



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

MR WAYNE THOMPSON
ROUTE 4 BOX 155-H
RIDGELAND SC 29936-8811

NOV 26 2003

Re: Wayne Thompson, Route 4, Box 155H, Ridgeland, SC
UST Permit #18856
Telephone Conversation with Mr. Robert Hodges on November 25, 2003
Release reported September 9, 2002
Jasper County

Dear Mr. Thompson:

Based on the referenced conversation and file information, it reveals that you did not maintain the appropriate level of financial responsibility as required by state law and regulation, and as a matter of course, consider yourself financially unable to undertake certain federal and state regulatory requirements for your underground storage tank (UST) system. This office requests needed information to verify this financial situation.

In order for the Underground Storage Tank (UST) Program to evaluate your financial ability, you must provide the following information:

1. Complete the enclosed form entitled, "Financial Verification". Please read the accompanying instructions carefully. All information must be current. The Bureau may verify any of the information provided. Please note the signature page includes a perjury clause.
2. Complete the enclosed form entitled "Underground Storage Tank Owner/Operator".
3. Complete Section 1 and sign Section 7 of the enclosed IRS form 8821. Form 8821 authorizes the South Carolina Department of Health and Environmental Control to receive confidential information from the IRS regarding your tax return for the periods listed.
4. Submit copies of the bank statements for your personal savings and checking accounts for the last 6 months. Also, if you have separate accounts for your business, submit copies of the bank statements for your business checking and savings accounts for the last 6 months.
5. If you feel there is any additional information to support your claim, please include it as an attachment.

Mr. Thompson
Page 2

On all correspondence related to this site, please reference UST Permit #18856. Questions should be addressed to me at (803) 896-6647 or 1-800-826-5435 (within South Carolina only).

Sincerely,



Konstantine T. Akhvlediani, Hydrogeologist
Owner/Operator Support Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management

cc: Financial Verification Package
IRS Form 8821
UST Owner Operator Form
Federal Trust Fund fact sheet

cc: Technical File (w/o enc.)



PROMOTE PROTECT PROSPER

2600 Bull Street
Columbia, SC 29201-1708

**UNDERGROUND STORAGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT**

Phone (803) 896-6240 Fax (803) 896-6245

AUG 14 2003

MR WAYNE THOMPSON
ROUTE 4 BOX 155-H
RIDGELAND SC 29936-8811

Re: Wayne Thompson, Route 4, Box 155H, Ridgeland, SC
UST Permit #18856, Cost Agreement #19828, MWA #UMW-16769
Release #1 Reported September 9, 2002
Initial Ground-Water Report received August 7, 2003
Jasper County

Dear Mr. Thompson:

The Underground Storage Tank (UST) Program of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the referenced Report. The report indicates concentration of chemicals of concern (CoC) in the groundwater. To determine what risk the release may pose to the environment and public health, and in accordance with Section 280.65 of the South Carolina Underground Storage Tank Control Regulations, implementation of the scope of work as outlined in the Tier I Assessment document is necessary. Since the above scope of work is detailed in the Tier I Assessment document, a separate plan is not required (please see <http://www.scdhec.net/ust/pubs/tierone.pdf>). **Please note that lead and EDB analyses are required for an UST system in operation prior to 1991. Additionally, water samples should be obtained for all groundwater wells within a 500-foot radius of the site. Please be advised that only EPA Method 8260B will be accepted for purgeable aromatics.**

Please note that detection limit for EDB has been changed and currently is 0.05 ug/l (micrograms per liter). Please adjust the detection limit in the current report.

If this release becomes qualified for funding through the State Underground Petroleum Environmental Response Bank (SUPERB) Act, eligible costs exceeding the \$25,000 deductible (according to Section 44-2-40 (D) of the SUPERB Act) can be compensated. As the owner/operator party, you are liable for the first \$25,000 of actual costs incurred for rehabilitation activities from your financial responsibility mechanism or other financial means. By law, the SUPERB Account cannot compensate any costs that are not pre-approved. To insure any expenditure you make does apply towards the deductible, the Department must pre-approve any such costs along with your technical plan of action.

To proceed with the qualification process for the SUPERB Act, the following information is required:

Written confirmation of the existence or nonexistence of an environmental insurance policy for this site. **The owner/operator party and a notary public must sign this information.** For your convenience, an insurance statement form has been enclosed. If an environmental insurance policy existed at the time of the release, a copy of the policy with all endorsements must be submitted with the insurance statement. **Please**

Mr. Thompson
Page 2

Please remember that, pursuant to Reg. 61-92, Subpart H, Section 280.114, you are required to notify the Program by certified mail within ten (10) days of commencing a voluntary or involuntary proceeding in bankruptcy. State law also requires that an owner, operator, or guarantor that files for bankruptcy protection must immediately submit the appropriate forms documenting that entity's ability to demonstrate financial responsibility.

Please note that the following changes have been made to the Risk Based Corrective Action (RBCA) Document (Effective May 15, 2001):

- **EDB Analysis must be performed by EPA Method 8011.**
- **The minimum separation distance for conducting the soil leachability model (Appendix C) has been revised to eight feet.**
- **The Risk Based Screening Levels (RBSLs) for soils have been revised.**
- **Soil Vapor and Remediation by Natural Attenuation (RNA) Models are included in Appendix F of the May 2001 RBCA Document.**

All investigative derived waste must be properly stored in labeled containers or covered with plastic as appropriate. The Bureau grants pre-approval for the transportation of the investigative derived waste (virgin petroleum contaminated soil and groundwater) from the referenced site to a permitted facility. There can be no spillage or leakage in transport. A copy of the disposal manifest and approval letter from the receiving facility must be included as an appendix to the final report. If laboratory analysis of the investigation derived waste shows levels of petroleum contamination are below treatment levels, please contact the project manager for approval to dispose of the investigation derived waste on site. The SUPERB Account will not compensate for the transportation or treatment of clean soil and/or groundwater.

On all correspondence regarding this site and scope of work, please reference UST Permit #18856 and cost agreement #19828. If you have any questions concerning this correspondence, please contact me at (803) 896-6647 or 1-800-826-5435 (within South Carolina only).

Sincerely,



Konstantine T. Akhvlediani, Hydrogeologist
Owner/Operator Support Section
Assessment and Corrective Action Division

enc.: Monitoring Well Approval (MWA)



2600 Bull Street
Columbia, SC 29201-1708

Monitoring Well Installation Approval Form

Date of Issue: November 18, 2002

Approval No.:UMW-16769

Approval is hereby granted to:	Katawba Environmental, Inc.
(On behalf of):	Mr. Wayne Thompson
UST Permit #:	18856
County:	Jasper

This approval is for the construction of three Type II monitoring well(s) in accordance with the South Carolina Well Standards and Regulations. The well(s) are to be constructed within the shallow aquifer for the intended purpose of monitoring ground-water quality and/or water level(s) at the referenced facility. Approval is provided with the following conditions:

1. The latitude and longitude, surveyed elevations, boring and/or geologist logs and actual (as built) construction details for each well will be submitted with the technical report.
2. Each well will be labeled with an identification plate constructed of a durable material affixed to the casing or surface pad where it is readily visible. The plate will provide monitoring well I.D.#, date of construction, static water level, and driller name and state certification #.
3. Well construction and sampling derived waste including, but not necessarily limited to, drill cuttings, drilling fluids, development and purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regard to contents, source, and date of activity.
4. A minimum of forty-eight (48) hours prior to initiation of drilling activities, please provide notice to Konstantine Akhvlediani at (803) 896-6647 or akhvlekt@dhec.sc.gov
5. Please provide ground-water quality analytical data (chemical analysis and/or water level(s)) and associated measurements (i.e., in-situ field measurements) to me with the technical report.
6. Monitoring wells will be installed by or under the direct supervision of a licensed well driller certified by the State of South Carolina.
7. Monitoring wells will be abandoned, when no longer required, by or under the direct supervision of a licensed well driller certified by the State of South Carolina.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and the Department of Health and Environmental Control Regulations R.61-71. Please remember to have a copy of this approval on the site during well installation.

Approved Cost Agreement 328

Facility: 18856 • WAYNE THOMPSON
AKHVLEKT

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
20 TIER I		TIER I	1.0000	9,880.00	9,880.00
Total Amount					9,880.00



Katawba Environmental, Inc.

8/5/2003

Mr. Konstantine Akhvlediani
UST Program
SCDHEC
2600 Bull Street
Columbia, SC 29201-1708

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AUG 07 2003

Underground Storage
Tank Program


RE: WAYNE THOMPSON
16661 GRAY'S HWY
EARLY BRANCH, SOUTH CAROLINA
SITE ID #18856

Dear Mr. Akhvlediani:

Please find attached the Initial Groundwater Assessment for the above referenced site. It appears that further delineation of the contaminant plume will be required as attributed to laboratory data submitted to Katawba Environmental, Inc. by Shealy Environmental, Inc.

A groundwater sample was not collected from the drinking water well located at the subject site due to lack of power. In discussion with the owner, the power has been activated and the well will be sampled during the next assessment scope. Should you have any questions pertaining to this project do not hesitate to contact me at (803) 327-0469.

Sincerely,
KATAWBA ENVIRONMENTAL, INC.


Alex W. Amos, CEO



Katawba Environmental, Inc.

INITIAL GROUNDWATER ASSESSMENT

WAYNE THOMPSON
PINE LEVEL COMMUNITY
16661 GRAY'S HIGHWAY
EARLY BRANCH, SC
UST SITE ID# 18856

AUGUST 2003

INITIAL GROUND-WATER ASSESSMENT REPORT
DIVISION OF UNDERGROUND STORAGE TANK MANAGEMENT

Facility Name: Wayne Thompson (Pine Level Community)

UST Permit Number: 18856

Address: 16661 Grays Highway, Early Branch, South Carolina

Phone Number: (843) 717-4285

Property Owner (if different than UST owner/operator): Wayne Thompson

Address: Route 4, Box 155H, Ridgeland, South Carolina, 29936-8811

Phone Number: (843) 717-4285

Contractor: Katawba Environmental, Inc. Cert. # 18

Address: P.O. Box 11228, Rock Hill, South Carolina, 29731

Phone Number: (803) 327-0469

Well Driller: Cypress Bay Geological

Address: 262 Geology Lane, Walterboro, South Carolina 29488

Phone Number: (843) 908-5050

Receptor and Site Data

Please place a check in the appropriate answer block for each question:

Receptor Survey Questions	No	Yes *
Is there a drinking water supply well (public or private) or surface water supply intake within 1000 feet of the UST?		X
Are irrigation or other non-drinking water wells located within 1000 feet of the UST?	X	
Are there other potential receptors (i.e., utilities, surface waters, wetlands, less than 500 feet from the UST)?		X

* If "yes" provide additional information:
A phone line is within 20 feet of the release. Approximately 5 drinking water wells are within 1000 feet of the

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AUG 07 2003

Underground Storage
Tank Program

SCDHEC UST Permit #: 18856

Were any water wells within 250-foot radius sampled? Yes No

Is a public water supply line in the area? X Yes No

Is the current use of the site and surrounding properties commercial, residential, agricultural or industrial?

Site: Residential Adjacent Properties: Residential

See Appendix F for Chain of Custody Form and Laboratory Data.

Soil and Boring/Monitoring Well Data

Primary Soil Type: Clayey Sand

Well Installation Method and Date: Drill rig, 7/16/03

Development Method: Hand bailed

Soil Sample obtained at 4 feet.

SOIL ANALYTICAL DATA

Benzene (ug/kg)	Toluene (ug/kg)	Ethylbenzene (ug/kg)	Xylenes (ug/kg)	Naphthalene (ug/kg)
ND	ND	ND	16	7.7

Benzo(a)- anthracene (ug/kg)	Benzo(b)- Fluoranthene (ug/kg)	Benzo(k)- fluoranthene (ug/kg)	Chrysene (ug/kg)	Dibenz(a,h) Anthracene (ug/kg)
ND	ND	ND	ND	ND

Total PAH (ug/kg)	Lead (ug/kg)
ND	NA

* For waste oil UST releases only:

Total Chromium * (ug/kg)	Mercury * (ug/kg)	Selenium * (ug/kg)	Silver * (ug/kg)
NA	NA	NA	NA

Ground-Water DataDepth to Ground Water: 4.68Well Purging/Sampling Method: Hand BailedDate Sampled: 7/17/03Free Product Thickness: None

Equilibrated values:

Temperature: 21.8 c pH: 6.16Dissolved Oxygen: .92 Specific Conductance: 387Soil/Water Disposal Method: Eagle**GROUND-WATER ANALYTICAL DATA**

Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)	Naphthalene (ug/l)
1700	10000	2200	14000	ND	ND

Benzo(a) anthracene (ug/l)	Benzo(b)-fluoranthene (ug/l)	Benzo(k)-fluoranthene (ug/l)	Chrysene (ug/l)	Dibenz(a,h) anthracene (ug/l)
ND	ND	ND	ND	ND

EDB (ug/L)	Total PAH (ug/L)	Lead (ug/L)
NA	490	71

* For waste oil UST releases.

Total Chromium * (ug/kg)	Mercury * (ug/kg)	Selenium * (kg/ug)	Silver (kg/ug)	Arsenic (ug/L)
NA	NA	NA	NA	NA

Barium * (ug/L)	Cadmium * (ug/L)
NA	NA

Appendices

The appendices required for this report are as follows:

- Appendix A. Well Construction Log
- Appendix B. Laboratory Data
- Appendix C. Topographic map with site location marked
- Appendix D. Site Base Map
- Appendix E. Disposal Manifest(s)

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

Katawba Environmental, Inc.
PO Box 11228
Rock Hill, SC 29730
Attention: Alex Amos

Project Name: **Pine Level**

Project Number: **Pine Level**

Lot Number: **EG18042**

Date Completed: **07/31/2003**

Kelly M. Maberry
Project Manager

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DEHNR No: 329

Case Narrative
Katawba Environmental, Inc.
Lot Number: EG18042

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative.

Sample receipt, sample analysis, and data review have been performed in accordance with Shealy's Quality Assurance Management Plan and Standard Operating Procedures. Any data qualifiers associated with sample analysis are footnoted on the analytical results page(s) or are discussed below.

GC/MS SVOCs

Surrogate for sample -002 (Run 2) is out of range due to sample dilution.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary
Katawba Environmental, Inc.
Lot Number: EG18042

<u>Sample Number</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>
001	MW-1	Solid	07/16/2003 0936
002	MW-1	Aqueous	07/17/2003 1618
(2 samples)			

Volatile Organic Compounds by GC/MS

Client: **Katawba Environmental, Inc.**

Laboratory ID: **EG18042-001**

Description: **MW-1**

Matrix: **Solid**

Date Sampled: **07/18/2003 0936**

% Solids: **83.1** 07/20/2003 1345

Date Received: **07/18/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5035	8260B	1	07/22/2003 2017	LH		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Benzene	71-43-2	8260B	ND		4.4	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.4	ug/kg	1
Naphthalene	91-20-3	8260B	7.7		4.4	ug/kg	1
Toluene	108-88-3	8260B	ND		4.4	ug/kg	1
Xylenes (total)	1330-20-7	8260B	16		4.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		75	53-142
Bromofluorobenzene		93	47-138
Toluene-d8		96	68-124

Semivolatile Organic Compounds by GC/MS

Client: Katawba Environmental, Inc.	Laboratory ID: EG18042-001
Description: MW-1	Matrix: Solid
Date Sampled: 07/16/2003 0936	% Solids: 83.1 07/20/2003 1345
Date Received: 07/18/2003	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550B	8270C	1	07/25/2003 2008	DC	07/23/2003 1129	11298

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270C	ND		390	ug/kg	1
Acenaphthylene	208-96-8	8270C	ND		390	ug/kg	1
Anthracene	120-12-7	8270C	ND		390	ug/kg	1
Benzo(a)anthracene	56-55-3	8270C	ND		390	ug/kg	1
Benzo(a)pyrene	50-32-8	8270C	ND		390	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270C	ND		390	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270C	ND		390	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270C	ND		390	ug/kg	1
Chrysene	218-01-9	8270C	ND		390	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270C	ND		390	ug/kg	1
Fluoranthene	206-44-0	8270C	ND		390	ug/kg	1
Fluorene	86-73-7	8270C	ND		390	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270C	ND		390	ug/kg	1
Naphthalene	91-20-3	8270C	ND		390	ug/kg	1
Phenanthrene	85-01-8	8270C	ND		390	ug/kg	1
Pyrene	129-00-0	8270C	ND		390	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		50	30-130
Nitrobenzene-d5		53	30-130
Terphenyl-d14		84	30-130

Volatile Organic Compounds by GC/MS

Client: **Katawba Environmental, Inc.**

Laboratory ID: **EG18042-002**

Description: **MW-1**

Matrix: **Aqueous**

Date Sampled: **07/17/2003 1618**

Date Received: **07/18/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	200	07/25/2003 1939	RED		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Benzene	71-43-2	8260B	1700		1000	ug/L	1
Ethylbenzene	100-41-4	8260B	2200		1000	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1000	ug/L	1
Naphthalene	91-20-3	8260B	ND		1000	ug/L	1
Toluene	108-88-3	8260B	10000		1000	ug/L	1
Xylenes (total)	1330-20-7	8260B	14000		1000	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		104	70-130

Semivolatile Organic Compounds by GC/MS

Client: **Katawba Environmental, Inc.**

Laboratory ID: **EG18042-002**

Description: **MW-1**

Matrix: **Aqueous**

Date Sampled: **07/17/2003 1618**

Date Received: **07/18/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	07/25/2003 2036	DC	07/22/2003 1540	11292
2	3520C	8270C	5	07/30/2003 1331	DC	07/22/2003 1540	11292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270C	ND		5.3	ug/L	1
Acenaphthylene	208-96-8	8270C	ND		5.3	ug/L	1
Anthracene	120-12-7	8270C	ND		5.3	ug/L	1
Benzo(a)anthracene	56-55-3	8270C	ND		5.3	ug/L	1
Benzo(a)pyrene	50-32-8	8270C	ND		5.3	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270C	ND		5.3	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270C	ND		5.3	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270C	ND		5.3	ug/L	1
Chrysene	218-01-9	8270C	ND		5.3	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270C	ND		5.3	ug/L	1
Fluoranthene	206-44-0	8270C	ND		5.3	ug/L	1
Fluorene	86-73-7	8270C	ND		5.3	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270C	ND		5.3	ug/L	1
Naphthalene	91-20-3	8270C	490		26	ug/L	2
Phenanthrene	85-01-8	8270C	ND		5.3	ug/L	1
Pyrene	129-00-0	8270C	ND		5.3	ug/L	1

Surrogate	Run 1		Acceptance Limits	Run 2		Acceptance Limits
	Q	% Recovery		Q	% Recovery	
2-Fluorobiphenyl		80	30-130		92	30-130
Nitrobenzene-d5		101	30-130		142	30-130
Terphenyl-d14		65	30-130		87	30-130

ICP-AES

Client: **Katawba Environmental, Inc.**

Laboratory ID: **EG18042-002**

Description: **MW-1**

Matrix: **Aqueous**

Date Sampled: **07/17/2003 1618**

Date Received: **07/18/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010B	1	07/24/2003 1822	FTS	07/21/2003 1250	11285

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	7439-92-1	6010B	0.071		0.0030	mg/L	1

South Carolina Department of Health and Environmental Control
 Bureau of Underground Storage Tank Management
Field Data Information Sheet for Ground Water Sampling

Wagon The

Date (mm/dd/yy) _____
 Field Personnel _____
 General Weather Condition _____ °C
 Ambient Air Temperature _____ °C
 Facility Name _____ Site ID# _____
 Quality Assurance: _____

pH Meter serial no. _____ Conductivity Meter serial no. _____
 pH=4.0 Standard
 pH=7.0 Standard
 pH=10.0 Standard

Chain of Custody

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

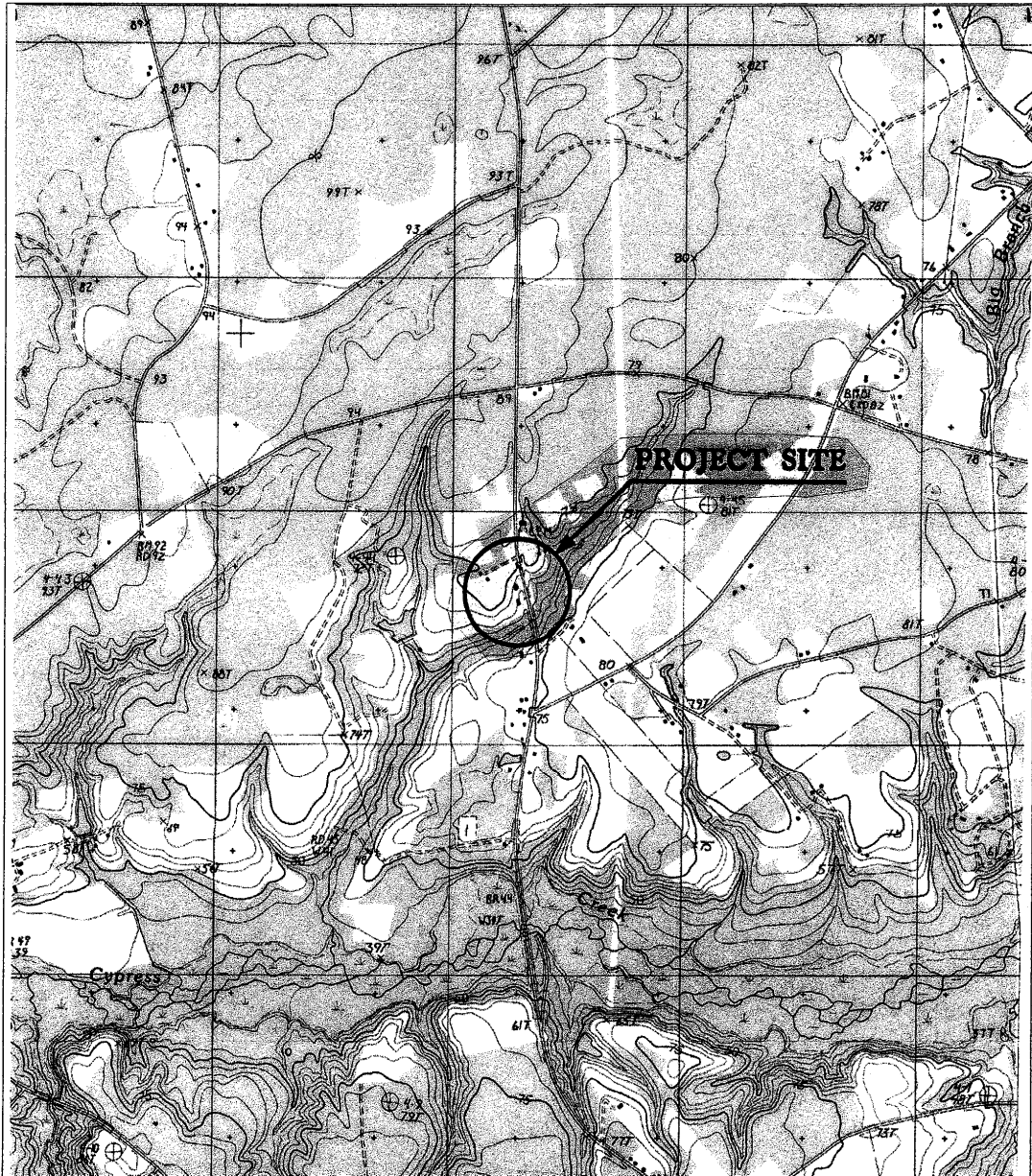
Well # New 1 _____ inches or _____
 Well Diameter(D) _____ inches or _____
 conversion factor(C): $3.143 \times (D/2)^2$
 for a 2 inch well C=0.163
 4 inch well C=0.652
 Total Well Depth (TWD) 12 ft.
 Depth to GW (DWG) 4.68 ft.

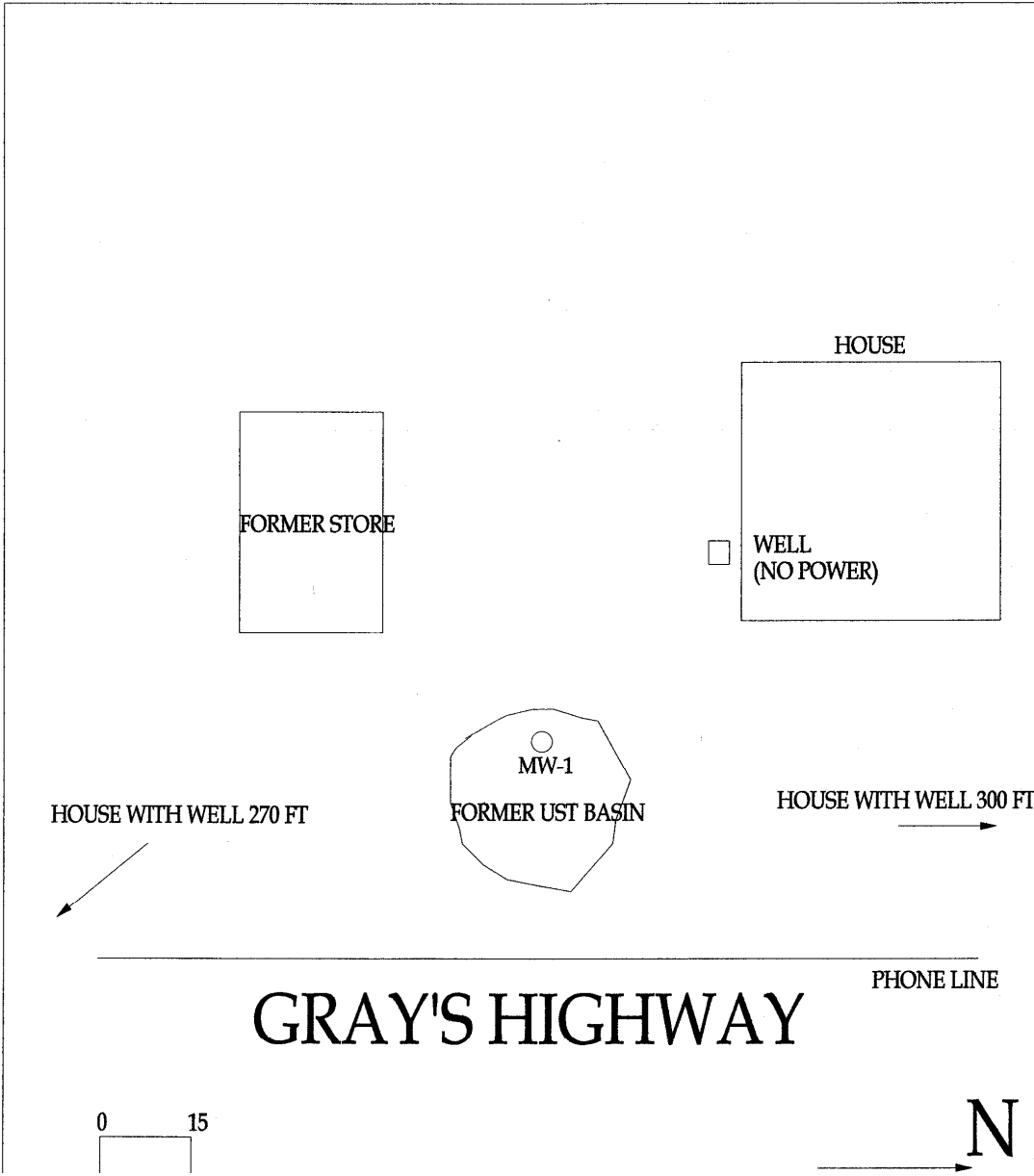
Length of Water Column (LWC=TWD-DWG) 7.32 ft.
 1 Csg. Volume (LWC * C) = $7.32 \times .163 = 1.19$
 3 Csg. Volumes = $3 \times 1.19 = 3.57$ gals. (Std. Purge Vol.)

Total Volume of Water Purged Before Sampling _____

Volume Purged (gallons)	Initial	1 st VOL.	2 nd VOL.	3 rd VOL.	4 th VOL.	5 th VOL.	P0
Time (military)	15:48	18:54	16:02	16:18			
pH (s.u.)	6.39	6.26	6.16	6.16			
Specific Cond. (umhos/cm)	96	426	358	357			
Water Temp (°C)	22.6	21.9	21.8	21.8			
Turbidity (°)							
OVA Readings							
Salinity							
Dissolved Oxygen	1.46	.65	.99	.92			

Remarks:





Eagle Disposal, Inc.
36 Clearwater Drive * PO Box 704
Walterboro, SC 29488
Phone (843)893-2580 * Fax (843)893-3328

CERTIFICATE OF DISPOSAL

EAGLE DISPOSAL, INC.
HEREBY CERTIFIES THAT ALL MATERIALS DESCRIBED IN
MANIFEST/BILL OF LADING #03001
DATED :08-01-03
WERE DISPOSED OF IN COMPLIANCE WITH ALL
APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS
UNDER PERMIT #152630-2001
FOR:

Katawba Environmental, Inc.
Pine Level
PO Box 11228
Rock Hill, SC 29731

Patricia S Smith



2600 Bull Street
Columbia, SC 29201-1708

**UNDERGROUND STORAGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT**

Phone (803) 896-6240 Fax (803) 896-6245

NOV 20 2002

MR WAYNE THOMPSON
ROUTE 4 BOX 155-H
RIDGELAND SC 29936-8811

Re: Wayne Thompson, Route 4, Box 155H, Ridgeland, SC
UST Permit #18856, Cost Agreement #17727, MWA #UMW-16768
Release #1 Reported September 9, 2002
Assessment Report received September 9, 2002
Jasper County

Dear Mr. Thompson:

The Underground Storage Tank (UST) Program of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the referenced report. The report confirms a release of petroleum chemicals of concern at this site. To determine what risk the release may pose to the environment and public health, and in accordance with Section 280.65 of the South Carolina Underground Storage Tank Control Regulations, implementation of the scope of work as outlined in the Initial Groundwater Assessment (IGWA) document is required. Since the scope of work for the IGWA is detailed in the IGWA document, this work is pre-approved and a separate work plan is not required (please see <http://www.scdhec.net/ust/pubs/igwa2000.pdf>). The monitoring well should be placed in the immediate location of the S-2.

If this release becomes qualified for funding through the State Underground Petroleum Environmental Response Bank (SUPERB) Act, eligible costs exceeding the \$25,000 deductible (according to Section 44-2-40 (D) of the SUPERB Act) can be compensated. As the owner/operator party, you are liable for the first \$25,000 of actual costs incurred for rehabilitation activities from your financial responsibility mechanism or other financial means. By law, the SUPERB Account cannot compensate any costs that are not pre-approved. To insure any expenditure you make does apply towards the deductible, the Department must pre-approve any such costs along with your technical plan of action.

To proceed with the qualification process for the SUPERB Act, the following information is required:

- Written confirmation of the existence or nonexistence of an environmental insurance policy for this site. **The owner/operator party and a notary public must sign this information.** For your convenience, an insurance statement form has been enclosed. If an environmental insurance policy existed at the time of the release, a copy of the policy with all endorsements must be submitted with the insurance statement. **Please complete and return the enclosed Insurance Information Form**

Mr. Thompson
Page 2

Please note that the maximum approvable amount for the IGWA is **\$1,195.00** (the cost for the IGWA reflects additional cost for 8RCRA Metals analyses). Upon receipt of the signed IGWA Invoice, IGWA Report, and a copy of your canceled check (front and back) or a notarized statement from the contractor verifying payment for this work, up to **\$1,195.00** may be applied toward your deductible if the release is qualified to receive funding from the SUPERB Account. Cost agreement #17727 has been established to track the allowable costs associated with this IGWA. Please include the cost agreement number when submitting your invoice. **Should it be determined that the tanks at this facility were not in substantial compliance with the UST Regulations at the time of discovery and reporting of release, you will be denied SUPERB access for this release.**

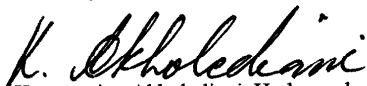
Please note that the following changes have been made to the Risk Based Corrective Action (RBCA) Document (Effective May 15, 2001):

- **EDB Analysis must be performed by EPA Method 8011.**
- **The minimum separation distance for conducting the soil leachability model (Appendix C) has been revised to eight feet.**
- **The Risk Based Screening Levels (RBSLs) for soils have been revised.**
- **Soil Vapor and Remediation by Natural Attenuation (RNA) Models are included in Appendix F of the May 2001 RBCA Document.**

Implementation of the IGWA should proceed upon receipt of this correspondence. The required monitoring well approval is enclosed. **The report should be submitted within 60 days from the date of this letter.** All investigative derived waste must be properly stored in labeled containers or covered with plastic as appropriate. The Bureau grants pre-approval for the transportation of the investigative derived waste (virgin petroleum contaminated soil and groundwater) from the referenced site to a permitted facility. There can be no spillage or leakage in transport. A copy of the disposal manifest and approval letter from the receiving facility must be included as an appendix to the final report. If laboratory analysis of the investigation derived waste shows levels of petroleum contamination are below treatment levels, please contact the project manager for approval to dispose of the investigation derived waste on site. The SUPERB Account will not compensate for the transportation or treatment of clean soil and/or groundwater. The Bureau reserves the authority to only apply costs to your deductible for work properly performed and/or technically justified in accordance with established criteria.

On all correspondence regarding this site and scope of work, please reference UST Permit #18856 and CA #17727. If you have any questions concerning this correspondence, please contact me at (803) 896-6647 or 1-800-826-5435 (within South Carolina only).

Sincerely,



Konstantine Akhvlediani, Hydrogeologist
Owner/Operator Support Section
Assessment and Corrective Action Division



2600 Bull Street
Columbia, SC 29201-1708

Monitoring Well Installation Approval Form

Date of Issue: 11/18/02

Approval No.:UMW-16768

Approval is hereby granted to:
UST Permit #:
County:

Mr. Wayne Thompson
18856
Jasper

This approval is for the construction of one Type II well in accordance with the IGWA document. The well(s) are to be constructed within the shallow aquifer for the intended purpose of monitoring ground-water quality and/or water level(s) at the referenced facility. Approval is provided with the following conditions:

1. The latitude and longitude, surveyed elevations, boring and/or geologist logs and actual (as built) construction details for each well will be submitted with the technical report.
2. Each well will be labeled with an identification plate constructed of a durable material affixed to the casing or surface pad where it is readily visible. The plate will provide monitoring well I.D.#, date of construction, static water level, and driller name and state certification #.
3. Well construction and sampling derived waste including, but not necessarily limited to, drill cuttings, drilling fluids, development and purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regard to contents, source, and date of activity.
4. A minimum of forty-eight (48) hours prior to initiation of drilling activities, please provide notice to Konstantine Akhvlediani at (803) 896-6647 or akhvlekt@dhec.sc.gov
5. Please provide ground-water quality analytical data (chemical analysis and/or water level(s)) and associated measurements (i.e., in-situ field measurements) to me with the technical report.
6. Monitoring wells will be installed by or under the direct supervision of a licensed well driller certified by the State of South Carolina.
7. Monitoring wells will be abandoned, when no longer required, by or under the direct supervision of a licensed well driller certified by the State of South Carolina.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and the Department of Health and Environmental Control Regulations R.61-71. Please remember to have a copy of this approval on the site during well installation.

Approved by:

PROJECT TRANSFER CHECKLIST

Site Name/Full ID # Wayne Township
 Release # / For UST # 001-002 Release Report Date 9/9/02
 Free Product Reported? Yes / No Impacted Water Supply Well Reported? Yes No
 Receptor(s) within 1000 feet of UST system? (Well / Surface Water Body / Wetland / Other)

Worst Case Analysis / Sample #	Soil (mg/kg) / # <u>52</u>	Water (ug/l) / # _____
Benzene	<u><0.50</u>	_____
Toluene	<u>0.272</u>	_____
Ethylbenzene	<u>0.476</u>	_____
Xylenes	<u>5.83</u>	_____
Naphthalene	<u>2.18</u>	_____
Benzo(a)anthracene	<u><0.330</u>	_____
Benzo(b)flouranthene	<u><0.330</u>	_____
Benzo(k)flouranthene	<u><0.330</u>	_____
Chrysene	<u><0.330</u>	_____
Dibenz(a,h)anthracene	<u><0.330</u>	_____
MTBE (water only)	_____	_____
Other _____	_____	_____

REGULATORY INFORMATION

1. All USTs Registered? Yes / No / NA
2. Regulatory PM Hightocw
3. All Applicable Annual Fees Paid? Yes / No / NA
4. Financial responsibility Certification Received? Yes / No / NA Type _____
5. Site In Substantial Compliance? Yes / No / NA
6. Insurance Statement Received? Yes / No / NA Dated _____
7. UST Status (account for all USTs in database)

Site ID# 18856

Facility Name Wayne Thompson

Triage Date 9-9-02

Triaged By Beverly McLeod

Triage (Indicate type of submittal)

- CR
- AR
- SC
- RLS
- TST
- MWR
- T of O
- Other

Date reported to UST Program: 9-9-02

Project Manager Assigned: Hightower

Report Ranking

- A (Free Product, Sheen on GW)
- B (GW contamination >MCL)
- C (Soil contamination >RBSLs)
- D (Soil contamination <RBSLs)
- E (No contamination documented)
- F (Incomplete submittal)

Release Report Classification

- Free Product (Forward to C Hightower)
- TST Failure (tank/line/ld)
- SIR (Fail/2 months Inconclusive)
- Soil or GW Contamination

Tank System Status

- System CIU or TOU (product in USTs)
- System ABD or TOU (USTs closed/USTs are empty)

Database Log-in/Change: Needs database change

Submittal (s) Logged-In By: Beverly McLeod

Database Changes Given To: _____

South Carolina Department of Health and Environmental Control (SCDHEC)
Underground Storage Tank (UST) Assessment Report

Date Received
State Use Only

Submit Completed Form To:
UST Program
SCDHEC
2600 Bull Street
Columbia, South Carolina 29201
Telephone (803) 896-6240

I. OWNERSHIP OF UST(S)

Owner Name (Corporation, Individual, Public Agency, Other)
Wayne Thompson

Mailing Address
Rt. # Box 155-H

City Ridgeland State SC Zip Code 29936

Area Code 843 Telephone Number 717-4285 Contact Person Wayne Thompson

II. SITE IDENTIFICATION AND LOCATION

Permit I.D. # 18856

Facility Name or Company Site Identifier
WAYNE THOMPSON

Street Address or State Road (as applicable)
~~1000 S. BROAD ST~~ Hwy 278 West (GRAY'S ROAD)

City Ridgeland, SC County Lasper

1.5 MILES WEST OF RIDGELAND, SC. ON HWY 278

III. CLOSURE INFORMATION

Closure Started 7-16-02 Closure Completed 7-16-02 (waiting for samples) Number of USTs Closed 2

Consultant Online Environmental UST Removal Contractor Wayne Thompson (see Connie Anderson)

VI. PIPING INFORMATION

	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
A. Construction Material.....	Alu.	Alu.				
B. Distance from UST to Dispenser.....	?	?				
C. Number of Dispensers.....	0	0				
D. Type of System P/S.....	?	?				
E. Was Piping Removed from the Ground? Y/N	Y	Y				
F. Visible Corrosion or Pitting Y/N.....	N	N				
G. Visible Holes Y/N.....	N	N				
H. Age.....	20+	20+				

I. If any corrosion, pitting, or holes were observed, describe the location and extent for each line.

NONE

VII. BRIEF SITE DESCRIPTION AND HISTORY Connie Anderson (Rescued Non Usable)

Small Abandoned Building with
Two UST's. (UST's Removed) w.r.
Building Removed

VIII. SITE CONDITIONS

	Yes	No	Unk
<p>A. Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells?</p> <p>If yes, indicate depth and location on the site map.</p>		X	
<p>B. Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells?</p> <p>If yes, indicate location on site map and describe the odor (strong, mild, etc.)</p>		X	
<p>C. Was water present in the UST excavation, soil borings, or trenches?</p> <p>If yes, how far below land surface (indicate location and depth)?</p>		X	
<p>D. Did contaminated soils remain stockpiled on site after closure?</p> <p>If yes, indicate the stockpile location on the site map.</p> <p>Name of DHEC representative authorizing soil removal:</p>		X	
<p>E. Was a petroleum sheen or free product detected on any excavation or boring waters?</p> <p>If yes, indicate location and thickness.</p>		X	

IX. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 32571

B. *SEE ATTACHED LABORATORY REPORT*

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

XI. RECEPTORS

	Yes	No
<p>A. Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?</p> <p>If yes, indicate type of receptor, distance, and direction on site map.</p>		X
<p>B. Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?</p> <p>If yes, indicate type of well, distance, and direction on site map.</p>		X
<p>C. Are there any underground structures (e.g., basements) located within 100 feet of the UST system?</p> <p>If yes, indicate type of structure, distance, and direction on site map.</p>		X
<p>D. Are there any underground utilities (e.g., telephone, electricity, gas, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the contamination?</p> <p>If yes, indicate the type of utility, distance, and direction on the site map.</p>		X
<p>E. Has contaminated soil been identified at a depth less than 3 feet below land surface in an area that is not capped by asphalt or concrete?</p> <p>If yes, indicate the area of contaminated soil on the site map.</p>		X

SITE MAP

You must supply a scaled site map. It should include all buildings, road names, utilities, tank and dispenser island locations, labeled sample locations, extent of excavation, and any other pertinent information.

(Attach Site Map Here)

Will Provide If Absolutely NECESSARY!
Would HAVE TO HAVE LAND SURVEYOR
TO DRAW THIS.

THANKS,
Wjg
Wjg

THE ONLY TAX PLAT MAP AVAILABLE TO
DATE IS HAND DRAWN AND WAS
RECORDED IN 1945.

THE GENERAL LOCATION OF THIS SITE
IS FIFTEEN MILES WEST OF RIDGELAND,
O.H. ~~OH~~

ANALYTICAL RESULTS

You must submit the laboratory report and chain-of-custody form for the samples. These samples must be analyzed by a South Carolina certified laboratory.

(Attach Certified Analytical Results and Chain-of-Custody Here)

Did You Remember to Include the Following?

- **Permit ID Number**
- **Sample Collection and Storage Methods**
- **Preservative used in the sample containers**
- **Scaled Site Map with ALL Requested Information**
- **Laboratory Chain-of-Custody Form**
- **Certified Analytical Results**
- **Completed and Notarized Insurance Statement
(see attached form)**
- **A Copy of Your Environmental Insurance Policy
(if applicable)**
- **Samples from all Dispenser Islands and Piping Runs**
- **Photographs (if available)**



oleinc.com

On Line Environmental, Inc., 200 Rich Lex. Drive, Lexington, SC 29072 • 803-939-4983 • Fax 803-939-4984

CERTIFIED LABORATORY
SCDHEC ID# 32571

DATE: 08/09/2002

CLIENT: Wayne Thompson
Rt. 4 Box 155 H
Ridgeland SC 29936

ID#: 030197	Sample Name: TANK # 1	Sampled on 07/16/2002	at 1638	Received on 07/18/2002	at 1025
Parameter	Method#	Value	Units	Analyzed on/at/by	
EPA 5035	5035	COMPLETE	see report	07/23/2002	0807 SKL
ID#: 030198	Sample Name: TANK # 1	Sampled on 07/16/2002	at 1638	Received on 07/18/2002	at 1025
Parameter	Method#	Value	Units	Analyzed on/at/by	
BTEX-Napthalene	5035/82608	COMPLETE	see report	07/23/2002	0807 SKL
ID#: 030199	Sample Name: TANK # 1	Sampled on 07/16/2002	at 1638	Received on 07/18/2002	at 1025
Parameter	Method#	Value	Units	Analyzed on/at/by	
EPA 8270	EPA 8270	COMPLETE	See Report	07/25/2002	1404 KMI
ID#: 030200	Sample Name: TANK # 2	Sampled on 07/16/2002	at 1646	Received on 07/18/2002	at 1025
Parameter	Method#	Value	Units	Analyzed on/at/by	
EPA 5035	5035	COMPLETE	see report	07/22/2002	0810 SKL
ID#: 030201	Sample Name: TANK # 2	Sampled on 07/16/2002	at 1646	Received on 07/18/2002	at 1025
Parameter	Method#	Value	Units	Analyzed on/at/by	
BTEX-Napthalene	5035/82608	COMPLETE	see report	07/22/2002	0810 SKL
ID#: 030202	Sample Name: TANK # 2	Sampled on 07/16/2002	at 1646	Received on 07/18/2002	at 1025
Parameter	Method#	Value	Units	Analyzed on/at/by	
EPA 8270	EPA 8270	COMPLETE	See Report	07/25/2002	1446 KMI

A 5 10 10 0 0

WALTERBORO RECYCLING

Rt 5 Box 775 • Hwy 15 N.
Walterboro, S. C. 29488

Day Phone: 538-5038 • Night Phone: 538-3990

Open Monday - Friday 8:00 til 5:30

Saturday 8:00 til 1:00

Walterboro Recycling properly disposed

of 1-1000 gallon tank & 1-500 gallon tank

for Wayne Thompson from the

Group Hwy 278 site.

The tanks will be disposed of for salvage only at

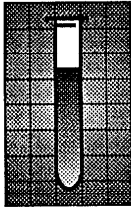
Walterboro Recycling in Walterboro, S.C.

DATE

8-28-02

Walterboro Recycling -

Matthew DeWalt



Columbia Analytical Laboratories, Inc.

3005 Broad River Road Columbia, South Carolina 29210

Laboratory Report

Tel:(803) 561-0331 Fax:(803) 561-0536

DATE: August 06, 2002

LAB# : 020718-50
JOB# : 07436

REPORT OF: SOIL ANALYSIS
PROJECT: WAYNE THOMPSON
CLIENT: ON LINE ENVIRONMENTAL
MR. JIM MATHEWS
200 RICH-LEX DR.
LEXINGTON SC 29072

Samples were logged in by Columbia Analytical Laboratories, Inc. on 07/18/02, at 03:47 pm, and were collected using proper protocol. Testing was conducted at the locations(s) enumerated at the end of this report.

ID	COLLECTED ON/AT	DESCRIPTION	PARAMETER	RESULTS	UNITS	ANALYZED ON/AT		LAB
A	07/16/02 at 16:38	TANK 1	BTEX /NAPHTHALENE(5035/8260B)	-			030197	PR
			NAPHTHALENE (na,5)	<5000	ppb	07/23/02 08:07 SKL	030198	PR
			BENZENE (na,5)	<5000	ppb	07/23/02 08:07 SKL		PR
			TOLUENE (na,5)	<5000	ppb	07/23/02 08:07 SKL		PR
			ETHYLBENZENE (na,5)	1460	ppb	07/23/02 09:47 SKL		PR
			o-XYLENE (na,5)	15700	ppb	07/23/02 09:47 SKL		PR
			p,m-XYLENE (na,5)	26700	ppb	07/23/02 09:47 SKL		PR
			MOISTURE CONTENT	12.6	%	07/26/02 14:43 DMO		PR
			(SURR) DIBROMOFLUOROMETHANE	114.75	%	07/26/02 11:43 DMO		PR
			(SURR) BFB	97.6	%	07/26/02 14:43 DMO		PR
			(SURR) TOLUENE-d8	113.75	%	07/26/02 14:43 DMO	030199	PR
			PAHS (EPA METHOD 8270)	-				S3
			PAHS EXTRACTION DATE/TIME	071902	0115	07/25/02 14:04 KMIL		S3
			ACENAPHTHYLENE	<330	ppb	07/25/02 14:04 KMIL		S3
			ACENAPHTHENE	<330	ppb	07/25/02 14:04 KMIL		S3
			FLUORENE	<330	ppb	07/25/02 14:04 KMIL		S3
			ANTHRACENE	<330	ppb	07/25/02 14:04 KMIL		S3
			FLUORANTHENE	<330	ppb	07/25/02 14:04 KMIL		S3
			PYRENE	<330	ppb	07/25/02 14:04 KMIL		S3
			CHRYSENE	<330	ppb	07/25/02 14:04 KMIL		S3
			BENZO(A) ANTHRACENE	<330	ppb	07/25/02 14:04 KMIL		S3
			BENZO(B,K)FLUORANTHENE	<660	ppb	07/25/02 14:04 KMIL		S3
			BENZO(A) PYRENE	<330	ppb	07/25/02 14:04 KMIL		S3
			INDENO(1,2,3-CD) PYRENE	<330	ppb	07/25/02 14:04 KMIL		S3
			DIBENZO(A,H) ANTHRACENE	<330	ppb	07/25/02 14:04 KMIL		S3
			BENZO(GHI) PERYLENE	<330	ppb	07/25/02 14:04 KMIL		S3
			PHENANTHRENE	<330	ppb	07/25/02 14:04 KMIL		S3
			NAPHTHALENE	4460	ppb	07/25/02 14:04 KMIL		S3
			(SURR) 2-FLUOROBIPHENYL	49	%	07/25/02 14:04 KMIL		S3
			(SURR) NITROBENZENE-d5	44	%	07/25/02 14:04 KMIL		S3



Continuation of report of SOIL ANALYSIS

ID	COLLECTED ON/AT	DESCRIPTION	PARAMETER	RESULTS	UNITS	ANALYZED ON/AT	LAB
			o-XYLENE (na,5)	1910	ppb	07/22/02 09:48 SKL	PR
			p,m-XYLENE (na,5)	3920	ppb	07/22/02 09:48 SKL	PR
			MOISTURE CONTENT	17.2	%	07/26/02 14:43 DMO	PR
			(SURR) DIBROMOFUROMETHANE	94.5	%	07/26/02 14:43 SKL	PR
			(SURR) BFB	1022	%	07/26/02 14:43 DMO	PR
			(SURR) TOLUENE-d8	97.5	%	07/26/02 14:43 DMO	PR
			PAHS (EPA METHOD 8270)	.			S3
			PAHS EXTRACTION DATE/TIME	071902	0115	07/25/02 14:46 KMIL	S3
			ACENAPHTHYLENE	<330	ppb	07/25/02 14:46 KMIL	S3
			ACENAPHTHENE	<330	ppb	07/25/02 14:46 KMIL	S3
			FLUORENE	<330	ppb	07/25/02 14:46 KMIL	S3
			ANTHRACENE	<330	ppb	07/25/02 14:46 KMIL	S3
			FLUORANTHENE	<330	ppb	07/25/02 14:46 KMIL	S3
			PYRENE	<330	ppb	07/25/02 14:46 KMIL	S3
			CHRYSENE	<330	ppb	07/25/02 14:46 KMIL	S3
			BENZO(A) ANTHRACENE	<330	ppb	07/25/02 14:46 KMIL	S3
			BENZO(B,K) FLUORANTHENE	<660	ppb	07/25/02 14:46 KMIL	S3
			BENZO(A) PYRENE	<330	ppb	07/25/02 14:46 KMIL	S3
			INDENO(1,2,3-CD) PYRENE	<330	ppb	07/25/02 14:46 KMIL	S3
			DIBENZO(A,H) ANTHRACENE	<330	ppb	07/25/02 14:46 KMIL	S3
			BENZO(GHI) PERYLENE	<330	ppb	07/25/02 14:46 KMIL	S3
			PHENANTHRENE	<330	ppb	07/25/02 14:46 KMIL	S3
			NAPHTHALENE	3960	ppb	07/25/02 14:46 KMIL	S3
			(SURR) 2-FLUOROBIPHENYL	52	%	07/25/02 14:46 KMIL	S3
			(SURR) NITROBENZENE-d5	47	%	07/25/02 14:46 KMIL	S3
			(SURR) p-TERPHENYL-d14	53	%	07/25/02 14:46 KMIL	S3

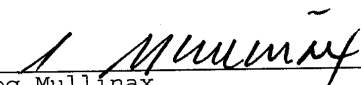
030202

ID LABORATORY TEST LOCATION NUMBER
PR = SC Lab. Certification No. 96023

ID LABORATORY TEST LOCATION NUMBER
S3 = Columbia- semi-VOCS 40001

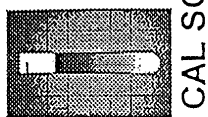
Respectfully submitted,
Columbia Analytical Laboratories, Inc.

CC: Fax report.


C. Greg Mullinax
Project Director

DDY / SAMPLE COLLECTION / ANALYSIS REQUEST FORM

Columbia Analytical Laboratories, Inc.
 3005 Broad River Road
 Columbia SC 29210
 Bus: 803-561-0331 Fax: 803-561-0536
 www.columbiaanalytical.com



CAL SCDHEC #40001

Environmental
 Project Name: _____
 Invoice To: Same as report to
 Address: _____
 City St Zip: _____
 Contact: _____
 Phone / Fax: _____

SAMPLING NO.	DATE	TIME	TYPE	PROGRAM AREA	# of BOTTLES		REQUESTED TEST(S)
					SAMPLED	SUB RECEIVED	
10197	7-16-02	16:38	G	S O	2	2	EPA 5035
98					1	1	BTEX-NAPH
99					1	1	8070 (PAH)
100		16:46			2	2	EPA 5035
01					1	1	BTEX-NAPH
102					1	1	8270 (PAH)

DATE/TIME ON:	DATE/TIME OFF:	TYPE KEY:	MATRIX KEY:	PROGRAM AREA KEY:
		C-Composite G-Grab (P)-Plastic (G)-Glass	G-Gas L-Liquid D-Semi-solid S-Solid	N-NPDES S-SWDA R-RCRA I-Industrial Pretreatment O-Other

DATE/TIME ON:	DATE/TIME OFF:	DATE/TIME ON:	DATE/TIME OFF:	DATE/TIME ON:	DATE/TIME OFF:

ANALYSIS	UNIT	RECEIVED BY	DATE/TIME
Received by:			7-18-02 1255
Received by:			
Received by:			

Comments:

7-18-02 1255

7-18-02 1255

7-18-02 1255

ENVIRONMENTAL, INC. Chain of Custody Record SCDHEC LAB ID# 36005/25003
 Attn: YAC THOMPSON
 Phone: 843-717-4285
 Address: 1 BOX 155H
Blad SC 29936 Fax:

Sample Name	Date/Time of Sample	Sample Type	Preservative	# Bot	Parameter
<u>K #2</u>	<u>7-16-07 11:46</u>	<u>G</u>	<u>Na₂SO₄</u>	<u>2</u>	<u>5035</u>
<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>±4°C</u>	<u>1</u>	<u>HIGH LEVEL BTEX-NAPH</u>
<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>±4°C</u>	<u>1</u>	<u>8270 (PAH)</u>

in replica

Special Instructions:

Meter Reading After: _____
 Meter Reading Before: _____
 Difference: _____ (factor): _____

Date	Time	Received By	Date	Time

in replica Date: 7-18-07 Time: 10:25



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

MR WAYNE THOMPSON
ROUTE 4 BOX 155-H
RIDGELAND SC 29936-8811

NOV 26 2003

Re: Wayne Thompson, Route 4, Box 155H, Ridgeland, SC
UST Permit #18856
Telephone Conversation with Mr. Robert Hodges on November 25, 2003
Release reported September 9, 2002
Jasper County

Dear Mr. Thompson:

Based on the referenced conversation and file information, it reveals that you did not maintain the appropriate level of financial responsibility as required by state law and regulation, and as a matter of course, consider yourself financially unable to undertake certain federal and state regulatory requirements for your underground storage tank (UST) system. This office requests needed information to verify this financial situation.

In order for the Underground Storage Tank (UST) Program to evaluate your financial ability, you must provide the following information:

1. Complete the enclosed form entitled, "Financial Verification". Please read the accompanying instructions carefully. All information must be current. The Bureau may verify any of the information provided. Please note the signature page includes a perjury clause.
2. Complete the enclosed form entitled "Underground Storage Tank Owner/Operator".
3. Complete Section 1 and sign Section 7 of the enclosed IRS form 8821. Form 8821 authorizes the South Carolina Department of Health and Environmental Control to receive confidential information from the IRS regarding your tax return for the periods listed.
4. Submit copies of the bank statements for your personal savings and checking accounts for the last 6 months. Also, if you have separate accounts for your business, submit copies of the bank statements for your business checking and savings accounts for the last 6 months.
5. If you feel there is any additional information to support your claim, please include it as an attachment.

Your response is due on or before January 5, 2004. If you do not provide the necessary documentation to support your claim of financial inability, the Bureau will have no choice but to find you financially able to conduct the necessary environmental activities as required by regulation. If the Bureau determines you are financially unable to conduct the required activities, the decision will not relieve you of any liabilities associated with the UST system. Regardless of the outcome of this investigation, the Bureau is required under either federal or state guidelines to pursue recovery of any expenditure of either state or federal funds. Recovery procedures have been established and each case is reviewed on its merits. A fact sheet describing the Federal Leaking Underground Storage Tank Trust Fund is attached.

SCANNED

Docket #1

Mr. Thompson
Page 2

On all correspondence related to this site, please reference UST Permit #18856. Questions should be addressed to me at (803) 896-6647 or 1-800-826-5435 (within South Carolina only).

Sincerely,



Konstantine T. Akhvlediani, Hydrogeologist
Owner/Operator Support Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management

cc: Financial Verification Package
IRS Form 8821
UST Owner Operator Form
Federal Trust Fund fact sheet

cc: Technical File (w/o enc.)



**UNDERGROUND STORAGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT**

Phone (803) 896-6240

Fax (803) 896-6245

AUG 14 2003

2600 Bull Street
Columbia, SC 29201-1708

MR WAYNE THOMPSON
ROUTE 4 BOX 155-H
RIDGELAND SC 29936-8811

Re: Wayne Thompson, Route 4, Box 155H, Ridgeland, SC
UST Permit #18856, Cost Agreement #19828, MWA #UMW-16769
Release #1 Reported September 9, 2002
Initial Ground-Water Report received August 7, 2003
Jasper County

Dear Mr. Thompson:

The Underground Storage Tank (UST) Program of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the referenced Report. The report indicates concentration of chemicals of concern (CoC) in the groundwater. To determine what risk the release may pose to the environment and public health, and in accordance with Section 280.65 of the South Carolina Underground Storage Tank Control Regulations, implementation of the scope of work as outlined in the Tier I Assessment document is necessary. Since the above scope of work is detailed in the Tier I Assessment document, a separate plan is not required (please see <http://www.scdhec.net/ust/pubs/tierone.pdf>). **Please note that lead and EDB analyses are required for an UST system in operation prior to 1991. Additionally, water samples should be obtained for all groundwater wells within a 500-foot radius of the site. Please be advised that only EPA Method 8260B will be accepted for purgeable aromatics.**

Please note that detection limit for EDB has been changed and currently is 0.05 ug/l (micrograms per liter). Please adjust the detection limit in the current report.

If this release becomes qualified for funding through the State Underground Petroleum Environmental Response Bank (SUPERB) Act, eligible costs exceeding the \$25,000 deductible (according to Section 44-2-40 (D) of the SUPERB Act) can be compensated. As the owner/operator party, you are liable for the first \$25,000 of actual costs incurred for rehabilitation activities from your financial responsibility mechanism or other financial means. By law, the SUPERB Account cannot compensate any costs that are not pre-approved. To insure any expenditure you make does apply towards the deductible, the Department must pre-approve any such costs along with your technical plan of action.

To proceed with the qualification process for the SUPERB Act, the following information is required:

Written confirmation of the existence or nonexistence of an environmental insurance policy for this site. **The owner/operator party and a notary public must sign this information.** For your convenience, an insurance statement form has been enclosed. If an environmental insurance policy existed at the time of the release, a copy of the policy with all endorsements must be submitted with the insurance statement. **Please complete and return the enclosed Insurance Information Form within 14 days from the date of this letter.**

The Program has pre-approved a total of **\$9,880.00** for implementation of the Tier I Assessment. The total includes costs for completion of up to 75 feet of permanent monitoring well footage. Additional monitoring well footage can be billed at the SUPERB allowable rate of \$38 per foot provided that the cost is pre-approved by the Program. Upon receipt of a report of findings, and a completed Tier I invoice with all necessary supporting documentation, up to \$9,880.00 will be applied towards the \$25,000 deductible. The report and invoice should be submitted to the Program within 90 days of the date of this correspondence.

Please remember that, pursuant to Reg. 61-92, Subpart H, Section 280.114, you are required to notify the Program by certified mail within ten (10) days of commencing a voluntary or involuntary proceeding in bankruptcy. State law also requires that an owner, operator, or guarantor that files for bankruptcy protection must immediately submit the appropriate forms documenting that entity's ability to demonstrate financial responsibility.

Please note that the following changes have been made to the Risk Based Corrective Action (RBCA) Document (Effective May 15, 2001):

- **EDB Analysis must be performed by EPA Method 8011.**
 - **The minimum separation distance for conducting the soil leachability model (Appendix C) has been revised to eight feet.**
 - **The Risk Based Screening Levels (RBSLs) for soils have been revised.**
- Soil Vapor and Remediation by Natural Attenuation (RNA) Models are included in Appendix F of the May 2001 RBCA Document.**

All investigative derived waste must be properly stored in labeled containers or covered with plastic as appropriate. The Bureau grants pre-approval for the transportation of the investigative derived waste (virgin petroleum contaminated soil and groundwater) from the referenced site to a permitted facility. There can be no spillage or leakage in transport. A copy of the disposal manifest and approval letter from the receiving facility must be included as an appendix to the final report. If laboratory analysis of the investigation derived waste shows levels of petroleum contamination are below treatment levels, please contact the project manager for approval to dispose of the investigation derived waste on site. The SUPERB Account will not compensate for the transportation or treatment of clean soil and/or groundwater.

On all correspondence regarding this site and scope of work, please reference UST Permit #18856 and cost agreement #19828. If you have any questions concerning this correspondence, please contact me at (803) 896-6647 or 1-800-826-5435 (within South Carolina only).

Sincerely,



Konstantine T. Akhvlediani, Hydrogeologist
Owner/Operator Support Section
Assessment and Corrective Action Division

enc.: Monitoring Well Approval (MWA)
Approved Cost Agreement (ACA)
Insurance Statement Form

cc: Mr. Alex Amos, Katawba Environmental, Inc., P.O. Box 11228, Rock Hill, SC 29731 (w/ACA & original MWA)
Technical File (w/MWA & ACA)
Read File (w/o enc.)



Monitoring Well Installation Approval Form

2600 Bull Street
Columbia, SC 29201-1708

Date of Issue: November 18, 2002

Approval No.:UMW-16769

Approval is hereby granted to: Katawba Environmental, Inc.
(On behalf of): Mr. Wayne Thompson
UST Permit #: 18856
County: Jasper

This approval is for the construction of three Type II monitoring well(s) in accordance with the South Carolina Well Standards and Regulations. The well(s) are to be constructed within the shallow aquifer for the intended purpose of monitoring ground-water quality and/or water level(s) at the referenced facility. Approval is provided with the following conditions:

1. The latitude and longitude, surveyed elevations, boring and/or geologist logs and actual (as built) construction details for each well will be submitted with the technical report.
2. Each well will be labeled with an identification plate constructed of a durable material affixed to the casing or surface pad where it is readily visible. The plate will provide monitoring well I.D.#, date of construction, static water level, and driller name and state certification #.
3. Well construction and sampling derived waste including, but not necessarily limited to, drill cuttings, drilling fluids, development and purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regard to contents, source, and date of activity.
4. A minimum of forty-eight (48) hours prior to initiation of drilling activities, please provide notice to Konstantine Akhvlediani at (803) 896-6647 or akhvlekt@dhec.sc.gov
5. Please provide ground-water quality analytical data (chemical analysis and/or water level(s)) and associated measurements (i.e., in-situ field measurements) to me with the technical report.
6. Monitoring wells will be installed by or under the direct supervision of a licensed well driller certified by the State of South Carolina.
7. Monitoring wells will be abandoned, when no longer required, by or under the direct supervision of a licensed well driller certified by the State of South Carolina.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and the Department of Health and Environmental Control Regulations R.61-71. Please remember to have a copy of this approval on the site during well installation.

Approved by: *K. Akhvlediani*
Konstantine T. Akhvlediani, Hydrogeologist
Owner/Operator Support Section
Assessment and Corrective Action Division
UST Program

cc: Low Country EQC District
Technical File

Approved Cost Agreement 328

Facility: 18856 • WAYNE THOMPSON

AKHVLEKT

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
20 TIER I		TIER I	1.0000	9,880.00	9,880.00
			Total Amount		9,880.00



Katawba Environmental, Inc.

8/5/2003

Mr. Konstantine Akhvlediani
UST Program
SCDHEC
2600 Bull Street
Columbia, SC 29201-1708

RECEIVED

AUG 07 2003

Underground Storage
Tank Program

RE: WAYNE THOMPSON
16661 GRAY'S HWY
EARLY BRANCH, SOUTH CAROLINA
SITE ID #18856

Dear Mr. Akhvlediani:

Please find attached the Initial Groundwater Assessment for the above referenced site. It appears that further delineation of the contaminant plume will be required as attributed to laboratory data submitted to Katawba Environmental, Inc. by Shealy Environmental, Inc.

A groundwater sample was not collected from the drinking water well located at the subject site due to lack of power. In discussion with the owner, the power has been activated and the well will be sampled during the next assessment scope. Should you have any questions pertaining to this project do not hesitate to contact me at (803) 327-0469.

Sincerely,
KATAWBA ENVIRONMENTAL, INC.


Alex W. Amos, CEO

Cc: Mr. Jim Peurifoy, Cypress Bay Geological





Katawba Environmental, Inc.

INITIAL GROUNDWATER ASSESSMENT

WAYNE THOMPSON
PINE LEVEL COMMUNITY
16661 GRAY'S HIGHWAY
EARLY BRANCH, SC
UST SITE ID# 18856

AUGUST 2003

803-327-0469

P. O. Box 11228 • Rock Hill, South Carolina 29731



**INITIAL GROUND-WATER ASSESSMENT REPORT
DIVISION OF UNDERGROUND STORAGE TANK MANAGEMENT**

Facility Name: Wayne Thompson (Pine Level Community)

UST Permit Number: 18856

Address: 16661 Grays Highway, Early Branch, South Carolina

Phone Number: (843) 717-4285

Property Owner (if different than UST owner/operator): Wayne Thompson

Address: Route 4, Box 155H, Ridgeland, South Carolina, 29936-8811

Phone Number: (843) 717-4285

Contractor: Katawba Environmental, Inc. Cert. # 18

Address: P.O. Box 11228, Rock Hill, South Carolina, 29731

Phone Number: (803) 327-0469

Well Driller: Cypress Bay Geological

Address: 262 Geology Lane, Walterboro, South Carolina 29488

Phone Number: (843) 908-5050

Receptor and Site Data

Please place a check in the appropriate answer block for each question:

Receptor Survey Questions	No	Yes *
Is there a drinking water supply well (public or private) or surface water supply intake within 1000 feet of the UST?		X
Are irrigation or other non-drinking water wells located within 1000 feet of the UST?	X	
Are there other potential receptors (i.e., utilities, surface waters, wetlands, less than 500 feet from the UST)?		X

* If "yes" provide additional information:

A phone line is within 20 feet of the release. Approximately 5 drinking water wells are within 1000 feet of the

release.

RECEIVED

AUG 07 2003

Underground Storage
Tank Program

Were any water wells within 250-foot radius sampled? Yes No

Is a public water supply line in the area? Yes No

Is the current use of the site and surrounding properties commercial, residential, agricultural or industrial?

Site: Residential Adjacent Properties: Residential

See Appendix F for Chain of Custody Form and Laboratory Data.

Soil and Boring/Monitoring Well Data

Primary Soil Type: Clayey Sand

Well Installation Method and Date: Drill rig, 7/16/03

Development Method: Hand bailed

Soil Sample obtained at 4 feet.

SOIL ANALYTICAL DATA

Benzene (ug/kg)	Toluene (ug/kg)	Ethylbenzene (ug/kg)	Xylenes (ug/kg)	Naphthalene (ug/kg)
ND	ND	ND	16	7.7

Benzo(a)-anthracene (ug/kg)	Benzo(b)-Fluoranthene (ug/kg)	Benzo(k)-fluoranthene (ug/kg)	Chrysene (ug/kg)	Dibenz(a,h) Anthracene (ug/kg)
ND	ND	ND	ND	ND

Total PAH (ug/kg)	Lead (ug/kg)
ND	NA

* For waste oil UST releases only:

Total Chromium *	Mercury *	Selenium *	Silver *
(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
NA	NA	NA	NA

Arsenic *	Barium *	Cadmium *
(ug/kg)	(ug/kg)	(ug/kg)
NA	NA	NA

Ground-Water DataDepth to Ground Water: 4.68Well Purging/Sampling Method: Hand BailedDate Sampled: 7/17/03Free Product Thickness: None

Equilibrated values:

Temperature: 21.8 c pH: 6.16Dissolved Oxygen: .92 Specific Conductance: 387Soil/Water Disposal Method: Eagle**GROUND-WATER ANALYTICAL DATA**

Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)	Naphthalene (ug/l)
1700	10000	2200	14000	ND	ND

Benzo(a) anthracene (ug/l)	Benzo(b)-fluoranthene (ug/l)	Benzo(k)-fluoranthene (ug/l)	Chrysene (ug/l)	Dibenz(a,h) anthracene (ug/l)
ND	ND	ND	ND	ND

EDB (ug/L)	Total PAH (ug/L)	Lead (ug/L)
NA	490	71

* For waste oil UST releases.

Total Chromium * (ug/kg)	Mercury * (ug/kg)	Selenium * (kg/ug)	Silver (kg/ug)	Arsenic (ug/L)
NA	NA	NA	NA	NA

Barium * (ug/L)	Cadmium * (ug/L)
NA	NA

Appendices

The appendices required for this report are as follows:

Appendix A. Well Construction Log

Appendix B. Laboratory Data


Appendix C. Topographic map with site location marked

Appendix D. Site Base Map

Appendix E. Disposal Manifest(s)

Appendix F. Additional Data (Sampling Results of Existing Ground-Water Wells)

Appendix G. Invoice Form (SUPERB payment only)

Report Completed By:  Cert. # 18
(signature)Date: 8/6/03

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

Katawba Environmental, Inc.
PO Box 11228
Rock Hill, SC 29730
Attention: Alex Amos

Project Name: **Pine Level**

Project Number: **Pine Level**

Lot Number: **EG18042**

Date Completed: **07/31/2003**

Kelly M. Maberry
Project Manager

This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DEHNR No: 329

Case Narrative
Katawba Environmental, Inc.
Lot Number: EG18042

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative.

Sample receipt, sample analysis, and data review have been performed in accordance with Shealy's Quality Assurance Management Plan and Standard Operating Procedures. Any data qualifiers associated with sample analysis are footnoted on the analytical results page(s) or are discussed below.

GC/MS SVOCs

Surrogate for sample -002 (Run 2) is out of range due to sample dilution.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary Katawba Environmental, Inc. Lot Number: EG18042

<u>Sample Number</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>
001	MW-1	Solid	07/16/2003 0936
002	MW-1	Aqueous	07/17/2003 1618

(2 samples)

Volatile Organic Compounds by GC/MS

Client: **Katawba Environmental, Inc.**

Laboratory ID: **EG18042-001**

Description: **MW-1**

Matrix: **Solid**

Date Sampled: **07/16/2003 0936**

% Solids: **83.1** **07/20/2003 1345**

Date Received: **07/18/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5035	8260B	1	07/22/2003 2017	LH		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Benzene	71-43-2	8260B	ND		4.4	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.4	ug/kg	1
Naphthalene	91-20-3	8260B	7.7		4.4	ug/kg	1
Toluene	108-88-3	8260B	ND		4.4	ug/kg	1
Xylenes (total)	1330-20-7	8260B	16		4.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		75	53-142
Bromofluorobenzene		93	47-138
Toluene-d8		96	68-124

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Semivolatile Organic Compounds by GC/MS

Client: **Katawba Environmental, Inc.**

Laboratory ID: **EG18042-001**

Description: **MW-1**

Matrix: **Solid**

Date Sampled: **07/16/2003 0936**

% Solids: **83.1 07/20/2003 1345**

Date Received: **07/18/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550B	8270C	1	07/25/2003 2008	DC	07/23/2003 1129	11298

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270C	ND		390	ug/kg	1
Acenaphthylene	208-96-8	8270C	ND		390	ug/kg	1
Anthracene	120-12-7	8270C	ND		390	ug/kg	1
Benzo(a)anthracene	56-55-3	8270C	ND		390	ug/kg	1
Benzo(a)pyrene	50-32-8	8270C	ND		390	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270C	ND		390	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270C	ND		390	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270C	ND		390	ug/kg	1
Chrysene	218-01-9	8270C	ND		390	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270C	ND		390	ug/kg	1
Fluoranthene	206-44-0	8270C	ND		390	ug/kg	1
Fluorene	86-73-7	8270C	ND		390	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270C	ND		390	ug/kg	1
Naphthalene	91-20-3	8270C	ND		390	ug/kg	1
Phenanthrene	85-01-8	8270C	ND		390	ug/kg	1
Pyrene	129-00-0	8270C	ND		390	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		50	30-130
Nitrobenzene-d5		53	30-130
Terphenyl-d14		84	30-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: **Katawba Environmental, Inc.**

Laboratory ID: **EG18042-002**

Description: **MW-1**

Matrix: **Aqueous**

Date Sampled: **07/17/2003 1618**

Date Received: **07/18/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	200	07/25/2003 1939	RED		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Benzene	71-43-2	8260B	1700		1000	ug/L	1
Ethylbenzene	100-41-4	8260B	2200		1000	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1000	ug/L	1
Naphthalene	91-20-3	8260B	ND		1000	ug/L	1
Toluene	108-88-3	8260B	10000		1000	ug/L	1
Xylenes (total)	1330-20-7	8260B	14000		1000	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Semivolatile Organic Compounds by GC/MS

Client: **Katawba Environmental, Inc.**

Laboratory ID: **EG18042-002**

Description: **MW-1**

Matrix: **Aqueous**

Date Sampled: **07/17/2003 1618**

Date Received: **07/18/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270C	1	07/25/2003 2036	DC	07/22/2003 1540	11292
2	3520C	8270C	5	07/30/2003 1331	DC	07/22/2003 1540	11292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acenaphthene	83-32-9	8270C	ND		5.3	ug/L	1
Acenaphthylene	208-96-8	8270C	ND		5.3	ug/L	1
Anthracene	120-12-7	8270C	ND		5.3	ug/L	1
Benzo(a)anthracene	56-55-3	8270C	ND		5.3	ug/L	1
Benzo(a)pyrene	50-32-8	8270C	ND		5.3	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270C	ND		5.3	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270C	ND		5.3	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270C	ND		5.3	ug/L	1
Chrysene	218-01-9	8270C	ND		5.3	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270C	ND		5.3	ug/L	1
Fluoranthene	206-44-0	8270C	ND		5.3	ug/L	1
Fluorene	86-73-7	8270C	ND		5.3	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270C	ND		5.3	ug/L	1
Naphthalene	91-20-3	8270C	490		26	ug/L	2
Phenanthrene	85-01-8	8270C	ND		5.3	ug/L	1
Pyrene	129-00-0	8270C	ND		5.3	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
2-Fluorobiphenyl		80	30-130		92	30-130
Nitrobenzene-d5		101	30-130		142	30-130
Terphenyl-d14		65	30-130		87	30-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES

Client: **Katawba Environmental, Inc.**

Laboratory ID: **EG18042-002**

Description: **MW-1**

Matrix: **Aqueous**

Date Sampled: **07/17/2003 1618**

Date Received: **07/18/2003**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010B	1	07/24/2003 1822	FTS	07/21/2003 1250	11285

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Lead	7439-92-1	6010B	0.071		0.0030	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the PQL

J = Estimated result less than the PQL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

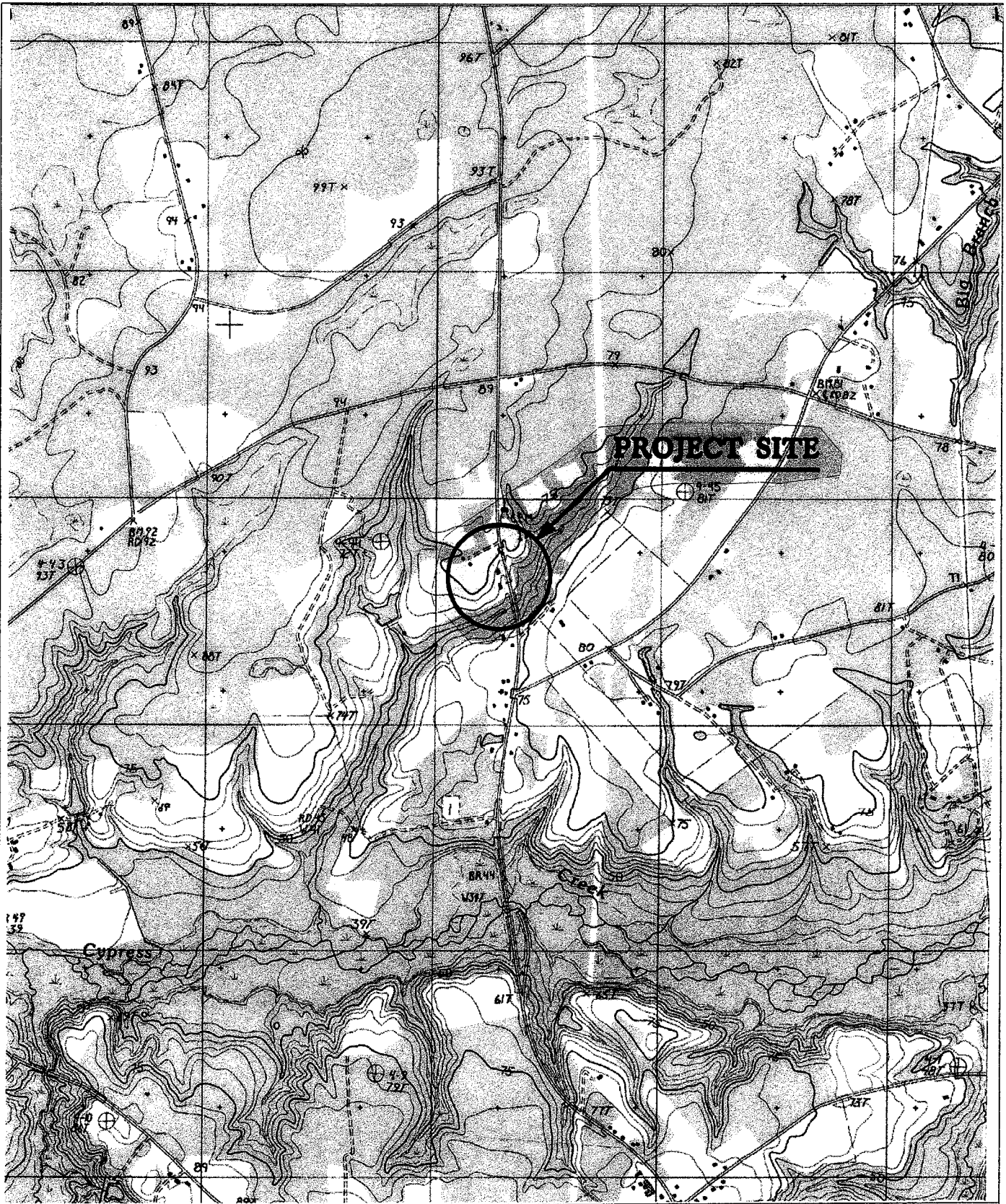
South Carolina Department of Health and Environmental Control
Bureau of Underground Storage Tank Management
Field Data Information Sheet for Ground Water Sampling

L. S. Taylor

Date (mm/dd/yy) _____		Well # <u>W-1</u>	
Field Personnel _____		Well Diameter(D) _____ inches or _____ feet	
General Weather Condition _____		conversion factor(C): 3.143*(D/2) ²	
Ambient Air Temperature _____ °C		for a 2 inch well C=0.163	
Facility Name _____ Site ID# _____		4 inch well C=0.652	
Quality Assurance:		Total Well Depth (TWD) <u>12</u> ft.	
pH Meter _____ Conductivity Meter _____		Depth to GW (DWG) <u>7.68</u> ft.	
serial no. _____ serial no. _____		Length of Water Column (LWC=TWD-DGW) <u>7.32</u> ft.	
pH=4.0 _____ Standard _____		1 Csg. Volume (LWC*C) = <u>7.32</u> x <u>.163</u> = <u>1.19</u> gals.	
pH=7.0 _____ Standard _____		3 Csg. Volumes = 3 x <u>1.19</u> = <u>3.57</u> gals. (Std. Purge Volume)	
pH=10.0 _____ Standard _____		Total Volume of Water Purged Before Sampling <u>4</u> gals.	
<u>Chain of Custody</u>			
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____

	Initial	1 st VOL.	2 nd VOL.	3 rd VOL.	4 th VOL.	5 th VOL.	Post	Sampling
Volume Purged (gallons)	0	15	3	4				
Time (military)	15:48	15:54	16:02	16:18				
pH (s.u.)	6.39	6.26	6.16	6.16				
Specific Cond. (umhos/cm)	96	426	368	387				
Water Temp (°C)	22.6	21.9	21.8	21.8				
Turbidity (*)								
OVA Readings								
Salinity								
Dissolved Oxygen	1.46	.65	.99	.92				

Remarks:



KATAWBA ENVIRONMENTAL, INC

PO BOX 11228
 ROCK HILL, SC 29731
 (803) 327-0469

UST
 ASBESTOS
 PHASE I

TITLE
 SITE LOCATION MAP

PROJECT

WAYNE THOMPSON
 16861 GRAYS HIGHWAY
 EARLY BRANCH, SC 29916
 UST SITE ID#18856

DRAWN BY:

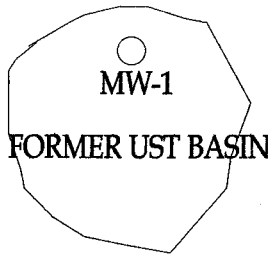
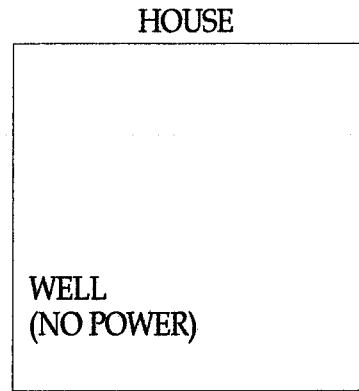
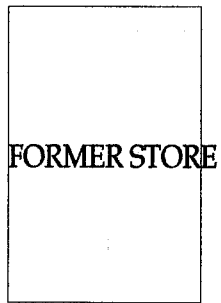
AA

DATE

7/30/03

DRAWING #

1

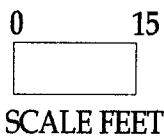


HOUSE WITH WELL 270 FT

HOUSE WITH WELL 300 FT

GRAY'S HIGHWAY

PHONE LINE



KATAWBA ENVIRONMENTAL, INC

PO BOX 11228
ROCK HILL, SC 29731
(803) 327-0469

UST
ASBESTOS
PHASE I

TITLE
SITE LOCATION MAP

PROJECT WAYNE THOMPSON
16861 GRAYS HIGHWAY
EARLY BRANCH, SC 29916
UST SITE ID#18856

DRAWN BY: AA

DATE 7/30/03

DRAWING# 2

Eagle Disposal, Inc.
*36 Clearwater Drive * PO Box 704*
Walterboro, SC 29488
*Phone (843)893-2580 * Fax (843)893-3328*

CERTIFICATE OF DISPOSAL

EAGLE DISPOSAL, INC.
HEREBY CERTIFIES THAT ALL MATERIALS DESCRIBED IN
MANIFEST/BILL OF LADING #03001
DATED :08-01-03
WERE DISPOSED OF IN COMPLIANCE WITH ALL
APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS
UNDER PERMIT #152630-2001
FOR:

Katawba Environmental, Inc.
Pine Level
PO Box 11228
Rock Hill, SC 29731

Patricia S Smith
EAGLE DISPOSAL, INC



**UNDERGROUND STORAGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT**

Phone (803) 896-6240 Fax (803) 896-6245

NOV 20 2002

2600 Bull Street
Columbia, SC 29201-1708

MR WAYNE THOMPSON
ROUTE 4 BOX 155-H
RIDGELAND SC 29936-8811

Re: Wayne Thompson, Route 4, Box 155H, Ridgeland, SC
UST Permit #18856, Cost Agreement #17727, MWA #UMW-16768
Release #1 Reported September 9, 2002
Assessment Report received September 9, 2002
Jasper County

Dear Mr. Thompson:

The Underground Storage Tank (UST) Program of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the referenced report. The report confirms a release of petroleum chemicals of concern at this site. To determine what risk the release may pose to the environment and public health, and in accordance with Section 280.65 of the South Carolina Underground Storage Tank Control Regulations, implementation of the scope of work as outlined in the Initial Groundwater Assessment (IGWA) document is required. Since the scope of work for the IGWA is detailed in the IGWA document, this work is pre-approved and a separate work plan is not required (please see <http://www.scdhec.net/ust/pubs/igwa2000.pdf>). The monitoring well should be placed in the immediate location of the S-2.

If this release becomes qualified for funding through the State Underground Petroleum Environmental Response Bank (SUPERB) Act, eligible costs exceeding the \$25,000 deductible (according to Section 44-2-40 (D) of the SUPERB Act) can be compensated. As the owner/operator party, you are liable for the first \$25,000 of actual costs incurred for rehabilitation activities from your financial responsibility mechanism or other financial means. By law, the SUPERB Account cannot compensate any costs that are not pre-approved. To insure any expenditure you make does apply towards the deductible, the Department must pre-approve any such costs along with your technical plan of action.

To proceed with the qualification process for the SUPERB Act, the following information is required:

- Written confirmation of the existence or nonexistence of an environmental insurance policy for this site. **The owner/operator party and a notary public must sign this information.** For your convenience, an insurance statement form has been enclosed. If an environmental insurance policy existed at the time of the release, a copy of the policy with all endorsements must be submitted with the insurance statement. **Please complete and return the enclosed Insurance Information Form within 14 days from the date of this letter.**
- **All rehabilitation activities associated with a UST release must be performed by a SCDHEC certified site rehabilitation contractor as required by R.61-98. Please complete and return the enclosed Owner/Operator Information Sheet within 14 days from the date of this letter.**

Please remember that, pursuant to Reg. 61-92, Subpart H, Section 280.114, you are required to notify the Program by certified mail within ten (10) days of commencing a voluntary or involuntary proceeding in bankruptcy. State law also requires that an owner, operator, or guarantor that files for bankruptcy protection must immediately submit the appropriate forms documenting that entity's ability to demonstrate financial responsibility.

Please note that the maximum approvable amount for the IGWA is **\$1,195.00** (the cost for the IGWA reflects additional cost for 8RCRA Metals analyses). Upon receipt of the signed IGWA Invoice, IGWA Report, and a copy of your canceled check (front and back) or a notarized statement from the contractor verifying payment for this work, up to **\$1,195.00** may be applied toward your deductible if the release is qualified to receive funding from the SUPERB Account. Cost agreement #17727 has been established to track the allowable costs associated with this IGWA. Please include the cost agreement number when submitting your invoice. **Should it be determined that the tanks at this facility were not in substantial compliance with the UST Regulations at the time of discovery and reporting of release, you will be denied SUPERB access for this release.**

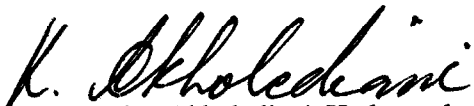
Please note that the following changes have been made to the Risk Based Corrective Action (RBCA) Document (Effective May 15, 2001):

- **EDB Analysis must be performed by EPA Method 8011.**
- **The minimum separation distance for conducting the soil leachability model (Appendix C) has been revised to eight feet.**
- **The Risk Based Screening Levels (RBSLs) for soils have been revised.**
- **Soil Vapor and Remediation by Natural Attenuation (RNA) Models are included in Appendix F of the May 2001 RBCA Document.**

Implementation of the IGWA should proceed upon receipt of this correspondence. The required monitoring well approval is enclosed. **The report should be submitted within 60 days from the date of this letter.** All investigative derived waste must be properly stored in labeled containers or covered with plastic as appropriate. The Bureau grants pre-approval for the transportation of the investigative derived waste (virgin petroleum contaminated soil and groundwater) from the referenced site to a permitted facility. There can be no spillage or leakage in transport. A copy of the disposal manifest and approval letter from the receiving facility must be included as an appendix to the final report. If laboratory analysis of the investigation derived waste shows levels of petroleum contamination are below treatment levels, please contact the project manager for approval to dispose of the investigation derived waste on site. The SUPERB Account will not compensate for the transportation or treatment of clean soil and/or groundwater. The Bureau reserves the authority to only apply costs to your deductible for work properly performed and/or technically justified in accordance with established criteria.

On all correspondence regarding this site and scope of work, please reference UST Permit #18856 and CA #17727. If you have any questions concerning this correspondence, please contact me at (803) 896-6647 or 1-800-826-5435 (within South Carolina only).

Sincerely,


Konstantine Akhvlediani, Hydrogeologist
Owner/Operator Support Section
Assessment and Corrective Action Division

Enc.: Monitoring Well Approval
Owner/ Operator Lead Information Sheet
Insurance Information Form

cc: Technical File (Copy of Monitoring Well Approval)
Read File (w/o enc.)



2600 Bull Street
Columbia, SC 29201-1708

Monitoring Well Installation Approval Form

Date of Issue: 11/18/02

Approval No.:UMW-16768

Approval is hereby granted to:
UST Permit #:
County:

Mr. Wayne Thompson
18856
Jasper

This approval is for the construction of one Type II well in accordance with the IGWA document. The well(s) are to be constructed within the shallow aquifer for the intended purpose of monitoring ground-water quality and/or water level(s) at the referenced facility. Approval is provided with the following conditions:

1. The latitude and longitude, surveyed elevations, boring and/or geologist logs and actual (as built) construction details for each well will be submitted with the technical report.
2. Each well will be labeled with an identification plate constructed of a durable material affixed to the casing or surface pad where it is readily visible. The plate will provide monitoring well I.D.#, date of construction, static water level, and driller name and state certification #.
3. Well construction and sampling derived waste including, but not necessarily limited to, drill cuttings, drilling fluids, development and purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regard to contents, source, and date of activity.
4. A minimum of forty-eight (48) hours prior to initiation of drilling activities, please provide notice to Konstantine Akhvlediani at (803) 896-6647 or akhvlekt@dhec.sc.gov
5. Please provide ground-water quality analytical data (chemical analysis and/or water level(s)) and associated measurements (i.e., in-situ field measurements) to me with the technical report.
6. Monitoring wells will be installed by or under the direct supervision of a licensed well driller certified by the State of South Carolina.
7. Monitoring wells will be abandoned, when no longer required, by or under the direct supervision of a licensed well driller certified by the State of South Carolina.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and the Department of Health and Environmental Control Regulations R.61-71. Please remember to have a copy of this approval on the site during well installation.

Approved by:

Konstantine Akhvlediani, Hydrogeologist
Owner/Operator Support Section
Assessment and Corrective Action Division
UST Program

cc: Low Country District EQC
Technical File

PROJECT TRANSFER CHECKLIST

Site Name/Full ID # Wayne Thompson

Release # 1 For UST # 001-002 Release Report Date 9/9/02

Free Product Reported? Yes / No Impacted Water Supply Well Reported? Yes / No

Receptor(s) within 1000 feet of UST system? (Well / Surface Water Body / Wetland / Other)

Worst Case Analysis / Sample #	Soil (mg/kg) / # <u>52</u>	Water (ug/l) / # _____
Benzene	<u><0.50</u>	_____
Toluene	<u>0.272</u>	_____
Ethylbenzene	<u>0.476</u>	_____
Xylenes	<u>5.83</u>	_____
Naphthalene	<u>2.18</u>	_____
Benzo(a)anthracene	<u><0.330</u>	_____
Benzo(b)flouranthene	<u><0.330</u>	_____
Benzo(k)flouranthene	<u><0.330</u>	_____
Chrysene	<u><0.330</u>	_____
Dibenz(a,h)anthracene	<u><0.330</u>	_____
MTBE (water only)	_____	_____
Other _____	_____	_____

REGULATORY INFORMATION

1. All USTs Registered? Yes / No / NA
2. Regulatory PM Hightocw
3. All Applicable Annual Fees Paid? Yes / No / NA
4. Financial responsibility Certification Received? Yes / No / NA Type _____
5. Site In Substantial Compliance? Yes / No / NA
6. Insurance Statement Received? Yes / No / NA Dated _____
7. UST Status (account for all USTs in database)

USTs Permanently Closed Date Closed 7/16/02

____ USTs CIU & Passed TT Date Tested _____

____ USTs TOU & Emptied Date Emptied _____

Site ID# 18856

Facility Name Wayne Thompson

Triage Date 9-9-02

Triaged By Beverly McLeod

Triage (Indicate type of submittal)

- CR
- AR
- SC
- RLS
- TST
- MWR
- T of O
- Other

Date reported to UST Program: 9-9-02

Project Manager Assigned: Hightower

Report Ranking

Release Report Classification

- A (Free Product, Sheen on GW)
- B (GW contamination >MCL)
- C (Soil contamination >RBSLs)
- D (Soil contamination <RBSLs)
- E (No contamination documented)
- F (Incomplete submittal)

- Free Product (Forward to C Hightower)
- TST Failure (tank/line/lld)
- SIR (Fail/2 months Inconclusive)
- Soil or GW Contamination

Tank System Status

System CIU or TOU (product in USTs)
 System ABD or TOU (USTs closed/USTs are empty)

Database Log-in/Change: Needs database change

Submittal (s) Logged-In By: Beverly McLeod

Database Changes Given To: _____

South Carolina Department of Health and Environmental Control (SCDHEC)
Underground Storage Tank (UST) Assessment Report

Date Received _____
 State (SC Only) _____

Submit Completed Form To:
 UST Program
 SCDHEC
 2600 Bull Street
 Columbia, South Carolina 29201
 Telephone (803) 896-6240

I. OWNERSHIP OF UST(S)

Owner Name (Corporation, Individual, Public Agency, Other) Wayne Thompson
 Mailing Address Rt. # Box 155-H
 City Ridgeland State SC Zip Code 29936
 Area Code 843 Telephone Number 717-4285 Contact Person Wayne Thompson

II. SITE IDENTIFICATION AND LOCATION

Permit I.D. # 18856
 Facility Name or Company Site Identifier WAYNE THOMPSON
 Street Address or State Road (as applicable) ~~18856~~ Hwy 278 West (GRAY'S ROAD)
 City Ridgeland, SC County Lasper
1.5 MILES WEST OF RIDGELAND, SC. ON HWY 278

III. CLOSURE INFORMATION

Closure Started 7-16-02 Closure Completed 7-16-02 (waiting for sample) Number of USTs Closed 2
 Consultant Online Environmental UST Removal Contractor Wayne Thompson (see Connie Anderson)

IV. CERTIFICATION (To be signed by the UST owner/operator.)

I certify that I have personally examined and am familiar with the information submitted in this and all attached documents; and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.
 Name (Type or print.) Wayne Thompson
 Signature Wayne Thompson 7-16-02

RECEIVED

SEP 09 2002

V. UST INFORMATION

- A. Product.....
- B. Capacity.....
- C. Age.....
- D. Construction Material.....
- E. Month/Year of Last Use.....
- F. Depth (ft.) To Base of Tank.....
- G. Spill Prevention Equipment Y/N.....
- H. Overfill Prevention Equipment Y/N.....
- I. Method of Closure Removed/ Filled.....
- J. Date Tanks Removed/ Filled.....
- K. Visible Corrosion or Pitting Y/N.....
- L. Visible Holes Y/N.....

Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
Gas	Gas				
1000	550				
20+	20+				
Steel	steel				
86'	86'				
10/81	10/81				
7/14/02	7/14/02				

M. Method of disposal for any USTs removed from the ground (attach disposal manifests)

SEE ATTACHED DISPOSAL MANIFESTS

N. Method of disposal for any liquid petroleum, sludges, or waste waters removed from the USTs (attach disposal manifests)

SEE ATTACHED DISPOSAL MANIFEST

O. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST

NONE

VI. PIPING INFORMATION

- A. Construction Material.....
- B. Distance from UST to Dispenser.....
- C. Number of Dispensers.....
- D. Type of System P/S.....
- E. Was Piping Removed from the Ground? Y/N
- F. Visible Corrosion or Pitting Y/N.....
- G. Visible Holes Y/N.....
- H. Age.....

Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
Alu.	Alu.				
75	75				
0	0				
?	?				
Y	Y				
N	N				
N	N				
20+	20+				

- I. If any corrosion, pitting, or holes were observed, describe the location and extent for each line.

NONE

VII. BRIEF SITE DESCRIPTION AND HISTORY (Connie Anderson (Rendered Non Usable))

SMALL ABANDONED BUILDING WITH
 TWO UST'S. (UST'S REMOVED)
 BUILDING REMOVED W.R.
 ONCE OPERATED AS COUNTRY STORE/
 GAS STATION.

VIII. SITE CONDITIONS

	Yes	No	Unk
<p>A. Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells?</p> <p>If yes, indicate depth and location on the site map.</p>		X	
<p>B. Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells?</p> <p>If yes, indicate location on site map and describe the odor (strong, mild, etc.)</p>		X	
<p>C. Was water present in the UST excavation, soil borings, or trenches?</p> <p>If yes, how far below land surface (indicate location and depth)?</p>		X	
<p>D. Did contaminated soils remain stockpiled on site after closure?</p> <p>If yes, indicate the stockpile location on the site map.</p> <p>Name of DHEC representative authorizing soil removal:</p>		X	
<p>E. Was a petroleum sheen or free product detected on any excavation or boring waters?</p> <p>If yes, indicate location and thickness.</p>		X	

IX. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 32571

B. *SEE ATTACHED LABORATORY REPORT*

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

* = Depth Below the Surrounding Land Surface

X.

SAMPLING METHODOLOGY

Provide a detailed description of the methods used to collect and store the samples. Also include the preservative used for each sample. Please use the space provided below.

SEE LAB REPORT

XI. RECEPTORS

	Yes	No
<p>A. Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?</p> <p>If yes, indicate type of receptor, distance, and direction on site map.</p>		X
<p>B. Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?</p> <p>If yes, indicate type of well, distance, and direction on site map.</p>		X
<p>C. Are there any underground structures (e.g., basements) Located within 100 feet of the UST system?</p> <p>If yes, indicate type of structure, distance, and direction on site map.</p>		X
<p>D. Are there any underground utilities (e.g., telephone, electricity, gas, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the contamination?</p> <p>If yes, indicate the type of utility, distance, and direction on the site map.</p>		X
<p>E. Has contaminated soil been identified at a depth less than 3 feet below land surface in an area that is not capped by asphalt or concrete?</p> <p>If yes, indicate the area of contaminated soil on the site map.</p>		X

SITE MAP

You must supply a scaled site map. It should include all buildings, road names, utilities, tank and dispenser island locations, labeled sample locations, extent of excavation, and any other pertinent information.

(Attach Site Map Here)

Will Provide If Absolutely NECESSARY!
would HAVE TO HAVE LAND SURVEYOR
TO DRAW THIS.

THANKS,
Wjpe Not

THE ONLY TAX PLAT MAP AVAILABLE TO
DATE IS HAND DRAWN AND WAS
RECORDED IN 1945.

THE GENERAL LOCATION OF THIS SITE
IS FIFTEEN MILES WEST OF RIDGELAND
IN THE GRAYS COMMUNITY. ~~GRAYS~~
(HWY 278) (GRAYS ROAD)
PARALLEL TO HWY 278 NEAR HIGHWAY
RIGHT-OF-WAY.

ANALYTICAL RESULTS

You must submit the laboratory report and chain-of-custody form for the samples. These samples must be analyzed by a South Carolina certified laboratory.

(Attach Certified Analytical Results and Chain-of-Custody Here)

Did You Remember to Include the Following?

- Permit ID Number**
- Sample Collection and Storage Methods**
- Preservative used in the sample containers**
- Scaled Site Map with ALL Requested Information**
- Laboratory Chain-of-Custody Form**
- Certified Analytical Results**
- Completed and Notarized Insurance Statement
(see attached form)**
- A Copy of Your Environmental Insurance Policy
(if applicable)**
- Samples from all Dispenser Islands and Piping Runs**
- Photographs (if available)**

**CERTIFIED LABORATORY
SCDHEC ID# 32571**

DATE: 08/09/2002

CLIENT: Wayne Thompson
Rt. 4 Box 155 H
Ridgeland SC 29936-----
ID#: 030197 Sample Name: TANK # 1 Sampled on 07/16/2002 at 1638 Received on 07/18/2002 at 1025

Parameter	Method#	Value	Units	Analyzed on/at/by
EPA 5035	5035	COMPLETE	see report	07/23/2002 0807 SKL

-----ID#: 030198 Sample Name: TANK # 1 Sampled on 07/16/2002 at 1638 Received on 07/18/2002 at 1025

Parameter	Method#	Value	Units	Analyzed on/at/by
BTEX-Napthalene	5035/82608	COMPLETE	see report	07/23/2002 0807 SKL

-----ID#: 030199 Sample Name: TANK # 1 Sampled on 07/16/2002 at 1638 Received on 07/18/2002 at 1025

Parameter	Method#	Value	Units	Analyzed on/at/by
EPA 8270	EPA 8270	COMPLETE	See Report	07/25/2002 1404 KMI

-----ID#: 030200 Sample Name: TANK # 2 Sampled on 07/16/2002 at 1646 Received on 07/18/2002 at 1025

Parameter	Method#	Value	Units	Analyzed on/at/by
EPA 5035	5035	COMPLETE	see report	07/22/2002 0810 SKL

-----ID#: 030201 Sample Name: TANK # 2 Sampled on 07/16/2002 at 1646 Received on 07/18/2002 at 1025

Parameter	Method#	Value	Units	Analyzed on/at/by
BTEX-Napthalene	5035/82608	COMPLETE	see report	07/22/2002 0810 SKL

-----ID#: 030202 Sample Name: TANK # 2 Sampled on 07/16/2002 at 1646 Received on 07/18/2002 at 1025

Parameter	Method#	Value	Units	Analyzed on/at/by
EPA 8270	EPA 8270	COMPLETE	See Report	07/25/2002 1446 KMI

Report Released by: _____

James D Collins for
James Matthews, Laboratory Director

WALTERBORO RECYCLING

Rt 5 Box 775 • Hwy 15 N.
Walterboro, S. C. 29488

Day Phone: 538-5038 • Night Phone: 538-3990

Open Monday - Friday 8:00 til 5:30

Saturday 8:00 til 1:00

Walterboro Recycling properly disposed

of 1-1000 gallon tank & 1-500 gallon tank

for Wayne Thompson from the

Gray, Hwy 278 site.

The tanks will be disposed of for salvage only at

Walterboro Recycling in Walterboro, S.C.

DATE

8-28-02

Walterboro Recycling

Mark DeWitt

Columbia Analytical Laboratories, Inc.

Laboratory Report

3005 Broad River Road Columbia, South Carolina 29210

Tel:(803) 561-0331 Fax:(803) 561-0536

DATE: August 06, 2002

LAB# : 020718-50

JOB# : 07436

REPORT OF: SOIL ANALYSIS
PROJECT: WAYNE THOMPSON

CLIENT: ON LINE ENVIRONMENTAL
MR. JIM MATTHEWS
200 RICH-LEX DR.
LEXINGTON SC 29072

Samples were logged in by Columbia Analytical Laboratories, Inc. on 07/18/02, at 03:47 pm, and were collected using proper protocol. Testing was conducted at the locations(s) enumerated at the end of this report.

ID	COLLECTED ON/AT	DESCRIPTION	PARAMETER	RESULTS	UNITS	ANALYZED ON/AT	LAB
A	07/16/02 at 16:38	TANK 1	BTEX /NAPHTHALENE(5035/8260B)	.			030197
			NAPHTHALENE (na,5)	<5000	ppb	07/23/02 08:07 SKL	PR
			BENZENE (na,5)	<5000	ppb	07/23/02 08:07 SKL	PR
			TOLUENE (na,5)	<5000	ppb	07/23/02 08:07 SKL	PR
			ETHYLBENZENE (na,5)	1460	ppb	07/23/02 09:47 SKL	PR
			o-XYLENE (na,5)	15700	ppb	07/23/02 09:47 SKL	PR
			p,m-XYLENE (na,5)	26700	ppb	07/23/02 09:47 SKL	PR
			MOISTURE CONTENT	12.6	%	07/26/02 14:43 DMO	PR
			(SURR) DIBROMOFUOROMETHANE	114.75	%	07/26/02 11:43 DMO	PR
			(SURR) BFB	97.6	%	07/26/02 14:43 DMO	PR
			(SURR) TOLUENE-d8	113.75	%	07/26/02 14:43 DMO	PR
			PAHS (EPA METHOD 8270)	.			030199
			PAHS EXTRACTION DATE/TIME	071902	0115	07/25/02 14:04 KMIL	S3
			ACENAPHTHYLENE	<330	ppb	07/25/02 14:04 KMIL	S3
			ACENAPHTHENE	<330	ppb	07/25/02 14:04 KMIL	S3
			FLUORENE	<330	ppb	07/25/02 14:04 KMIL	S3
			ANTHRACENE	<330	ppb	07/25/02 14:04 KMIL	S3
			FLUORANTHENE	<330	ppb	07/25/02 14:04 KMIL	S3
			PYRENE	<330	ppb	07/25/02 14:04 KMIL	S3
			CHRYSENE	<330	ppb	07/25/02 14:04 KMIL	S3
			BENZO(A) ANTHRACENE	<330	ppb	07/25/02 14:04 KMIL	S3
			BENZO(B,K)FLUORANTHENE	<660	ppb	07/25/02 14:04 KMIL	S3
			BENZO(A) PYRENE	<330	ppb	07/25/02 14:04 KMIL	S3
			INDENO(1,2,3-CD) PYRENE	<330	ppb	07/25/02 14:04 KMIL	S3
			DIBENZO(A,H) ANTHRACENE	<330	ppb	07/25/02 14:04 KMIL	S3
			BENZO(GHI) PERYLENE	<330	ppb	07/25/02 14:04 KMIL	S3
			PHENANTHRENE	<330	ppb	07/25/02 14:04 KMIL	S3
			NAPHTHALENE	4460	ppb	07/25/02 14:04 KMIL	S3
			(SURR) 2-FLUOROBIPHENYL	49	%	07/25/02 14:04 KMIL	S3
			(SURR) NITROBENZENE-d5	44	%	07/25/02 14:04 KMIL	S3
			(SURR) p-TERPHENYL-d14	47	%	07/25/02 14:04 KMIL	S3
			B	07/16/02 at 16:46	TANK 2	BTEX /NAPHTHALENE(5035/8260B)	.
NAPHTHALENE (na,5)	2180	ppb				07/22/02 08:10 SKL	PR
BENZENE (na,5)	<500	ppb				07/22/02 08:10 SKL	PR
TOLUENE (na,5)	272	ppb				07/22/02 09:48 SKL	PR
ETHYLBENZENE (na,5)	496	ppb				07/22/02 09:48 SKL	PR

This report is continued on the next page....

--- An Equal Opportunity Employer ---

Spectrophotometry

Chromatography

Microbiology

Computer Modeling

Environmental Evaluations

Continuation of report of SOIL ANALYSIS

ID	COLLECTED ON/AT	DESCRIPTION	PARAMETER	RESULTS	UNITS	ANALYZED ON/AT	LAB
			o-XYLENE (na,5)	1910	ppb	07/22/02 09:48 SKL	PR
			p,m-XYLENE (na,5)	3920	ppb	07/22/02 09:48 SKL	PR
			MOISTURE CONTENT	17.2	%	07/26/02 14:43 DMO	PR
			(SURR) DIBROMOFLUOROMETHANE	94.5	%	07/26/02 14:43 SKL	PR
			(SURR) BFB	1022	%	07/26/02 14:43 DMO	PR
			(SURR) TOLUENE-d8	97.5	%	07/26/02 14:43 DMO	PR
			PAHS (EPA METHOD 8270)	.			030202
			PAHS EXTRACTION DATE/TIME	071902	0115	07/25/02 14:46 KMIL	S3
			ACENAPHTHYLENE	<330	ppb	07/25/02 14:46 KMIL	S3
			ACENAPHTHENE	<330	ppb	07/25/02 14:46 KMIL	S3
			FLUORENE	<330	ppb	07/25/02 14:46 KMIL	S3
			ANTHRACENE	<330	ppb	07/25/02 14:46 KMIL	S3
			FLUORANTHENE	<330	ppb	07/25/02 14:46 KMIL	S3
			PYRENE	<330	ppb	07/25/02 14:46 KMIL	S3
			CHRYSENE	<330	ppb	07/25/02 14:46 KMIL	S3
			BENZO(A) ANTHRACENE	<330	ppb	07/25/02 14:46 KMIL	S3
			BENZO(B,K)FLUORANTHENE	<660	ppb	07/25/02 14:46 KMIL	S3
			BENZO(A) PYRENE	<330	ppb	07/25/02 14:46 KMIL	S3
			INDENO(1,2,3-CD) PYRENE	<330	ppb	07/25/02 14:46 KMIL	S3
			DIBENZO(A,H) ANTHRACENE	<330	ppb	07/25/02 14:46 KMIL	S3
			BENZO(GHI) PERYLENE	<330	ppb	07/25/02 14:46 KMIL	S3
			PHENANTHRENE	<330	ppb	07/25/02 14:46 KMIL	S3
			NAPHTHALENE	3960	ppb	07/25/02 14:46 KMIL	S3
			(SURR) 2-FLUOROBIPHENYL	52	%	07/25/02 14:46 KMIL	S3
			(SURR) NITROBENZENE-d5	47	%	07/25/02 14:46 KMIL	S3
			(SURR) p-TERPHENYL-d14	53	%	07/25/02 14:46 KMIL	S3

ID LABORATORY TEST LOCATION NUMBER ID LABORATORY TEST LOCATION NUMBER
 PR = SC Lab. Certification No. 96023 S3 = Columbia- semi-VOCS 40001

Respectfully submitted,
 Columbia Analytical Laboratories, Inc.

C. Greg Mullinax
 C. Greg Mullinax
 Project Director

CC: Fax report.

CHAIN-OF-CUSTODY / SAMPLE COLLECTION / ANALYSIS REQUEST FORM

COC# 250

JOB#

ClientName On Line Environmental

ReportTo Mr. Jim Matthews

Address 200 Rich-Lex Dr.

City St Zip Lexington, SC 29072

Contact Mr. Jim Matthews

Phone / Fax 803-939-4983 / 4984

ProjectName

InvoiceTo Same as report to

Address

City St Zip

Contact

Phone / Fax

Sampler Signature

John Matthews

Sample Site:

FAX Report (circle): YES NO

DATE TIME

TYPE PROGRAM AREA

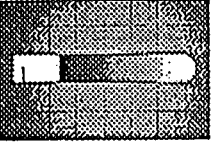
MATRIX

of BOTTLES

SAMPLED RECEIVED

Project Manager

REQUESTED TEST(S)



Columbia Analytical Laboratories, Inc.

3005 Broad River Road
Columbia SC 29210

Bus: 803-561-0331 Fax: 803-561-0536
www.columbiaanalytical.com

CAL SCDHEC #40001

020718-50

A ↓ B ↓

Sample ID#	FAX Report (circle): YES NO	DATE	TIME	TYPE	PROGRAM AREA	MATRIX	# of BOTTLES		REQUESTED TEST(S)
							SAMPLED	RECEIVED	
030199		7-16-02	16:38	G	S	O	2	2	EPA 5035
98							1	1	BTEX-NAPH
99							1	1	8270 (PAH)
200			16:46				2	2	EPA 5035
01							1	1	BTEX-NAPH
102							1	1	8270 (PAH)

Comp Sample ID#	DATE/TIME ON:	DATE/TIME OFF:	TYPE KEY:	MATRIX KEY:	PROGRAM AREA KEY:
			C-Composite G-Grab (P)-Plastic (G)-Glass	G-Gas L-Liquid D-Semi-solid S-Solid	N-NPDES S-SWDA R-RCRA I-Industrial Pretreatment O-Other

# of Containers Preserved with:	H2SO4	HNO3	HCl	NaOH	NaOH/ZnOAc	4 Deg. C
Received on ICE? (circle) YES NO	OG(G)	Metals(P)	TPO4(P)	VOG(G)	SO4(P)	G(P)
	NH4(P)	TKN(P)	Phenol(G)			BNA(G)
						FCIC(G) (Contains Sodium Thiosulfate)

Relinquished by:	DATE/TIME:	Received by:	DATE/TIME:	Comments:
<i>John Matthews</i>	7-18-02	<i>[Signature]</i>	7-18-02 1255	
Relinquished by:	DATE/TIME:	Received by:	DATE/TIME:	

Relinquished by:	DATE/TIME:	Received by:	DATE/TIME:
<i>[Signature]</i>	7-18-02	<i>[Signature]</i>	7-18-02 1:37 PM

ON LINE ENVIRONMENTAL, INC Chain of Custody Record

SCDHEC LAB ID# 36005/25003

Client: Boyd Thompson Attn: _____
 Address: Box 155 H Phone: 843-717-4885
 City, State, Zip: Ridge land SC 29936 Fax: _____

Prog. Area	Sample ID#	Sample Name	Date/Time of Sample	Sample Type	Preservative	# Bot	Parameter
✓	030197	Tank #1	7-16-02 16:38	G	Na ₂ SO ₄	2	5035
✓	198	Tank #2	↓ ↓ ↓	↓	±4°C	1	HIGH LEVEL BTEX-NAPH
✓	199	Tank #1	↓ ↓ ↓	↓	±4°C	1	8270 (PAH)

Samplers Signature: John Supter

Auto Sampler Data
 Date/Time Set On: _____
 by whom: _____
 Date/Time Off: _____
 by whom: _____
 Meter Reading After: _____
 Meter Reading Before: _____
 Difference: _____
 X _____ (factor): _____

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time

Received in lab by: John Supter Date: 7-18-02 Time: 10:25

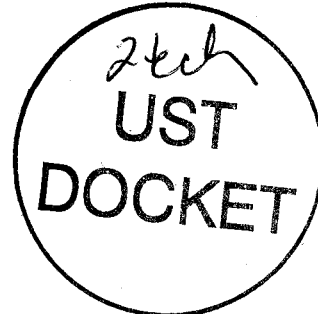


C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment

RENEE SPENCER
PACE ANALYTICAL SERVICES
9800 KINCEY AVE STE 100
HUNTERSVILLE NC 28078

APR 28 2011



Re: Laboratory Analyses Approval
Bid # IFB-33871-05/29/08-EMW, PO #4500011309

Dear Ms. Spencer:

Under the terms and conditions of the referenced bid package, analytical sampling has been approved for the referenced facilities. The facilities have been assigned individual Cost Agreement (CA) numbers as listed below. Please reference the CA number and Purchase Order #4500011309 on the appropriate invoice submitted for payment against the facility. SCDHEC personnel will perform the sampling.

UST Permit #	Facility	Analyses-Groundwater	CA #	Bottles (Y/N)
01502	Stall Road Mart	1-BTEXMN, DCA, & EDB	41545	N
01769	SCDOT	3-BTEXMN, DCA, EDB, & Lead	36834	N
12157	Hot Spot 4004	1-BTEXMN	36596	N
14317	Former Gulf Station	3-BTEXMN, DCA, EDB, & Lead	37066	N
17671	Lakeland Gas	2-BTEXMN	41520	N
18140	Lenora Dunifer	76-BTEXMN, DCA, & EDB	41530	N
19328	Phillips Rental	3-BTEXMN, DCA, EDB, & Oxygenates	41472	N
05443	General Store	8-BTEXMN, DCA, EDB, Oxygenates, & Lead	41258	N
18856	Steady Simons	4-BTEXMN, DCA, EDB & Lead	37968	N

If you have any questions or need further assistance, please contact me at (803) 896-6397 or thomadl@dhec.sc.gov.

Sincerely,

Debra L. Thoma, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

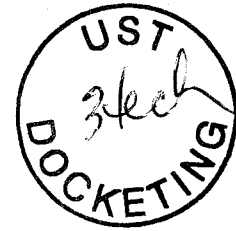
Enc: Approved Cost Agreements

cc: Technical Files (w/o enc.)



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.



SEP 13 2011

BRYAN SHANE
 MIDLANDS ENVIRONMENTAL CONSULTANTS INC
 PO BOX 854
 LEXINGTON SC 29071

Re: QAPP Contractor Addendum Directive for Small Scope Contract
 Solicitation # 5400003229; PO# 4600117789

Dear Mr. Shane:

Based on the award of the referenced bid package, enclosed are the information packets to conduct assessments at several facilities. Please submit the Site-specific Quality Assurance Project Plan for an IGWA, Tier I or Assessment Plan, and Assessment Component Cost Agreement as necessary, to my attention **within fifteen (15) days from the date of this correspondence**. Plan implementation shall not commence prior to receipt of written technical and financial approval from the Department. The facilities will be assigned a Cost Agreement (CA) numbers once the QAPP Contractor Addendum has been approved by the project manager. Please reference the CA numbers and Purchase Order # 4600117789 on the appropriate invoices submitted for payment. As specified in the referenced bid, **the completed invoice forms and associated reports (include contract certification number) are expected on or before the designated due date (see below) after the technical and cost approval from the project manager.**

UST Permit #	Facility	ARRA	County	Project Manager	Work Scope	Due Date*
08424	Max Brian	No	Spartanburg	Milenkova	Well Installation	60 Days
19547	Former American Oil	Yes	Florence	Smith	Tier I	60 Days
06277	Cooke's General Store	No	Marion	McCormick	Well Installation	60 Days
18140	Lenora Dunifer Well Contamination	Yes	Chester	Smith	Monitoring Well Installation	60 Days
18856	Steady Simmons	Yes	Jasper	Smith	Tier I	60 Days

*From receipt of Notice to Proceed letter

Mr. Shane

Page 2

Midland's Environmental Consultants, Inc. will perform services at the sites on behalf of the site's UST owners; however, payments will be made from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. The site's UST owners have no obligation for payment for this scope of work. **Please note, if there are any changes in the established cost agreement amounts (e.g., additional water supply wells sampled, additional well footage, etc.) contact the site's project manager for technical and/or financial approval. Failure to do so prior to submittal of invoice may result in delay of payment.**

IGWA, Tier I or Assessment Plan, Implementation and Report submittal shall be performed in accordance with the referenced contract. Per Section 3.4.2., a late fee of \$50.00/day (not to exceed 20% of the cost agreement total) may be levied for each report submitted after the deadline established in the Notice to Proceed.

Under the terms of the American Recovery and Reinvestment Act (ARRA), the Department is required to pay funds for rehabilitation activities on or before September 31, 2012.

Please provide this office with a schedule of drilling dates and coordinate all work with me before commencing work at the facility. In accordance with the bid specification, a bi-monthly status report of the project should be provided by the 5th and 20th of each month via e-mail to my attention. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. If you have any questions or need further assistance, please contact me at (803) 8966629.

Sincerely,



Andrew McCormick, Hydrogeologist

Assessment Section

Underground Storage Tank Management Division

Bureau of Land and Waste Management

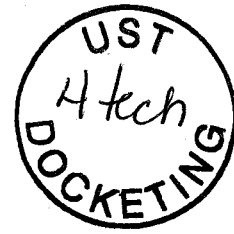
Enc: Information Packets (08424, 19547, 06277, 18140 and 18856)

cc: Andrew McCormick, UST Management Division (without enc)
Technical Files (08424, 19547, 06277, 18140 and 18856) with enc.



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.



MR WAYNE THOMPSON
16657 GRAYS HIGHWAY
EARLY BRANCH SC 29916-8016

SEP 16 2011

Re: Request for Property Access
Steady Simmons, 16661 Grays Highway, Early Branch, SC
UST Permit # 18856
Access to your property located at 16661 Grays Highway, Early Branch, SC
Tax Map # 052-00-05-027
Jasper County

Dear Mr. Thompson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (SCDHEC) is conducting work to assess a gasoline release reported at the Steady Simmons facility. Midlands Environmental Consultants, Incorporated will be conducting an environmental assessment and requires access to your property in order to install field screening points and four monitoring wells. You will be contacted regarding the location of the monitoring wells and all efforts will be made to locate the wells near the perimeter of your property or other areas that are suitable to you. This work will be conducted at no cost to you or a future land owner.

The monitoring wells will be constructed in accordance with the South Carolina Well Standards and Regulations. They will be completed at grade and will have a small diameter manhole cover and concrete pad. They will not interfere with normal usage of your property. The screening points will be installed by a Geoprobe™ drill and will be used to sample soil and groundwater. They will be properly abandoned upon completion, and no permanent effects will remain on your property.

Please sign the enclosed SCDHEC right of entry form and return it to my attention within fifteen days of the date you received this letter. Thank you for your consideration. If you have any questions, please contact me by phone at (803) 896-6218, by fax at (803) 896-6245, or by email at smitha2@dhec.sc.gov.

Sincerely,

Alexander Smith, Hydrogeologist
Assessment Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Right of Entry Form
Site Map

cc: Technical File (with enc.)

Please Return to Alexander Smith
Assessment Section UST Management Division,
2600 Bull Street,
Columbia, SC 29201

RIGHT OF ENTRY
Tax Map # 052-00-05-027

I, _____ certify that I am the legal owner or the authorized representative for _____ (owner) of the property described below. I have witnessed the planned locations / have been provided a sketch map indicating the location(s) of the work to be performed. Permission is hereby granted to the South Carolina Department of Health and Environmental Control (SCDHEC) and its agents to enter the referenced property for the following purposes:

Name of Facility (if appropriate) : _____ Steady Simmons

Street Address : _____ 16661 Grays Highway

City, State, : _____ Early Branch, SC

- 1) Drilling of screening points. The work will be properly abandoned upon completion, and no permanent effects shall remain on site.
- 2) Installation of monitoring/ recovery wells. I understand that these wells will remain on the property until cleanup is complete. Additionally, SCDHEC or its agents will access the property at reasonable times for measurement and/or collection of samples. The monitoring wells will be properly abandoned upon completion of remediation activities.

NAME (Please print) : _____

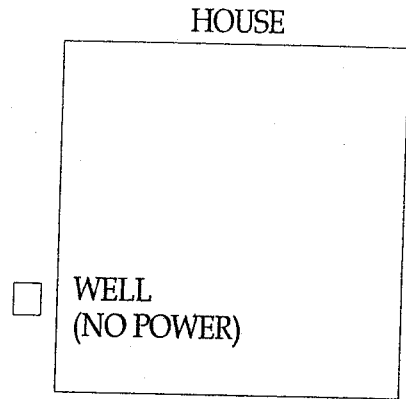
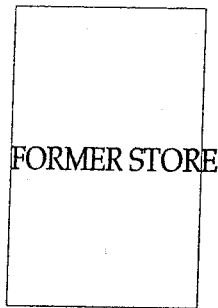
SIGNATURE : _____

WITNESS : _____

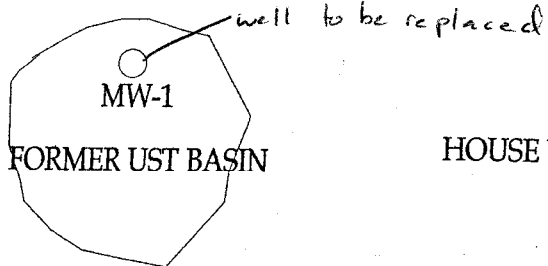
DATE : _____ Mo _____ Day _____ Year

Reference UST Permit # 18856

⊕ — Approximate location
for well



Approximate
location for wells



HOUSE WITH WELL 270 FT

HOUSE WITH WELL 300 FT



GRAY'S HIGHWAY

PHONE LINE

0 15



SCALE FEET



KATAWBA ENVIRONMENTAL, INC

PO BOX 11228
ROCK HILL, SC 29731
(803) 327-0469

UST
ASBESTOS
PHASE I

TITLE
SITE LOCATION MAP

PROJECT

WAYNE THOMPSON
16661 GRAYS HIGHWAY
EARLY BRANCH, SC 29916
UST SITE ID#18856

DRAWN BY:

AA

DATE

7/30/03

DRAWING#

2

 **Midlands
Environmental
Consultants, Inc.**

October 10, 2011

Mr. Alex Smith, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: QAPP Contractor Addendum – Revision 1
Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID Number 18856
MECI Project Number 11-3586
Certified Site Rehabilitation Contractor UCC-0009




Dear Mr. Smith,


Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached QAPP Contractor Addendum for the referenced site.

On September 19, 2011, MECI personnel performed a site visit to the subject site to evaluate site conditions, attempt to locate monitoring wells and identify potential problems for future assessment activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
Midlands Environmental Consultants, Inc.


Jeff L. Coleman
Senior Scientist


Brendon P. Kelly
Project Scientist

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For
Steady Simmons, SCDHEC Site ID# 18856


16661 Grays Highway, Early Branch, South Carolina

Prepared by:
Jeff L. Coleman
Senior Scientist
Midlands Environmental Consultants, Inc.
(Certified Site Rehabilitation Contractor UCC-0009)
235-B Dooley Road
Lexington, SC 29073
(803)808-2043

Date: October 10, 2011

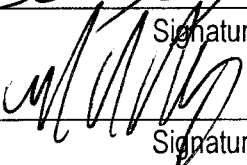
Approvals

Alex Smith
SC DHEC Project Manager



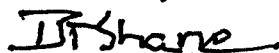
Signature Date 10/14/11

Brendon P. Kelly
Contractor QA Manager



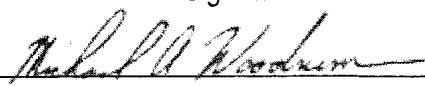
Signature Date 10/10/11

Bryan T. Shane, P.G.
Site Rehabilitation Contractor



Signature Date 10-10-11

Michael Woodrum
Laboratory Director



Signature Date 10/10/2011

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A3 Distribution List

Name	Title	Organization/Address	Telephone Number	Fax Number	Email Address
Alex Smith	SC DHEC Technical Project Manager	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6218	803-896-6245	smitha2@dhec.sc.gov
Bryan T. Shane	Site Rehabilitation Contractor	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	bts@meci.net
Brendon P. Kelly	Quality Assurance Officer	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	bpk@meci.net
Jeff L. Coleman	Field Manager	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	jlc@meci.net
Michael Woodrum	Laboratory Director	Shealy Environmental Services, Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791-9700	803-791-9111	mwoodrum@shealylab.com
Stephen Hahn	Schnabel Project Manager	Schnabel Engineering 104 Corporate Blvd, Suite 420 West Columbia, SC 29169	803-796-6240	803-796-6250	shahn@schnabel-eng.com
Mickey Edwards	Schnabel Soil Laboratory Manager	Schnabel Engineering 104 Corporate Blvd, Suite 420 West Columbia, SC 29169	803-796-6240	803-796-6250	medwards@schnabel-eng.com
Tommy Bolyard	Well Services/Driller	Environmental Probing and Drilling Services 17538 Greenhill Road Charlotte, NC 28278	704-607-7529	803-548-2233	EDPS@comporium.net

Table 1A Addendum Distribution List

A4 Project Organization

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephone Number	Fax Number	Email Address
Project Manager	Alex Smith	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6218	803-896-6245	smitha2@dhec.sc.gov
Site Rehabilitation Contractor	Bryan T. Shane	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	bts@meci.net
Quality Assurance Officer	Brendon P. Kelly	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	bpk@meci.net

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephone Number	Fax Number	Email Address
Field Manager	Jeff L. Coleman	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	jlc@meci.net
Analytical Laboratory Director	Michael Woodrum	Shealy Environmental Services, Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791-9700	803-791-9111	mwoodrum@shealylab.com
Soil Laboratory Manager	Mickey Edwards	Schnabel Engineering 104 Corporate Blvd, Suite 420 West Columbia, SC 29169	803-796-6240	803-796-6250	medwards@schnabel-eng.com
Soil Boring and Monitoring Well Driller	Tommy Bolyard	Environmental Probing and Drilling Services 17538 Greenhill Road Charlotte, NC 28278	704-607-7529	803-548-2233	EDPS@comporium.net
Project Verifier	Courtney M. Sanders or Brendon P. Kelly	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	cms@meci.net

Table 2A Addendum Role Identification and Contact Information

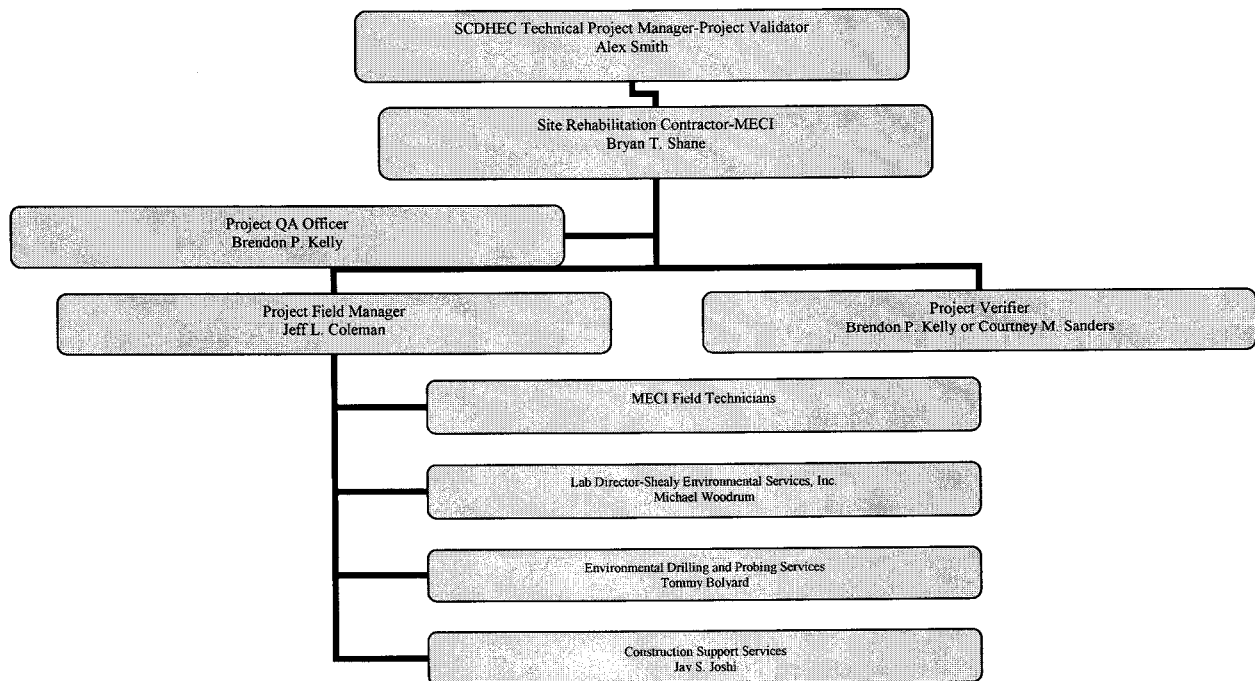


Figure 1A Organizational Chart

A5 Problem Definition/Background

Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed.

The subject site (Steady Simmons) is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The subject site formally maintained one 550 gallon gasoline underground storage tank (UST) and one 1,000 gallon gasoline UST. These UST's were abandoned by removal from the ground in July of 2002. A release of petroleum product from these UST's was reported in September of 2002 and confirmed in October of 2002. The subject site is currently rated a Class 2BB.

The site is being assessed in conjunction with the SCDHEC Small Scope Assessment Contract (Solicitation # IFB-5400003229, PO# 4600117789).

Please answer the following: Does this project fall under UST or Brownfields area?

Underground Storage Tank Division

A6 Project/Task Description

- 1. Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).**

The scope of this assessment will be to conduct a Tier I Assessment and to replace MW-1.

Following the well installation, a comprehensive survey will be conducted by Construction Support Services of Columbia, SC (Jay S. Joshi-PLS#14811) to locate the vertical and horizontal positions of the newly installed wells. The monitoring wells installed in conjunction with the Tier I Assessment will be sampled accordingly to SCDHEC guidelines set forth by Quality Assurance Program Plan For the Underground Storage Tank Management Division (June, 2011). The replacement monitoring well for MW-1 will be sampled and analyzed for BTEX, Naphth, MTBE, 1,2 DCA (EPA Method 8260B), Total Lead (EPA Method 6010), and EDB (EPA Method 8011). All water supply wells located within 500' feet of the subject site will be sampled and analyzed for BTEX, Naphth, MTBE, 1,2 DCA (EPA Method 8260B), and EDB (EPA Method 8011).

- 2. The work will begin within fourteen (14) days of receipt of approved QAPP contractors addendum after cost approval and the scope of work should be complete by sixty (60) days of receipt of approved QAPP contractors addendum.**
- 3. Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.**

Factors that may prevent schedule work will be, but not limited to, inclement weather, equipment malfunction, and machine failure.

A7 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

The subject site is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The site is located on a parcel which contains an abandoned building and a residence

The proposed work will be conducted on the property of 16661 Grays Highway.

A8 Training and Certificates

Required training and licenses:

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Principal Geologist	Bryan T. Shane, P.G.	Professional Geologist	10/30/1993	State of South Carolina	1102
Senior Scientist	Jeff Coleman	OSHA 40 hr HAZWOPER	7/27/2007	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	7/27/2011	N/A	N/A
Project Scientist	Brendon Kelly	OSHA 40 hr HAZWOPER	8/21/2009	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	12/14/2010	N/A	N/A
Staff Geologist	John Bryant	OSHA 40 hr HAZWOPER	4/17/2009	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	12/14/2010	N/A	N/A
Field Technician	Brian Owen	OSHA 40 hr HAZWOPER	8/21/2009	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	12/14/2010	N/A	N/A
Staff Biologist	Courtney Sanders	OSHA 40 hr HAZWOPER	12/10/2010	N/A	N/A
Staff Biologist	Kyle Pudney	OSHA 40 hr HAZWOPER	12/10/2010	N/A	N/A
Staff Biologist	Chris Lashley	OSHA 40 hr HAZWOPER	12/10/2010	N/A	N/A
Staff Biologist	Gavin Globensky	OSHA 40 hr HAZWOPER	7/29/2011	N/A	N/A
Staff Biologist	Ryan Ariail	OSHA 40 hr HAZWOPER	9/23/2011	N/A	N/A
Lab Manager	Michael Woodrum	***	***	Lab Certification	SC 32010
Surveying Services	Jay S. Joshi	Tier A Land Surveyor Certification	6/1/1992	PLS	14811
Drilling	Tommy Bolyard -	SC Drillers	8/24/2004	B	01846

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Services	EDPS	Certification			

Table 3A Required Training and Licenses

Brendon P. Kelly of Midlands Environmental Consultants, Inc. is responsible to ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location: 235-B Dooley Road, Lexington, SC 29073.

It is understood that training records will be produced if requested by SC DHEC.

The Following Laboratory(ies) will be used for this Project:

Commercial Lab(s)

Full Name of the Laboratory Shealy Environmental Services, Inc.
 Name of Lab Director Michael Woodrum
 SC DHEC Certification Number 32010
 Parameters this Lab will analyze for this project:

Samples Collected for Soil Test Borings and Groundwater Monitoring Wells constructed in conjunction with the Tier I Assessment will be analyzed for the following parameters:

SOILS

GROUNDWATER

Source Borings & Downgradient Well
 -BTEX, Naphth, MTBE (5035/8260B)
 -PAH's (8270D)
 -Total Lead (6010B)

-BTEX, Naphth, MTBE (8260B)
 -1,2 DCA (8260B)
 -EDB (8011)
 -Total Lead (6010B)
 -Filtered Lead (6010B)
 -PAH's (8270D)

Highest PID Boring
 -TPH-DRO (8015B)

Background Boring
 -TOC (Walkley-Black)

As requested by SCDHEC, the replacement well for MW-1 (MW-1R) will be analyzed for BTEX, Naphth, MTBE, 1,2 DCA (EPA Method 8260B), Total Lead (EPA Method 6010B), and EDB (EPA Method 8011).

Additionally, all water supply wells or relevant surface waters located within 500' feet of the subject site with be analyzed for BTEX, Naphth, MTBE, 1,2 DCA (EPA Method 8260B) and EDB (EPA Method 8011).

Full Name of the Laboratory Schnabel Engineering
 Name of Lab Director Mickey Edwards
 SC DHEC Certification Number N/A
 Parameters this Lab will analyze for this project:

Grain size distribution test will be performed by Schnabel Engineering in accordance with ASTM Method D-422.

Please note: SC DHEC may require that the contractor submit some or all of the Laboratory's SOPs as part of this QAPP.

A9 Documents and Records

Personnel will receive the most current version of the QAPP Addendum via:
 (Check all that apply)

US Mail Courier Hand delivered

Other (please specify): E-mailed electronic copies

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Instrument Raw Data	Target, Thermospec, or Iteva software	Hardcopy and Electronic	Hardcopy: Offsite storage for 7 yrs Electronic: Two external storage device backups – one offsite, one onsite storage for 10 yrs	Yes
Final Reports	LIMS	Electronic	Electronic: Two external storage device backups – one offsite, one onsite storage for 10 years	Yes
Field Work	Field Staff	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
Chain of Custody	Field Staff	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
QAPP Addendum	Brendon Kelly	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes
Internal QC record	Brendon Kelly	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
Sampling Report	Brendon Kelly	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes
1903 Water Well Record Form	EDPS	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes

Table 4A Record Identification, Storage, and Disposal

Section B Measurement/Data Acquisition

B1 Sampling Process/Experimental Design

Item	Start Date	End Date	Comments
Site Reconnaissance	9/19/11	9/19/11	Already Completed
QAPP preparation	10/10/11	10/10/11	In progress
QAPP approval	10/10/11	10/31/11	Assuming three week turnaround
PUPs Request	10/31/11	11/3/11	Give 72 hours until PUPs ticket active
Monitoring Well	11/4/11	11/11/11	One week to mobilize a drilling rig to the

Item	Start Date	End Date	Comments
Installation			subject site. Drilling will take 1 day.
Monitoring well Sampling	11/14/11	11/21/11	Standard 5 Day Turn Around Time
Report Preparation	11/21/11	12/12/11	Three weeks to prepare/submit report

Table 5A Sampling Activities

B2 Sampling Methods

Please note: The contractor must follow sampling protocols as given in the UST QAPP.

Estimate the number of samples of each matrix that are expected to be collected:

Soil	_____9_____
Ground Water from monitoring wells	_____4_____
From Drinking/Irrigation water wells	_____5_____
Field Duplicate Collection	_____2_____
Field Blank Collection	_____2_____
Trip Blank	_____3_____
From surface water features	_____1_____
Total number of samples	_____26_____

The samples will be (check as many as apply): Homogenized Split

Notes:

-Nine (9) soil sample sets will be collected during the initial phase of the Tier I Assessment. Three (3) monitoring wells installed in conjunction with the Tier I Assessment will be sampled. Samples will be collected following the SCDHEC guidelines set forth by the Quality Assurance Program Plan For the Underground Storage Tank Management Division (June, 2011) (See ***Tier I Sampling Design Process- Pages 59-62***).

-Additionally, the replacement well for MW-1 (MW-1R) will be sampled for parameters requested by SCDHEC Project Manager.

-During the initial site visit, five (5) water supply wells were located within 500' feet of the subject site. Additionally, one (1) surface water feature was located approximately 175' feet south of the subject site.

-It is anticipated that two (2) field duplicates will be sampled. One duplicate will be collected during the collection of soil samples during the initial phase of the Tier I Assessment and one duplicate will be collected during the monitoring well sampling event.

-It is anticipated that two (2) field blanks will be collected. One field blank will be collected during the collection of soil samples during the initial phase of the Tier I Assessment and one field blank will be collected during the monitoring well sampling event.

- It is anticipated that three (3) trip blanks will be analyzed (1 per cooler utilized during Assessment activities). One cooler will be utilized during the collection of soil samples during the initial phase of the Tier I Assessment and two coolers will be collected during the monitoring well sampling event.

Environmental Drilling and Probing Services (EDPS) will mobilize a Geoprobe 6620 drilling rig to the subject site. All drilling activities will be performed under the supervision of a South Carolina Certified Well Driller and MECI field personnel (Tommy Bolyard, #B 01846).

Wells will be installed according to MECI Standard Operating Procedures (4.1.1, 4.1.5, 4.2.1, 4.2.2, & 4.2.4) and in accordance with South Carolina Well Standards, R.61-71.

Monitoring wells will be purged/sampled in accordance with MECI SOP # 4.3.1 through 4.3.5.

Two slug tests will be conducted on newly installed wells, according to MECI SOP# 4.4.1

Will Sampling Equipment have to be cleaned and decontaminated or is everything disposable?

All equipment, excluding electronic water level indicators and field probes, is disposable.

If sampling equipment must be cleaned please give a detailed description of how this is done and the disposal of by-products from the cleaning and decontamination.

Prior to usage of non-disposable equipment, it is decontaminated with isopropanol applied by a Teflon squeeze bottle and rinsed with analyte free water. This rinse water is collected and run through a portable GAC (granulated activated carbon) unit.

Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.

Environmental Drilling and Probing Services (EDPS) will mobilize a Geoprobe 6620 drilling rig to the subject site. All drilling activities will be performed under the supervision of a South Carolina Certified Well Driller and MECI field personnel (Tommy Bolyard, #B 01846).

Wells will be installed according to MECI Standard Operating Procedures (4.2., 4.2.2, 4.2.3 & 4.2.4) and in accordance with South Carolina Well Standards, R.61-71.

Drill cuttings will be disposed of by MECI personnel at Waste Management Richland County Landfill in Elgin, SC.

All samples (if needed) will be shipped to the lab via lab courier or delivered directly to the lab by MECI personnel.

Following monitoring well installation a comprehensive site survey will be conducted by Construction Support Services of Columbia, SC (Jay S. Joshi PLS# 14811).

Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.

Failure	Response	Documentation	Individual Responsible
Water level indicator not working properly	Attempt to clean probe, change battery, use back-up indicator if need be.	Record on field sheets, notify office staff. Take indicator out of rotation until problem identified and corrected.	Field Staff, Field Manager
Field meters not working	Attempt to clean probes, recalibrate in the field.	Record on field sheets, notify office staff. Take meters out of rotation until problem identified and corrected.	Field Staff, Field Manager
Wells not located	Use metal detector, measure from known points, contact project manager for additional information.	Record method used to attempt to locate the well on field sheets, and possibly reasoning for the well to be missing	Field Staff
Hitting a Utility Line while Drilling	Contact PUPS (Palmetto Utilities Protection Service), contact appropriate utility (if gas line is hit, notify fire department)	Record in field sheets, on PUPS ticket in office. Contact SCDHEC project manager to inform them of problem.	Field Staff, Field Manager
Drilling rig breaks down	Attempt to correct problem. If the problem cannot be determined, or cannot be fixed, discontinue drilling for the day. Drilling can continue once drill rig has been fixed, or new drill rig is mobilized to the site	Record on field sheet, notify office staff.	Field Staff, Drill rig operator

Table 6A Field Corrective Action

B3 Sample Handling and Custody

1. How will the samples get from the Site to the Lab to ensure holding requirements are met?

Following sample collection, the samples are immediately place in a laboratory provided cooler, pre-filled with wet ice obtained from the MECI office. Samples are transported to the MECI office once a sampling event is complete. A Chain of Custody (CoC) is filled out following the sampling event by the field staff. See attached CoC. If a lab provided courier is scheduled to visit the MECI offices the day following a sampling event, sampling coolers are repacked with wet ice, and left at the office for pick-up the following morning. If no courier is schedule to visit the MECI office the day following a sampling event, all sampling

coolers are repacked with ice and are dropped off at a lab approved shipping company for overnight delivery to the lab.

2. How will the contactors cool the samples and keep the samples cool?

All samples are kept on wet ice, obtained from MECI office.

3. How will the lab determine the temperature of the samples upon receipt? Will they be using a temperature blank?

A calibrated thermometer and temperature blank will be used to document sample temperature. The temperature blank is immediately checked by the sample receiving technician upon arrival at the laboratory.

4. Where will the samples be stored in the Lab once they are received?

All samples are stored in clean refrigeration units monitored and maintained at 4 degrees C + or – 2 degrees. Volatile organic samples are stored separately from all other samples.

5. Describe the chain of custody procedure and attach a copy of each chain of custody that will be used. If a Chain of Custody SOP exists from the Lab and the Contractor is willing to adhere to it, then this may be attached.

A chain of custody (COC) will be filled out for each sampling event at each project site. COC to be signed by MECI and Shealy Environmental technician at time physical transfer of samples occurs to courier. Shealy uses the following COC procedures to protect sample integrity following pickup by their courier: A full time Sample Receiving Technician receives all samples and completes a Sample Receipt Checklist (SRC), which will identify any anomalies, if any exist the Sample Receiving Technician or Project Manager must resolve the deviation internally and/or notify the client to resolve the anomaly.

B4 Analytical Methods

1. Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:

Parameter	SOP ID*	Method Referenced	Equipment	Comments
BTEX+Naph+MTBE+Oxygentaes	S-VO-002	8260B	GC/MS	
PAH's	S-SV-021	8270D	GC/MS	
EDB	S-SV-012	8011	GC	
Lead,T.	S-IM-022	6010C	ICP	
Ferrous Iron	S-IN-009	SM 3500-FED	Spectrophotometer	
Nitrate	S-IN-042	353.2	Auto-analyzer/Lachate	
Sulfate	S-IN-010	300.0	Ion Chromatograph	
Methane	S-VO-004	RSK-175	GC	
TOC	S-IN-030	Walkley-Black	N/A	
DRO - TPH	S-SV-001	8015C	GC	

Grain-size / Hydrometer	D-422	ASTM Method D-422	Sieves	
pH	Standard	MECI SOP 4.3.6	YSI 63	Place probe in sample and allow to equilibrate before recording reading
Conductivity	Standard	MECI SOP 4.3.6	YSI 63	
Dissolved Oxygen	Standard	MECI SOP 4.3.6	YSI 550A	
Temperature	Standard	MECI SOP 4.3.6	YSI 550A	

Table 7A Analytical SOPs and Referenced Methods

- This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

Abbreviation	Lab Identification of this SOP	Full Name of the SOP
S-VO-002	S-VO-002	GC/MS VOLATILES ANALYSIS BASED ON EPA METHODS 8260B AND 624 PREPARED BY EPA METHODS 5030B, 5035 AND 3585
S-SV-021	S-SV-021	GC/MS ANALYSIS BASED ON EPA METHOD 8270D PREPARED BY EPA METHODS 3520C, 3550C AND 3580A
S-SV-012	S-SV-012	GC/ECD ANALYSIS OF EDB AND DBCP BASED ON METHOD 8011 & 504.1
S-IM-022	S-IM-022	INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPECTROSCOPY-PECTROMETRIC METHOD for TRACE ELEMENT ANALYSES METHOD 6010C
S-IN-009	S-IN-009	FERROUS IRON (PHENANTHROLINE METHOD) STANDARD METHOD 3500-Fe D
S-IN-042	S-IN-042	NITRATE+NITRITE NITROGEN BY EPA METHOD 353.2, NITRATE NITROGEN BY 353.2 SUBTRACTION, AND NITRITE NITROGEN BY EPA METHOD 353.2
S-IN-010	S-IN-010	INORGANIC ANIONS BY ION CHROMATOGRAPHY EPA METHOD 300.0 and SW-846 9056 and 9056A
S-VO-004	S-VO-004	STANDARD OPERATING PROCEDURE GC ANALYSIS BASED ON METHOD RSKSOP-175
S-IN-030	S-IN-030	TOTAL ORGANIC CARBON (TOC) WALKLEY-BLACK PROCEDURE
S-SV-001	S-SV-001	GC/FID DIESEL RANGE ORGANICS ANALYSIS BASED ON METHOD 8015B and/or 8015C PREPARED BY EPA METHODS 3520C, 3550C and 3580A
MECI SOP 4.3.6	MECI SOP 4.3.6	Sampling Standard operating procedures

Table 8A SOP Abbreviation Key

2. Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Failure	Response	Documented Where?	Individual Responsible
Field meters	Attempt to clean	Record on field sheets, notify	Field Staff, Field Manager

not working	probes, recalibrate in the field.	office staff. Take meters out of rotation until problem identified and corrected.	
COC or Sample Receiving issues	Call Client	Sample Receiving Checklist (SRC)	PM – Kelly Maberry kmaberry@shealylab.com
Analytical errors	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.com
QA/QC Failure	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.com QA/QC Officer – Jami Savje Jsavje@shealylab.com
On time delivery	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.com QA/QC Officer – Jami Savje Jsavje@shealylab.com

Table 9A Corrective Action Procedures

3. Identify sample disposal procedures.

Analysis	Matrix	Schedule for disposal	Method for disposal	Comments
BTEX+Naph+MTBE+Oxygenates	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
PAH's	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
EDB	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	

Lead	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
Ferrous Iron	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
Nitrate, Sulfate	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
Methane	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
All	Water	On-Site	Portable Granulated Activated Carbon (GAC) Unit	All waste water produced from sampling and decontamination activities will be run through a GAC unit

Table 10A Disposal Procedures

4. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. Identify all field and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Note the availability and location of spare parts.

Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible
Volatiles Mass Spec	ALL	Change traps, clean ion source, replace filaments	Periodic	Laboratory	MSV Analyst
Semivolatile Mass Specc	ALL	Injection port maintenance, ion source maintenance, column replacement	Periodic	Laboratory	MSSV Analyst
ECD GC	ALL	Injection port maintenance, column replacement	Periodic	Laboratory	GC Analyst
Dionex IC	ALL	Replace auto sampler filter, tubing, line filter, sample Line and Waste Line, as needed. Check Reagent levels, flow rate, waste line.	Periodic	Laboratory	IC Analyst
ICP	ALL	Clean Sample introduction system , auto sampler, torch, Change spray chamber, torch tubing, tubing	Periodic	Laboratory	ICP Analyst
Leeman Mercury Analyzer	ALL	Clean GLS, Change Pump tubing, Nafion Dryer, Lamp	Periodic	Laboratory	Mercury Analyst
Flow Injection Analysis – Lachat 8000	ALL	Replace sample and reagent lines, replace light source, re-wrap heating coil, replace column	Periodic/As Needed	Laboratory	Nitrate Analyst
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace probe tip	Yearly	Order from YSI	B. Kelly
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace batteries	As Needed	In stock at office	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	General inspection for wear and tear on equipment	Daily	Major fixes will be done out of office	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	Check buffer solutions for expiration	Weekly	In stock at office	B. Kelly
YSI 550A	04L 2026AK,	Replace membrane	4 to 8	In stock at office	Field Staff

	08B 101407, 04A 0912AI		weeks		
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace batteries	As Needed	In stock at office	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	General inspection for wear and tear on equipment	Daily	Major fixes will be done out of office	Field Staff

Table 11A Instrument and Equipment Maintenance

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this

Instrument/Equipment & Serial Number	Type of Inspection	Requirement	Individual Responsible	Resolution of Deficiencies
Volatiles Mass Spec	Daily calibration check	Method Requirements	MSV Analyst	Recalibration or instrument maintenance
Semi-volatiles Mass Spec	Daily calibration check	Method Requirements	MSSV Analyst	Recalibration or instrument maintenance
ECD GC	Daily calibration check	Method Requirements	GC Analyst	Recalibration or instrument maintenance
Dionex IC	Daily calibration check	Method Requirements	Nitrate Analyst	Recalibration or instrument maintenance
ICP	Daily calibration check	Method Requirements	ICP Analyst	Recalibration or instrument maintenance
Leeman Mercury Analyzer	Daily calibration check	Method Requirements	Mercury Analyst	Recalibration or instrument maintenance
Flow Injection Analysis – Lachat 8000	Daily and continuing calibration check	See calibration criteria	INM Analyst	Recalibration or instrument maintenance
YSI 63 - 09C 101302, 10K 101895, 07M 100905	Daily calibration check	pH within 0.20 of pH 7.00 standard buffer, conductivity within 10% of standard	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer
YSI 550A - 04L 2026AK, 08B 101407, 04A 0912AI	Daily calibration check	Temperature within +/- 1°C vs. mercury thermometer, dissolved oxygen within 0.25 mg/l	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer

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Table 12A Instrument and Equipment Inspection

B7 Instrument Calibration and Frequency

1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
Volatiles Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by continuous calibration verification standard	Method Criteria	Detailed in SOP	MSV Analyst	S-VO-002
Semi-volatile Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	MSSV Analyst	S-SV-021
GC ECD	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	GC Analyst	S-SV-012
Dionex IC	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	IC Analyst	S-IN-010
ICP	Minimum of 3 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	ICP Analyst	S-IM-022
Cetac Mercury Analyzer	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	Mercury Analyst	S-IM-006
Lacaht QuickChem 8000	Minimum of 5 calibration standards	Daily or when indicated by calibration verification standard	Method Criteria	Detailed in SOP	Nitrate Analyst	S-IN-042
YSI 63	pH Calibration	Daily	+/- 0.2 pH units	clean/replace probe tip, recalibrate	Field Staff	4.3.6
YSI 63	Conductivity	As directed by	+/- 10 uS	clean/replace	Field Staff	4.3.6

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
	Calibration	manufacturer		probe tip, recalibrate		
YSI 550A	DO calibration	Daily	+/- 0.25 mg/l	clean/replace probe tip, recalibrate	Field Staff	4.3.6
YSI 550A	Temperature Calibration	Daily	+/- 1 °C	clean/replace probe tip, recalibrate	Field Staff	4.3.6
Electronic Water Level Indicator	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff	***
Oil/Water Interface probe	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff	***

Table 13A Instrument Calibration Criteria and Corrective Action

* This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

B8 Inspection/Acceptance Requirements for Supplies and Consumables

1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
2. Identify the individual(s) responsible for this.

Item	Vendor	Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.
Laboratory Chemicals	Fisher, VWR	Certificates of analysis and laboratory testing	Laboratory storage	Receiving and laboratory personnel
Laboratory standards	O2Si, Restek, High Purity, VHG, Supelco	Certificates of analysis and laboratory verifications	Vendor specific storage conditions	Laboratory Analysts
Sample Containers	Daniels Scientific, QEC	Certificates of analysis and laboratory testing	Bottle storage area	Sample receiving personnel
Clear, Disposable polyethylene Bailers	Preferred Pump	Individual sleeves intact, ball valve operational	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
Nylon Rope	Preferred Pump	Covered with plastic	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
Nitrile Gloves	Preferred Pump	Unopened box, no holes	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
40 mL HCL preserved amber vials	Shealy Environmental Services	Custody seal intact	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
250 mL HNO3 preserved metals vials	Shealy Environmental Services	Custody seal intact	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff

Coolers	Shealy Environmental Services	Intact	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
pH Buffer	TRS Environmental, Enviroequipment	Within expiration date	Stored in calibration room	B. Kelly, Field Staff
Conductivity Standard	TRS Environmental, Enviroequipment	Within expiration date	Stored in calibration room	B. Kelly, Field Staff
DO Membranes	YSI, Enviroequipment	Clean, in box	Stored in calibration room	B. Kelly, Field Staff
Batteries	Any Store	Not previously used	Stored in calibration room	B. Kelly, Field Staff

Table 14A List of Consumables and Acceptance Criteria

B9 Data Acquisition Requirements (Non-Direct Measurements)

1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
3. Indicate the acceptance criteria for these data sources and/or models.

Data Source	Used for	Justification for use in this project	Comments
IGWA Report	Historic groundwater and CoC concentration data. Lithology and well construction data from previous MWI's	Establish the type of drilling rig required, time for sampling and any other potential problems that may be encountered.	1903 forms from previous monitoring well installations will be used to estimate depth of the newly installed monitoring wells installed in conjunction with the Tier I Assessment.

Table 15A Non-Direct Measurements

4. Identify key resources/support facilities needed.

B10 Data Management

1. Describe the data management scheme from field to final use and storage.

Following sample collection and chain of custody production, samples are shipped to the lab. Field work from the field staff is reviewed by the MECI project manager, and converted into digital form. All data entry is subsequently checked to validate the data entry. The original copies of the field work are stored in MECI files for a minimum of 5 years. Digital copies of the work are stored on the MECI server, which is backed

up weekly, and stored for a minimum of 5 years. The digital copy of the field work is presented to SCDHEC with the final report.

2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?

The laboratory maintains comprehensive Quality Control and Training Programs. All sample receipt data, sample log-in, and analytical data is peer reviewed, including review for inappropriate changes. Data management, review procedures and the Quality Systems Program are documented in the laboratory's Quality Manual and Standard Operating Procedures. The Quality Assurance Department oversees adherence to and review of these programs.

All MECI field work is produced using ink-pens. Any attempt to alter field data, after sampling is complete, can be readily identified. MECI keeps a carbon copy of the chain of custody after it is shipped to the lab. This copy is kept with the field work. If any change to the CoC are suspected, this original carbon copy can be use to identify potential changes.

3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted?

Sample data acquisition software is reviewed periodically. The LIMS database is backed up daily and is able to be restored in the event of a system failure. These procedures are documented in laboratory SOP S-AD-003, LIMS. The IT Manager is responsible for these systems and procedures."

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Laboratory Hardcopy data stored off site is logged, maintained and archived by the Quality Assurance Department. Laboratory Electronic Data Reports are maintained through IT back up under the responsibility of the IT Systems Manager.

MECI keeps all field work and paper copies of reports in its in-house filing system. All paper copies are stored for a minimum of 5 years. Any file can be retrieved easily by going to the correct filing cabinet/box.

All electronic copies of reports generated are kept on the MECI server. This server is backed-up on a weekly basis. Any file stored on the MECI server can be retrieved instantly, by accessing the server. All electronic files are stored for a minimum of 5 years on the server.

Section C Assessment and Oversight

C1 Assessment and Response Actions

1. *The Contractor is supposed to observe field personnel daily during sampling activities to ensure samples are collected and handled properly and report problems to DHEC within 24 hours. .*

Please state who is responsible for doing this and what observations will be made. Will this person have the authority to stop work if severe problems are seen?

Field audits can be conducted on any field personnel at any time. MECI field audits can be conducted by the Field Manger, who will be responsible for ensuring that field personnel adhere to the QAPP. If during a random field audit, severe problems are found, work will be stopped by the field manager and the QA officer contacted to determine corrective action. All problems must be corrected prior to any additional work being performed; any work conducted prior to severe problems being identified should be redone. Should it be requested, an On-site Field Audit can be scheduled with the SCDHEC project manager.

- 2. The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done on the Commercial Lab(s) that are being used—other than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?*

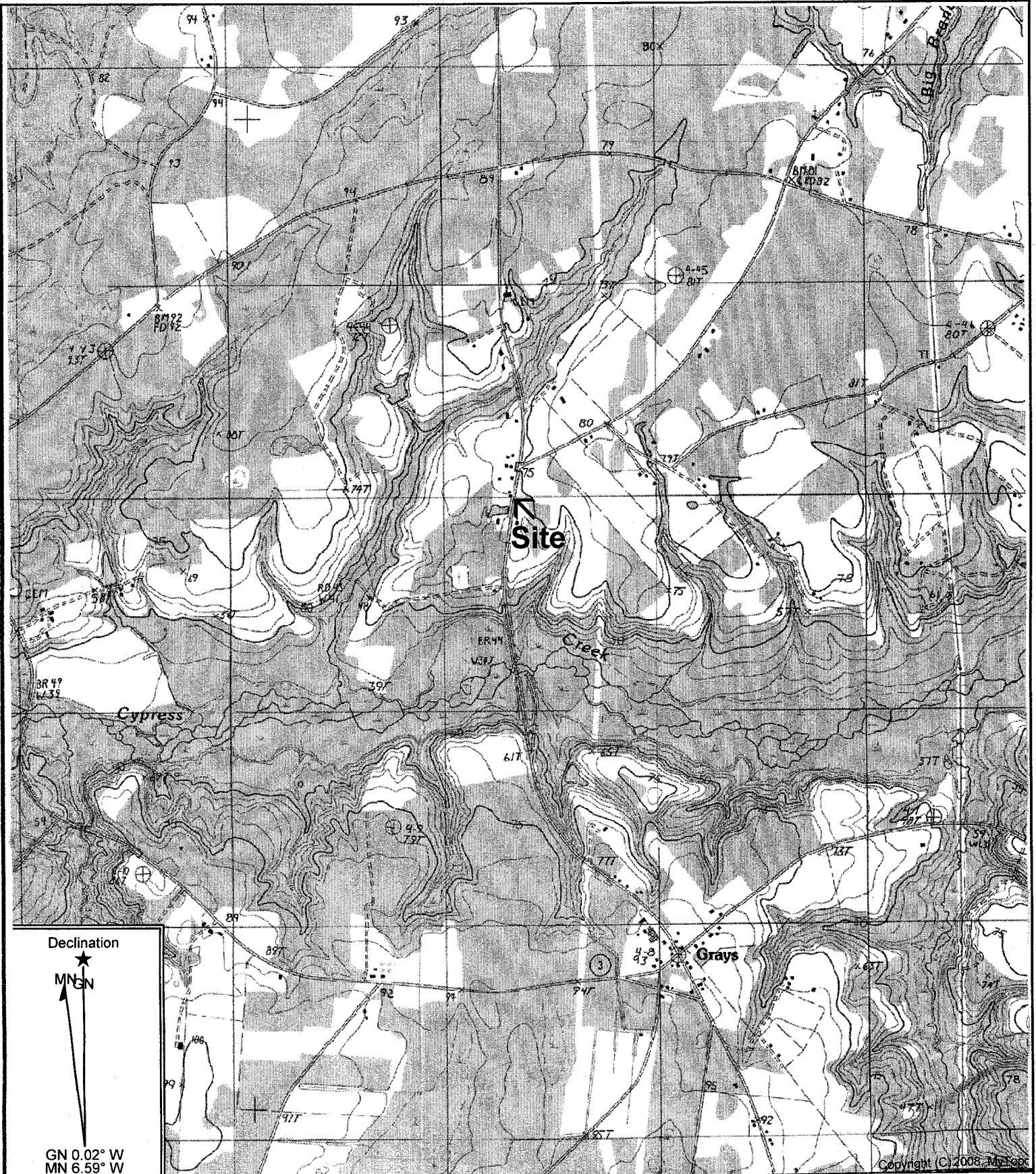
The laboratory participates in annual Proficiency Testing through an approved vendor, Wibby Environmental. Proficiency Testing results are provided to the Office of Environmental Laboratory Certification.

C2 Reports to Management

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Section D Data Validation and Usability

All field and laboratory data will be checked and verified by the project verifier (Brendon Kelly or Courtney Sanders) prior to submission to SCDHEC.

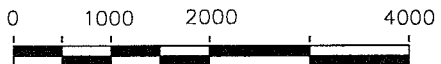


Declination



GN 0.02° W
MN 6.59° W

GRAPHIC SCALE



1IN = 2000FT

Reference: Grays, South Carolina
USGS 7.5 Min. Quad
Countour Interval - 5 Feet

Midlands
Environmental
Consultants, Inc.

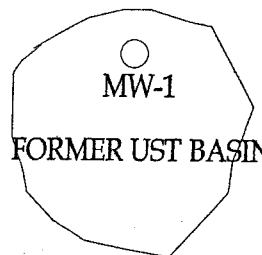
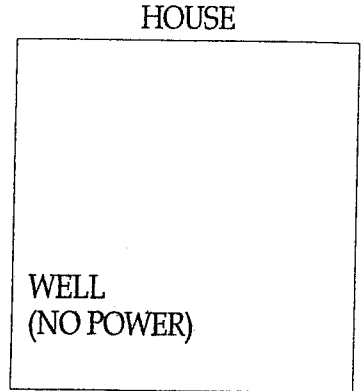
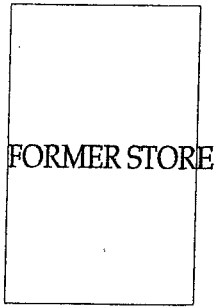
Site Location

Steady Simmons
16661 Grays Highway, Early Branch, South Carolina
SCDHEC Site ID* 18856

Figure 1

MECI 11-3586

Copyright (C) 2008, MapInfo

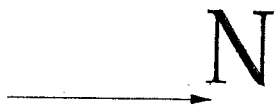
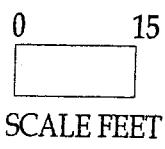


HOUSE WITH WELL 270 FT
↙

HOUSE WITH WELL 300 FT
→

GRAY'S HIGHWAY

PHONE LINE



KATAWBA ENVIRONMENTAL, INC

PO BOX 11228
ROCK HILL, SC 29731
(803) 327-0469

UST ASBESTOS PHASE I

TITLE
SITE LOCATION MAP

PROJECT WAYNE THOMPSON
18661 GRAYS HIGHWAY
EARLY BRANCH, SC 29916
UST SITE ID#18856

DRAWN BY: AA DATE: 7/30/03 DRAWING# 2



Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 12602

Form with sections: Client, Report to Contact, Sampler (Printed Name), Quote No., Address, Telephone No. / Fax No. / Email, Waybill No., City, State, Zip Code, Preservative, Project Name, Project Number, P.O Number, Matrix, Sample ID / Description, Date, Time, Analysis, Remarks / Cooler ID, Turn Around Time Required, Sample Disposal, QC Requirements (Specify), Possible Hazard Identification, Relinquished by / Sampler, LAB USE ONLY.

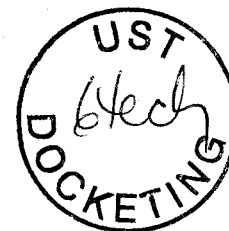


C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071-0854

OCT 19 2011



Re: Notice to Proceed for Tier I QAPP Contractor Addendum Approval
Solicitation # 5400003229, PO# 4600117789
Steady Simmons, 16661 Grays Highway, Early Branch, SC
UST Permit #18856; CA#41775; MWA #UMW-24267
QAPP Contractor Addendum received October 10, 2011
Jasper County

Dear Mr. Shane:

In accordance with the referenced bid solicitation # IFB-5400003229 the UST Management Division Quality Assurance Program Plan (QAPP), the Site-Specific Contractor Addendum has been reviewed and approved. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered, including quality assurance problems, the actions taken and the results must be included in the final report submitted to the UST Management Division.

A report, contractor verification checklist and invoice are due sixty (60) days from the date of this letter. Monitoring well approval for four shallow monitoring wells is enclosed for your records. Please note that all applicable South Carolina certification requirements regarding laboratory analyses, well installation, and report preparation must be met in accordance with the referenced solicitation. All shallow wells are to be installed with screen intervals that bracket the water table. The final report should contain the requirements of Section 3.10 (IGWA), 3.11 (Tier I) or 3.12 (Well Installation) of the bid solicitation. The final report should be submitted to Andrew McCormick, the contract manager.

MECI will perform services at the site on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. The Department grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the final report. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs.

If you have any site-specific questions, please contact me at (803) 896-6218 or via e-mail at smitha2@dhec.sc.gov. If you have any contract specific questions, please contact Andrew McCormick at (803) 896-6629 or via e-mail at mccormat@dhec.sc.gov.

Sincerely,

Alex Smith
Assessment Section
UST Management Division
Bureau of Land & Waste Management

enc: Approved QAPP Contractor Addendum Signature Page
Approved Cost Agreement
Monitoring Well Approval

cc: Andrew McCormick, Assessment Section, UST Management Division (without enc)
Technical File (with enc)



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

Monitoring Well Approval

Approval is hereby granted to: Midlands Environmental Consultants Inc.
Facility: Steady Simmons, 16661 Gray's Highway,
Early Branch, SC
UST Permit Number: 18856
County: Jasper

This approval is for the installation of up to four shallow groundwater monitoring wells. The monitoring wells are to be installed in the approved locations. The monitoring wells are to be installed following the South Carolina Well Standards, R.61-71 and the applicable guidance documents.

Please note that R.61-71 requires the following:

1. All wells shall be drilled, constructed and abandoned by a South Carolina certified well driller per R.61-71.D.1.
2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
3. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless another schedule has been approved by the Department. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
4. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
5. If any of the information provided to the Department changes, notification to Alex Smith (tel: (803) 896-6218 or e-mail: smitha2@dhec.sc.gov) shall be provided a minimum of twenty-four (24) hours prior to well construction as required by R.61-71.H.1.a.
6. All temporary monitoring wells shall be abandoned within 5 days of borehole completion using appropriate methods as required by R.61-71.H.4.c. All other wells shall be properly developed per R.61-71.H.2.d.
7. Departmental approval is required prior to abandonment of all monitoring wells as required by R.61-71.H.1.a.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and R.61-71 of the South Carolina Well Standards and Regulations, dated April 26, 2002. A copy of this approval should be on the site during well installation.

Date of Issuance: October 14, 2011

Approval #: UMW-24267

Alex Smith, Hydrogeologist
Assessment Section
Division of Assessment and Corrective Action
Bureau of Land and Waste Management

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For
Steady Simmons, SCDHEC Site ID# 18856


16661 Grays Highway, Early Branch, South Carolina

Prepared by:
Jeff L. Coleman
Senior Scientist
Midlands Environmental Consultants, Inc.
(Certified Site Rehabilitation Contractor UCC-0009)
235-B Dooley Road
Lexington, SC 29073
(803)808-2043

Date: October 10, 2011

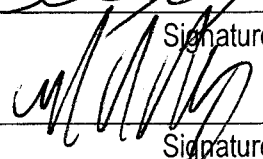
Approvals

Alex Smith
SC DHEC Project Manager



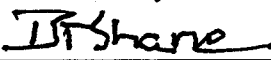
Signature Date 10/14/11

Brendon P. Kelly
Contractor QA Manager



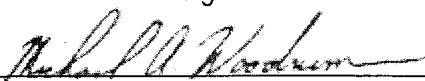
Signature Date 10/10/11

Bryan T. Shane, P.G.
Site Rehabilitation Contractor



Signature Date 10-10-11

Michael Woodrum
Laboratory Director



Signature Date 10/10/2011

Approved Cost Agreement 41775

Facility: 18856 STEADY SIMMONS

SMITHA2

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
09 WELL INSTALLATION		B WATER TABLE (DRILLED)	12.0000	6.00	72.00
10 SAMPLE COLLECTION		A GROUND WATER	1.0000	5.00	5.00
		C WATER SUPPLY	6.0000	5.00	30.00
11 ANALYSES					
	GW GROUNDWATER	A1 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	7.0000	48.00	336.00
		E LEAD	1.0000	12.00	12.00
		F EDB	7.0000	25.00	175.00
	SOIL SOIL	Q BTEX+NAPTH	1.0000	32.00	32.00
20 TIER I		TIER I	1.0000	2,000.00	2,000.00
Total Amount					2,662.00



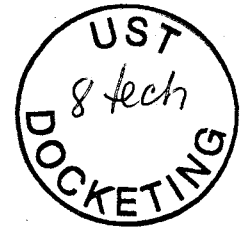
C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

BRYAN SHANE PG
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071-0854

DEC 22 2011

Re: Required Revisions to Tier I Report
Steady Simmons, 16661 Grays Highway, Early Branch, SC
UST Permit #18856; Cost Agreement #41775; Monitoring Well Approval # UMW-24267
Solicitation #5400003229, Purchase Order # 4600117789
Notice to Submit QAPP Contractor Addendum dated September 13, 2011
Tier I Site Specific QAPP Revision 0 received October 11, 2011
Tier I Report Directive dated October 19, 2011
Tier I Report received December 19, 2011
Jasper County



Dear Mr. Shane:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the Tier I Assessment Report and Quality Assurance Program Plan (QAPP) checklist for the referenced site. The report corrections should begin immediately upon receipt of this letter.

The SCDHEC reserves the authority to pay only for work properly performed and/or technically justified and will only pay rates in accordance with contract IFB-5400003229. Further, SCDHEC reserves the right to question and/or reject costs, if deemed unreasonable. The SCDHEC reserves the right to audit project records at any time during the project or after completion of the work. **A Revised Tier I Assessment Report (2 paper copies) and Site-specific QAPP checklist should be submitted within 15 days or sooner from the date of this correspondence.**

Future invoices and/or other criteria included therein must comply with current SUPERB criteria per Section 44-2-20(2). Please reference cost agreement number 42461 on all pertinent invoices and correspondence. Please note that Sections 44-2-110(4) and 44-2-130(B) of the SUPERB Statute state that no costs will be allowed (considered for payment) unless prior approval from the Department is obtained. If for any reason there is a change in this cost agreement, any associated changes must be pre-approved by this Department in order for Midlands Environmental Consultants (Midlands) to seek future cost compensation. The UST Division cannot reimburse Midlands for incomplete or unnecessary work.

Please correct the following items in the final report:

- The primary soil type listed on page 9 of the report as well as on the slug test summary form does not match the results of the grain size analysis. Additionally, the grain size analysis was not completed as it only lists a percentage of silt and clay and does not list from which well the sample was taken.
- The 1903 forms for all permanent wells and soil borings do indicate that all soil borings were not abandoned.

Please note that all applicable South Carolina certification requirements regarding laboratory analyses, well installation, and report preparation must be met.

Mr. Shane
Page 2

The Department grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. IDW should not be stored on-site longer than ninety (90) days. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included as an appendix to the report. If the COC concentrations, based on laboratory analysis, are below Risk Based Screening Levels (RBSLs), please contact the project manager for approval to dispose of soil and/or groundwater on site. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs.

On all correspondence regarding this site, please reference the UST Permit # 19547 and Cost Agreement # 42461. If you have questions concerning this correspondence, or would like to submit additional information, please contact me at (803) 896-6218, fax me at (803) 896-6245, or e-mail me at smitha2@dhec.sc.gov.

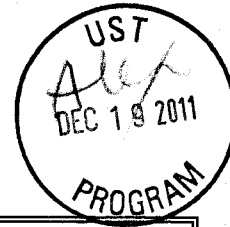
Sincerely,



Alex Smith, Hydrogeologist
Assessment Section
Underground Storage Tank Management Division
Bureau of Land & Waste Management

cc: Midlands Environmental Consultants Contractor Certification File
Andrew McCormick, Assessment Section, UST Management Division
✓ Technical File

SCANNED



TIER I ASSESSMENT REPORT

Site Name/Address Steady Simmons
16661 Grays Highway
Early Branch, South Carolina
Site ID# 18856; CA# 41775
MECI Project No. 11-3586



Submitted to:
Underground Storage Tank Program
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

This report has been reviewed by:

Name Bryan T. Shane SC1102 13-Dec-11
Registered Professional Registration # Date

Signature *B. Shane* 12-16-11
Date

REGISTERED PROFESSIONAL SEAL

SCDHEC Certificate # 9

TIER I ASSESSMENT REPORT OF FINDINGS

I INTRODUCTION

A. Owner/Operator Information

Facility name Steady Simmons UST Permit # 18856
Name Orphan Simmons
Address N/A
Telephone Number (include area code) N/A

B. Property Owner Information

Name (if different from above) Wayne Thompson
Address 16657 Grays Highway, Early Branch, SC 29916
Telephone Number (include area code) (803) 842-4530

C. Contractor Information

Name Midlands Environmental Consultants Inc. SCDHEC Certification # 9
Address P. O. Box 854, Lexington, SC 29071
Telephone Number (include area code) (803) 808-2043

D. Facility Information

Address 16661 Grays Highway, Early Branch, SC
Description of Adjacent Land Use (Commercial, residential, rural, etc.) Include documentation (e.g. zoning regulations) as appropriate.

The site is located outside the town limits of Early Branch, Jasper County, South Carolina. It is currently occupied by an abandoned store and a residential building. The site is bordered by Grays Highway (US Highway 278) to the East, beyond which are rural residential properties and planted pines. North and south of the site are residential properties. West of the site are residential and agricultural properties.

Predicted Future Land Use (site and adjacent area)

The site is located in a rural residential area outside of Early Branch, SC. The property is currently occupied by an abandoned store building and mobile home. There are no indications of future property use change.

E. Facility History

Date Release Reported to SCDHEC 9/9/2002
Estimated Quantity of Product Released Unknown
Cause of Release UST system

UST #	Product	Date Installed	Currently in use (Yes or No)	If not in use, Date Removed
1	1,000 Gallon Gasoline	unknown	No	7/16/2002
2	550 Gallon Gasoline	unknown	No	7/16/2002

Other Releases at this site? Yes _____ No X

If yes, Date Release Reported to SCDHEC N/A

Status of Release N/A

No Further Action Date N/A

II. SITE CHARACTERISTICS

A. Site Geography

Describe the topography of the site and surrounding area (slope, vegetation, bodies of water, major land features, etc.)

 The site is located in a mixed rural residential / agricultural area. Site drainage and topography are generally level, with a slight slope to the west, towards Cypress Creek. The site is covered predominately by grass and gravel.

Mean Elevation of Site 70 feet

Additional Comments _____

B. Exposure Analysis

Describe all potential receptors and preferential pathways within a 1000-foot radius of the site.

Description of Receptor	Distance/Direction from Site
WSW-1	Onsite, 326 feet West of MW-1R
WSW-2	Approx. 450 feet Southwest of MW-1R
WSW-3	Approx. 400 feet Southeast of MW-1R
WSW-4	Approx. 214 feet Southeast of MW-1R
WSW-5	Approx. 500 feet North of MW-1R
WSW-6 (Not-Functioning)	Onsite, 90 feet Northwest of MW-1R
WSW-7	Approx. 850 feet Southeast of MW-1R
WSW-8 (Not-Functioning)	Approx. 380 feet North of MW-1R
WSW-9	Approx. 600 feet Northwest of MW-1R
Pond (SW-1)	Approx. 183 feet South of MW-1R
Pond	Approx. 600 feet Northwest of MW-1R
Tributary associated with Cypress Creek	1,000 feet Southeast of MW-1

Provide any additional comments necessary to complete the exposure analysis

WSW-1 is located onsite, 326 feet west of MW-1R (Jasper County Tax Map # 052-00-05-027).

WSW-6 is also located onsite, but it is currently not functioning.

WSW-2 is located approx. 450 feet southwest of MW-1R at 16589 Grays Highway (Jasper County Tax Map# 052-00-05-026). The pond where surface water SW-1 was sampled is also located on this property.

WSW-3 is located approx. 400 feet Southeast of MW-1R at 16586 Grays Highway (Jasper County Tax Map# 052-00-10-002).

WSW-4 is located approx. 214 feet Southeast of MW-1R at 16540 Grays Highway (Jasper County Tax Map# 052-00-10-001).

WSW-5 is located approx. 500 feet North of MW-1R at 16743 Grays Highway (Jasper County Tax Map# 052-00-05-029). WSW-5 services two houses located at this property. WSW-9 and the Pond located 600 feet Northwest of MW-1R are also located on this property.

WSW-7 is located approx. 850 feet Southeast of MW-1R at 16508 Grays Highway (Jasper County Tax Map# 052-00-10-026).

A tributary associated with Cypress Creek is located 1,000 feet southeast of MW-1R.

C. Utilities Survey

List the utilities on site, and adjacent to the site within a 250-foot radius, that could serve as exposure points or as preferential pathways.

Utility	On-site or Distance/Direction from site	Depth to Utility
Buried Telephone	On-site, Along Grays Highway	3-6 ft.

Additional Comments

Groundwater was encountered at the site at a depth of 10.99 to 12.67 feet. Given the proximity between the depth to groundwater and the depth of utilities, it is unlikely that underground utilities could serve as receptors or preferential pathways, dependant on groundwater fluctuaction.

D. Site Geology

Provide a brief description of the regional geology and hydrogeology

The project site is located in the Atlantic Coastal Plain Physiographic Province. The soils in this province are generally interbedded silts, sands and clays that have been deposited during successive advances and retreats of the ocean over the past several million years. This interbedding can cause perched water and makes hydrogeological interpretation difficult.

Provide a brief description of the site specific geology and stratigraphy

Coastal Plain sediments were encountered during drilling activities conducted at the site. The soils encountered included clays and clayey fine to medium sands. Test Boring Records which depict the soils encountered in each boring advanced are located in Appendix A.

E. Soil Boring Data

Drilling Dates 11/1/2011

Provide a brief justification for the location of the soil borings

- SB-1 Delineation of horizontal extent of contamination
- SB-2 Delineation of horizontal extent of contamination
- SB-3 Delineation of horizontal extent of contamination
- SB-4 Delineation of horizontal extent of contamination
- SB-5 Delineation of horizontal extent of contamination
- SB-6 Delineation of horizontal extent of contamination
- SB-7 Delineation of horizontal extent of contamination
- SB-8 Background Boring

Additional Comments:

Field Screening was accomplished by a Direct Push drilling rig employing a MacroCore Sampler for collection of continuous soil samples. As soil samples were extracted from the ground, MECI personnel recorded the lithology of the soil column and screened for organic vapors using a MiniRae 3000 Photo Ionization Detector (PID).

Soil Borings and Monitoring Wells were installed by Tommy Bolyard (SC Driller Certification #B 01846) of EDPS, 17538 Greenhill Road, Charlotte, NC 28278 ((704) 607-7529)

Complete the table below for each soil boring.

UST Area Borings -

Borehole SB-1			
Sampling Date- 11/1/2011		Sample Depth: 6-8 Ft.	
Interval (ft.)	Field Screening Results	Lithology (soil type, color, rocks/ minerals present)	Soil Conditions (dry, moist, etc; petroleum odor)
0-2 Ft.	5.8	Brown & Black, Fine to Medium Sandy SILT	Dry, No Petroleum Odor
2-4 Ft.	11.9	Red, Silty, Fine to Medium Sandy CLAY	Dry, No Petroleum Odor
4-6 Ft.	10.4	SAA	Dry, No Petroleum Odor
6-8 Ft.	41.4	SAA	Dry, Slight Petroleum Odor
8-10 Ft.	31.8	SAA	Dry, Slight Petroleum Odor

Borehole SB-2			
Sampling Date- 11/1/2011		Sample Depth: 6-8 Ft.	
Interval (ft.)	Field Screening Results	Lithology (soil type, color, rocks/ minerals present)	Soil Conditions (dry, moist, etc; petroleum odor)
0-2 Ft.	0.7	Brown & Black, Fine to Medium Sandy SILT	Dry, No Petroleum Odor
2-4 Ft.	4.2	Red, Silty, Fine to Medium Sandy CLAY	Dry, No Petroleum Odor
4-6 Ft.	42.7	SAA	Dry, Slight Petroleum Odor
6-8 Ft.	7,105	SAA	Dry, Petroleum Odor
8-10 Ft.	3,446	SAA	Dry, Petroleum Odor

Borehole SB-3			
Sampling Date- 11/1/2011		Sample Depth: 8-10 Ft.	
Interval (ft.)	Field Screening Results	Lithology (soil type, color, rocks/ minerals present)	Soil Conditions (dry, moist, etc; petroleum odor)
0-2 Ft.	1.8	Brown & Black, Fine to Medium Sandy SILT	Dry, No Petroleum Odor
2-4 Ft.	2.6	Red and Tan, Silty, Fine to Medium Sandy CLAY	Dry, No Petroleum Odor
4-6 Ft.	3.9	SAA	Dry, No Petroleum Odor
6-8 Ft.	8,576	SAA	Dry, Petroleum Odor
8-10 Ft.	15,000+	SAA	Dry, Petroleum Odor

Borehole SB-4			
Sampling Date- 11/1/2011		Sample Depth: 8-10 Ft.	
Interval (ft.)	Field Screening Results	Lithology (soil type, color, rocks/ minerals present)	Soil Conditions (dry, moist, etc; petroleum odor)
0-2 Ft.	6.9	Brown & Black; Fine to Medium Sandy SILT	Dry, No Petroleum Odor
2-4 Ft.	2.6	Red, Silty, Fine to Medium Sandy CLAY	Dry, No Petroleum Odor
4-6 Ft.	2.4	SAA	Dry, No Petroleum Odor
6-8 Ft.	1.8	SAA	Dry, No Petroleum Odor
8-10 Ft.	15,000+	SAA	Dry, Petroleum Odor

Borehole SB-5			
Sampling Date- 11/1/2011		Sample Depth: 0-2 Ft.	
Interval (ft.)	Field Screening Results	Lithology (soil type, color, rocks/ minerals present)	Soil Conditions (dry, moist, etc; petroleum odor)
0-2 Ft.	2.8	Brown, Fine to Medium Sandy SILT	Dry, No Petroleum Odor
2-4 Ft.	1.7	Red and Tan, Silty, Fine to Medium Sandy CLAY	Dry, No Petroleum Odor
4-6 Ft.	0.3	SAA	Dry, No Petroleum Odor
6-8 Ft.	0.5	SAA	Dry, No Petroleum Odor
8-10 Ft.	0.7	SAA	Dry, No Petroleum Odor

UST Area Borings -**Borehole SB-6****Sampling Date- 11/1/2011****Sample Depth: 8-10 Ft.**

Interval (ft.)	Field Screening Results	Lithology (soil type, color, rocks/ minerals present)	Soil Conditions (dry, moist, etc; petroleum odor)
0-2 Ft.	2.1	Brown and Tan, Fine to Medium Sandy SILT	Dry, No Petroleum Odor
2-4 Ft.	1.4	Red and Tan, Silty, Fine to Medium Sandy CLAY	Dry, No Petroleum Odor
4-6 Ft.	5.8	SAA	Dry, No Petroleum Odor
6-8 Ft.	482.5	SAA	Dry, Petroleum Odor
8-10 Ft.	1,865	SAA	Dry, Petroleum Odor

Borehole SB-7**Sampling Date- 11/1/2011****Sample Depth: 8-10 Ft.**

Interval (ft.)	Field Screening Results	Lithology (soil type, color, rocks/ minerals present)	Soil Conditions (dry, moist, etc; petroleum odor)
0-2 Ft.	0.2	Brown, Fine to Medium Sandy SILT	Dry, No Petroleum Odor
2-4 Ft.	1.8	Red, Silty, Fine to Medium Sandy CLAY	Dry, No Petroleum Odor
4-6 Ft.	6.3	SAA	Dry, No Petroleum Odor
6-8 Ft.	220.1	SAA	Dry, Petroleum Odor
8-10 Ft.	1,121	SAA	Dry, Petroleum Odor

Background Boring**Borehole SB-8****Sampling Date- 11/1/2011****Sample Depth: 8-10 Ft.**

Interval (ft.)	Field Screening Results	Lithology (soil type, color, rocks/ minerals present)	Soil Conditions (dry, moist, etc; petroleum odor)
0-2 Ft.	1.2	Brown and Tan, Fine to Medium Sandy SILT	Dry, No Petroleum Odor
2-4 Ft.	3.2	Red and Brown, Silty, Fine to Medium Sandy CLAY	Dry, No Petroleum Odor
4-6 Ft.	0.5	SAA	Dry, No Petroleum Odor
6-8 Ft.	0.4	SAA	Dry, No Petroleum Odor
8-10 Ft.	0.3	SAA	Dry, No Petroleum Odor

Laborator Services Provided by:

Shealy Environmental Services, Inc. 106 Vantage Point Drive, West Columbia, SC 29172-3000 :

(803) 791-9700 : SCDHEC Certification Number 32010

Schnabel Engineering 104 Corporate Blvd #420, West Columbia, SC 29169-4600 : (803) 796-6240

: Performed grain size distribution test in accordance with ASTM Method D-422.

Enter the soil analytical data for each soil boring for all COC in the table below and on the following page. Enter the appropriate RBSL for the soil type from Tables 4 through 8 in SCDHEC Risk-Based Corrective Action (RBCA) for Petroleum Releases Guidance Document.

CoC	RBSL	Units	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8
Benzene	7	ug/kg	<4.8	<4.6	<6.0	<5.6	<7.4	<4.3	<5.7	NT
Toluene	1450	ug/kg	2.2J	3.0J	<6.0	<5.6	9.9	<4.3	6.2	NT
Ethylbenzene	1150	ug/kg	12	7.6	11	<5.6	21	3.1J	4.6J	NT
Total Xylenes	14500	ug/kg	120	46	150	13	180	24	26	NT
Total BTEX	n/a	ug/kg	134.2J	56.6J	161	13	210.9	27.1J	36.8J	NT
Naphthalene	36	ug/kg	12	7.3	200	22	21	8.3	2.9J	NT
Benzo(a)anthracene	66	ug/kg	<370	<360	<440	22J	48J	<380	<380	NT
Benzo(b)flouranthene	66	ug/kg	38J	<360	<440	<370	33J	<380	<380	NT
Benzo(k)flouranthene	66	ug/kg	<370	<360	<440	<370	<410	<380	<380	NT
Chrysene	66	ug/kg	<370	<360	<440	17J	26J	<380	<380	NT
Dibenz(a,h)anthracene	66	ug/kg	<370	<360	<440	<370	<410	<380	<380	NT
Total Lead	n/a	mg/kg	22	9.8	17	12	11	15	17	NT
TPH-DRO	n/a	ug/kg	NT	NT	6,700J	NT	NT	NT	NT	NT
TOC (Background boring)	n/a	mg/kg	NT	NT	NT	NT	NT	NT	NT	420

Discuss the horizontal and vertical extent of COC in the soil

Soil sample analytical data for boring SB-3 indicate CoC concentrations above RBSL's.

See attached laboratory reports for Field Duplicate, Trip Blank, and Field Blank analytical data.

Additional Comments

Soil samples were collected, preserved and stored according to MECI SOP# 4.1.1.

Chemicals of Concern - Groundwater

Provide well installation information in the table below

MW#	Installation Date	Development Date	Sampling Date
MW-1R	11/1/2011	11/18/2011	11/18/2011
MW-2	11/1/2011	11/18/2011	11/18/2011
MW-3	11/1/2011	11/18/2011	11/18/2011
MW-4	11/1/2011	11/18/2011	11/18/2011

Additional Comments

Monitoring wells are installed according to MECI SOP# 4.2 and South Carolina Well Standards R.61-71.

Newly installed monitoring wells are developed by hand bailing, utilizing a prepackaged, clear, disposable polyethylene bailer & nylon rope.

Monitoring well locations are determined on-site, utilizing Tier I guidelines.

Enter the soil analytical data for each monitoring well for all CoC in the table below.

CoC	MW-2(SB-3)	MW-3	MW-4(SB-8)
Depth of sample	8-10 Feet	5-10 Feet	8-10 Feet
Benzene (ug/kg)	<6.0	2.8J	NT
Toluene (ug/kg)	<6.0	15	NT
Ethylbenzene (ug/kg)	11	13	NT
Xylenes (ug/kg)	150	84	NT
Total BTEX (ug/kg)	161	114.8J	NT
Naphthalene (ug/kg)	200	16	NT
Benzo(a)anthracene (ug/kg)	<440	<400	NT
Benzo(b)flouranthene (ug/kg)	<440	<400	NT
Benzo(k)flouranthene (ug/kg)	<440	<400	NT
Chrysene (ug/kg)	<440	<400	NT
Dibenz(a,h)anthracene (ug/kg)	<440	<400	NT
Total Lead (mg/kg)	17	16	NT
TPH-DRO (ug/kg)	6,700J	NT	NT
TOC (mg/kg)	NT	NT	420

F. Chemicals of Concern- Groundwater

Summarize the monitoring well and groundwater data in the table below.

MW #	TOC Elevation (ft)	Screened Interval (ft)	Depth to Product (ft)	Depth to Water (ft)	Water Table Elevation (ft)
MW-1R	98.99	7-17	NA	12.37	86.62
MW-2	99.41	7-17	NA	12.67	86.74
MW-3	97.90	7-17	NA	11.33	86.57
MW-4	97.29	7-17	NA	10.99	86.30

Enter field data measurements (temperature, pH, conductivity) taken during well purging on the form provided. Complete for each well.

Monitoring Well #	MW-1R	MW-2	MW-3	MW-4
PH (final)	6.24	6.03	5.53	5.19
Conductivity (final)	30.3	25.0	30.0	98.5
Temperature (final)	21.6	22.1	20.7	20.1

Enter dissolved oxygen measurements for each well in the table below.

Monitoring Well #	MW-1R	MW-2	MW-3	MW-4
Dissolved Oxygen (mg/l)	2.56	1.76	3.09	3.98

Enter the groundwater analytical data for each monitoring well for all CoC in the table below. If free product is present, indicate the measured thickness to the nearest 0.01 feet.

CoC	RBSL (ug/l)	MW-1R	MW-2	MW-3	MW-4	SW-1
Free Product Thickness	None	None	None	None	None	None
Benzene (ug/l)	5	1,900	62J	160	<5.0	<5.0
Toluene (ug/l)	1,000	10,000	830	1.9J	<5.0	<5.0
Ethylbenzene (ug/l)	700	2,500	930	25	<5.0	<5.0
Xylenes (ug/l)	10,000	13,000	5,300	50	<5.0	<5.0
Total BTEX (ug/l)	N/A	27,400	7,122J	236.9J	BDL	BDL
Naphthalene (ug/l)	25	330J	180	31	<5.0	<5.0
MTBE (ug/l)	40	83J	<100	85	<5.0	<5.0
1,2 DCA (ug/l)	5	<500	<100	<5.0	<5.0	<5.0
Benzo(a)anthracene (ug/l)	10	NT	<6.3	<6.4	<6.3	NT
Benzo(b)fluoranthene (ug/l)	10	NT	<6.3	<6.4	<6.3	NT
Benzo(k)fluoranthene (ug/l)	10	NT	<6.3	<6.4	<6.3	NT
Chrysene (ug/l)	10	NT	<6.3	<6.4	<6.3	NT
Dibenz(a,h)anthracene (ug/l)	10	NT	<6.3	<6.4	<6.3	NT
EDB (ug/l)	0.05	14	0.44	0.20	<0.019	<0.019
Lead (mg/l)	15	0.030	0.018	0.0064J	0.0024J	NT
Filtered Lead (mg/l)	15	NT	0.0071J	<0.010	<0.010	NT

CoC	RBSL (ug/l)	WSW-1	WSW-2	WSW-3	WSW-4	WSW-5
Benzene (ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene (ug/l)	1,000	<5.0	<5.0	<5.0	<5.0	<5.0
Ethylbenzene (ug/l)	700	<5.0	<5.0	<5.0	<5.0	<5.0
Xylenes (ug/l)	10,000	<5.0	<5.0	<5.0	<5.0	<5.0
Total BTEX (ug/l)	N/A	BDL	BDL	BDL	BDL	BDL
Naphthalene (ug/l)	25	<5.0	<5.0	<5.0	<5.0	<5.0
MTBE (ug/l)	40	<5.0	<5.0	<5.0	<5.0	<5.0
1,2 DCA (ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
EDB (ug/l)	0.05	<0.020	<0.020	<0.020	<0.020	<0.019

Additional Comments:

Analytical data indicated CoC above RBSL's in monitoring wells MW-1R, MW-2 and MW-3.

All monitoring and water supply wells sampled according to MECI SOP# 4.3. See attached Laboratory reports for Field Duplicate, Trip Blank and Field Blank analytical data.

G. Aquifer Characteristics

Hydraulic Conductivity	2.69 E-01 ft/day
Hydraulic Gradient	3.14 E-03 ft./ft.
Porosity	25 percent for Clayey Sand
Estimated Seepage Velocity	1.23 feet per year

Complete the slug test form and include in Appendix D of the report. Include all data, graphs, and equations used to derive the aquifer characteristics and hydrologic parameters (hydraulic conductivity, seepage velocity, hydraulic gradient, etc.) in Appendix D.

III. Tier I Evaluation

A. CURRENT LAND USE - Identify any potential receptors or human exposure pathways (e.g. basements, contaminated soils from UST closures, etc.) within a 1000-foot radius for current land use. Complete the table below. Additional sheets may be attached if necessary.

Media (for exposure)	Exposure Route	Pathway Selected for Evaluation? (Yes or No)	Exposure point or Reason for Non-Selection	Data Requirements (IF pathway selected)
Air	Inhalation	Yes	Buried Structures identified in search radius	Tier II Evaluation to determine horizontal and vertical extent of contamination
	Explosion Hazard	Yes		
Groundwater	Ingestion	Yes	Nine water supply wells were identified within our search radius.	Tier II Evaluation to determine horizontal and vertical extent of contamination
	Dermal Contact	Yes		
	Volatile Inhalation	Yes		
Surface Water	Ingestion	Yes	Two Ponds were identified within our search radius.	Tier II Evaluation to determine horizontal and vertical extent of contamination
	Dermal contact	Yes		
	Volatile Inhalation	Yes		
Surficial Soil	Ingestion	Yes	Potentially contaminated soil not covered by pavement.	Tier II Evaluation to determine horizontal and vertical extent of contamination
	Dermal Contact	Yes		
	Volatile Inhalation	Yes		
	Leaching to Groundwater	Yes		
Subsurface Soil	Ingestion	Yes	Potentially contaminated soil not covered by pavement.	Tier II Evaluation to determine horizontal and vertical extent of contamination
	Dermal Contact	Yes		
	Volatile Inhalation	Yes		
	Leaching to Groundwater	Yes		

B. FUTURE LAND USE - Identify any potential receptors or human exposure pathways (e.g. basements, contaminated soils from UST closures, etc.) within a 1000-foot radius for projected future land use. Complete the table below. Additional sheets may be attached if necessary.

Media (for exposure)	Exposure Route	Pathway Selected for Evaluation? (Yes or No)	Exposure point or Reason for Non-Selection	Data Requirements (IF pathway selected)
Air	Inhalation	Yes	Buried Structures identified in search radius	Tier II Evaluation to determine horizontal and vertical extent of contamination
	Explosion Hazard	Yes		
Groundwater	Ingestion	Yes	Nine water supply wells were identified within our search radius.	Tier II Evaluation to determine horizontal and vertical extent of contamination
	Dermal Contact	Yes		
	Volatile Inhalation	Yes		
Surface Water	Ingestion	Yes	Two Ponds were identified within our search radius.	Tier II Evaluation to determine horizontal and vertical extent of contamination
	Dermal contact	Yes		
	Volatile Inhalation	Yes		
Surficial Soil	Ingestion	Yes	Potentially contaminated soil not covered by pavement.	Tier II Evaluation to determine horizontal and vertical extent of contamination
	Dermal Contact	Yes		
	Volatile Inhalation	Yes		
	Leaching to Groundwater	Yes		
Subsurface Soil	Ingestion	Yes	Potentially contaminated soil not covered by pavement.	Tier II Evaluation to determine horizontal and vertical extent of contamination
	Dermal Contact	Yes		
	Volatile Inhalation	Yes		
	Leaching to Groundwater	Yes		

Recommendations for further action Tier II Assessment to determine the vertical and horizontal extent of contamination.

IV. Maps and Figures

Complete and attach all maps and appendices as outlined below.

A. Figures

All maps must include the following :

- the facility name,
- address,
- site id number,
- date
- bar scale
- north arrow.

1 Figure 1 - Topographic Map

Prepare a copy of the relevant portion of the appropriate United States Geological Survey 7.5 minute topographic map. Indicate the location of the site and location of any receptors (e.g., marsh, groundwater well, city water well, etc.).

2 Figure 2- Scaled Site Location Map

Prepare a site location map identifying the site and any pertinent property boundaries (residential and commercial), streets, receptors, etc. within a 500 foot radius.

3 Figure 3- Surveyed Site Map

Prepare a site base map to scale and plot all the utilities. This map will include:

- a. Location of property lines.
- b. Streets and highways (indicate names).
- c. Location of buildings.
- d. Paved areas on or adjacent to site.
- e. Location of all present and former above ground and underground storage tanks and associated lines, pumps, and dispensers.
- f. Underground utilities on or adjacent to site (sewer, water, telephone, gas, electric, etc.).
- g. Location of any other potential receptors.
- h. Eight soil boring locations.
- j. Survey datum location.

4 Figure 4- Soil COC Site Map

Prepare a COC site map from a copy of Figure 3. Add all accompanying soil data. The soil analytical data will be plotted adjacent to each soil boring (SB) using the following format:

SB#	
Sample Depth (ft)	
Benzene (mg/kg)	
Toluene (mg/kg)	
Ethylbenzene (mg/kg)	
Xylenes (mg/kg)	
PAHs (mg/kg)	

5 Figure 5- Groundwater COC Site Map

Prepare a COC site map from a copy of Figure 3. Add potentiometric surface (elevation) data, an arrow indicating groundwater flow direction, and accompanying groundwater data. The groundwater data should be plotted adjacent to the monitoring wells (MW) using the following format:

MW #	
Groundwater elevation	
Benzene (ug/l)	
Toluene (ug/l)	
Ethylbenzene (ug/l)	
Xylenes (ug/l)	
PAHs (ug/l)	

B. Appendices

1 Appendix A - Boring Logs

The monitoring well construction logs must include all information as outlined in the S.C. Well Standards and Regulations R.61-71.11E(2). Additionally, a copy of DHEC Form 1903 (Water Well Record) should be included for each monitoring well installed.

2 Appendix B - Analytical Data

A copy of the completed chain of custody, certificates of analysis and field sampling logs should be attached. The sampling logs should note the location and type of each sample submitted for analysis. The laboratory certificates of analysis should include the analytical results, the reporting limit, the analytical method utilized, and the laboratory certification number.

3 Appendix C - Slug Test Data Form

The slug test summary forms, and all data, graphs, and equations that were used to derive the aquifer characteristics and hydrologic parameters should be included.

4 Appendix D - Soil and water disposal manifests.

5 Appendix E - Copy of Zoning Regulations.

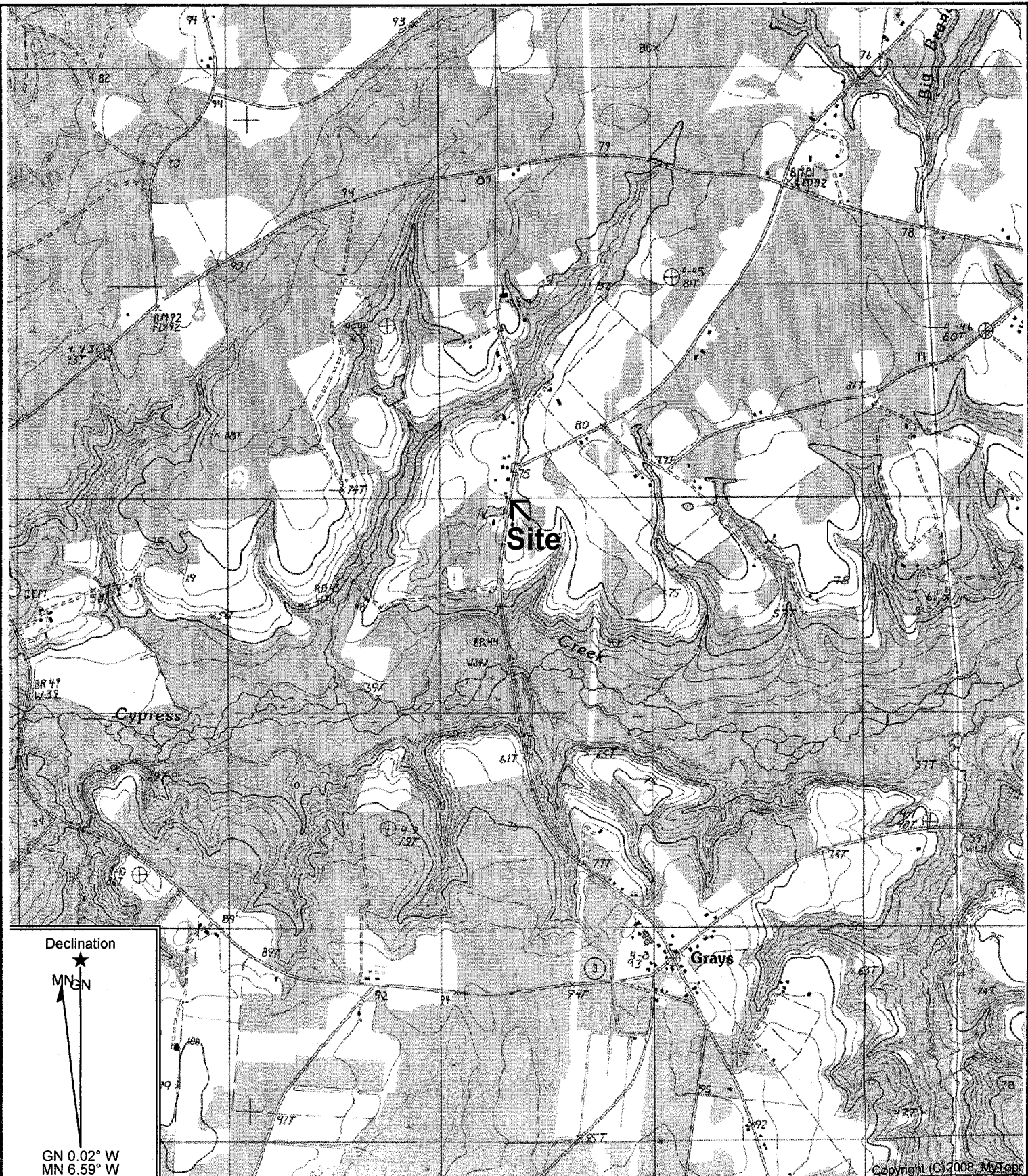
6 Appendix F - Copy of Tax Map

The tax map should be accompanied by the list of names and addresses of adjacent property owners.

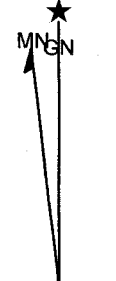
7 Appendix G - Field Information Data Sheets

8 Appendix H - QAPP Contractor Checklist

FIGURES

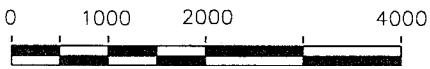


Declination



GN 0.02° W
MN 6.59° W

GRAPHIC SCALE



1IN = 2000FT

Reference: Grays, South Carolina
USGS 7.5 Min. Quad
Countour Interval - 5 Feet

Midlands
Environmental
Consultants, Inc.

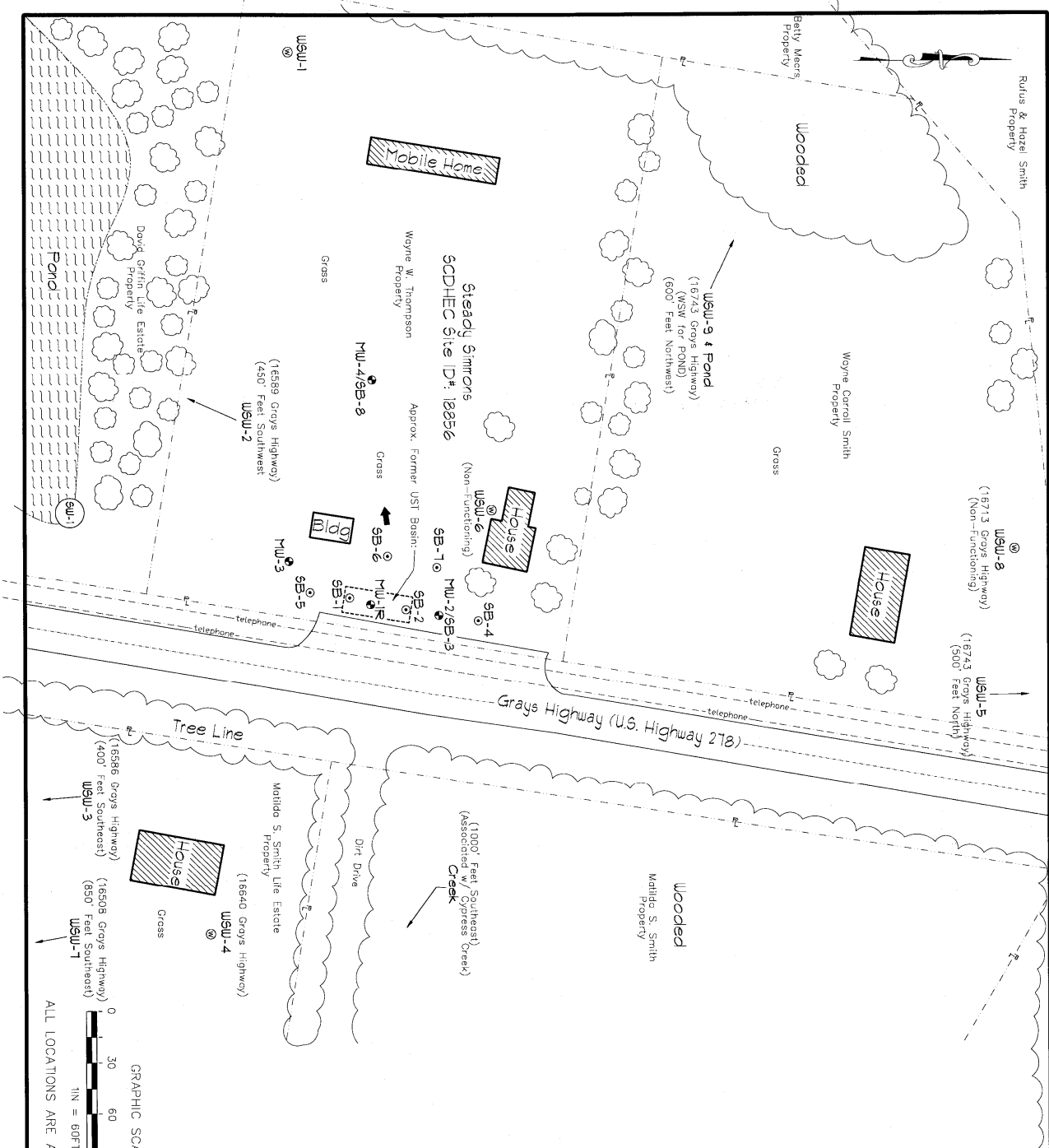
Steady Simmons
16661 Grays Highway, Early Branch, South Carolina
SCDHEC Site ID# 18856

Site Location

Figure 1

MECI II-3586

Copyright (C) 2008, M&S



Explanation:

- Location of Soil Test Boring
- Estimated Groundwater Flow Direction
- Location of Water-table Bracketing Monitoring Well
- Estimated Location of Removed Underground Storage Tanks
- Location of Water Supply Well
- Property Line
- Location of Surface Water Sample Collection
- Telephone
- Under Ground Telephone

Groundwater Elevation Data

Well #	Screened Interval	Depth to Water (feet)	Well Head Elevation	Groundwater Elevation
MW-1R	7-17	12.37	98.99	86.62
MW-2	7-17	12.67	99.41	86.74
MW-3	7-17	11.33	97.90	86.57
MW-4	7-17	10.99	97.29	86.30

Notes:

Depth to groundwater measured on November 18, 2011.
 Site datum based on assumed Spot Elevation

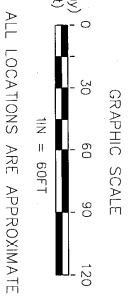
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated December 7, 2011.

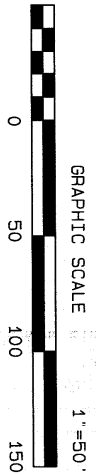
Site Features

Steady Simmons
 Early Branch, South Carolina
 SCDHEC Site ID 18556

Midlands Environmental Consultants, Inc.

JOB NO. 11-2566
 DATE December 13, 2011
 PAGE 2



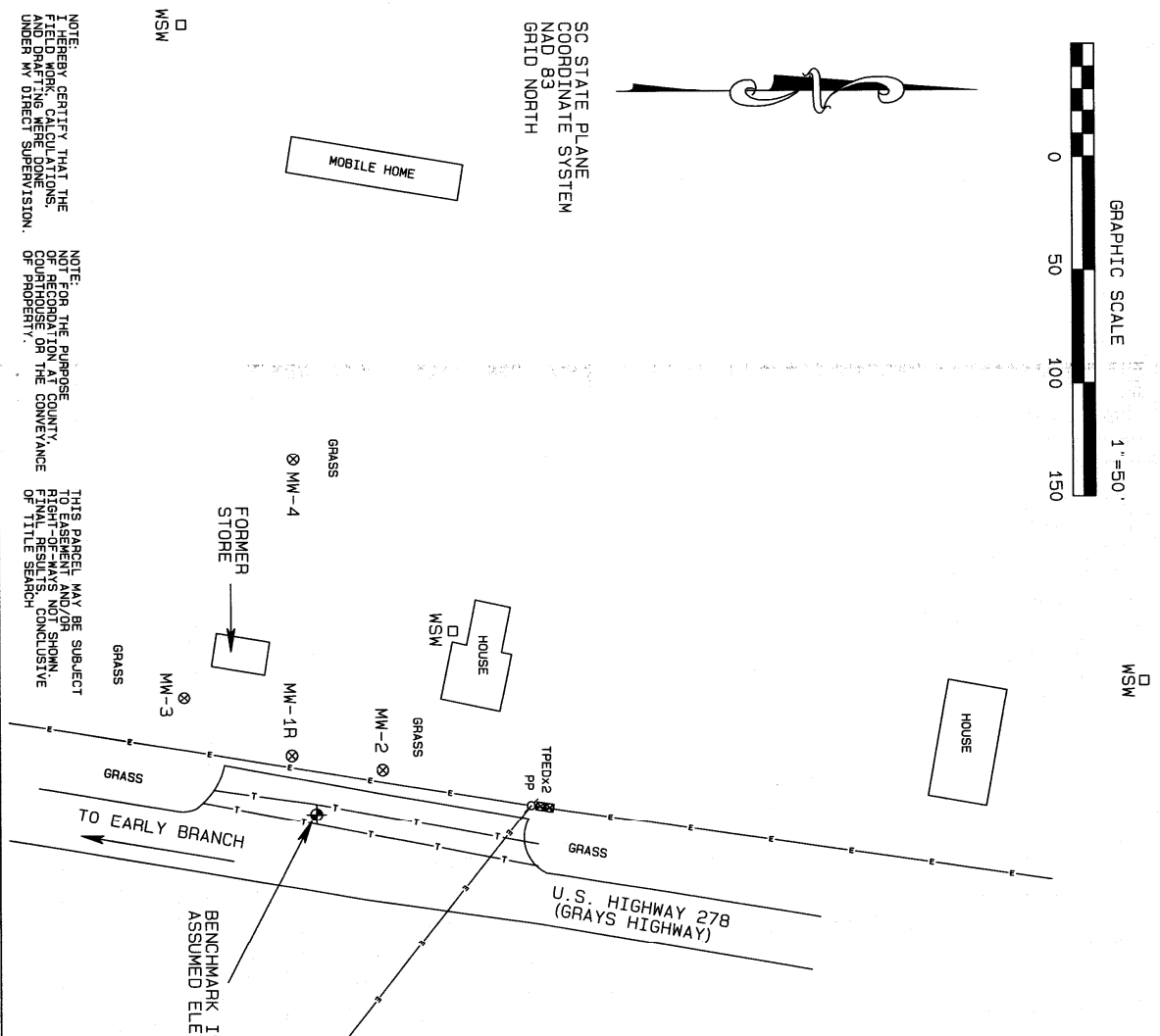


SC STATE PLANE
COORDINATE SYSTEM
NAD 83
GRID NORTH

NOTE:
I HEREBY CERTIFY THAT THE
FIELD MEASUREMENTS,
AND DRAWINGS WERE DONE
UNDER MY DIRECT SUPERVISION.

NOTE:
FOR THE PURPOSE
OF ESTABLISHING A
COURTHOUSE OF THE CONVEYANCE
OF PROPERTY.

THIS PARCEL MAY BE SUBJECT
TO EASEMENTS AND/OR SHOW
FINAL RESULTS OF CONCLUSIVE
OF TITLE SEARCH.

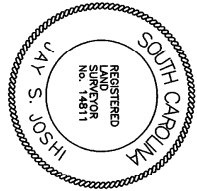


BENCHMARK IS A MAGNAIL
ASSUMED ELEV. = 100.00'

MONITOR WELLS		
WELL	TOL. ELEV.	TOC ELEV.
MW-1R	99.21	98.99
MW-2	99.76	99.41
MW-3	98.22	97.90
MW-4	97.55	97.29

LEGEND AND ABBREVIATIONS:

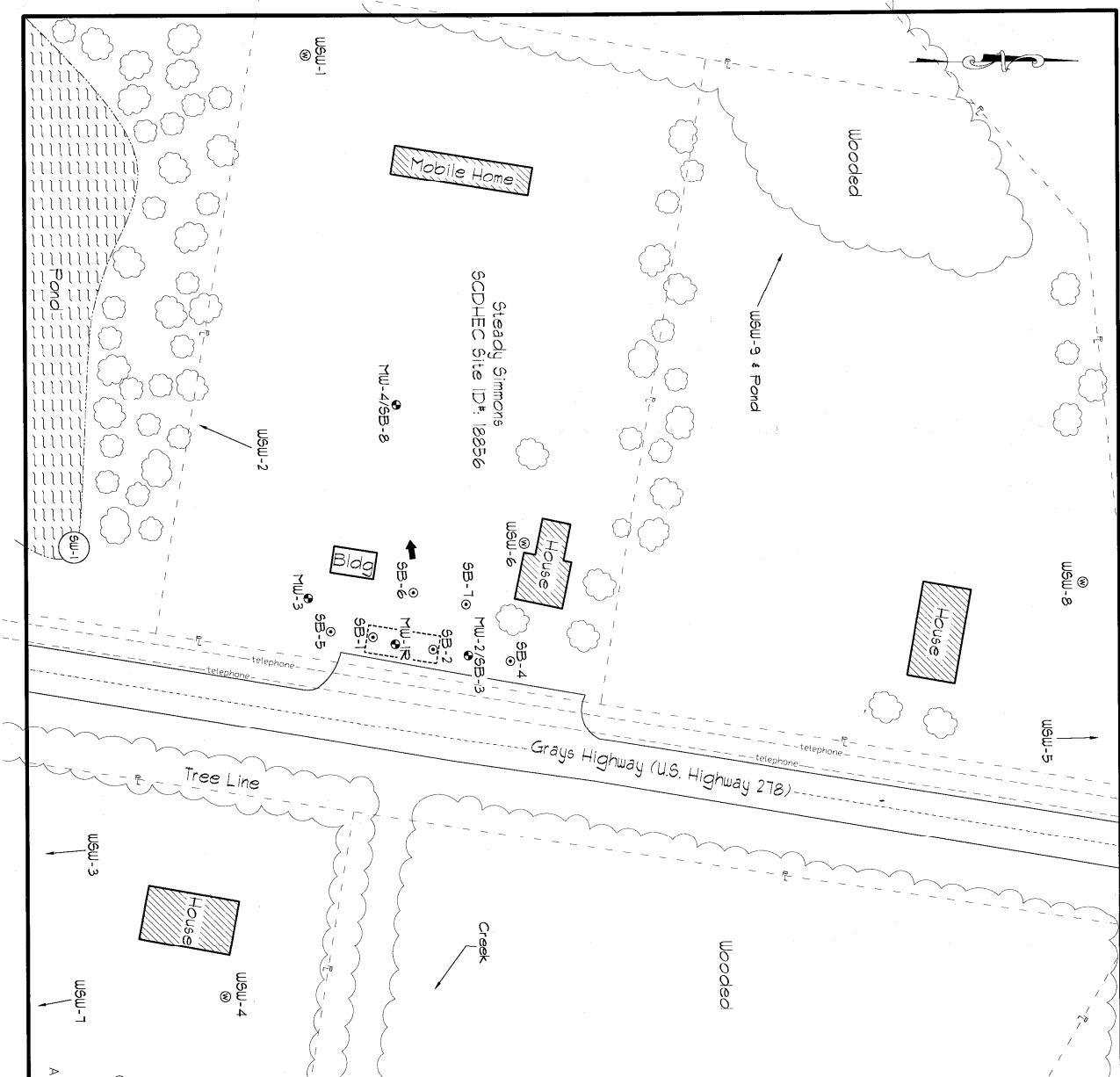
- ⊗ = MONITORING WELL
- BM = BENCHMARK
- TPEDX = TELEPHONE PEDESTAL
- SMH = SANITARY MAN HOLE
- TMH = TELEPHONE MAN HOLE
- WM = WATER METER
- WV = WATER VALVE
- FH = FIRE HYDRANT
- SP = SIGNAL POLE
- PP = POWER POLE
- LP = LIGHT POLE
- GW = GAS VALVE
- UST = UNDERGROUND STORAGE TANK
- USTV = UNDERGROUND STORAGE TANK VENT
- MSW = MONITORING WELL
- WATER SUPPLY WELL
- CONCRETE PIPE
- VACUUM
- PHONE
- FD = FUEL DISPENSER
- DD = DIESEL DISPENSER
- KD = KEROSENE DISPENSER
- OVERHEAD POWER LINE
- GAS LINE
- UNDERGROUND TELEPHONE LINE
- WATER LINE
- WOOD LINE
- FENCE LINE
- UNDERGROUND POWER LINE



COMPREHENSIVE SITE SKETCH OF
STEADY SIMMONS
16681, GRAYS HIGHWAY
EARLY BRANCH, JASPER COUNTY, SC
SCDHEC SITE ID #18868
PREPARED FOR

Figure 3

Jay S. Joshi
JAY S. JOSHI PLS # 14811
P.O. BOX 90408, COLUMBIA, SC, 29290
DATE: DECEMBER 7, 2011 JOB #120611Z
803-778-9909



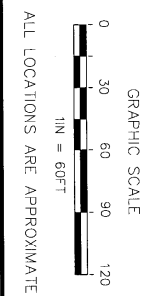
Explanation:

- ⊙ Location of Soil Test Boring
- ⊙ Location of Water Table Bracketing Monitoring Well
- ⊙ Location of Water Supply Well
- ⊙ Location of Surface Water Sample Collection
- ⊙ Estimated Groundwater Flow Direction
- ⊙ Estimated Location of Removed Underground Storage Tanks

Soil Analytical Data •

Sample Location	Sample Date	Depth (feet)	Benzene (ug/kg)	Toluene (ug/kg)	Ethylbenzene (ug/kg)	Total Xylenes (ug/kg)	Total BTEX (ug/kg)	Naphthalene (ug/kg)	TOC (mg/kg)	TPH-DRO (ug/kg)
SB-1	11/11	6-8	<4.8	3.01	12	120	134.21	12	NI	NI
SB-2	11/11	8-10	<4.6	3.01	7.6	45	56.61	7.3	NI	NI
SB-3/MW-2	11/11	8-10	<5.6	6.0	11	150	161	200	6,700	NI
SB-4	11/11	0-2	<7.4	9.9	5.6	13	13	22	NI	NI
SB-5	11/11	8-10	<4.3	4.3	3.14	24	27.14	8.3	NI	NI
SB-6	11/11	8-10	<5.7	6.2	4.61	26	36.81	2.91	NI	NI
SB-1/MW-4	11/11	8-10	NI	NI	NI	NI	NI	NI	420	NI
MW-3	11/11	5-10	2.81	15	13	84	114.81	16	NI	NI

Notes: NI = Not Tested
 "J" values in Total BTEX calculations.



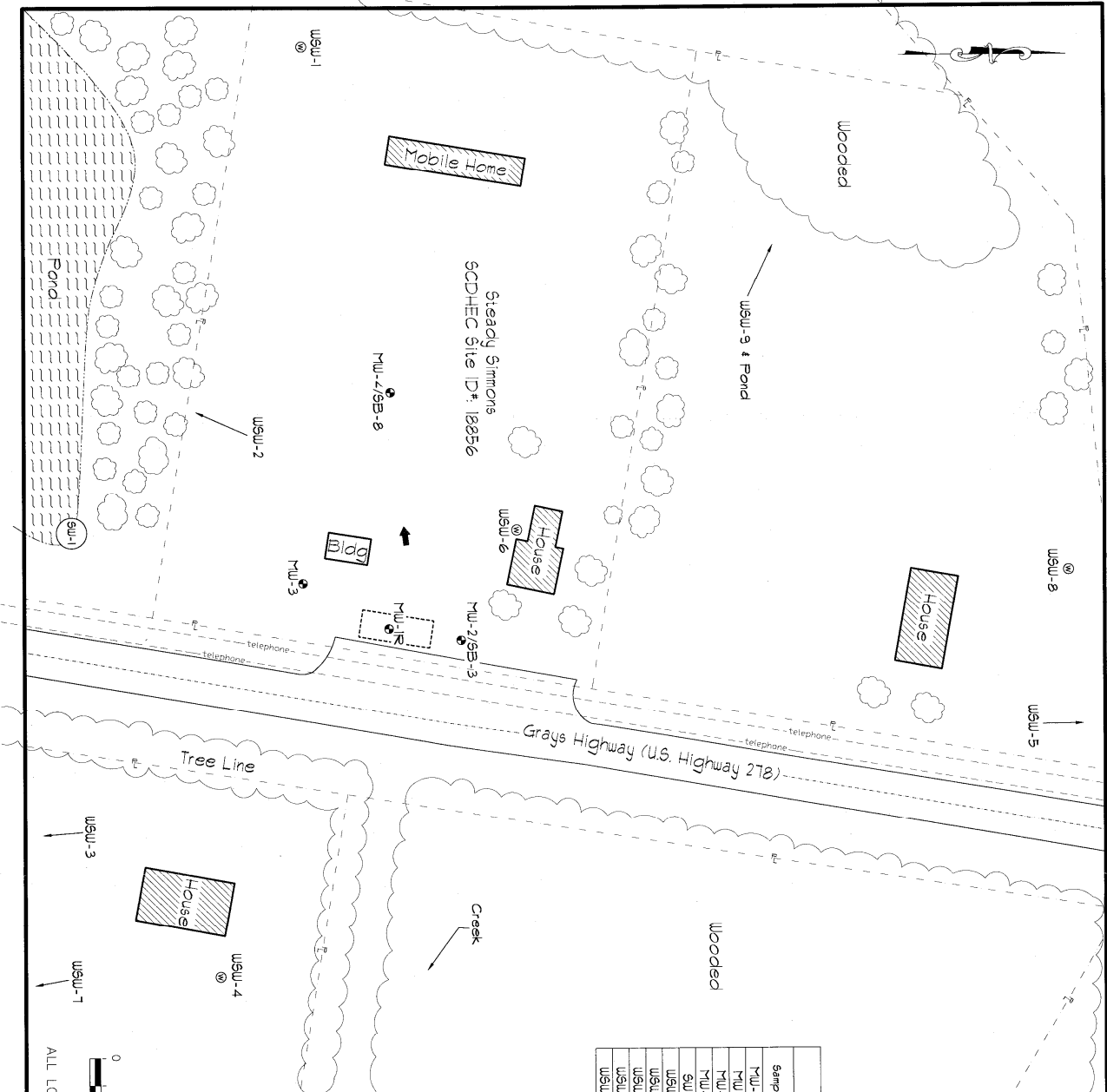
Drawing Based on MECL Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated December 7, 2011.

Soil COC Site Map

Steady Simmons
 Early Branch, South Carolina
 SCDHEC Site ID 18956

MiLand Environmental Consultants, Inc.

JOB NO. 11-2586
 DATE December 13, 2011
 FIGURE 4



Explanation:

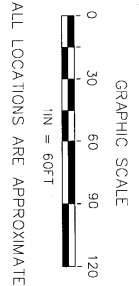
- ⊙ Location of Waterable Bracketing Monitoring Well
- ⬆ Estimated Groundwater Flow Direction
- ⊙ Location of Water Supply Well
- ⊠ Estimated Location of Removed Underground Storage Tanks
- ⊙(SW-2) Location of Surface Water Sample Collection

COC Concentration Data

Sample #	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	Naphthalene (ug/l)	MTBE (ug/l)	1,2 DCA (ug/l)	EDB (ug/l)
MU-R	1,900	10,000	2,500	13,000	27,400	330J	83J	<500	14
MU-2	62J	830	930	5,300	7,122J	180	<100	<100	0.44
MU-3	160	1.9J	25	50	236.9J	31	85	<5.0	0.20
MU-4	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
SW-1	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
USW-1	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.020
USW-2	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.020
USW-3	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.020
USW-4	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.020
USW-5	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019

Notes: Groundwater samples collected on November 18, 2011.
BDL = Below Detection Limits

*J Values used in Total BTEX Calculation



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated December 7, 2011.

Groundwater COC Site Map

Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID 18556

5

JOB NO. 11-358

DATE December 13, 2011

**APPENDIX A
BORING LOGS**

Depth (Feet)	Description	PID PPM	Well Diagram	Penetration Blows Per Foot						
				0	5	10	20	40	60	80
0 - 5	Grass with Topsoil COASTAL PLAIN SEDIMENT: Black and Brown, Fine to Medium Sandy SILT			NO BLOWCOUNTS RECORDED						
5	Red and Tan, Fine to Medium Sandy Silty CLAY	343								
10		1,830								
15										
20	Boring Terminated at 17.0 Feet Below Ground Surface (BGS). Monitoring Well Installed to 17.0 Feet BGS. Groundwater Measured at 12.37 Feet Below Top of Casing on 11/18/2011.	1,562								
25										
30										
35										

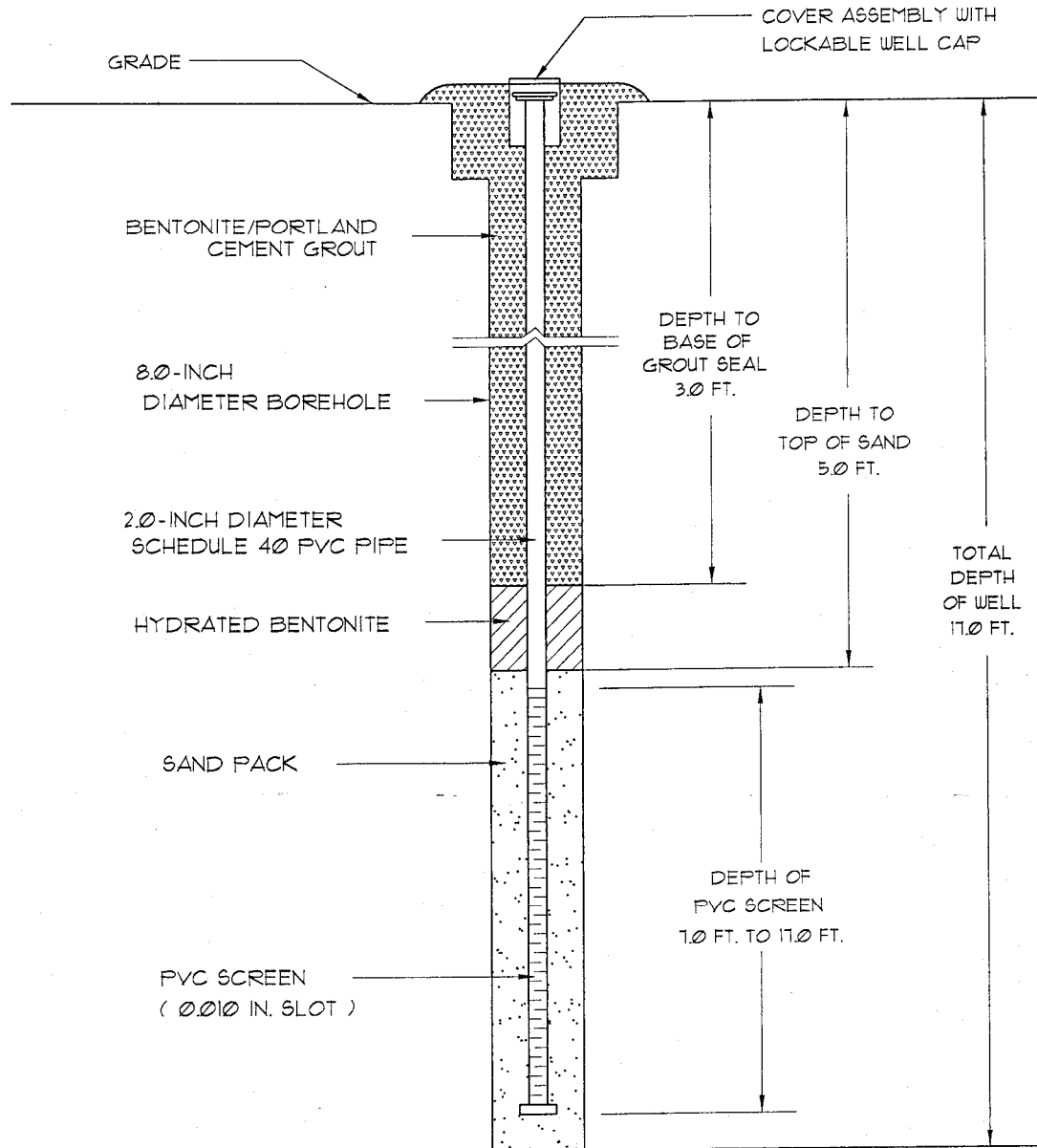
TEST BORING RECORD
 Steady Simmons
 Early Branch, South Carolina
 SCDHEC Site ID# 18856
 MECI Project Number 11-3586

Boring Number:	MW-1R
Date Drilled:	11/01/11
Drilled By:	Environmental Drilling & Probing Services, Inc.
Logged By:	J. Bryant

Prepared By:
 Midlands
 Environmental
 Consultants, Inc.
 235-B Dooley Road
 Lexington, South Carolina 29073
 (803) 808-2043 fax: 808-2048

MONITORING WELL INSTALLATION RECORD

Steady Simmons
 Early Branch, South Carolina
 SCDHEC Site ID# 18856
 MECI Project Number 11-3586



Well Number:	MW-1R
Date Drilled:	11/01/11
Drilled By:	Environmental Drilling & Probing Services, Inc.
Driller:	T. Bolyard S.C. I.D. #: B 01846
Logged By:	J. Bryant

Prepared By:

Midlands Environmental Consultants, Inc.

235-B Dooley Road
 Lexington, South Carolina 29013
 (803) 808-2043 fax: 808-2048

Depth (Feet)	Description	PID PPM	Well Diagram	Penetration Blows Per Foot																	
				0	5	10	20	40	60	80	100										
0	Grass with Topsoil																				
1.8	COASTAL PLAIN SEDIMENT: Black and Brown, Fine to Medium Sandy SILT	1.8																			
2.6	Red and Tan, Fine to Medium Sandy Silty CLAY	2.6																			
5																					
		3.9																			
		8,576																			
10		15,000																			
15		15,000																			
20	Boring Terminated at 17.0 Feet Below Ground Surface (BGS). Monitoring Well Installed to 17.0 Feet BGS. Groundwater Measured at 12.67 Feet Below Top of Casing on 11/18/2011.	15,000																			
25																					
30																					
35																					

NO BLOWCOUNTS RECORDED

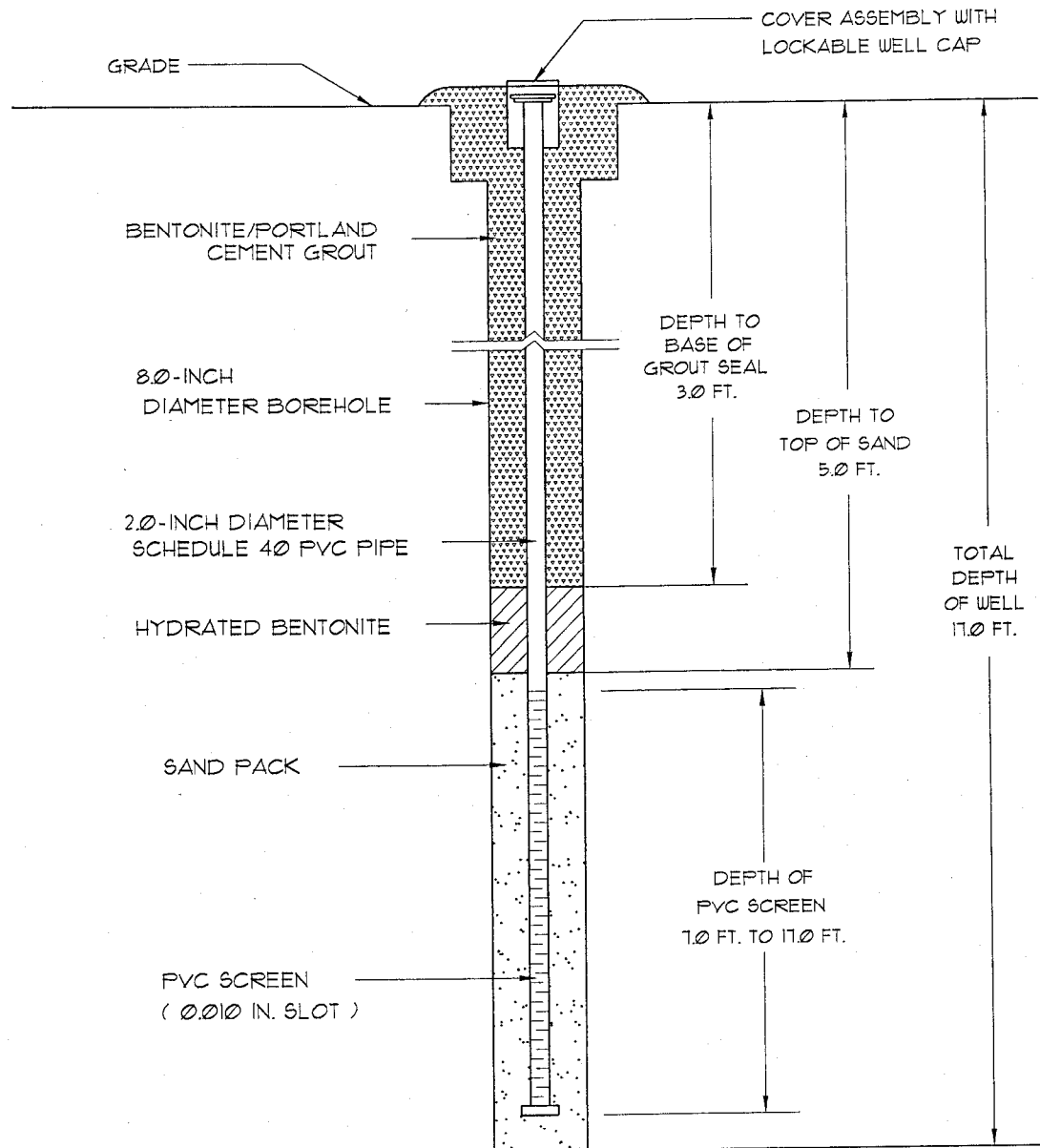
TEST BORING RECORD
 Steady Simmons
 Early Branch, South Carolina
 SCDHEC Site ID* 18856
 MECI Project Number 11-3586

Boring Number:	MW-2
Date Drilled:	11/01/11
Drilled By:	Environmental Drilling & Probing Services, Inc.
Logged By:	J. Bryant

Prepared By:
Midlands
Environmental
Consultants, Inc.
 235-B Dooley Road
 Lexington, South Carolina 29013
 (803) 808-2043 Fax: 808-2048

MONITORING WELL INSTALLATION RECORD

Steady Simmons
 Early Branch, South Carolina
 SCDHEC Site ID# 18856
 MECI Project Number 11-3586



Well Number:	MW-2
Date Drilled:	11/01/11
Drilled By:	Environmental Drilling & Probing Services, Inc.
Driller:	T. Bolyard S.C. I.D. #: B 01846
Logged By:	J. Bryant

Prepared By:

Midlands Environmental Consultants, Inc.

235-B Dooley Road
 Lexington, South Carolina 29073
 (803) 808-2043 fax: 808-2048

Depth (Feet)	Description	PID PPM	Well Diagram	Penetration Blows Per Foot													
				0	5	10	20	40	60	80	100						
0	Grass with Topsoil																
0 - 5.2	COASTAL PLAIN SEDIMENT: Brown and Tan, Fine to Medium Sandy SILT																
5.2 - 7.8	Brown and Red, Fine to Medium Sandy Silty CLAY	5.2															
7.8 - 36.1		7.8															
36.1 - 20.2		36.1															
20.2 - 17.0	Boring Terminated at 17.0 Feet Below Ground Surface (BGS). Monitoring Well Installed to 17.0 Feet BGS. Groundwater Measured at 11.33 Feet Below Top of Casing on 11/18/2011.	20.2															
17.0 - 35																	

NO BLOWCOUNTS RECORDED

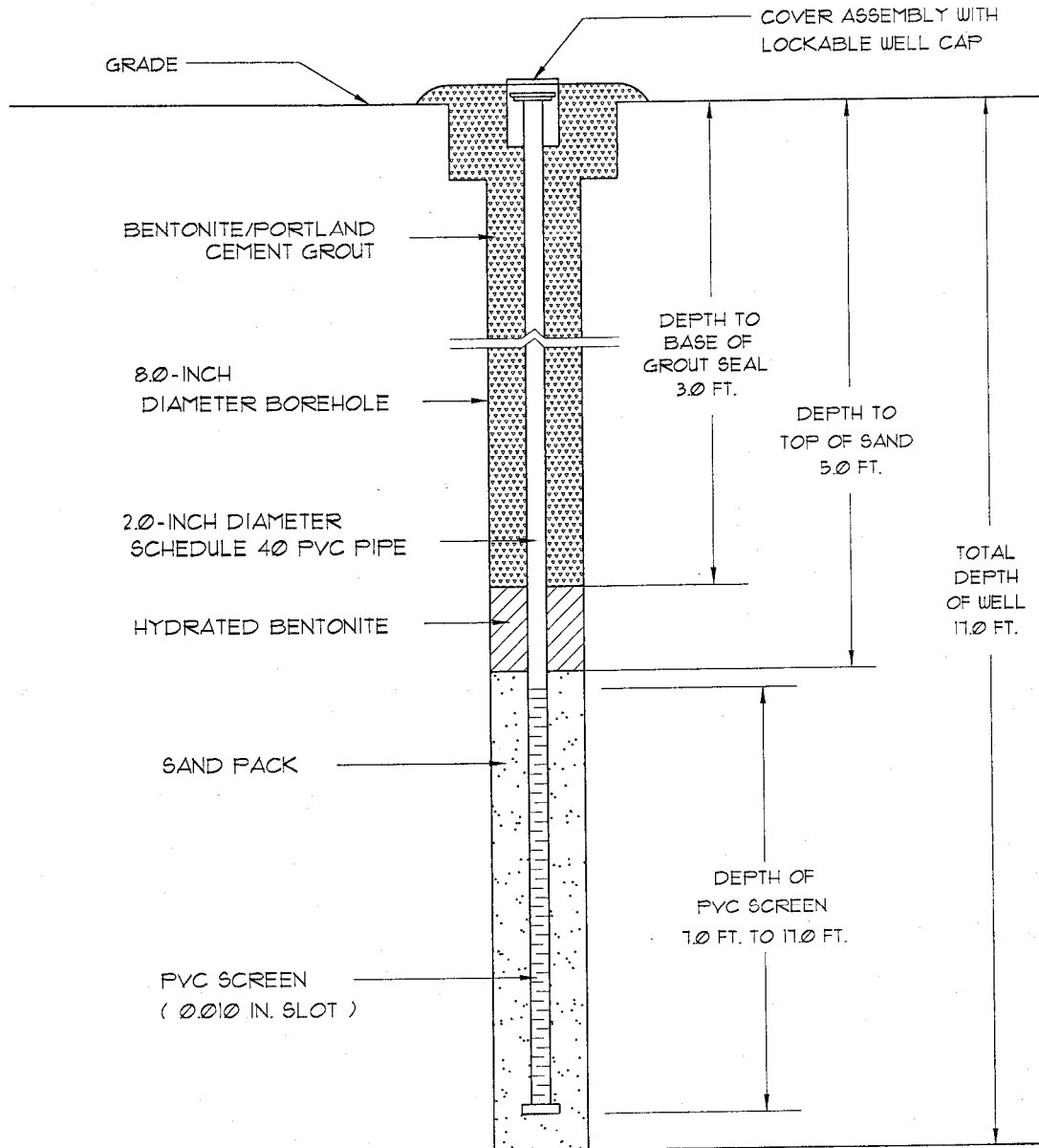
TEST BORING RECORD
 Steady Simmons
 Early Branch, South Carolina
 SCDHEC Site ID# 18856
 MECI Project Number 11-3586

Boring Number:	MW-3
Date Drilled:	11/01/11
Drilled By:	Environmental Drilling & Probing Services, Inc.
Logged By:	J. Bryant

Prepared By:
 Midlands
 Environmental
 Consultants, Inc.
 235-B Dooley Road
 Lexington, South Carolina 29013
 (803) 808-2043 fax: 808-2048

MONITORING WELL INSTALLATION RECORD

Steady Simmons
 Early Branch, South Carolina
 SCDHEC Site ID# 18856
 MECI Project Number 11-3586



Well Number:	MW-3
Date Drilled:	11/01/11
Drilled By:	Environmental Drilling & Probing Services, Inc.
Driller:	T. Bolyard S.C. I.D. #: B 01846
Logged By:	J. Bryant

Prepared By:

Midlands Environmental Consultants, Inc.

235-B Dooley Road
 Lexington, South Carolina 29073
 (803) 808-2043 fax: 808-2048

Depth (Feet)	Description	PID PPM	Well Diagram	Penetration Blows Per Foot															
				0	5	10	20	40	60	80	100								
	Grass with Topsoil																		
	COASTAL PLAIN SEDIMENT: Brown and Tan, Fine to Medium Sandy SILT	1.2																	
	Red and Tan, Fine to Medium Sandy Silty CLAY	3.2																	
5																			
		0.5																	
		0.4																	
10		0.3																	
15																			
20	Boring Terminated at 17.0 Feet Below Ground Surface (BGS). Monitoring Well Installed to 17.0 Feet BGS. Groundwater Measured at 10.99 Feet Below Top of Casing on 11/18/2011.																		
25																			
30																			
35																			

NO BLOWCOUNTS RECORDED

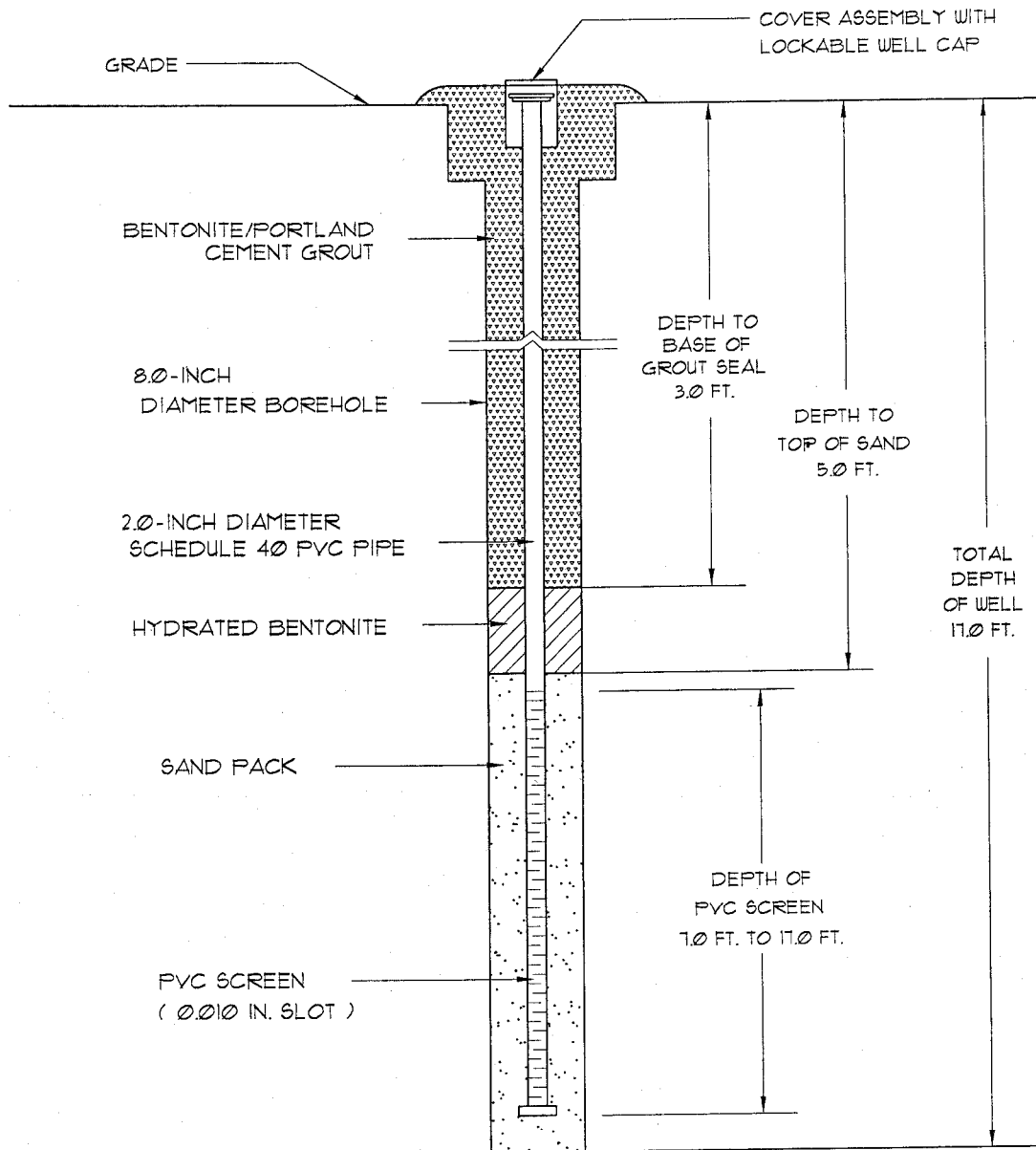
TEST BORING RECORD
 Steady Simmons
 Early Branch, South Carolina
 SCDHEC Site ID# 18856
 MECI Project Number 11-3586

Boring Number:	MW-4
Date Drilled:	11/01/11
Drilled By:	Environmental Drilling & Probing Services, Inc.
Logged By:	J. Bryant

Prepared By:
 Midlands
 Environmental
 Consultants, Inc.
 235-B Dooley Road
 Lexington, South Carolina 29073
 (803) 808-2043 fax: 808-2048

MONITORING WELL INSTALLATION RECORD

Steady Simmons
 Early Branch, South Carolina
 SCDHEC Site ID# 18856
 MECI Project Number 11-3586



Well Number:	MW-4
Date Drilled:	11/01/11
Drilled By:	Environmental Drilling & Probing Services, Inc.
Driller:	T. Bolyard S.C. I.D. #: B 01846
Logged By:	J. Bryant

Prepared By:

Midlands Environmental Consultants, Inc.

235-B Dooley Road
 Lexington, South Carolina 29013
 (803) 808-2043 fax: 808-2048



Water Well Record Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
 Name: SCDHEC
 (last) (first)
 Address: 2600 Bull Street
 City: Columbia State: SC Zip: 29201-1708
 Telephone: Work: (803) 898-4300 Home:

2. LOCATION OF WELL: COUNTY:
 Name: Steady Simmons
 Street Address: 16661 Grays Highway
 City: Early Branch Zip: 29916-8016
 Latitude: Longitude:

3. PUBLIC SYSTEM NAME: PUBLIC SYSTEM NUMBER:

4. ABANDONMENT: Yes No
 Grouted Depth: from 0.0 ft. to 10.0 ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Topsoil	0.5	0.5
Black & Brown, Sandy SILT	1.5	2.0
Red, Sandy Silty CLAY	8.0	10.0
Temporary boring Abandoned by Environmental Drilling and Probing Services. !LC via tremie pipe with Portland-Bentonite Cement Slurry on 11/01/11.		
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
SB-1

6. TYPE: Mud Rotary Jetted Bored
 Dug Air Rotary Driven
 Cable tool Other

7. PERMIT NUMBER: 18856

8. USE:
 Residential Public Supply Process
 Irrigation Air Conditioning Emergency
 Test Well Monitor Well Replacement

9. WELL DEPTH (completed) 10.0 ft. Date Started: 11/01/11
 Date Completed: 11/01/11

10. CASING: Threaded Welded
 Diam.: _____
 Type: PVC Galvanized Steel Other
 _____ in. to _____ ft. depth
 _____ in. to _____ ft. depth
 Height: Above /Below Surface _____ ft.
 Weight _____ lb./ft.
 Drive Shoe? Yes No

11. SCREEN:
 Type: _____ Diam.: _____
 Slot/Gauge: _____ Length: _____
 Set Between: _____ ft. and _____ ft.
 _____ ft. and _____ ft.
 Sieve Analysis Yes (please enclose) No
NOTE: MULTIPLE SCREENS USE SECOND SHEET

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
 _____ ft. after _____ hrs. Pumping _____ G.P.M.
 Pumping Test: Yes (please enclose) No
 Yield: _____

14. WATER QUALITY
 Chemical Analysis Yes No Bacterial Analysis Yes No
 Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) Yes No
 Installed from _____ ft. to _____ ft.
 Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? Yes No
 Neat Cement Bentonite Bentonite/Cement Other _____
 Depth: From 0.0 ft. to 10.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
 Type _____
 Well Disinfected Yes No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed
 Mfr. Name: _____ Model No.: _____
 H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
 TYPE: Submersible Jet (shallow) Turbine
 Jet (deep) Reciprocating Centrifugal

19. WELL DRILLER: Tommy Bolyard CERT. NO.: 01846
 Address: (Print) 17538 Greenhill Road Level: A B C D (circle one) X
 Charlotte, NC 28278
 Telephone No.: 704-607-7529 Fax No.: 803-548-2233

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Date: 11/15/11
 Well Driller

If D Level Driller, provide supervising driller's name:



Water Well Record Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:

Name: SCDHEC (last) (first)
 Address: 2600 Bull Street
 City: Columbia State: SC Zip: 29201-1708
 Telephone: Work: (803) 898-4300 Home:

7. PERMIT NUMBER: 18856

8. USE:

- Residential Public Supply Process
 Irrigation Air Conditioning Emergency
 Test Well Monitor Well Replacement

2. LOCATION OF WELL: COUNTY:

Name: Steady Simmons
 Street Address: 16661 Grays Highway
 City: Early Branch Zip: 29916-8016
 Latitude: Longitude:

9. WELL DEPTH (completed) 10.0 ft. Date Started: 11/01/11
 Date Completed: 11/01/11

10. CASING: Threaded Welded

Diam.: _____ Height: Above /Below
 Type: PVC Galvanized Surface _____ ft.
 Steel Other Weight _____ lb./ft.
 _____ in. to _____ ft. depth Drive Shoe? Yes No
 _____ in. to _____ ft. depth

3. PUBLIC SYSTEM NAME: PUBLIC SYSTEM NUMBER:

11. SCREEN:

Type: _____ Diam.: _____
 Slot/Gauge: _____ Length: _____
 Set Between: _____ ft. and _____ ft. **NOTE: MULTIPLE SCREENS
 USE SECOND SHEET**
 Sieve Analysis Yes (please enclose) No

4. ABANDONMENT: Yes No

Grouted Depth: from 0.0 ft. to 10.0 ft.

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.

_____ ft. after _____ hrs. Pumping _____ G.P.M.
 Pumping Test: Yes (please enclose) No
 Yield: _____

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Topsoil	0.5	0.5
Black & Brown, Sandy SILT	1.5	2.0
Red, Sandy Silty CLAY	8.0	10.0

14. WATER QUALITY

Chemical Analysis Yes No Bacterial Analysis Yes No
 Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) Yes No

Installed from _____ ft. to _____ ft.
 Effective size _____ Uniformity Coefficient _____

16. WELL GROUDED? Yes No

Neat Cement Bentonite Bentonite/Cement Other _____
 Depth: From 0.0 ft. to 10.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction

Type _____
 Well Disinfected Yes No Type: _____ Amount: _____

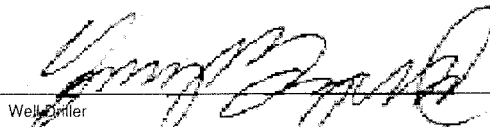
18. PUMP: Date installed: _____ Not installed

Mfr. Name: _____ Model No.: _____
 H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
 TYPE: Submersible Jet (shallow) Turbine
 Jet (deep) Reciprocating Centrifugal

19. WELL DRILLER: Tommy Bolyard

Address: (Print) 17538 Greenhill Road
 Charlotte, NC 28278
 Telephone No.: 704-607-7529
 Level: A B C D (circle one) X
 Fax No.: 803-548-2233

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed:  Date: 11/15/11
 Well Driller

If D Level Driller, provide supervising driller's name:

- 6. TYPE:** Mud Rotary Jetted Bored
 Dug Air Rotary Driven
 Cable tool Other



Water Well Record

Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:

Name: SCDHEC
 (last) (first)
 Address: 2600 Bull Street
 City: Columbia State: SC Zip: 29201-1708
 Telephone: Work: (803) 898-4300 Home:

2. LOCATION OF WELL: COUNTY:

Name: Steady Simmons
 Street Address: 16661 Grays Highway
 City: Early Branch Zip: 29916-8016
 Latitude: Longitude:

3. PUBLIC SYSTEM NAME: PUBLIC SYSTEM NUMBER:

4. ABANDONMENT: Yes No

Grouted Depth: from 0.0 ft. to 10.0 ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Topsoil	0.5	0.5
Brown & Tan, Sandy SILT	1.5	2.0
Red & Tan, Sandy Silty CLAY	8.0	10.0
Temporary boring Abandoned		
by Environmental Drilling and		
Probing Services, LLC via tremie		
pipe with Portland-Bentonite		
Cement Slurry on 11/01/11.		
*Indicate Water Bearing Zones		
(Use a 2nd sheet if needed)		

5. REMARKS:

SB-6

- 6. TYPE:** Mud Rotary Jetted Bored
 Dug Air Rotary Driven
 Cable tool Other

7. PERMIT NUMBER: 18856

8. USE:

- Residential Public Supply Process
 Irrigation Air Conditioning Emergency
 Test Well Monitor Well Replacement

9. WELL DEPTH (completed) 10.0 ft. Date Started: 11/01/11
 Date Completed: 11/01/11

10. CASING: Threaded Welded
 Diam.: _____ ft.
 Type: PVC Galvanized Steel Other
 _____ in. to _____ ft. depth
 _____ in. to _____ ft. depth
 Height: Above /Below
 Surface _____ ft.
 Weight _____ lb./ft.
 Drive Shoe? Yes No

11. SCREEN:

Type: _____ Diam.: _____
 Slot/Gauge: _____ Length: _____
 Set Between: _____ ft. and _____ ft.
 _____ ft. and _____ ft.
 Sieve Analysis Yes (please enclose) No
NOTE: MULTIPLE SCREENS USE SECOND SHEET

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
 _____ ft. after _____ hrs. Pumping _____ G.P.M.
 Pumping Test: Yes (please enclose) No
 Yield: _____

14. WATER QUALITY

Chemical Analysis Yes No Bacterial Analysis Yes No
 Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) Yes No
 Installed from _____ ft. to _____ ft.
 Effective size _____ Uniformity Coefficient _____

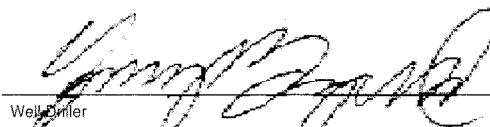
16. WELL GROUTED? Yes No
 Neat Cement Bentonite Bentonite/Cement Other _____
 Depth: From 0.0 ft. to 10.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
 Type _____
 Well Disinfected Yes No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed
 Mfr. Name: _____ Model No.: _____
 H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
 TYPE: Submersible Jet (shallow) Turbine
 Jet (deep) Reciprocating Centrifugal

19. WELL DRILLER: Tommy Bolyard **CERT. NO.:** 01846
 Address: (Print) 17538 Greenhill Road
 Charlotte, NC 28278 Level: A B C D (circle one) **X**
 Telephone No.: 704-607-7529 Fax No.: 803-548-2233

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed:  Date: 11/15/11
 Well Driller

If D Level Driller, provide supervising driller's name:



Water Well Record

Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
 Name: SCDHEC (last) (first)
 Address: 2600 Bull Street
 City: Columbia State: SC Zip: 29201-1708
 Telephone: Work: (803) 898-4300 Home:

7. PERMIT NUMBER: 18856

2. LOCATION OF WELL: COUNTY:
 Name: Steady Simmons
 Street Address: 16661 Grays Highway
 City: Early Branch Zip: 29916-8016
 Latitude: Longitude:

8. USE:
 Residential Public Supply Process
 Irrigation Air Conditioning Emergency
 Test Well Monitor Well Replacement

9. WELL DEPTH (completed) Date Started: 11/01/11
 10.0 ft. Date Completed: 11/01/11

10. CASING: Threaded Welded
 Diam.: _____
 Type: PVC Galvanized
 Steel Other
 _____ in. to _____ ft. depth
 _____ in. to _____ ft. depth
 Height: Above /Below
 Surface _____ ft.
 Weight _____ lb./ft.
 Drive Shoe? Yes No

3. PUBLIC SYSTEM NAME: PUBLIC SYSTEM NUMBER:

11. SCREEN:
 Type: _____ Diam.: _____
 Slot/Gauge: _____ Length: _____
 Set Between: _____ ft. and _____ ft.
 _____ ft. and _____ ft.
 Sieve Analysis Yes (please enclose) No
NOTE: MULTIPLE SCREENS USE SECOND SHEET

4. ABANDONMENT: Yes No
 Grouted Depth: from 0.0 ft. to 10.0 ft.

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Topsoil	0.5	0.5
Brown, Sandy SILT	1.5	2.0
Red, Sandy Silty CLAY	8.0	10.0
Temporary boring Abandoned		
by Environmental Drilling and		
Probing Services, LLC via tremie		
pipe with Portland-Bentonite		
Cement Slurry on 11/01/11.		
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

13. PUMPING LEVEL Below Land Surface.
 _____ ft. after _____ hrs. Pumping _____ G.P.M.
 Pumping Test: Yes (please enclose) No
 Yield: _____

14. WATER QUALITY
 Chemical Analysis Yes No Bacterial Analysis Yes No
 Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) Yes No
 Installed from _____ ft. to _____ ft.
 Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? Yes No
 Neat Cement Bentonite Bentonite/Cement Other _____
 Depth: From 0.0 ft. to 10.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
 Type _____
 Well Disinfected Yes No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed
 Mfr. Name: _____ Model No.: _____
 H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
 TYPE: Submersible Jet (shallow) Turbine
 Jet (deep) Reciprocating Centrifugal

19. WELL DRILLER: Tommy Bolyard CERT. NO.: 01846
 Address: (Print) Level: A B C D (circle one)
 17538 Greenhill Road X
 Charlotte, NC 28278
 Telephone No.: 704-607-7529 Fax No.: 803-548-2233

5. REMARKS:
 SB-7

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Date: 11/15/11
 Well Driller

6. TYPE: Mud Rotary Jetted Bored
 Dug Air Rotary Driven
 Cable tool Other

If D Level Driller, provide supervising driller's name:

APPENDIX B
ANALYTICAL DATA

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

Midlands Environmental Consultants, Inc.

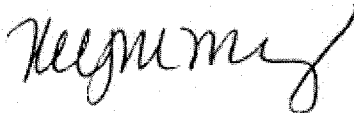
235 Dooley Rd
Lexington, SC 29073
Attention: Bryan Shane

Project Name: **Steady Simmons**

Project Number: **11-3586**

Lot Number: **MK03054**

Date Completed: **11/16/2011**



Kelly M. Maberry
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

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SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

Case Narrative

Midlands Environmental Consultants, Inc.

Lot Number: MK03054

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

Shealy is not NELAC certified for Phosphorus by 365.1 but is certified in SC and NC.

Shealy is not NELAC certified for VPH, but is certified for VPH in NC.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

TPH-DRO

I1 - An unknown hydrocarbon pattern is present in the sample.

The method blank associated with sample -003 had DRO detected at a concentration that was above the MDL but below ½ the PQL. All samples associated with this method blank have detections for DRO have been flagged with a "B".

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary Midlands Environmental Consultants, Inc. Lot Number: MK03054

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SB-1 (6-8')	Solid	11/01/2011 1300	11/03/2011
002	SB-2 (6-8')	Solid	11/01/2011 1330	11/03/2011
003	SB- 3/MW-2 (8-10)	Solid	11/01/2011 1400	11/03/2011
004	SB-4 (8-10')	Solid	11/01/2011 1430	11/03/2011
005	SB-5 (0-2')	Solid	11/01/2011 1500	11/03/2011
006	SB-6 (8-10')	Solid	11/01/2011 1530	11/03/2011
007	SB-7 (8-10')	Solid	11/01/2011 1600	11/03/2011
008	SB-8/MW-4 (10')	Solid	11/01/2011 1630	11/03/2011
009	MW-3	Solid	11/01/2011 1700	11/03/2011
010	MW-3 Dup.	Solid	11/01/2011 1700	11/03/2011
011	Field Blank	Aqueous	11/01/2011 1600	11/03/2011
012	Trip Blank	Aqueous	11/01/2011 1605	11/03/2011

(12 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary Midlands Environmental Consultants, Inc. Lot Number: MK03054

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SB-1 (6-8')	Solid	Ethylbenzene	8260B	12		ug/kg	6
001	SB-1 (6-8')	Solid	Naphthalene	8260B	12		ug/kg	6
001	SB-1 (6-8')	Solid	Toluene	8260B	2.2	J	ug/kg	6
001	SB-1 (6-8')	Solid	Xylenes (total)	8260B	120		ug/kg	6
001	SB-1 (6-8')	Solid	Benzo(b)fluoranthene	8270D	38	J	ug/kg	6
001	SB-1 (6-8')	Solid	Fluoranthene	8270D	15	J	ug/kg	6
001	SB-1 (6-8')	Solid	Naphthalene	8270D	28	J	ug/kg	6
001	SB-1 (6-8')	Solid	Pyrene	8270D	24	J	ug/kg	6
001	SB-1 (6-8')	Solid	Lead	6010C	22		mg/kg	7
002	SB-2 (6-8')	Solid	Ethylbenzene	8260B	7.6		ug/kg	8
002	SB-2 (6-8')	Solid	Naphthalene	8260B	7.3		ug/kg	8
002	SB-2 (6-8')	Solid	Toluene	8260B	3.0	J	ug/kg	8
002	SB-2 (6-8')	Solid	Xylenes (total)	8260B	46		ug/kg	8
002	SB-2 (6-8')	Solid	Lead	6010C	9.8		mg/kg	9
003	SB- 3/MW-2 (8-10)	Solid	Ethylbenzene	8260B	11		ug/kg	10
003	SB- 3/MW-2 (8-10)	Solid	Naphthalene	8260B	200		ug/kg	10
003	SB- 3/MW-2 (8-10)	Solid	Xylenes (total)	8260B	150		ug/kg	10
003	SB- 3/MW-2 (8-10)	Solid	Naphthalene	8270D	28	J	ug/kg	10
003	SB- 3/MW-2 (8-10)	Solid	TPH-DRO	8015C	6700	BJ11	ug/kg	11
003	SB- 3/MW-2 (8-10)	Solid	Lead	6010C	17		mg/kg	11
004	SB-4 (8-10')	Solid	Naphthalene	8260B	22		ug/kg	12
004	SB-4 (8-10')	Solid	Xylenes (total)	8260B	13		ug/kg	12
004	SB-4 (8-10')	Solid	Benzo(a)anthracene	8270D	22	J	ug/kg	12
004	SB-4 (8-10')	Solid	Chrysene	8270D	17	J	ug/kg	12
004	SB-4 (8-10')	Solid	Fluoranthene	8270D	42	J	ug/kg	12
004	SB-4 (8-10')	Solid	Phenanthrene	8270D	25	J	ug/kg	12
004	SB-4 (8-10')	Solid	Pyrene	8270D	31	J	ug/kg	12
004	SB-4 (8-10')	Solid	Lead	6010C	12		mg/kg	13
005	SB-5 (0-2')	Solid	Ethylbenzene	8260B	21		ug/kg	14
005	SB-5 (0-2')	Solid	Naphthalene	8260B	21		ug/kg	14
005	SB-5 (0-2')	Solid	Toluene	8260B	9.9		ug/kg	14
005	SB-5 (0-2')	Solid	Xylenes (total)	8260B	180		ug/kg	14
005	SB-5 (0-2')	Solid	Benzo(a)anthracene	8270D	48	J	ug/kg	14
005	SB-5 (0-2')	Solid	Benzo(b)fluoranthene	8270D	33	J	ug/kg	14
005	SB-5 (0-2')	Solid	Chrysene	8270D	26	J	ug/kg	14
005	SB-5 (0-2')	Solid	Fluoranthene	8270D	33	J	ug/kg	14
005	SB-5 (0-2')	Solid	Naphthalene	8270D	41	J	ug/kg	14
005	SB-5 (0-2')	Solid	Phenanthrene	8270D	21	J	ug/kg	14
005	SB-5 (0-2')	Solid	Pyrene	8270D	50	J	ug/kg	14
005	SB-5 (0-2')	Solid	Lead	6010C	11		mg/kg	15
006	SB-6 (8-10')	Solid	Ethylbenzene	8260B	3.1	J	ug/kg	16
006	SB-6 (8-10')	Solid	Naphthalene	8260B	8.3		ug/kg	16
006	SB-6 (8-10')	Solid	Xylenes (total)	8260B	24		ug/kg	16
006	SB-6 (8-10')	Solid	Lead	6010C	15		mg/kg	17
007	SB-7 (8-10')	Solid	Ethylbenzene	8260B	4.6	J	ug/kg	18

Executive Summary (Continued)

Lot Number: MK03054

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
007	SB-7 (8-10')	Solid	Naphthalene	8260B	2.9	J	ug/kg	18
007	SB-7 (8-10')	Solid	Toluene	8260B	6.2		ug/kg	18
007	SB-7 (8-10')	Solid	Xylenes (total)	8260B	26		ug/kg	18
007	SB-7 (8-10')	Solid	Lead	6010C	17		mg/kg	19
008	SB-8/MW-4 (10')	Solid	TOC	Walkley-Black	420		mg/kg	20
009	MW-3	Solid	Benzene	8260B	2.8	J	ug/kg	21
009	MW-3	Solid	Ethylbenzene	8260B	13		ug/kg	21
009	MW-3	Solid	Naphthalene	8260B	16		ug/kg	21
009	MW-3	Solid	Toluene	8260B	15		ug/kg	21
009	MW-3	Solid	Xylenes (total)	8260B	84		ug/kg	21
009	MW-3	Solid	Lead	6010C	16		mg/kg	22
010	MW-3 Dup.	Solid	Benzene	8260B	4.5	J	ug/kg	23
010	MW-3 Dup.	Solid	Ethylbenzene	8260B	20		ug/kg	23
010	MW-3 Dup.	Solid	Naphthalene	8260B	19		ug/kg	23
010	MW-3 Dup.	Solid	Toluene	8260B	31		ug/kg	23
010	MW-3 Dup.	Solid	Xylenes (total)	8260B	130		ug/kg	23
010	MW-3 Dup.	Solid	Lead	6010C	16		mg/kg	24

(62 detections)

Description: SB-1 (6-8')

Matrix: Solid

Date Sampled: 11/01/2011 1300

% Solids: 87.2 11/03/2011 2150

Date Received: 11/03/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/09/2011 1048	SAS		71339	6.03

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		4.8	1.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	12		4.8	1.6	ug/kg	1
Naphthalene	91-20-3	8260B	12		4.8	1.6	ug/kg	1
Toluene	108-88-3	8260B	2.2	J	4.8	1.6	ug/kg	1
Xylenes (total)	1330-20-7	8260B	120		4.8	2.8	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	53-142
Bromofluorobenzene		97	47-138
Toluene-d8		99	68-124

Semivolatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8270D	1	11/10/2011 1719	WD	11/04/2011 1731	71126

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acenaphthene	83-32-9	8270D	ND		370	11	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		370	15	ug/kg	1
Anthracene	120-12-7	8270D	ND		370	16	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		370	12	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		370	27	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	38	J	370	25	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		370	25	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		370	31	ug/kg	1
Chrysene	218-01-9	8270D	ND		370	12	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		370	25	ug/kg	1
Fluoranthene	206-44-0	8270D	15	J	370	12	ug/kg	1
Fluorene	86-73-7	8270D	ND		370	14	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		370	34	ug/kg	1
Naphthalene	91-20-3	8270D	28	J	370	16	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		370	15	ug/kg	1
Pyrene	129-00-0	8270D	24	J	370	16	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		74	33-102
Nitrobenzene-d5		70	22-109
Terphenyl-d14		78	41-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Client: Midlands Environmental Consultants, Inc.

Laboratory ID: MK03054-001

Description: SB-1 (6-8')

Matrix: Solid

Date Sampled: 11/01/2011 1300

% Solids: 87.2 11/03/2011 2150

Date Received: 11/03/2011

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/04/2011 2028	CDF	11/03/2011 1812	71078

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	22		0.57	0.11	mg/kg	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs)

Description: SB-2 (6-8')

Matrix: Solid

Date Sampled: 11/01/2011 1330

% Solids: 89.6 11/03/2011 2150

Date Received: 11/03/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/09/2011 1110	SAS		71339	6.01

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		4.6	1.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	7.6		4.6	1.6	ug/kg	1
Naphthalene	91-20-3	8260B	7.3		4.6	1.6	ug/kg	1
Toluene	108-88-3	8260B	3.0	J	4.6	1.6	ug/kg	1
Xylenes (total)	1330-20-7	8260B	46		4.6	2.7	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	53-142
Bromofluorobenzene		101	47-138
Toluene-d8		99	68-124

Semivolatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8270D	1	11/10/2011 1738	WD	11/04/2011 1731	71126

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acenaphthene	83-32-9	8270D	ND		360	11	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		360	14	ug/kg	1
Anthracene	120-12-7	8270D	ND		360	16	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		360	12	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		360	27	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		360	25	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		360	25	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		360	30	ug/kg	1
Chrysene	218-01-9	8270D	ND		360	11	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		360	24	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		360	11	ug/kg	1
Fluorene	86-73-7	8270D	ND		360	14	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		360	33	ug/kg	1
Naphthalene	91-20-3	8270D	ND		360	15	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		360	15	ug/kg	1
Pyrene	129-00-0	8270D	ND		360	16	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		78	33-102
Nitrobenzene-d5		78	22-109
Terphenyl-d14		77	41-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Client: Midlands Environmental Consultants, Inc.

Laboratory ID: MK03054-002

Description: SB-2 (6-8')

Matrix: Solid

Date Sampled: 11/01/2011 1330

% Solids: 89.6 11/03/2011 2150

Date Received: 11/03/2011

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/04/2011 2043	CDF	11/03/2011 1812	71078

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	9.8		0.55	0.10	mg/kg	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs)

Description: SB- 3/MW-2 (8-10)

Matrix: Solid

Date Sampled: 11/01/2011 1400

% Solids: 74.3 11/03/2011 2150

Date Received: 11/03/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/09/2011 1133	SAS		71339	5.59

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		6.0	1.3	ug/kg	1
Ethylbenzene	100-41-4	8260B	11		6.0	2.0	ug/kg	1
Naphthalene	91-20-3	8260B	200		6.0	2.0	ug/kg	1
Toluene	108-88-3	8260B	ND		6.0	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	150		6.0	3.5	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	53-142
Bromofluorobenzene		96	47-138
Toluene-d8		109	68-124

Semivolatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8270D	1	11/10/2011 1757	WD	11/04/2011 1731	71126

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acenaphthene	83-32-9	8270D	ND		440	13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		440	17	ug/kg	1
Anthracene	120-12-7	8270D	ND		440	19	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		440	14	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		440	32	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		440	29	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		440	30	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		440	36	ug/kg	1
Chrysene	218-01-9	8270D	ND		440	14	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		440	29	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		440	14	ug/kg	1
Fluorene	86-73-7	8270D	ND		440	17	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		440	39	ug/kg	1
Naphthalene	91-20-3	8270D	28	J	440	18	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		440	18	ug/kg	1
Pyrene	129-00-0	8270D	ND		440	19	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		67	33-102
Nitrobenzene-d5		64	22-109
Terphenyl-d14		69	41-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Client: Midlands Environmental Consultants, Inc.

Laboratory ID: MK03054-003

Description: SB- 3/MW-2 (8-10)

Matrix: Solid

Date Sampled: 11/01/2011 1400

% Solids: 74.3 11/03/2011 2150

Date Received: 11/03/2011

TPH - DRO

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	11/08/2011 1521	PMS	11/04/2011 2000	71127

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
TPH-DRO		8015C	6700	BJ11	9000	1600	ug/kg	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
o - Terphenyl		83	55-120						

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/04/2011 2051	CDF	11/03/2011 1812	71078

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	17		0.64	0.12	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: SB-4 (8-10')

Matrix: Solid

Date Sampled: 11/01/2011 1430

% Solids: 88.0 11/03/2011 2150

Date Received: 11/03/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/09/2011 1156	SAS		71339	5.05

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.6	1.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.6	1.9	ug/kg	1
Naphthalene	91-20-3	8260B	22		5.6	1.9	ug/kg	1
Toluene	108-88-3	8260B	ND		5.6	1.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	13		5.6	3.3	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	53-142
Bromofluorobenzene		105	47-138
Toluene-d8		98	68-124

Semivolatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8270D	1	11/10/2011 1816	WD	11/04/2011 1731	71126

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acenaphthene	83-32-9	8270D	ND		370	11	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		370	15	ug/kg	1
Anthracene	120-12-7	8270D	ND		370	16	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	22	J	370	12	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		370	27	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		370	25	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		370	25	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		370	30	ug/kg	1
Chrysene	218-01-9	8270D	17	J	370	11	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		370	24	ug/kg	1
Fluoranthene	206-44-0	8270D	42	J	370	12	ug/kg	1
Fluorene	86-73-7	8270D	ND		370	14	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		370	33	ug/kg	1
Naphthalene	91-20-3	8270D	ND		370	15	ug/kg	1
Phenanthrene	85-01-8	8270D	25	J	370	15	ug/kg	1
Pyrene	129-00-0	8270D	31	J	370	16	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		72	33-102
Nitrobenzene-d5		67	22-109
Terphenyl-d14		70	41-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Client: Midlands Environmental Consultants, Inc.

Laboratory ID: MK03054-004

Description: SB-4 (8-10')

Matrix: Solid

Date Sampled: 11/01/2011 1430

% Solids: 88.0 11/03/2011 2150

Date Received: 11/03/2011

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	3050B	6010C	1	11/04/2011 2102	CDF	11/03/2011 1812	71078				

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	12		0.56	0.10	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: SB-5 (0-2')

Matrix: Solid

Date Sampled: 11/01/2011 1500

% Solids: 80.5 11/03/2011 2150

Date Received: 11/03/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/09/2011 1219	SAS		71339	4.21

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		7.4	1.6	ug/kg	1
Ethylbenzene	100-41-4	8260B	21		7.4	2.5	ug/kg	1
Naphthalene	91-20-3	8260B	21		7.4	2.5	ug/kg	1
Toluene	108-88-3	8260B	9.9		7.4	2.5	ug/kg	1
Xylenes (total)	1330-20-7	8260B	180		7.4	4.3	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	53-142
Bromofluorobenzene		95	47-138
Toluene-d8		100	68-124

Semivolatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8270D	1	11/10/2011 1835	WD	11/04/2011 1731	71126

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acenaphthene	83-32-9	8270D	ND		410	13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		410	16	ug/kg	1
Anthracene	120-12-7	8270D	ND		410	18	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	48	J	410	14	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		410	30	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	33	J	410	28	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		410	28	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		410	34	ug/kg	1
Chrysene	218-01-9	8270D	26	J	410	13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		410	27	ug/kg	1
Fluoranthene	206-44-0	8270D	33	J	410	13	ug/kg	1
Fluorene	86-73-7	8270D	ND		410	16	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		410	37	ug/kg	1
Naphthalene	91-20-3	8270D	41	J	410	17	ug/kg	1
Phenanthrene	85-01-8	8270D	21	J	410	17	ug/kg	1
Pyrene	129-00-0	8270D	50	J	410	18	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		81	33-102
Nitrobenzene-d5		78	22-109
Terphenyl-d14		79	41-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: SB-5 (0-2')

Matrix: Solid

Date Sampled: 11/01/2011 1500

% Solids: 80.5 11/03/2011 2150

Date Received: 11/03/2011

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/04/2011 2106	CDF	11/03/2011 1812	71078

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	11		0.58	0.11	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: SB-6 (8-10')

Matrix: Solid

Date Sampled: 11/01/2011 1530

% Solids: 84.2 11/03/2011 2150

Date Received: 11/03/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/09/2011 1242	SAS		71339	6.84

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		4.3	0.96	ug/kg	1
Ethylbenzene	100-41-4	8260B	3.1	J	4.3	1.5	ug/kg	1
Naphthalene	91-20-3	8260B	8.3		4.3	1.5	ug/kg	1
Toluene	108-88-3	8260B	ND		4.3	1.5	ug/kg	1
Xylenes (total)	1330-20-7	8260B	24		4.3	2.5	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	53-142
Bromofluorobenzene		101	47-138
Toluene-d8		93	68-124

Semivolatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8270D	1	11/10/2011 1933	WD	11/04/2011 1731	71126

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acenaphthene	83-32-9	8270D	ND		380	12	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		380	15	ug/kg	1
Anthracene	120-12-7	8270D	ND		380	17	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		380	13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		380	28	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		380	26	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		380	26	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		380	32	ug/kg	1
Chrysene	218-01-9	8270D	ND		380	12	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		380	25	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		380	12	ug/kg	1
Fluorene	86-73-7	8270D	ND		380	15	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		380	35	ug/kg	1
Naphthalene	91-20-3	8270D	ND		380	16	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		380	16	ug/kg	1
Pyrene	129-00-0	8270D	ND		380	17	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		73	33-102
Nitrobenzene-d5		76	22-109
Terphenyl-d14		72	41-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Client: Midlands Environmental Consultants, Inc.

Laboratory ID: MK03054-006

Description: SB-6 (8-10')

Matrix: Solid

Date Sampled: 11/01/2011 1530

% Solids: 84.2 11/03/2011 2150

Date Received: 11/03/2011

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/04/2011 2110	CDF	11/03/2011 1812	71078

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	15		0.57	0.11	mg/kg	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs)

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/11/2011 0314	SAS		71472	5.15

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.7	1.3	ug/kg	2
Ethylbenzene	100-41-4	8260B	4.6	J	5.7	1.9	ug/kg	2
Naphthalene	91-20-3	8260B	2.9	J	5.7	1.9	ug/kg	2
Toluene	108-88-3	8260B	6.2		5.7	1.9	ug/kg	2
Xylenes (total)	1330-20-7	8260B	26		5.7	3.3	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	53-142
Bromofluorobenzene		101	47-138
Toluene-d8		99	68-124

Semivolatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8270D	1	11/11/2011 1803	WD	11/04/2011 1731	71126

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acenaphthene	83-32-9	8270D	ND		380	12	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		380	15	ug/kg	1
Anthracene	120-12-7	8270D	ND		380	17	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		380	13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		380	28	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		380	26	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		380	26	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		380	31	ug/kg	1
Chrysene	218-01-9	8270D	ND		380	12	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		380	25	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		380	12	ug/kg	1
Fluorene	86-73-7	8270D	ND		380	15	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		380	34	ug/kg	1
Naphthalene	91-20-3	8270D	ND		380	16	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		380	15	ug/kg	1
Pyrene	129-00-0	8270D	ND		380	16	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		71	33-102
Nitrobenzene-d5		65	22-109
Terphenyl-d14		69	41-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Client: Midlands Environmental Consultants, Inc.

Laboratory ID: MK03054-007

Description: SB-7 (8-10')

Matrix: Solid

Date Sampled: 11/01/2011 1600

% Solids: 85.4 11/03/2011 2150

Date Received: 11/03/2011

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/04/2011 2114	CDF	11/03/2011 1812	71078

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	17		0.57	0.11	mg/kg	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs)

Client: Midlands Environmental Consultants, Inc.

Laboratory ID: MK03054-008

Description: SB-8/MW-4 (10')

Matrix: Solid

Date Sampled: 11/01/2011 1630

% Solids: 81.2 11/03/2011 2150

Date Received: 11/03/2011

Inorganic non-metals

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(TOC) Walkley-Black	1	11/08/2011 2310	PMM		71319

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
TOC		Walkley-Black	420		200	31	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Shealy Environmental Services, Inc.

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Description: MW-3

Matrix: Solid

Date Sampled: 11/01/2011 1700

% Solids: 81.9 11/03/2011 2150

Date Received: 11/03/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/09/2011 1328	SAS		71339	5.90

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	2.8	J	5.2	1.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	13		5.2	1.8	ug/kg	1
Naphthalene	91-20-3	8260B	16		5.2	1.8	ug/kg	1
Toluene	108-88-3	8260B	15		5.2	1.8	ug/kg	1
Xylenes (total)	1330-20-7	8260B	84		5.2	3.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		85	53-142
Bromofluorobenzene		98	47-138
Toluene-d8		89	68-124

Semivolatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8270D	1	11/10/2011 2011	WD	11/04/2011 1731	71126

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acenaphthene	83-32-9	8270D	ND		400	12	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		400	16	ug/kg	1
Anthracene	120-12-7	8270D	ND		400	17	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		400	13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		400	29	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		400	27	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		400	27	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		400	33	ug/kg	1
Chrysene	218-01-9	8270D	ND		400	12	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		400	26	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		400	12	ug/kg	1
Fluorene	86-73-7	8270D	ND		400	15	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		400	36	ug/kg	1
Naphthalene	91-20-3	8270D	ND		400	17	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		400	16	ug/kg	1
Pyrene	129-00-0	8270D	ND		400	17	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		71	33-102
Nitrobenzene-d5		69	22-109
Terphenyl-d14		71	41-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Client: Midlands Environmental Consultants, Inc.

Laboratory ID: MK03054-009

Description: MW-3

Matrix: Solid

Date Sampled: 11/01/2011 1700

% Solids: 81.9 11/03/2011 2150

Date Received: 11/03/2011

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/04/2011 2117	CDF	11/03/2011 1812	71078

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	16		0.58	0.11	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: MW-3 Dup.

Matrix: Solid

Date Sampled: 11/01/2011 1700

% Solids: 82.4 11/03/2011 2150

Date Received: 11/03/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/11/2011 0338	SAS		71472	5.56

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	4.5	J	5.5	1.2	ug/kg	2
Ethylbenzene	100-41-4	8260B	20		5.5	1.9	ug/kg	2
Naphthalene	91-20-3	8260B	19		5.5	1.9	ug/kg	2
Toluene	108-88-3	8260B	31		5.5	1.9	ug/kg	2
Xylenes (total)	1330-20-7	8260B	130		5.5	3.2	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	53-142
Bromofluorobenzene		96	47-138
Toluene-d8		95	68-124

Semivolatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8270D	1	11/10/2011 2030	WD	11/04/2011 1731	71126

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acenaphthene	83-32-9	8270D	ND		400	12	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		400	16	ug/kg	1
Anthracene	120-12-7	8270D	ND		400	18	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		400	13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		400	29	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		400	27	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		400	27	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		400	33	ug/kg	1
Chrysene	218-01-9	8270D	ND		400	12	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		400	26	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		400	12	ug/kg	1
Fluorene	86-73-7	8270D	ND		400	15	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		400	36	ug/kg	1
Naphthalene	91-20-3	8270D	ND		400	17	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		400	16	ug/kg	1
Pyrene	129-00-0	8270D	ND		400	17	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		68	33-102
Nitrobenzene-d5		62	22-109
Terphenyl-d14		72	41-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Client: Midlands Environmental Consultants, Inc.

Laboratory ID: MK03054-010

Description: MW-3 Dup.

Matrix: Solid

Date Sampled: 11/01/2011 1700

% Solids: 82.4 11/03/2011 2150

Date Received: 11/03/2011

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/04/2011 2121	CDF	11/03/2011 1812	71078

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	16		0.55	0.10	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

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Description: Field Blank

Matrix: Aqueous

Date Sampled: 11/01/2011 1600

Date Received: 11/03/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/04/2011 2156	JJG		71160

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs)

Description: Trip Blank

Matrix: Aqueous

Date Sampled: 11/01/2011 1605

Date Received: 11/03/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/04/2011 2217	JJG		71160

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

QC Summary

Inorganic non-metals - MB

Sample ID: MQ71319-001

Matrix: Solid

Batch: 71319

Analytical Method: Walkley-Black

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
TOC	ND		1	200	31	mg/kg	11/08/2011 2310

Inorganic non-metals - LCS

Sample ID: MQ71319-002

Matrix: Solid

Batch: 71319

Analytical Method: Walkley-Black

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TOC	1000	860		1	86	80-120	11/08/2011 2310

Inorganic non-metals - LCSD

Sample ID: MQ71319-003

Matrix: Solid

Batch: 71319

Analytical Method: Walkley-Black

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
TOC	1000	810		1	81	4.9	80-120	20	11/08/2011 2310

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: MQ71160-001

Matrix: Aqueous

Batch: 71160

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	11/04/2011 2116
Ethylbenzene	ND		1	5.0	1.7	ug/L	11/04/2011 2116
Naphthalene	ND		1	5.0	1.7	ug/L	11/04/2011 2116
Toluene	ND		1	5.0	1.7	ug/L	11/04/2011 2116
Xylenes (total)	ND		1	5.0	1.7	ug/L	11/04/2011 2116
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		95	70-130				
1,2-Dichloroethane-d4		96	70-130				
Toluene-d8		98	70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: MQ71160-002

Matrix: Aqueous

Batch: 71160

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	46		1	93	70-130	11/04/2011 1920
Ethylbenzene	50	50		1	100	70-130	11/04/2011 1920
Naphthalene	50	55		1	110	70-130	11/04/2011 1920
Toluene	50	49		1	99	70-130	11/04/2011 1920
Xylenes (total)	100	99		1	99	70-130	11/04/2011 1920
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		97	70-130				
Toluene-d8		104	70-130				

Volatile Organic Compounds by GC/MS - MB

Sample ID: MQ71339-001

Matrix: Solid

Batch: 71339

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	1.1	ug/kg	11/09/2011 0938

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: MQ71339-001

Matrix: Solid

Batch: 71339

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Ethylbenzene	ND		1	5.0	1.7	ug/kg	11/09/2011 0938
Naphthalene	ND		1	5.0	1.7	ug/kg	11/09/2011 0938
Toluene	ND		1	5.0	1.7	ug/kg	11/09/2011 0938
Xylenes (total)	ND		1	5.0	2.9	ug/kg	11/09/2011 0938
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		118	47-138				
1,2-Dichloroethane-d4		111	53-142				
Toluene-d8		111	68-124				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: MQ71339-002

Matrix: Solid

Batch: 71339

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	49		1	98	69-123	11/09/2011 0808
Ethylbenzene	50	51		1	102	59-128	11/09/2011 0808
Naphthalene	50	55		1	110	54-131	11/09/2011 0808
Toluene	50	48		1	95	61-129	11/09/2011 0808
Xylenes (total)	100	100		1	103	58-128	11/09/2011 0808
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		112	47-138				
1,2-Dichloroethane-d4		104	53-142				
Toluene-d8		109	68-124				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: MQ71339-003

Matrix: Solid

Batch: 71339

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	51		1	102	3.9	69-123	20	11/09/2011 0831
Ethylbenzene	50	54		1	108	5.6	59-128	20	11/09/2011 0831

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: MQ71339-003

Matrix: Solid

Batch: 71339

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Naphthalene	50	54		1	108	1.2	54-131	20	11/09/2011 0831
Toluene	50	50		1	99	4.1	61-129	20	11/09/2011 0831
Xylenes (total)	100	110		1	111	7.0	58-128	20	11/09/2011 0831
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		117	47-138						
1,2-Dichloroethane-d4		105	53-142						
Toluene-d8		111	68-124						

Volatile Organic Compounds by GC/MS - MB

Sample ID: MQ71472-001

Matrix: Solid

Batch: 71472

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	1.1	ug/kg	11/11/2011 0011
Ethylbenzene	ND		1	5.0	1.7	ug/kg	11/11/2011 0011
Naphthalene	ND		1	5.0	1.7	ug/kg	11/11/2011 0011
Toluene	ND		1	5.0	1.7	ug/kg	11/11/2011 0011
Xylenes (total)	ND		1	5.0	2.9	ug/kg	11/11/2011 0011
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		98	47-138				
1,2-Dichloroethane-d4		96	53-142				
Toluene-d8		95	68-124				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: MQ71472-002

Matrix: Solid

Batch: 71472

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	48		1	96	69-123	11/10/2011 2237
Ethylbenzene	50	51		1	101	59-128	11/10/2011 2237
Naphthalene	50	48		1	95	54-131	11/10/2011 2237

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: MQ71472-002

Matrix: Solid

Batch: 71472

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Toluene	50	48		1	95	61-129	11/10/2011 2237
Xylenes (total)	100	100		1	103	58-128	11/10/2011 2237
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		97	47-138				
1,2-Dichloroethane-d4		95	53-142				
Toluene-d8		96	68-124				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: MQ71472-003

Matrix: Solid

Batch: 71472

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	50		1	99	3.5	69-123	20	11/10/2011 2301
Ethylbenzene	50	52		1	104	2.6	59-128	20	11/10/2011 2301
Naphthalene	50	47		1	94	0.86	54-131	20	11/10/2011 2301
Toluene	50	49		1	97	2.5	61-129	20	11/10/2011 2301
Xylenes (total)	100	100		1	105	1.9	58-128	20	11/10/2011 2301
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		107	47-138						
1,2-Dichloroethane-d4		106	53-142						
Toluene-d8		106	68-124						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: MQ71126-001

Batch: 71126

Analytical Method: 8270D

Matrix: Solid

Prep Method: 3550C

Prep Date: 11/04/2011 1731

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acenaphthene	ND		1	330	10	ug/kg	11/10/2011 1229
Acenaphthylene	ND		1	330	13	ug/kg	11/10/2011 1229
Anthracene	ND		1	330	15	ug/kg	11/10/2011 1229
Benzo(a)anthracene	ND		1	330	11	ug/kg	11/10/2011 1229
Benzo(a)pyrene	ND		1	330	24	ug/kg	11/10/2011 1229
Benzo(b)fluoranthene	ND		1	330	22	ug/kg	11/10/2011 1229
Benzo(g,h,i)perylene	ND		1	330	23	ug/kg	11/10/2011 1229
Benzo(k)fluoranthene	ND		1	330	27	ug/kg	11/10/2011 1229
Chrysene	ND		1	330	10	ug/kg	11/10/2011 1229
Dibenzo(a,h)anthracene	ND		1	330	22	ug/kg	11/10/2011 1229
Fluoranthene	ND		1	330	10	ug/kg	11/10/2011 1229
Fluorene	ND		1	330	13	ug/kg	11/10/2011 1229
Indeno(1,2,3-c,d)pyrene	ND		1	330	30	ug/kg	11/10/2011 1229
Naphthalene	ND		1	330	14	ug/kg	11/10/2011 1229
Phenanthrene	ND		1	330	13	ug/kg	11/10/2011 1229
Pyrene	ND		1	330	14	ug/kg	11/10/2011 1229
Surrogate	Q	% Rec	Acceptance Limit				
2-Fluorobiphenyl		82	33-102				
Nitrobenzene-d5		77	22-109				
Terphenyl-d14		82	41-120				

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: MQ71126-002

Batch: 71126

Analytical Method: 8270D

Matrix: Solid

Prep Method: 3550C

Prep Date: 11/04/2011 1731

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	3300	2700		1	80	46-114	11/10/2011 1248
Acenaphthylene	3300	2700		1	82	44-122	11/10/2011 1248
Anthracene	3300	2800		1	85	50-119	11/10/2011 1248
Benzo(a)anthracene	3300	2700		1	82	47-121	11/10/2011 1248
Benzo(a)pyrene	3300	3000		1	89	55-134	11/10/2011 1248
Benzo(b)fluoranthene	3300	2600		1	79	28-139	11/10/2011 1248
Benzo(g,h,i)perylene	3300	2600		1	78	36-125	11/10/2011 1248
Benzo(k)fluoranthene	3300	2500		1	76	47-130	11/10/2011 1248
Chrysene	3300	2700		1	82	45-126	11/10/2011 1248
Dibenzo(a,h)anthracene	3300	3300		1	99	45-122	11/10/2011 1248

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: MQ71126-002

Batch: 71126

Analytical Method: 8270D

Matrix: Solid

Prep Method: 3550C

Prep Date: 11/04/2011 1731

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Fluoranthene	3300	2800		1	84	50-123	11/10/2011 1248
Fluorene	3300	2700		1	80	48-117	11/10/2011 1248
Indeno(1,2,3-c,d)pyrene	3300	2500		1	76	45-123	11/10/2011 1248
Naphthalene	3300	2600		1	77	36-110	11/10/2011 1248
Phenanthrene	3300	2800		1	83	49-117	11/10/2011 1248
Pyrene	3300	2900		1	86	47-119	11/10/2011 1248
Surrogate	Q	% Rec	Acceptance Limit				
2-Fluorobiphenyl		80	33-102				
Nitrobenzene-d5		76	22-109				
Terphenyl-d14		75	41-120				

Semivolatile Organic Compounds by GC/MS - MS

Sample ID: MK03054-005MS

Batch: 71126

Analytical Method: 8270D

Matrix: Solid

Prep Method: 3550C

Prep Date: 11/04/2011 1731

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	ND	4100	3100		1	74	30-130	11/10/2011 1854
Acenaphthylene	ND	4100	3100		1	74	30-130	11/10/2011 1854
Anthracene	ND	4100	3100		1	76	30-130	11/10/2011 1854
Benzo(a)anthracene	48	4100	3100		1	74	30-130	11/10/2011 1854
Benzo(a)pyrene	ND	4100	3200		1	79	30-130	11/10/2011 1854
Benzo(b)fluoranthene	33	4100	2700		1	64	30-130	11/10/2011 1854
Benzo(g,h,i)perylene	ND	4100	2900		1	70	30-130	11/10/2011 1854
Benzo(k)fluoranthene	ND	4100	3100		1	75	30-130	11/10/2011 1854
Chrysene	26	4100	3100		1	75	30-130	11/10/2011 1854
Dibenzo(a,h)anthracene	ND	4100	3700		1	88	30-130	11/10/2011 1854
Fluoranthene	33	4100	3100		1	76	30-130	11/10/2011 1854
Fluorene	ND	4100	3100		1	74	30-130	11/10/2011 1854
Indeno(1,2,3-c,d)pyrene	ND	4100	2800		1	69	30-130	11/10/2011 1854
Naphthalene	41	4100	3100		1	73	30-130	11/10/2011 1854
Phenanthrene	21	4100	3100		1	75	30-130	11/10/2011 1854
Pyrene	50	4100	3300		1	78	30-130	11/10/2011 1854

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MS

Sample ID: MK03054-005MS

Matrix: Solid

Batch: 71126

Prep Method: 3550C

Analytical Method: 8270D

Prep Date: 11/04/2011 1731

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		73	33-102
Nitrobenzene-d5		74	22-109
Terphenyl-d14		69	41-120

Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: MK03054-005MD

Matrix: Solid

Batch: 71126

Prep Method: 3550C

Analytical Method: 8270D

Prep Date: 11/04/2011 1731

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acenaphthene	ND	4100	2900	1		71	6.6	30-130	40	11/11/2011 1744
Acenaphthylene	ND	4100	2900	1		72	5.4	30-130	40	11/11/2011 1744
Anthracene	ND	4100	3000	1		74	4.2	30-130	40	11/11/2011 1744
Benzo(a)anthracene	48	4100	3300	1		80	5.5	30-130	40	11/11/2011 1744
Benzo(a)pyrene	ND	4100	3500	1		86	7.9	30-130	40	11/11/2011 1744
Benzo(b)fluoranthene	33	4100	3700	1		91	32	30-130	40	11/11/2011 1744
Benzo(g,h,i)perylene	ND	4100	3100	1		76	6.6	30-130	40	11/11/2011 1744
Benzo(k)fluoranthene	ND	4100	2600	1		64	19	30-130	40	11/11/2011 1744
Chrysene	26	4100	2900	1		71	6.3	30-130	40	11/11/2011 1744
Dibenzo(a,h)anthracene	ND	4100	3100	1		76	16	30-130	40	11/11/2011 1744
Fluoranthene	33	4100	3100	1		75	2.3	30-130	40	11/11/2011 1744
Fluorene	ND	4100	3000	1		73	3.0	30-130	40	11/11/2011 1744
Indeno(1,2,3-c,d)pyrene	ND	4100	3100	1		76	7.5	30-130	40	11/11/2011 1744
Naphthalene	41	4100	2700	1		66	12	30-130	40	11/11/2011 1744
Phenanthrene	21	4100	3000	1		75	1.7	30-130	40	11/11/2011 1744
Pyrene	50	4100	3300	1		79	0.092	30-130	40	11/11/2011 1744

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		69	33-102
Nitrobenzene-d5		65	22-109
Terphenyl-d14		70	41-120

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - MB

Sample ID: MQ71127-001

Matrix: Solid

Batch: 71127

Prep Method: 3550C

Analytical Method: 8015C

Prep Date: 11/04/2011 2000

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
TPH-DRO	1600	J	1	6700	1200	ug/kg	11/08/2011 1438
Surrogate	Q	% Rec	Acceptance Limit				
o - Terphenyl		94	55-120				

TPH - DRO - LCS

Sample ID: MQ71127-002

Matrix: Solid

Batch: 71127

Prep Method: 3550C

Analytical Method: 8015C

Prep Date: 11/04/2011 2000

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	83000	72000		1	87	70-130	11/08/2011 1459
Surrogate	Q	% Rec	Acceptance Limit				
o - Terphenyl		96	55-120				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-AES - MB

Sample ID: MQ71078-001
 Batch: 71078
 Analytical Method: 6010C

Matrix: Solid
 Prep Method: 3050B
 Prep Date: 11/03/2011 1812

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Lead	ND		1	0.50	0.093	mg/kg	11/04/2011 2016

ICP-AES - LCS

Sample ID: MQ71078-002
 Batch: 71078
 Analytical Method: 6010C

Matrix: Solid
 Prep Method: 3050B
 Prep Date: 11/03/2011 1812

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Lead	250	250		1	100	80-120	11/04/2011 2020

ICP-AES - LCSD

Sample ID: MQ71078-003
 Batch: 71078
 Analytical Method: 6010C

Matrix: Solid
 Prep Method: 3050B
 Prep Date: 11/03/2011 1812

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Lead	250	240		1	97	3.1	80-120	20	11/04/2011 2024

ICP-AES - MS

Sample ID: MK03054-001MS
 Batch: 71078
 Analytical Method: 6010C

Matrix: Solid
 Prep Method: 3050B
 Prep Date: 11/03/2011 1812

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Lead	22	260	260		1	93	75-125	11/04/2011 2031

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-AES - MSD

Sample ID: MK03054-001MD

Matrix: Solid

Batch: 71078

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/03/2011 1812

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Lead	22	260	260		1	92	0.28	75-125	20	11/04/2011 2035

ICP-AES - MS

Sample ID: MK03054-002MS

Matrix: Solid

Batch: 71078

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/03/2011 1812

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Lead	9.8	260	240		1	91	75-125	11/04/2011 2047

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

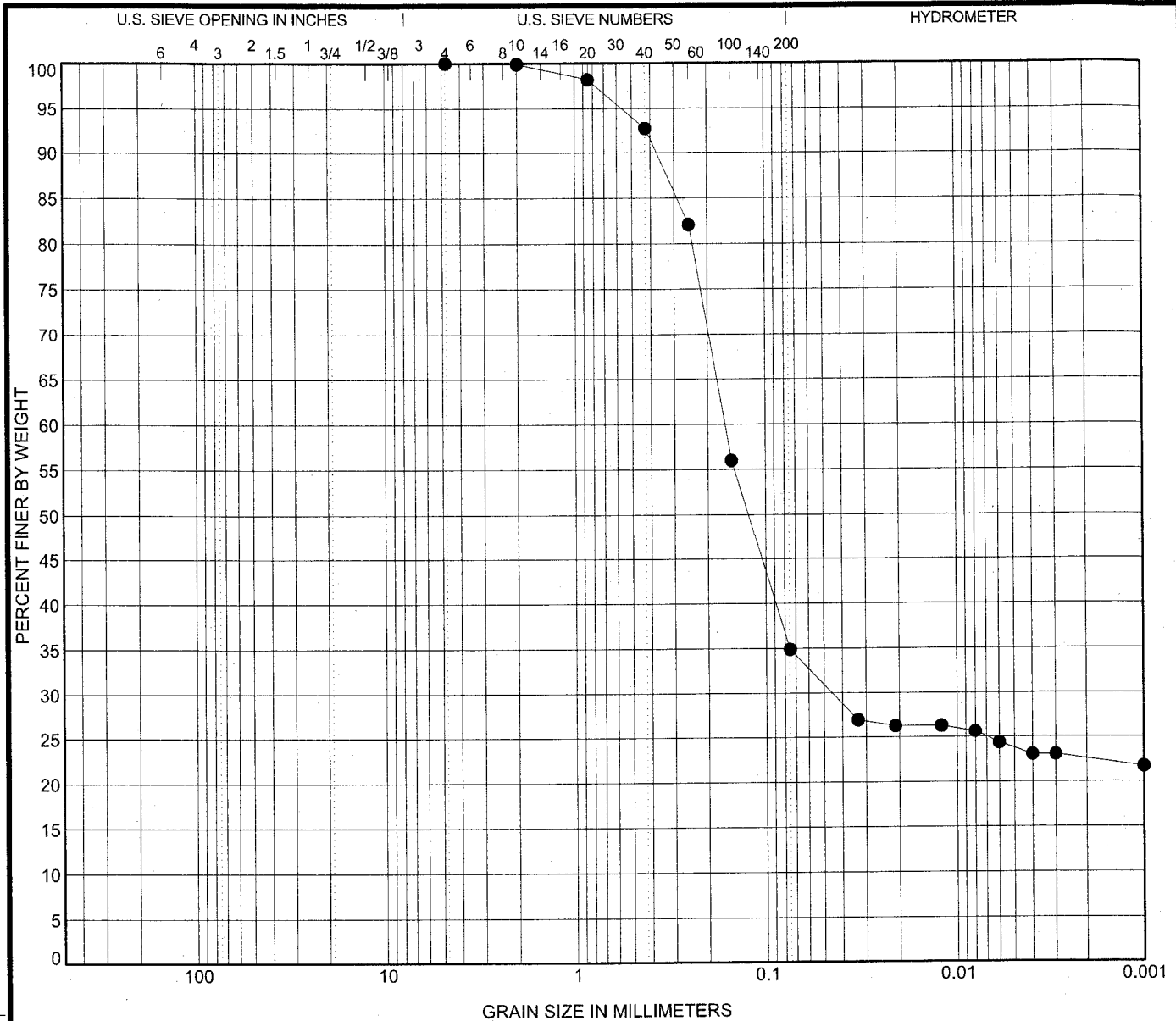
J = Estimated result < PQL and \geq MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Subcontracted Data



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen	Sample Description					LL	PL	PI	
MK03054 MW-2 17.0 ft	Sand, brown (visual classification)					--	--	--	
Test Method	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay	
ASTM D1140					0.0	65.1	12.3	22.6	

Sieve Size	200	100	60	40	20	10	4
% Finer	34.9	56.0	82.1	92.8	98.2	99.9	100.0



Schnabel
ENGINEERING

GRADATION CURVE

Project: Shealy Federal Services
West Columbia, SC
Contract: 09190043.00.417

SIEVE 1/SHEET HYDROMETERS SET 2.GPJ SCHNABEL DATA TEMPLATE 2008 04 22.GDT 12/22/11



Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 04220

Report to Contact: B. Shane		Sampler (Printed Name): J. Bryant		Quote No.
Address: 235 B Dooley Rd.		Telephone No. / Fax No. / Email: 803-20431808-20481btsource@att.net		Page: 1 of 2
City: Lexington SC 29073		Waybill No.		Number of Containers
Project Name: Steady Simmons		Preservative		Bole (See Instructions on back)
Project Number: 113586		1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCl 3. H2SO4 6. Na Tho.		Preservative
Sample ID / Description (Containers for each sample may be combined on one line)		Matrix		Lot No.
Date	Time	Beads C-Composite	GW DW WW S Other	Remarks / Cooler ID
				MK0305X
SB-1 (6-8')	11-1-11	1300		
SB-2 (6-8')		1330		Grainsize at 17'
SB-3/MW2 (8-10')		1400		
SB-4 (8-10')		1430		
SB-5 (0-2')		1500		
SB-6 (8-10')		1530		
SB-7 (8-10')		1600		
SB-8/MW4 (10')		1630		
MW-3		1700		
MW-3 D.D.	11-1-11	1700		

Turn Around Time Required (Prior lab approval required for expedited TAT)		Sample Disposal		QC Requirements (Specify)		Hazardous Identification	
<input type="checkbox"/> Standard	<input type="checkbox"/> Rush (Priority Sample)	<input type="checkbox"/> Return to Client	<input type="checkbox"/> Disposal by Lab	<input type="checkbox"/> Non-Hazardous	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison
1. Received by	Date: 11/3/11	Time: 1430	1. Received by	Date: 11/1/11	Time: 1530		
2. Relinquished by	Date:	Time:	2. Received by	Date:	Time:		
3. Relinquished by	Date:	Time:	3. Received by	Date:	Time:		
4. Relinquished by	Date: 11/3/11	Time: 1530	4. Laboratory Received by	Date: 11/3/11	Time: 1530		
Note: All samples are retained for six weeks from receipt unless other arrangements are made.				LAB USE ONLY		Temp. Blank <input type="checkbox"/> Y <input type="checkbox"/> N	
				Received on Ice (Check) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack		Receipt Temp: 1.0 5.2	

SHEALY ENVIRONMENTAL SERVICES, INC.



Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 04221

Client MECL	Report to Contact B. Stone	Sampler (Printed Name) J. Bryant	Quote No.
Address 235B Doolley Rd.	Telephone No. / Fax No. / Email 808-204-1318 / 808-204-8181 / bts@mecl.com	Waybill No.	Page 2 of 2
City Livingston SC 29073	Preservative 1. Unpac. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.	Matrix Analysis BTEX, Naphtha	Number of Containers
Project Name Steady Simmons	Project Number 17-3586		Bottle (See Instructions on back)
Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	Preservative
Field Blank	11-1-11	1600	Lot No. MK-3054
Trip Blank	11-1-11	1605	Remarks / Cooler ID

Turn Around Time Required (Prior to approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Pl. Specify)	Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab	CC Requirements (Specify)	Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown
1. Reimbursed by / Sample # [Signature]	Date 11/3/11 Time 1430	1. Received by [Signature]	Date 11/3/11 Time 1431
2. Reimbursed by	Date Time	2. Received by	Date Time
3. Reimbursed by	Date Time	3. Received by	Date Time
4. Reimbursed by [Signature]	Date 11/2/11 Time 1530	4. Laboratory Received by	Date Time

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
 Yes No Ice Pack
 Receipt Temp **1.0 5.4** °C
 Temp. Blank **A Y / D N**

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 9

Page 1 of 1
 Replaces Date: 05/06/11
 Effective Date: 10/11/11

Sample Receipt Checklist (SRC)

Client: MACE Cooler Inspected by/date: LAC 11/3/10 Lot #: MK2054

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/temperature upon receipt: <u>17</u> °C / <u>1</u> °C / <u>1</u> °C / <u>1</u> °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Was collection date & time listed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	12. Was adequate sample volume available?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	13. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	14. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	15. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input checked="" type="checkbox"/>	16. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BN/pest/PCB/herb (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) with the SR # (number)		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/BN/pest/PCB/herb.		
Corrective Action taken, if necessary:		
Was client notified: Yes <input type="checkbox"/> No <input type="checkbox"/>		Did client respond: Yes <input type="checkbox"/> No <input type="checkbox"/>
SESI employee: _____		Date of response: _____
Comments: _____		

LAC
11/3/10

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

Midlands Environmental Consultants, Inc.

235 Dooley Rd
Lexington, SC 29073
Attention: Bryan Shane

Project Name: **Steady Simmons**

Project Number: **11-3586**

Lot Number: **MK18076**

Date Completed: **12/02/2011**

Kelly M. Maberry
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

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SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

Case Narrative

Midlands Environmental Consultants, Inc.

Lot Number: MK18076

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample Receiving

Sample -007 not analyzed for EDB as only 2 vials were received.

Sample -001 for volatiles analysis contained vials with air bubbles greater than ¼" or 6mm in diameter. The laboratory uses these vials for screening and the vials without bubbles for analysis whenever possible. Condition of samples is documented on the Sample Receipt Checklist (SRC).

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary Midlands Environmental Consultants, Inc. Lot Number: MK18076

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-1R	Aqueous	11/18/2011 1018	11/18/2011
002	MW-2	Aqueous	11/18/2011 1035	11/18/2011
003	MW-3	Aqueous	11/18/2011 1100	11/18/2011
004	MW-4	Aqueous	11/18/2011 1125	11/18/2011
005	MW-1R Dup	Aqueous	11/18/2011 1018	11/18/2011
006	Field Blank	Aqueous	11/18/2011 1000	11/18/2011
007	Trip Blank	Aqueous	11/18/2011 1005	11/18/2011
008	SW-1	Aqueous	11/18/2011 1230	11/18/2011
009	WSW-1	Aqueous	11/18/2011 1245	11/18/2011
010	WSW-2	Aqueous	11/18/2011 1255	11/18/2011
011	WSW-3	Aqueous	11/18/2011 1305	11/18/2011
012	WSW-4	Aqueous	11/18/2011 1315	11/18/2011
013	WSW-5	Aqueous	11/18/2011 1400	11/18/2011

(13 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary Midlands Environmental Consultants, Inc. Lot Number: MK18076

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-1R	Aqueous	Benzene	8260B	1900		ug/L	5
001	MW-1R	Aqueous	Ethylbenzene	8260B	2500		ug/L	5
001	MW-1R	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	83	J	ug/L	5
001	MW-1R	Aqueous	Naphthalene	8260B	330	J	ug/L	5
001	MW-1R	Aqueous	Toluene	8260B	10000		ug/L	5
001	MW-1R	Aqueous	Xylenes (total)	8260B	13000		ug/L	5
001	MW-1R	Aqueous	1,2-Dibromoethane (EDB)	8011	14		ug/L	5
001	MW-1R	Aqueous	Lead	6010C	0.030		mg/L	5
002	MW-2	Aqueous	Benzene	8260B	62	J	ug/L	6
002	MW-2	Aqueous	Ethylbenzene	8260B	930		ug/L	6
002	MW-2	Aqueous	Naphthalene	8260B	180		ug/L	6
002	MW-2	Aqueous	Toluene	8260B	830		ug/L	6
002	MW-2	Aqueous	Xylenes (total)	8260B	5300		ug/L	6
002	MW-2	Aqueous	Naphthalene	8270D	120		ug/L	6
002	MW-2	Aqueous	1,2-Dibromoethane (EDB)	8011	0.44		ug/L	7
002	MW-2	Aqueous	Dissolved Lead	6010C	0.0071	J	mg/L	7
002	MW-2	Aqueous	Lead	6010C	0.018		mg/L	7
003	MW-3	Aqueous	Benzene	8260B	160		ug/L	8
003	MW-3	Aqueous	Ethylbenzene	8260B	25		ug/L	8
003	MW-3	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	85		ug/L	8
003	MW-3	Aqueous	Naphthalene	8260B	31		ug/L	8
003	MW-3	Aqueous	Toluene	8260B	1.9	J	ug/L	8
003	MW-3	Aqueous	Xylenes (total)	8260B	50		ug/L	8
003	MW-3	Aqueous	Naphthalene	8270D	13		ug/L	8
003	MW-3	Aqueous	1,2-Dibromoethane (EDB)	8011	0.20		ug/L	9
003	MW-3	Aqueous	Lead	6010C	0.0064	J	mg/L	9
004	MW-4	Aqueous	Lead	6010C	0.0024	J	mg/L	11
005	MW-1R Dup	Aqueous	Benzene	8260B	1400		ug/L	12
005	MW-1R Dup	Aqueous	1,2-Dichloroethane	8260B	36	J	ug/L	12
005	MW-1R Dup	Aqueous	Ethylbenzene	8260B	1300		ug/L	12
005	MW-1R Dup	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	83	J	ug/L	12
005	MW-1R Dup	Aqueous	Naphthalene	8260B	270		ug/L	12
005	MW-1R Dup	Aqueous	Toluene	8260B	5700		ug/L	12
005	MW-1R Dup	Aqueous	Xylenes (total)	8260B	6800		ug/L	12
005	MW-1R Dup	Aqueous	1,2-Dibromoethane (EDB)	8011	15		ug/L	12
005	MW-1R Dup	Aqueous	Lead	6010C	0.026		mg/L	12

(36 detections)

Description: MW-1R

Matrix: Aqueous

Date Sampled: 11/18/2011 1018

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	100	11/23/2011 0330	JJG		72316

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	1900		500	20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		500	30	ug/L	1
Ethylbenzene	100-41-4	8260B	2500		500	170	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	83	J	500	40	ug/L	1
Naphthalene	91-20-3	8260B	330	J	500	170	ug/L	1
Toluene	108-88-3	8260B	10000		500	170	ug/L	1
Xylenes (total)	1330-20-7	8260B	13000		500	170	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		108	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		102	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	11/23/2011 0456	MPM	11/22/2011 0925	72243
2	8011	8011	20	11/23/2011 1108	MPM	11/22/2011 0925	72243

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	14		0.39	0.39	ug/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		127	57-137		117	57-137

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	11/22/2011 1946	CDF	11/22/2011 1330	72255

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	0.030		0.010	0.0019	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: MW-2

Matrix: Aqueous

Date Sampled: 11/18/2011 1035

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	20	11/23/2011 0413	JJG		72316			
Parameter		CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene		71-43-2	8260B	62	J	100	4.0	ug/L	1	
1,2-Dichloroethane		107-06-2	8260B	ND		100	6.0	ug/L	1	
Ethylbenzene		100-41-4	8260B	930		100	34	ug/L	1	
Methyl tertiary butyl ether (MTBE)		1634-04-4	8260B	ND		100	8.0	ug/L	1	
Naphthalene		91-20-3	8260B	180		100	34	ug/L	1	
Toluene		108-88-3	8260B	830		100	34	ug/L	1	
Xylenes (total)		1330-20-7	8260B	5300		100	34	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		105	70-130							
Bromofluorobenzene		110	70-130							
Toluene-d8		104	70-130							

Semivolatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	1	11/22/2011 2337	JCG	11/21/2011 1412	72159			
Parameter		CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acenaphthene		83-32-9	8270D	ND		6.3	1.5	ug/L	1	
Acenaphthylene		208-96-8	8270D	ND		6.3	1.5	ug/L	1	
Anthracene		120-12-7	8270D	ND		6.3	1.4	ug/L	1	
Benzo(a)anthracene		56-55-3	8270D	ND		6.3	0.75	ug/L	1	
Benzo(a)pyrene		50-32-8	8270D	ND		6.3	0.63	ug/L	1	
Benzo(b)fluoranthene		205-99-2	8270D	ND		6.3	0.75	ug/L	1	
Benzo(g,h,i)perylene		191-24-2	8270D	ND		6.3	1.0	ug/L	1	
Benzo(k)fluoranthene		207-08-9	8270D	ND		6.3	1.3	ug/L	1	
Chrysene		218-01-9	8270D	ND		6.3	0.88	ug/L	1	
Dibenzo(a,h)anthracene		53-70-3	8270D	ND		6.3	1.6	ug/L	1	
Fluoranthene		206-44-0	8270D	ND		6.3	1.8	ug/L	1	
Fluorene		86-73-7	8270D	ND		6.3	1.8	ug/L	1	
Indeno(1,2,3-c,d)pyrene		193-39-5	8270D	ND		6.3	2.9	ug/L	1	
Naphthalene		91-20-3	8270D	120		6.3	1.6	ug/L	1	
Phenanthrene		85-01-8	8270D	ND		6.3	1.5	ug/L	1	
Pyrene		129-00-0	8270D	ND		6.3	3.9	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: MW-2

Matrix: Aqueous

Date Sampled: 11/18/2011 1035

Date Received: 11/18/2011

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		83	37-129
Nitrobenzene-d5		81	38-127
Terphenyl-d14		34	10-148

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	11/23/2011 0518	MPM	11/22/2011 0925	72243

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	0.44		0.021	0.021	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		125	57-137

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	11/22/2011 2005	CDF	11/22/2011 1330	72255

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Lead	7439-92-1	6010C	0.0071	J	0.010	0.0019	mg/L	1

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	11/22/2011 1950	CDF	11/22/2011 1330	72255

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	0.018		0.010	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs)

Description: MW-3

Matrix: Aqueous

Date Sampled: 11/18/2011 1100

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	11/19/2011 1148	BM		72110			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Benzene	71-43-2	8260B	160		5.0	0.20	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1		
Ethylbenzene	100-41-4	8260B	25		5.0	1.7	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	85		5.0	0.40	ug/L	1		
Naphthalene	91-20-3	8260B	31		5.0	1.7	ug/L	1		
Toluene	108-88-3	8260B	1.9	J	5.0	1.7	ug/L	1		
Xylenes (total)	1330-20-7	8260B	50		5.0	1.7	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		99	70-130							
Bromofluorobenzene		100	70-130							
Toluene-d8		99	70-130							

Semivolatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	1	11/22/2011 2356	JCG	11/21/2011 1412	72159			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acenaphthene	83-32-9	8270D	ND		6.4	1.5	ug/L	1		
Acenaphthylene	208-96-8	8270D	ND		6.4	1.5	ug/L	1		
Anthracene	120-12-7	8270D	ND		6.4	1.4	ug/L	1		
Benzo(a)anthracene	56-55-3	8270D	ND		6.4	0.77	ug/L	1		
Benzo(a)pyrene	50-32-8	8270D	ND		6.4	0.64	ug/L	1		
Benzo(b)fluoranthene	205-99-2	8270D	ND		6.4	0.77	ug/L	1		
Benzo(g,h,i)perylene	191-24-2	8270D	ND		6.4	1.0	ug/L	1		
Benzo(k)fluoranthene	207-08-9	8270D	ND		6.4	1.3	ug/L	1		
Chrysene	218-01-9	8270D	ND		6.4	0.90	ug/L	1		
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		6.4	1.7	ug/L	1		
Fluoranthene	206-44-0	8270D	ND		6.4	1.8	ug/L	1		
Fluorene	86-73-7	8270D	ND		6.4	1.8	ug/L	1		
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		6.4	2.9	ug/L	1		
Naphthalene	91-20-3	8270D	13		6.4	1.7	ug/L	1		
Phenanthrene	85-01-8	8270D	ND		6.4	1.5	ug/L	1		
Pyrene	129-00-0	8270D	ND		6.4	4.0	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: MW-3

Matrix: Aqueous

Date Sampled: 11/18/2011 1100

Date Received: 11/18/2011

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		86	37-129
Nitrobenzene-d5		80	38-127
Terphenyl-d14		34	10-148

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	11/23/2011 0540	MPM	11/22/2011 0925	72243

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	0.20		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		126	57-137

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	11/22/2011 2017	CDF	11/22/2011 1330	72255

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	11/22/2011 2009	CDF	11/22/2011 1330	72255

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	0.0064	J	0.010	0.0019	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: MW-4

Matrix: Aqueous

Date Sampled: 11/18/2011 1125

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/19/2011 1211	BM		72110

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Run 1 Q	Acceptance % Recovery	Limits
1,2-Dichloroethane-d4	96		70-130
Bromofluorobenzene	98		70-130
Toluene-d8	98		70-130

Semivolatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	11/23/2011 0015	JCG	11/21/2011 1412	72159

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acenaphthene	83-32-9	8270D	ND		6.3	1.5	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		6.3	1.5	ug/L	1
Anthracene	120-12-7	8270D	ND		6.3	1.4	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		6.3	0.75	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		6.3	0.63	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		6.3	0.75	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		6.3	1.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		6.3	1.3	ug/L	1
Chrysene	218-01-9	8270D	ND		6.3	0.88	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		6.3	1.6	ug/L	1
Fluoranthene	206-44-0	8270D	ND		6.3	1.8	ug/L	1
Fluorene	86-73-7	8270D	ND		6.3	1.8	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		6.3	2.9	ug/L	1
Naphthalene	91-20-3	8270D	ND		6.3	1.6	ug/L	1
Phenanthrene	85-01-8	8270D	ND		6.3	1.5	ug/L	1
Pyrene	129-00-0	8270D	ND		6.3	3.9	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: MW-4

Matrix: Aqueous

Date Sampled: 11/18/2011 1125

Date Received: 11/18/2011

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		90	37-129
Nitrobenzene-d5		81	38-127
Terphenyl-d14		34	10-148

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	11/23/2011 0602	MPM	11/22/2011 0925	72243

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		113	57-137

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	11/22/2011 2033	CDF	11/22/2011 1330	72255

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	11/22/2011 2021	CDF	11/22/2011 1330	72255

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	7439-92-1	6010C	0.0024	J	0.010	0.0019	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: MW-1R Dup

Matrix: Aqueous

Date Sampled: 11/18/2011 1018

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
3	5030B	8260B	40	12/01/2011 0301	JJG		72743			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Benzene	71-43-2	8260B	1400		200	8.0	ug/L	3		
1,2-Dichloroethane	107-06-2	8260B	36	J	200	12	ug/L	3		
Ethylbenzene	100-41-4	8260B	1300		200	68	ug/L	3		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	83	J	200	16	ug/L	3		
Naphthalene	91-20-3	8260B	270		200	68	ug/L	3		
Toluene	108-88-3	8260B	5700		200	68	ug/L	3		
Xylenes (total)	1330-20-7	8260B	6800		200	68	ug/L	3		
Surrogate	Q	Run 3 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		116	70-130							
Bromofluorobenzene		98	70-130							
Toluene-d8		109	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	11/23/2011 0623	MPM	11/22/2011 0925	72243			
2	8011	8011	20	11/23/2011 1130	MPM	11/22/2011 0925	72243			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
1,2-Dibromoethane (EDB)	106-93-4	8011	15		0.38	0.38	ug/L	2		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits				
1,1,1,2-Tetrachloroethane		129	57-137		136	57-137				

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3005A	6010C	1	11/22/2011 2036	CDF	11/22/2011 1330	72255			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Lead	7439-92-1	6010C	0.026		0.010	0.0019	mg/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: Field Blank

Matrix: Aqueous

Date Sampled: 11/18/2011 1000

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/19/2011 1020	BM		72109

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		116	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		100	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	11/23/2011 0645	MPM	11/22/2011 0925	72243

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		115	57-137

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: Trip Blank

Matrix: Aqueous

Date Sampled: 11/18/2011 1005

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/19/2011 1042	BM		72109

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		117	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: SW-1

Matrix: Aqueous

Date Sampled: 11/18/2011 1230

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/19/2011 1149	BM		72109

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		95	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	11/23/2011 0707	MPM	11/22/2011 0925	72243

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		124	57-137

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: WSW-1

Matrix: Aqueous

Date Sampled: 11/18/2011 1245

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/19/2011 1212	BM		72109

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		96	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	11/23/2011 0812	MPM	11/22/2011 0925	72243

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		114	57-137

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: WSW-2

Matrix: Aqueous

Date Sampled: 11/18/2011 1255

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/19/2011 1234	BM		72109

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		108	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		95	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	11/23/2011 0834	MPM	11/22/2011 0925	72243

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		115	57-137

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: WSW-3

Matrix: Aqueous

Date Sampled: 11/18/2011 1305

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/19/2011 1256	BM		72109

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		95	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	11/23/2011 0856	MPM	11/22/2011 0925	72243

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		120	57-137

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: WSW-4

Matrix: Aqueous

Date Sampled: 11/18/2011 1315

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	11/19/2011 1319	BM		72109			
Parameter		CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene		71-43-2	8260B	ND		5.0	0.20	ug/L	1	
1,2-Dichloroethane		107-06-2	8260B	ND		5.0	0.30	ug/L	1	
Ethylbenzene		100-41-4	8260B	ND		5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)		1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
Naphthalene		91-20-3	8260B	ND		5.0	1.7	ug/L	1	
Toluene		108-88-3	8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)		1330-20-7	8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		108	70-130							
Bromofluorobenzene		102	70-130							
Toluene-d8		95	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	11/23/2011 0918	MPM	11/22/2011 0925	72243			
Parameter		CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)		106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,1,1,2-Tetrachloroethane		114	57-137							

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: WSW-5

Matrix: Aqueous

Date Sampled: 11/18/2011 1400

Date Received: 11/18/2011

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/19/2011 1341	BM		72109

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		106	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		96	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	11/23/2011 0940	MPM	11/22/2011 0925	72243

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		112	57-137

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: MQ72109-001

Matrix: Aqueous

Batch: 72109

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	11/19/2011 0941
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	11/19/2011 0941
Ethylbenzene	ND		1	5.0	1.7	ug/L	11/19/2011 0941
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	11/19/2011 0941
Naphthalene	ND		1	5.0	1.7	ug/L	11/19/2011 0941
Toluene	ND		1	5.0	1.7	ug/L	11/19/2011 0941
Xylenes (total)	ND		1	5.0	1.7	ug/L	11/19/2011 0941
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		107	70-130				
1,2-Dichloroethane-d4		110	70-130				
Toluene-d8		94	70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: MQ72109-002

Matrix: Aqueous

Batch: 72109

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	51		1	102	70-130	11/19/2011 0813
1,2-Dichloroethane	50	59		1	118	70-130	11/19/2011 0813
Ethylbenzene	50	54		1	108	70-130	11/19/2011 0813
Methyl tertiary butyl ether (MTBE)	50	59		1	119	70-130	11/19/2011 0813
Naphthalene	50	52		1	104	70-130	11/19/2011 0813
Toluene	50	52		1	104	70-130	11/19/2011 0813
Xylenes (total)	100	110		1	108	70-130	11/19/2011 0813
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		106	70-130				
1,2-Dichloroethane-d4		103	70-130				
Toluene-d8		95	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: MQ72109-003

Matrix: Aqueous

Batch: 72109

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	50		1	101	0.78	70-130	20	11/19/2011 0835
1,2-Dichloroethane	50	58		1	117	1.3	70-130	20	11/19/2011 0835
Ethylbenzene	50	54		1	107	0.15	70-130	20	11/19/2011 0835
Methyl tertiary butyl ether (MTBE)	50	58		1	115	3.1	70-130	20	11/19/2011 0835
Naphthalene	50	53		1	106	1.1	70-130	20	11/19/2011 0835
Toluene	50	51		1	103	1.0	70-130	20	11/19/2011 0835
Xylenes (total)	100	110		1	108	0.12	70-130	20	11/19/2011 0835
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		107	70-130						
1,2-Dichloroethane-d4		110	70-130						
Toluene-d8		96	70-130						

Volatile Organic Compounds by GC/MS - MB

Sample ID: MQ72110-001

Matrix: Aqueous

Batch: 72110

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	11/19/2011 0829
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	11/19/2011 0829
Ethylbenzene	ND		1	5.0	1.7	ug/L	11/19/2011 0829
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	11/19/2011 0829
Naphthalene	ND		1	5.0	1.7	ug/L	11/19/2011 0829
Toluene	ND		1	5.0	1.7	ug/L	11/19/2011 0829
Xylenes (total)	ND		1	5.0	1.7	ug/L	11/19/2011 0829
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		102	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: MQ72110-002

Matrix: Aqueous

Batch: 72110

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	50		1	99	70-130	11/19/2011 0719
1,2-Dichloroethane	50	49		1	98	70-130	11/19/2011 0719
Ethylbenzene	50	52		1	104	70-130	11/19/2011 0719
Methyl tertiary butyl ether (MTBE)	50	51		1	101	70-130	11/19/2011 0719
Naphthalene	50	55		1	110	70-130	11/19/2011 0719
Toluene	50	49		1	99	70-130	11/19/2011 0719
Xylenes (total)	100	100		1	103	70-130	11/19/2011 0719
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	70-130				
1,2-Dichloroethane-d4		105	70-130				
Toluene-d8		100	70-130				

Volatile Organic Compounds by GC/MS - MB

Sample ID: MQ72316-001

Matrix: Aqueous

Batch: 72316

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	11/22/2011 2035
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	11/22/2011 2035
Ethylbenzene	ND		1	5.0	1.7	ug/L	11/22/2011 2035
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	11/22/2011 2035
Naphthalene	ND		1	5.0	1.7	ug/L	11/22/2011 2035
Toluene	ND		1	5.0	1.7	ug/L	11/22/2011 2035
Xylenes (total)	ND		1	5.0	1.7	ug/L	11/22/2011 2035
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		104	70-130				
1,2-Dichloroethane-d4		106	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: MQ72316-002

Matrix: Aqueous

Batch: 72316

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	47		1	93	70-130	11/22/2011 1828
1,2-Dichloroethane	50	46		1	92	70-130	11/22/2011 1828
Ethylbenzene	50	48		1	97	70-130	11/22/2011 1828
Methyl tertiary butyl ether (MTBE)	50	45		1	90	70-130	11/22/2011 1828
Naphthalene	50	50		1	101	70-130	11/22/2011 1828
Toluene	50	45		1	90	70-130	11/22/2011 1828
Xylenes (total)	100	97		1	97	70-130	11/22/2011 1828
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		107	70-130				
1,2-Dichloroethane-d4		104	70-130				
Toluene-d8		100	70-130				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: MQ72316-003

Matrix: Aqueous

Batch: 72316

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	47		1	95	1.4	70-130	20	11/22/2011 1911
1,2-Dichloroethane	50	45		1	90	1.7	70-130	20	11/22/2011 1911
Ethylbenzene	50	47		1	95	1.7	70-130	20	11/22/2011 1911
Methyl tertiary butyl ether (MTBE)	50	44		1	89	1.8	70-130	20	11/22/2011 1911
Naphthalene	50	49		1	98	2.6	70-130	20	11/22/2011 1911
Toluene	50	47		1	93	3.6	70-130	20	11/22/2011 1911
Xylenes (total)	100	96		1	96	1.4	70-130	20	11/22/2011 1911
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		107	70-130						
1,2-Dichloroethane-d4		112	70-130						
Toluene-d8		102	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: MK18076-001DU

Matrix: Aqueous

Batch: 72316

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Result (ug/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Benzene	1900	1900		100	2.9	20	11/23/2011 0352
1,2-Dichloroethane	ND	ND		100	0.00	20	11/23/2011 0352
Ethylbenzene	2500	2600		100	4.5	20	11/23/2011 0352
Methyl tertiary butyl ether (MTBE)	83	79	J	100	4.4	20	11/23/2011 0352
Naphthalene	330	340	J	100	2.9	20	11/23/2011 0352
Toluene	10000	10000		100	2.0	20	11/23/2011 0352
Xylenes (total)	13000	14000		100	1.3	20	11/23/2011 0352
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		105	70-130				
1,2-Dichloroethane-d4		106	70-130				
Toluene-d8		102	70-130				

Volatile Organic Compounds by GC/MS - MS

Sample ID: MK18076-002MS

Matrix: Aqueous

Batch: 72316

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	62	1000	1100		20	99	70-130	11/23/2011 0434
1,2-Dichloroethane	ND	1000	990		20	99	70-130	11/23/2011 0434
Ethylbenzene	930	1000	1900		20	100	70-130	11/23/2011 0434
Methyl tertiary butyl ether (MTBE)	ND	1000	960		20	96	70-130	11/23/2011 0434
Naphthalene	180	1000	1200		20	104	70-130	11/23/2011 0434
Toluene	830	1000	1800		20	95	70-130	11/23/2011 0434
Xylenes (total)	5300	2000	7200		20	96	70-130	11/23/2011 0434
Surrogate	Q	% Rec	Acceptance Limit					
Bromofluorobenzene		108	70-130					
1,2-Dichloroethane-d4		105	70-130					
Toluene-d8		100	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: MQ72743-001

Matrix: Aqueous

Batch: 72743

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	11/30/2011 2114
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	11/30/2011 2114
Ethylbenzene	ND		1	5.0	1.7	ug/L	11/30/2011 2114
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	11/30/2011 2114
Naphthalene	ND		1	5.0	1.7	ug/L	11/30/2011 2114
Toluene	ND		1	5.0	1.7	ug/L	11/30/2011 2114
Xylenes (total)	ND		1	5.0	1.7	ug/L	11/30/2011 2114

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		100	70-130
1,2-Dichloroethane-d4		120	70-130
Toluene-d8		105	70-130

Volatile Organic Compounds by GC/MS - LCS

Sample ID: MQ72743-002

Matrix: Aqueous

Batch: 72743

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	49		1	98	70-130	11/30/2011 1946
1,2-Dichloroethane	50	49		1	98	70-130	11/30/2011 1946
Ethylbenzene	50	51		1	101	70-130	11/30/2011 1946
Methyl tertiary butyl ether (MTBE)	50	55		1	109	70-130	11/30/2011 1946
Naphthalene	50	53		1	107	70-130	11/30/2011 1946
Toluene	50	49		1	97	70-130	11/30/2011 1946
Xylenes (total)	100	100		1	105	70-130	11/30/2011 1946

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		103	70-130
1,2-Dichloroethane-d4		114	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: MQ72743-003

Matrix: Aqueous

Batch: 72743

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	49		1	98	0.12	70-130	20	11/30/2011 2008
1,2-Dichloroethane	50	50		1	100	1.9	70-130	20	11/30/2011 2008
Ethylbenzene	50	52		1	104	2.4	70-130	20	11/30/2011 2008
Methyl tertiary butyl ether (MTBE)	50	55		1	109	0.24	70-130	20	11/30/2011 2008
Naphthalene	50	50		1	99	7.4	70-130	20	11/30/2011 2008
Toluene	50	50		1	100	2.8	70-130	20	11/30/2011 2008
Xylenes (total)	100	110		1	106	1.6	70-130	20	11/30/2011 2008

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		102	70-130
1,2-Dichloroethane-d4		116	70-130
Toluene-d8		107	70-130

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: MQ72159-001

Matrix: Aqueous

Batch: 72159

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 11/21/2011 1412

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acenaphthene	ND		1	5.0	1.2	ug/L	11/22/2011 2221
Acenaphthylene	ND		1	5.0	1.2	ug/L	11/22/2011 2221
Anthracene	ND		1	5.0	1.1	ug/L	11/22/2011 2221
Benzo(a)anthracene	ND		1	5.0	0.60	ug/L	11/22/2011 2221
Benzo(a)pyrene	ND		1	5.0	0.50	ug/L	11/22/2011 2221
Benzo(b)fluoranthene	ND		1	5.0	0.60	ug/L	11/22/2011 2221
Benzo(g,h,i)perylene	ND		1	5.0	0.80	ug/L	11/22/2011 2221
Benzo(k)fluoranthene	ND		1	5.0	1.0	ug/L	11/22/2011 2221
Chrysene	ND		1	5.0	0.70	ug/L	11/22/2011 2221
Dibenzo(a,h)anthracene	ND		1	5.0	1.3	ug/L	11/22/2011 2221
Fluoranthene	ND		1	5.0	1.4	ug/L	11/22/2011 2221
Fluorene	ND		1	5.0	1.4	ug/L	11/22/2011 2221
Indeno(1,2,3-c,d)pyrene	ND		1	5.0	2.3	ug/L	11/22/2011 2221
Naphthalene	ND		1	5.0	1.3	ug/L	11/22/2011 2221
Phenanthrene	ND		1	5.0	1.2	ug/L	11/22/2011 2221
Pyrene	ND		1	5.0	3.1	ug/L	11/22/2011 2221
Surrogate	Q	% Rec	Acceptance Limit				
2-Fluorobiphenyl		95	37-129				
Nitrobenzene-d5		88	38-127				
Terphenyl-d14		93	10-148				

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: MQ72159-002

Matrix: Aqueous

Batch: 72159

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 11/21/2011 1412

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	100	85		1	85	30-130	11/22/2011 2240
Acenaphthylene	100	83		1	83	30-130	11/22/2011 2240
Anthracene	100	83		1	83	30-130	11/22/2011 2240
Benzo(a)anthracene	100	86		1	86	30-130	11/22/2011 2240
Benzo(a)pyrene	100	94		1	94	30-130	11/22/2011 2240
Benzo(b)fluoranthene	100	94		1	94	30-130	11/22/2011 2240
Benzo(g,h,i)perylene	100	85		1	85	30-130	11/22/2011 2240
Benzo(k)fluoranthene	100	82		1	82	30-130	11/22/2011 2240
Chrysene	100	84		1	84	30-130	11/22/2011 2240
Dibenzo(a,h)anthracene	100	89		1	89	30-130	11/22/2011 2240

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: MQ72159-002

Matrix: Aqueous

Batch: 72159

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 11/21/2011 1412

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Fluoranthene	100	88		1	88	30-130	11/22/2011 2240
Fluorene	100	85		1	85	30-130	11/22/2011 2240
Indeno(1,2,3-c,d)pyrene	100	86		1	86	30-130	11/22/2011 2240
Naphthalene	100	96		1	96	30-130	11/22/2011 2240
Phenanthrene	100	86		1	86	30-130	11/22/2011 2240
Pyrene	100	87		1	87	30-130	11/22/2011 2240
Surrogate	Q	% Rec	Acceptance Limit				
2-Fluorobiphenyl		91	37-129				
Nitrobenzene-d5		86	38-127				
Terphenyl-d14		87	10-148				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MB

Sample ID: MQ72243-001
 Batch: 72243
 Analytical Method: 8011

Matrix: Aqueous
 Prep Method: 8011
 Prep Date: 11/22/2011 925

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	11/23/2011 0329
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		113	57-137				

EDB & DBCP by Microextraction - LCS

Sample ID: MQ72243-002
 Batch: 72243
 Analytical Method: 8011

Matrix: Aqueous
 Prep Method: 8011
 Prep Date: 11/22/2011 925

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.30		1	121	60-140	11/23/2011 0351
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		110	57-137				

EDB & DBCP by Microextraction - MS

Sample ID: MK18076-008MS
 Batch: 72243
 Analytical Method: 8011

Matrix: Aqueous
 Prep Method: 8011
 Prep Date: 11/22/2011 925

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.29		1	122	60-140	11/23/2011 0729
Surrogate	Q	% Rec	Acceptance Limit					
1,1,1,2-Tetrachloroethane		111	57-137					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MSD

Sample ID: MK18076-008MD

Matrix: Aqueous

Batch: 72243

Prep Method: 8011

Analytical Method: 8011

Prep Date: 11/22/2011 925

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.29		1	119	1.4	60-140	20	11/23/2011 0751
Surrogate	Q	% Rec	Acceptance Limit							
1,1,1,2-Tetrachloroethane		113	57-137							

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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ICP-AES - MB

Sample ID: MQ72255-001

Matrix: Aqueous

Batch: 72255

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 11/22/2011 1330

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Lead	ND		1	0.010	0.0019	mg/L	11/29/2011 0226

ICP-AES - LCS

Sample ID: MQ72255-002

Matrix: Aqueous

Batch: 72255

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 11/22/2011 1330

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Lead	0.40	0.40		1	100	80-120	11/29/2011 0230

ICP-AES - LCSD

Sample ID: MQ72255-003

Matrix: Aqueous

Batch: 72255

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 11/22/2011 1330

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Lead	0.40	0.40		1	100	0.34	80-120	20	11/29/2011 0234

ICP-AES - MS

Sample ID: MK18076-002MS

Matrix: Aqueous

Batch: 72255

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 11/22/2011 1330

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Lead	0.018	0.40	0.43		1	104	75-125	11/22/2011 1954

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-AES - MSD

Sample ID: MK18076-002MD

Matrix: Aqueous

Batch: 72255

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 11/22/2011 1330

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Lead	0.018	0.40	0.45		1	107	2.8	75-125	20	11/22/2011 1958

ICP-AES - MS

Sample ID: MK18076-003MS

Matrix: Aqueous

Batch: 72255

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 11/22/2011 1330

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Lead	0.0064	0.40	0.42		1	104	75-125	11/22/2011 2013

ICP-AES - MB

Sample ID: MQ72255-001

Matrix: Aqueous

Batch: 72255

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 11/22/2011 1330

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Dissolved Lead	ND		1	0.010	0.0019	mg/L	11/29/2011 0226

ICP-AES - LCS

Sample ID: MQ72255-002

Matrix: Aqueous

Batch: 72255

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 11/22/2011 1330

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Dissolved Lead	0.40	0.40		1	100	80-120	11/29/2011 0230

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-AES - LCSD

Sample ID: MQ72255-003

Matrix: Aqueous

Batch: 72255

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 11/22/2011 1330

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Dissolved Lead	0.40	0.40		1	100	0.34	80-120	20	11/29/2011 0234

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Number 07296

Client MECI		Report to Contact B. Share		Sampler (Printed Name)		Quote No.				
Address 235 B Dudley Rd		Telephone No. / Fax No. / Email 803-808-2043		Waybill No.		Page 1 of 2				
City Lexington	State SC	Zip Code 29173	Preservative					Number of Containers		
Project Name Steady Simmons			1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCl 3. H2SO4 6. Na Thio					Bottle (See Instructions on back)		
Project Number	P.O. Number	Matrix		Analysis				Lot No.		
Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	Sec/ab	CW	OW	WW	S	Other	Analysis	Remarks / Cooler ID
MW-1R	11/18	10:18	G	X					X X	
MW-2		10:35							X X	
MW-3		11:00							X X	
MW-4		11:25							X X	
MW-1R Dup.		10:18							X X	
FIELD BLANK		10:00							X X	
TRIP BLANK		10:05							X X	
SW-1		12:30							X X	
WSW-1		12:45							X X	
WSW-2	11/18	12:55	G	X					X X	

Analysis notes: BTEX, PAH, MIBE (8.600), 1,2 DCA, 8 oxygens, EDB (80), Total Lead, Filtered Lead, PAH

Remarks: MK190 76

Turn Around Time Required (Prior lab approval required for expedited TAT)		Sample Disposal		QC Requirements (Specify)		Possible Hazard Identification				
<input type="checkbox"/> Standard	<input type="checkbox"/> Rush (Please Specify)	<input type="checkbox"/> Return to Client	<input type="checkbox"/> Disposal by Lab			<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison	<input type="checkbox"/> Unknown
1. Relinquished by	Date	Date	Time	1. Received by	Date					
2. Relinquished by	Date	Date	Time	2. Received by	Date					
3. Relinquished by	Date	Date	Time	3. Received by	Date					
4. Relinquished by	Date	Date	Time	4. Laboratory Received by	Date					

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
 Received on Ice (Check) Yes No Ice Pack Receipt Temp. **20** °C Temp. Blank Y N

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Number 07297

Client: MECI, Report to Contact: B. SHANE, Address: 235 B DOOLEY RD., City: LEXINGTON SC 29023, Project Name: STEADY SIMMONS, Analysis: BTEX, NPHL, MPBC, PCBs, 1,2 DCA, 8 ORGANICS, LEAD (GALV), TOTAL LEAD, FETTERED LEAD, PAH, Date: 11/18, Time: 13:15, 14:00, Matrix: G, X, Laboratory Received by: [Signature], Date: 11/19/11, Temp: 20 °C

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SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 9

Page 1 of 1
 Replaces Date: 05/06/11
 Effective Date: 10/11/11

Sample Receipt Checklist (SRC)

Client: MCCI Cooler Inspected by/date: MHL 11/16/11 Lot #: M-48078

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/temperature upon receipt: <u>2-0</u> °C / <u>1</u> °C / <u>1</u> °C / <u>1</u> °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles <u>TRIP BLANK</u>		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	6. Were sample IDs listed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7. Was collection date & time listed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	8. Were tests to be performed listed on the COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input type="checkbox"/> No <input type="checkbox"/>	12. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	13. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	14. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	15. Were there any excess samples not listed on COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	16. Were bubbles present > "pea-size" (1/4" or 6mm in diameter) in any VOA vials?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) with the SR # (number)		
Sample(s) <u>-601 (1)</u> were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/BNA/pest/PCB/herb.		
Corrective Action taken, if necessary:		
Was client notified: Yes <input type="checkbox"/> No <input type="checkbox"/>		Did client respond: Yes <input type="checkbox"/> No <input type="checkbox"/>
SESI employee: _____		Date of response: _____
Comments: _____		

**APPENDIX C
SLUG TEST DATA**

SUMMARY of SLUG TEST (Page 1 of 2)

SOUTH CAROLINA
Department of Health and Environmental Control (DHEC)

Site Data

SITE ID # 18856 COUNTY Jasper
FACILITY NAME Steady Simmons

SLUG DATA

See Appendix _____ Table _____ Figure _____ for a list of all data measurements.
(water level logs, etc.)(Complete as appropriate).

Water Level Recovery Data was measured by ORS Interface Probe
(Hermit Data Logger, Manually with Water Level Indicator, etc.)(List Method)

Complete the following table for each well tested.

COMPLETE A SECOND SHEET IF MORE THAN FOUR WELLS ARE TESTED

Slug Test Conducted in well(s) number _____
Initial Rise/Drawdown in well (feet) _____
Radius of well casing (feet) _____
Effective Radius of Well (feet) _____
Static Saturated Aquifer Thickness (feet) _____
Length of Well Screen (feet) _____
Static Height of Water Column in Well (ft) _____

	MW-1R	MW-3		
Initial Rise/Drawdown in well (feet)	0.97	0.89		
Radius of well casing (feet)	0.083	0.083		
Effective Radius of Well (feet)	0.33	0.33		
Static Saturated Aquifer Thickness (feet)	4.60	5.57		
Length of Well Screen (feet)	10	10		
Static Height of Water Column in Well (ft)	4.60	5.57		

Calculations

See Appendix _____ Table _____ Figure _____ for calculations

The method for aquifer calculations was NAVFAC

Calculated values by well were as follows:

Slug Test Conducted in Well(s) number _____
Hydraulic Conductivity

	MW-1R	MW-3		
Hydraulic Conductivity	1.12E-04	7.78E-05		cm/sec

Thickness of the aquifer used to calculate hydraulic conductivity was N/A feet.

The aquifer is _____ confined _____ semi-confined _____ water table (Check as Appropriate).

SEE SHEET 3

The estimated seepage velocity is 1.23 feet per year based on a hydraulic conductivity of 9.49E-05 cm/sec, a hydraulic gradient of 3.14E-03 ft/ft, and a porosity of 25 percent for Clayey SAND soil.

SUMMARY of SLUG TEST

Groundwater Seepage Velocity Calculations (Page 2 of 2)

SOUTH CAROLINA
Department of Health and Environmental Control (DHEC)

Site Data

SITE ID # 18856 COUNTY Jasper
FACILITY NAME Steady Simmons

Hydraulic Conductivity (average)

Hydraulic Conductivity Average = 9.49E-05 cm/sec
(MW-1R & MW-3)
2.69E-01 ft./day
1.87E-04 ft./min

Groundwater Seepage Velocity

$V = (Ki)/(Ne)$ * Enter Values in Shaded Areas Only
(ft./day)

where:

K = Hydraulic Conductivity (ft./day)
I = Hydraulic Gradient (ft./ft.)
Ne = Effective Permeability

K = 2.69E-01 ft./day
I = 3.14E-03 ft./ft.
Ne = 0.25

V = 3.4E-03 ft./day 1.23 ft./year

Groundwater Seepage Velocity Calculations

Inflow Permeability Calculation
Steady Simmons

Test Performed: 11/18/2011

MW-1R

Type II (Uncased Well)

Static: 12.40 ft

*Enter Values in Shaded Areas Only

Time (min)	Depth	delta H	Ht/Ho
0.25	13.37	0.97	1.00
0.50	13.35	0.95	0.98
0.75	13.34	0.94	0.97
1.00	13.33	0.93	0.96
1.25	13.32	0.92	0.95
1.50	13.30	0.90	0.93
1.75	13.29	0.89	0.92
2.00	13.29	0.89	0.92
2.50	13.24	0.84	0.87
3.00	13.21	0.81	0.84
3.50	13.19	0.79	0.81
4.00	13.16	0.76	0.78
5.00	13.12	0.72	0.74
6.00	13.08	0.68	0.70
7.00	13.02	0.62	0.64
9.00	12.94	0.54	0.56
11.00	12.87	0.47	0.48
13.00	12.78	0.38	0.39
15.00	12.73	0.33	0.34
20.00	12.60	0.20	0.21

Information from data and plot of Ht/Ho vs time

Bore Hole Diameter: 8 in
 Total Depth of Well: 17 ft
 Stand Pipe Area: 50.27 in²
 0.35 ft²

Coordinates from Graph for Slope Calc:

H1/Ho: 0.74
 t1: 5.00 min
 H2/Ho: 0.56
 t2: 9.00 min

H1: 0.72 H2: 0.54
 t1: 5.00 t2: 9.00
 Radius R: 4.00 in
 Radius R: 0.33 ft
 Depth D: 4.60 ft
 R/D: 0.072
 D/R: 13.80

Shape Factor Determination Value: 0.862935 *

*This value is used in conjunction with

Figure 13 of Reference [1] to obtain the shape factor.

Shape Factor S: 0.9

Coeff. of Permeability (K):

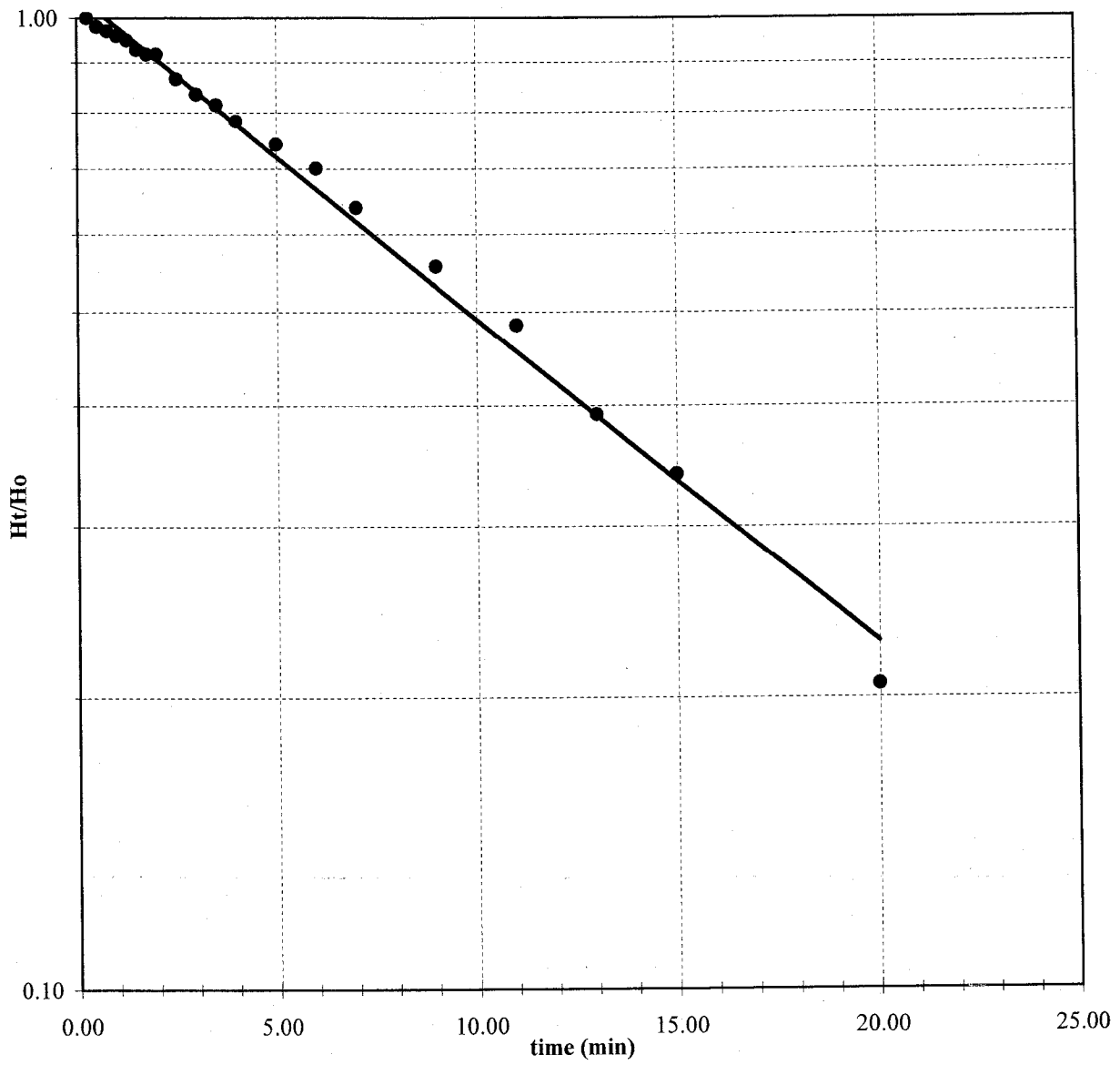
2.20E-04 ft/min

3.16E-01 ft/day

1.12E-04 cm/sec

Ref [1]: Naval Fac. Engr. Command, Design Manual 7.01, soil Mechanics, Condition A.

Inflow for Condition A Well MW-1R.xls



 Midlands
Environmental
Consultants, Inc.

235-B Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

Inflow Permeability Calculation
Steady Simmons

Test Performed: 11/18/2011

MW-3

Type II (Uncased Well)

Static: 11.43 ft

*Enter Values in Shaded Areas Only

Time (min)	Depth	delta H	Ht/Ho
0.25	12.32	0.89	1.00
0.50	12.31	0.88	0.99
0.75	12.30	0.87	0.98
1.00	12.30	0.87	0.98
1.25	12.29	0.86	0.97
1.50	12.29	0.86	0.97
1.75	12.28	0.85	0.96
2.00	12.28	0.85	0.96
2.50	12.27	0.84	0.94
3.00	12.26	0.83	0.93
4.00	12.24	0.81	0.91
5.00	12.22	0.79	0.89
7.00	12.15	0.72	0.81
9.00	12.06	0.63	0.71
12.00	11.95	0.52	0.58
15.00	11.87	0.44	0.49
20.00	11.74	0.31	0.35
25.00	11.63	0.20	0.22

Information from data and plot of Ht/Ho vs time

Bore Hole Diameter: 8 in
 Total Depth of Well: 17 ft
 Stand Pipe Area: 50.27 in²
 0.35 ft²

Coordinates from Graph for Slope Calc:

H1/Ho: 0.81
 t1: 7.00 min
 H2/Ho: 0.58
 t2: 12.00 min

H1: 0.72 H2: 0.52
 t1: 7.00 t2: 12.00

Radius R: 4.00 in
 Radius R: 0.33 ft
 Depth D: 5.57 ft
 R/D: 0.060
 D/R: 16.71

Shape Factor Determination Value: 0.888950 *

*This value is used in conjunction with

Figure 13 of Reference [1] to obtain the shape factor.

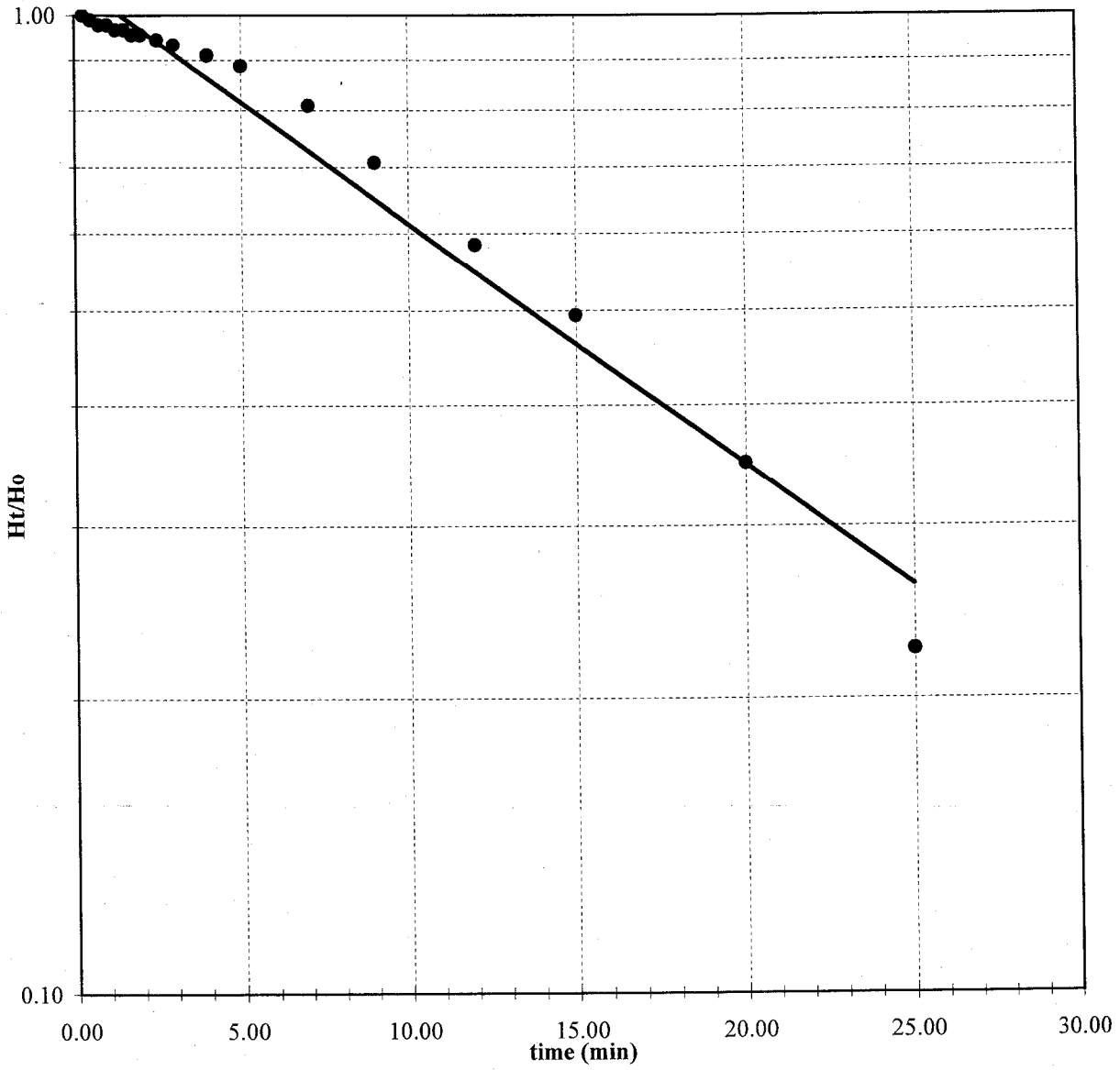
Shape Factor S: 1.0

Coeff. of Permeability (K):

- 1.53E-04 ft/min
- 2.21E-01 ft/day
- 7.78E-05 cm/sec

Ref [1]: Naval Fac. Engr. Command, Design Manual 7.01, soil Mechanics, Condition A.

Inflow for Condition A Well MW-3.xls



 Midlands
Environmental
Consultants, Inc.

235-B Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

APPENDIX D
WASTE DISPOSAL MANIFEST



Midlands
Environmental
Consultants, Inc.

December 12, 2011

Re: Treatment of Purge Water
Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID Number 18856
MECI Project Number 11-3586

To Whom it May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

12.0 Gallons were treated on November 18, 2011 at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,

Midlands Environmental Consultants, Inc.

Courtney M. Sanders
Staff Biologist



Richland County LF
 1047 Highway Church Road
 Elgin, SC, 29045
 Ph: (803) 788-3054

Original
 Ticket# 1134100

Customer Name MIDLANDSENVIRON MIDLANDS ENVI Carrier MIDLANDSENVIRON MIDLANDS ENVIRONMENT
 Ticket Date 11/03/2011 Vehicle# 3 Volume
 Payment Type Credit Account Container
 Manual Ticket# Driver
 Hauling Ticket# Check#
 Route Billing # 0000469
 State Waste Code Gen EPA ID
 Manifest 0
 Destination
 PO
 Profile VA2718 (SOIL FROM UST ASSESSMENT)
 Generator 125-MIDLANDSENVIRONMENTAL MIDLANDS ENVIRONMENTAL

Time
 In 11/03/2011 10:00:33
 Out 11/03/2011 10:35:54

Scale ScaleMaster
 Scale1 joyce
 Scale2 wcurry

Gross 15160 lb
 Tare 10600 lb
 Net 4560 lb
 Tons 2.28

Comments

WASTE MANAGEMENT

Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1 SOIL-Cont. Soil -	100	2.28	Tons				40-RICHLAN
2 FUEL-Fuel Surcharg	100		%				40-RICHLAN
3 EVF-P-Standard Env	100		%				40-RICHLAN


SIGNATURE

Quick Pantry #15
 Steady Simmons
 Roster Transport

Total Fees
 Total Ticket

1/4 0.57
 1/2 1.14
 1/4 0.57

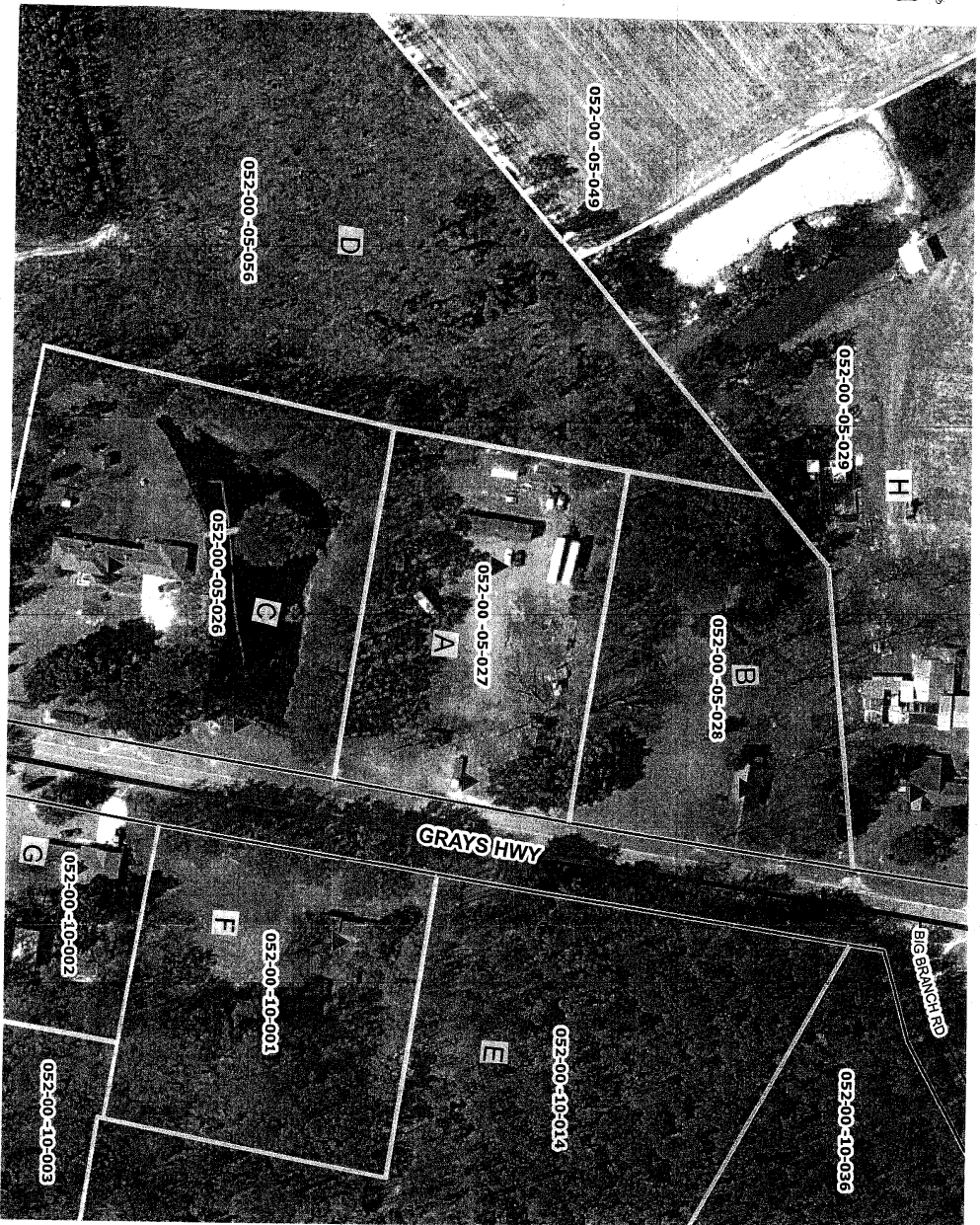
SPECIAL WASTE MANIFEST

WASTE ID NUMBER VA2718	<i>Richland Landfill</i> 1047 Highway Church Road Elgin, SC 29045 Special Waste Phone: 803-744-3346 Fax: 866-904-7194	
EXPIRATION DATE November 17, 2013		
Prepared by: Karen Truett/Carol Weldon		
GENERATOR OF WASTE: Midlands Env. Consultants, Inc. - Various	ACCOUNT NUMBER: 820-469	
CUSTOMER Midlands Env. Consultants		
LOCATION OF WASTE: Site Address:		
CITY:	COUNTY: <i>Richland</i>	
PHONE NUM 803-808-2043	CONTACT: Bryan Shane	
FAX NUMBER:		
GENERATOR'S SIGNATURE	DATE:	
TRANSPORTER OF WASTE: <i>Brunson Kelly</i>		
DATE: <i>11/3/11</i>	TRUCK NUMBER: <i>3</i>	
DRIVER'S SIGNATURE <i>[Signature]</i>		
**** TO BE COMPLETED BY RICHLAND LANDFILL ****		
DISPOSAL SITE: <u>RICHLAND LANDFILL ELGIN, SC</u>	Waste Class: Soil	
DESCRIPTION OF WASTE: Soil from UST Assessment		
TICKET NUMBER: <i>1134100</i>		
RECEIVED BY: <i>[Signature]</i>		

APPENDIX E
ZONING REGULATIONS

MECI Personnel contacted a representative of the Jasper County Building & Planning Services in December of 2011 to discuss zoning regulations associated with the subject site. According to the representative, Ms. Lisa Lamb there are no zoning regulations associated with the installation of water supply wells in Jasper County other than what SCDHEC sets forth.

APPENDIX F
TAX MAP



ID	Tax Map #	Owner
A	052-00-05-027 (WSW-1 & WSW-6) Site	Wayne Thompson 16657 Grays Highway Early Branch, SC 29916
B	052-00-05-028 (WSW-8)	Carroll Wayne Smith 1591 Fire Tower Road Pineland, SC 29934
C	052-00-05-026 (WSW-2)	Lilly Griffin 16589 Grays Highway Early Branch, SC 29916
D	052-00-05-056 (WSW-3)	Betty S. Mears 16427 Grays Highway Early Branch, SC 29916
E	052-00-10-014	Marilda Smith 29 Monagin Way Bluffton, SC 29909
F	052-00-10-001 (WSW-4)	Marilda Smith 110 Gardner Drive Apt. 325 Hilton Head Island, SC 29926
G	052-00-10-002 (WSW-3)	William Phillips 16586 Grays Highway Early Branch, SC 29916
H	052-00-05-029 (WSW-5 & WSW-9)	Rufus W. & Hazel C. Smith 16743 Grays Highway Early Branch, SC 29916
I	052-00-10-026 (WSW-7)	William E. & Mamie Lou Phillips 16586 Grays Highway Early Branch, SC 29916

Tax Map Data

Sheedy Simmons
Early Branch, South Carolina
SCDHEC Site ID# 122556

Midlands Environmental Consultants, Inc.

FORM NO. 11-3586
DATE: December 12, 2011
Appendix
F

APPENDIX G
FIELD DATA INFORMATION SHEETS

South Carolina Department of Health and Environmental Control
 Bureau of Land and Waste Management Underground Storage Tank Program
 Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 11/18/2011

Field Personnel: Gavin Globensky, Kyle Pudney

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	<u>02A0831</u>	serial no.	<u>02A0831</u>
pH=4.0	<u> </u>	standard	<u>X</u>
pH=7.0	<u>X</u>	standard	<u> </u>
pH=10.0	<u> </u>	standard	<u> </u>

Chain of Custody

Relinquished by	<u> </u>	Date/Time	<u> </u>
Received by	<u> </u>	Date/Time	<u> </u>

Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # MW-1R

Water Supply Well Public Private

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
 for a 4 inch well C=0.652

* Free Product Thickness: feet

Depth to Free Product (DFP) feet

Depth to Ground Water (DGW) 12.37 feet

Total Well Depth (TWD) 17.6 feet

Length of the water column (LWC=TWD-DGW) 5.23 feet

1 casing volume (CV=LWC X C)=	<u> </u> X	<u>0.163</u>	<u>0.85</u>	gallons
3 casing volume (3 X CV)=		<u>3</u>	<u>2.56</u>	gallons

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	10:10	10:14	10:16	10:18			
pH (s.u.)	7.50	7.06	6.66	6.24			
Specific Conductivity (µmhos/cm)	61.0	39.0	32.6	30.3			
Water Temperature (°C)	19.6	21.5	22.4	21.6			
Dissolved Oxygen	2.56	2.71	2.59	3.09			
PID readings, if required							

Remarks: Sample Time: 10:18

South Carolina Department of Health and Environmental Control
 Bureau of Land and Waste Management Underground Storage Tank Program
 Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 11/18/2011

Field Personnel: Gavin Globensky, Kyle Pudney

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	<u>02A0831</u>	serial no.	<u>02A0831</u>
pH=4.0	<u> </u>	standard	<u>X</u>
pH=7.0	<u>X</u>	standard	<u> </u>
pH=10.0	<u> </u>	standard	<u> </u>

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # MW-3

Water Supply Well Public Private

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
 for a 4 inch well C=0.652

* Free Product Thickness: feet

Depth to Free Product (DFP) feet

Depth to Ground Water (DGW) 11.33 feet

Total Well Depth (TWD) 17.5 feet

Length of the water column (LWC=TWD-DGW) 6.17 feet

1 casing volume (CV=LWC X C)= X 0.163 1.01 gallons

3 casing volume (3 X CV)= X 3 3.02 gallons

Total Volume of Water Purged Before Sampling 4 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	10:50	10:55	10:57	11:00			
pH (s.u.)	5.78	5.61	5.55	5.53			
Specific Conductivity (µmhos/cm)	34.0	30.4	29.7	30.0			
Water Temperature (°C)	19.9	20.1	20.5	20.7			
Dissolved Oxygen	3.09	5.01	4.82	4.27			
PID readings, if required							

Remarks: Sample Time: 11:00

South Carolina Department of Health and Environmental Control
 Bureau of Land and Waste Management Underground Storage Tank Program
 Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 11/18/2011

Field Personnel: Gavin Globensky, Kyle Pudney

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	<u>02A0831</u>	serial no.	<u>02A0831</u>
pH=4.0	<u> </u>	standard	<u>X</u>
pH=7.0	<u>X</u>	standard	<u> </u>
pH=10.0	<u> </u>	standard	<u> </u>

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # MW-4

Water Supply Well Public Private

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
 for a 4 inch well C=0.652

* Free Product Thickness: feet

Depth to Free Product (DFP) feet

Depth to Ground Water (DGW) 10.99 feet

Total Well Depth (TWD) 17.48 feet

Length of the water column (LWC=TWD-DGW) 6.49 feet

1 casing volume (CV=LWC X C)=	<u> </u> X	<u>0.163</u>	<u>1.06</u>	gallons
3 casing volume (3 X CV)=		<u>3</u>	<u>3.17</u>	gallons

Total Volume of Water Purged Before Sampling 4 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:15	11:18	11:22	11:25				
pH (s.u.)	5.44	5.26	5.24	5.19				
Specific Conductivity (µmhos/cm)	75.9	96.8	96.6	98.5				
Water Temperature (°C)	20.3	19.1	19.6	20.1				
Dissolved Oxygen	3.98	4.15	4.71	4.62				
PID readings, if required								

Remarks: Sample Time: 11:25

APPENDIX H
QAPP CONTRACTOR CHECKLIST

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided? (Page 1/Report)	X		
2	Is UST Owner/Operator name, address, & phone number provided? (Page 1/Report)	X		
3	Is name, address, & phone number of current property owner provided? (Page 1/Report)	X		
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided? (Page 1/Report)	X		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided? (Page 4/Report & Appendix A)	X		
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided? (Page 7/Report & Appendix B)	X		
7	Has the facility history been summarized? (Report)	X		
8	Has the regional geology and hydrogeology been described? (Page 4/Report)	X		
9	Are the receptor survey results provided as required? (Page 3/Report)	X		
10	Has current use of the site and adjacent land been described? (Pages 1/Report)	X		
11	Has the site-specific geology and hydrogeology been described? (Page 4/Report)	X		
12	Has the primary soil type been described? (Page 9/Report & Appendix A)	X		
13	Have field screening results been described? (Pages 4,5,6/Report)	X		
14	Has a description of the soil sample collection and preservation been detailed? (Page 7/Report)	X		
15	Has the field screening methodology and procedure been detailed? (Page 4/Report)	X		
16	Has the monitoring well installation and development dates been provided? (Page 7/Report)	X		
17	Has the method of well development been detailed? (Page 7/Report)	X		
18	Has justification been provided for the locations of the monitoring wells? Tier I Protocol	X		
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?			X
20	Has the groundwater sampling methodology been detailed? (Page 9/Report)	X		
21	Have the groundwater sampling dates and groundwater measurements been provided? (Pages 8, 9/Report)	X		
22	Has the purging methodology been detailed? (Page 7/Report)	X		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? (Appendix G)	X		
24	If free-product is present, has the thickness been provided?			X
25	Does the report include a brief discussion of the assessment done and the results? Tier I Protocol	X		
26	Does the report include a brief discussion of the aquifer evaluation and results? (Page 9/Report & Appendix C)	X		
27	Does the report include a brief discussion of the fate & transport models used?			X

Item#	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Pages 10, 11/Report)	X		
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			X
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			X
31	Have recommendations for further action been provided and explained? (Page 12/Report)	X		
32	Has the soil analytical data for the site been provided in tabular format? (Pages 7, 8/Report & Figure 4)	X		
33	Has the potentiometric data for the site been provided in tabular format? (Page 8/Report & Figure 2)	X		
34	Has the current and historical laboratory data been provided in tabular format? (Page 9/Report, Figure 5, & Appendix B)	X		
35	Have the aquifer characteristics been provided and summarized on the appropriate form? (Appendix C)	X		
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			X
37	Has the topographic map been provided with all required elements? (Figure 1)	X		
38	Has the site base map been provided with all required elements? (Figure 2)	X		
39	Have the CoC site maps been provided? (Figures 4 & 5)	X		
40	Has the site potentiometric map been provided? (Figure 2/Data Only)	X		
41	Have the geologic cross-sections been provided?			X
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			X
43	Has the site survey been provided and include all necessary elements? (Figure 3)	X		
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	X		
45	Is the laboratory performing the analyses properly certified?	X		
46	Has the tax map been included with all necessary elements? (Appendix F)	X		
47	Have the soil boring/field screening logs been provided? (Appendix A)	X		
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix A)	X		
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix C)	X		
50	Have the disposal manifests been provided? (Appendix D)	X		
51	Has a copy of the local zoning regulations been provided? (Appendix E)	X		
52	Has all fate and transport modeling been provided?			X
53	Have copies of all access agreements obtained by the contractor been provided?			X
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided? (Appendix H)	X		

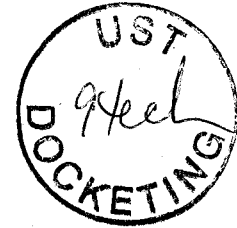


C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

JAN 03 2012

DEE OBRIEN PG
DIVISION MANAGER
CRAWFORD ENVIRONMENTAL SERVICES INC
104 CORPORATE BLVD STE 412
WEST COLUMBIA SC 29169-4600



Re: Tier II QAPP Contractor Addendum Directive
Contract IFB-5400002721-3/10/11-EMW, Purchase Order # 4600089989
Notice to Proceed

Dear Mr. O'Brien:

In accordance with the referenced contract, the Underground Storage Tank (UST) Management Division requests a Tier II Assessment Plan for the following three UST facilities plus an associated Cost Agreement.

Table with 6 columns: Site name, ID #, County, Priority, Project Manager, ARRA. Rows include Benton's Exxon, Steady Simmons, and Fmr. American Oil Co.

As outlined in the referenced contract, please submit the Site-specific Quality Assurance Project Plan (QAPP) Contractor Addendum, Tier II Assessment Plan, and Assessment Component Cost Agreement to my attention within thirty (30) days from the date of this correspondence.

Tier II Assessment Plan, Implementation and Report submittal shall be performed in accordance with the referenced contract. Per Section 3.4.3., a late fee of \$100.00/day may be levied for each report submitted after the deadline established in the Notice to Proceed.

Sincerely,

Handwritten signature of Arthur Shrader

Arthur Shrader, Hydrogeologist
Assessment Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Three Notice to Proceed Package (UST Permits 01816, 18856, and 19547)

cc: Technical File (without enc.)



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

JAN 03 2012



MR WAYNE THOMPSON
16657 GRAYS HIGHWAY
EARLY BRANCH SC 29916

Re: Letter Explaining Assessment Activities
Steady Simmons, 16661 Grays Highway, Early Branch, SC
UST Permit #18856
Release Reported September 9, 2002
Tier I Assessment Report received December 28, 2011
Jasper County

Dear Mr. Thompson:

As you are aware, the Underground Storage Tank (UST) Management Division directed Midlands Environmental Consultants Incorporated to install four monitoring wells to determine if groundwater was impacted from the UST. The assessment report documents groundwater has been impacted by petroleum chemicals of concern. A copy of the assessment report is enclosed for your information.

The UST Division in the near future plans on installing additional groundwater monitoring wells to define the horizontal and vertical extent of the problem. Costs for this future work and this assessment report will be paid from the Federal American Recovery and Reinvestment Act (ARRA).

On all correspondence regarding this site, please reference UST permit number 18856. Please feel free to contact me at (803) 896-6218, fax me at (803) 896-6245 or e-mail me at smitha2@dhec.sc.gov if you have questions or need additional information.

Sincerely,

Alexander Smith, Hydrogeologist
Assessment Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Tier I Assessment Report by Midlands Environmental Consultants dated December 13, 2011

cc: Technical File (without enc.)

CRAWFORD
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February 3, 2012

Art Shrader, Hydrogeologist
Assessment Section
UST Management Division
Bureau of Land and Waste Management
SCDHEC
2600 Bull Street
Columbia, SC 29201

Re: QAPP Contractor Addendum
Steady Simmons
16661 Grays Highway, Early Branch, SC 29916
UST Permit: 18856
Cost Agreement: Pending
Jasper County

Dear Mr. Shrader

Crawford Environmental Services, Inc. (CES) has completed the site check (February 2, 2012), the assessment plan and contractors addendum to the Master QAPP for the Tier II Assessment for the above noted facility.

If you have any questions or comments regarding the above referenced facility please feel free to contact me at 803-708-0079, or by email at jreynolds@crawfordenvironmental.com.

Sincerely,

Justin Reynolds.
Project Manager
SC Rehabilitation Contractor Number: 0388

Attachments:

- Appendix A: Quality Assurance Program Plan (Contractor's Addendum) 23 pages
- Appendix B: Tier II Assessment Plan 2 pages
- Appendix C: Proposed Cost Agreement 2 pages
- Appendix D: Figures 2 pages
- Appendix E: Chain of Custody Templates 2 pages

MID-ATLANTIC REGION

15 CHURCH AVENUE, SW
ROANOKE, VIRGINIA 24011

OFFICE 540 343.6256
FAX 540 343.6259

ccrawford@crawfordenvironmental.com

SOUTHEAST REGION

104 CORPORATE BLVD, SUITE 412
WEST COLUMBIA, SOUTH CAROLINA 29169

OFFICE 803 708.0079
FAX 803 708.8137

dobrien@crawfordenvironmental.com

SOUTHEAST REGION

600 TOWNE CENTRE BLVD, SUITE 305
PINEVILLE, NORTH CAROLINA 28134

OFFICE 704 889.0178
FAX 704 889.0179

abaioni@crawfordenvironmental.com

Tier II Assessment
Underground Storage Tank Management Program – State Lead Tier II
Quality Assurance Program Plan – Site Specific

APPENDIX A
Quality Assurance Program Plan

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Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For
Steady Simmons UST Permit #: 18856

16661 Gray's Highway, Early Branch, SC 29916-8016

Prepared by:

Justin Reynolds
Crawford Environmental Services
104 Corporate Blvd. Suite 412
West Columbia, SC 29196


SCDHEC Site Rehabilitation Contractor Certification Number: UCC-0388

Approvals


Alex Smith
SC DHEC Project Manager

Signature Date _____


Dee O'Brien
Site Rehabilitation Contractor

_____
Signature Date 2/3/12

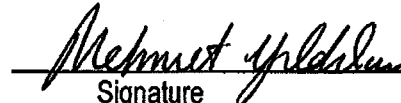
Dan Fisher
Project Verifier

_____
Signature Date 2/1/2012

Ashley Amick
Laboratory Director
Access Analytical Inc.

_____
Signature Date 2/3/12
Ashley B. Amick
Fri Feb 3 2012 11:22:50

Mehmet Yildirim
VP of Operations
Analytical Environmental Services Inc.,

_____
Signature Date 2/3/12

A2 Table of Contents

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A3 Distribution List

Name	Title	Organization/Address	Telephone Number	Fax Number	Email Address
Alex Smith	SC DHEC Technical Project Manager	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6218	803-896-6245	smitha2@dhec.sc.gov
Dee O'Brien	Site Rehabilitation Contractor	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708-8137	dobrien@crawfordenvironmental.com
Dan Fisher	Project QA/QC Manager and Project Verifier	Crawford Environmental Services 15 Church Street Roanoke, VA 24011	540-343-6256	540-343-6259	dfisher@crawfordenvironmental.com
Justin Reynolds	Project Manager	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708-8137	jreynolds@crawfordenvironmental.com
Todd Allred	Field Manager/ Certified Well Driller	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708-8137	tallred@crawfordenvironmental.com
Ashley Amick	Laboratory Director	Access Analytical, Inc. (AA) 7478 Carlisle Street Irmo, SC 29063	803-781-4243	803-781-4303	aamick@axs-inc.com
Larry Lewis	Laboratory Director	Analytical Environmental (AES) Services Inc. 3785 Presidential Pkwy Atlanta, GA 30340	770-457-8177	770-457-8188	llewis@aesatlanta.com

Table 1A Addendum Distribution List

A4 Project Organization

Role from the UST Master QAPP	Name of person in this Role for this Project	Organization/Address	Telephone Number	Fax Number	Email Address
Project Manager	Alex Smith	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6218	803-896-6245	smitha2@dhec.sc.gov
Site Rehabilitation Contractor	Dee O'Brien	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708-8137	dobrien@crawfordenvironmental.com
Project Manger	Justin Reynolds	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708-8137	jreynolds@crawfordenvironmental.com
Analytical Laboratory Director	Ashley Amick	Access Analytical, Inc. (AA) 7478 Carlisle Street Irmo, SC 29063	803-781-4243	803-781-4303	aamick@axs-inc.com
Analytical Laboratory Director	Larry Lewis	Analytical Environmental (AES) Services Inc. 3785 Presidential Pkwy Atlanta, GA 30340	770-457-8177	770-457-8188	llewis@aesatlanta.com
Field Manager/ Certified Well Driller	Todd Allred	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708-8137	tallred@crawfordenvironmental.com
Project QA/QC Manager and Project Verifier	Dan Fisher	Crawford Environmental Services 15 Church Street Roanoke, VA 24011	540-343-6256	540-343-6259	dfisher@crawfordenvironmental.com
Comprehensive Survey Subcontractor	Robert Lackey	Robert Lackey Surveying (RLS) P.O. Box 713 Camden, SC 29020	803-432-0968	803-425-4439	lackeyrh@att.net
Hydrometer Sieve Analysis Subcontractor	Steve Hahn	Schnabel Engineering (SE) 104 Corporate Blvd. Suite 420 West Columbia, SC 29169	803-796-6240	803-796-6240	shahn@schnabel-eng.com
Disposal Subcontractor	Paul Biery	A&D Environmental Services (A&D) 1741 Calks Ferry Road Lexington, SC 29073	803-957-9175	803-821-6021	pbiery@adenviro.com

Table 2A Addendum Role Identification and Contact Information

The responsibilities of the participants are as follows:

1. UST Management Project Manager – The UST Management Project Manager (UST Project Manager) is responsible for direct oversight of the contractor conducting this assessment. The UST Project Manager performs the review of the plan and the report associated with this assessment. These reviews include verification and analysis of data submitted to the UST Management Division by the Site Rehabilitation Contractor. The UST Project manager is responsible for the review of and approval of the site specific QAPP to ensure compliance with the Master QAPP. The UST Project Manager is also responsible for validating data.

2. Site Rehabilitation Contractor – The Site Rehabilitation Contractor is an independent contractor responsible for managing and coordinating field and office activities needed for this assessment.

3. **Project Manager** – The Project Manager is a representative of the Site Rehabilitation Contractor responsible for the day to day oversight of activities needed to complete this assessment. The Project Manager is responsible for the submission of plans, updates and reports associated with this assessment.

4. **Laboratory Analytical Director** – The Laboratory Analytical Director represents the Analytical Laboratory that will receive the soil and water samples from the Site Rehabilitation Contractor, performs the requested analyses and provides an analytical report.

5. **Field Manager** – The Field Manager is a representative of the Site Rehabilitation Contractor responsible for the oversight of the contractor technicians and field activities. The Field Manager is responsible for the review / QA of field activities to ensure compliance with the UST Master QAPP and contractor health and safety plans.

6. **Project QA/QC Manager and Project Verifier** – The Project QA/QC Manager and Project Verifier is a representative of the Site Rehabilitation Contractor responsible for the oversight of project activities to ensure quality control is in compliance with the UST Master QAPP.

7. **Disposal Contractor** – The Disposal Contractor is a subcontractor, chosen by the Site Rehabilitation Contractor, which will receive the industry derived waste created during the implementation of this assessment. The Disposal Contractor is responsible for the review of manifests to ensure the disposal is in compliance with the UST Master QAPP.

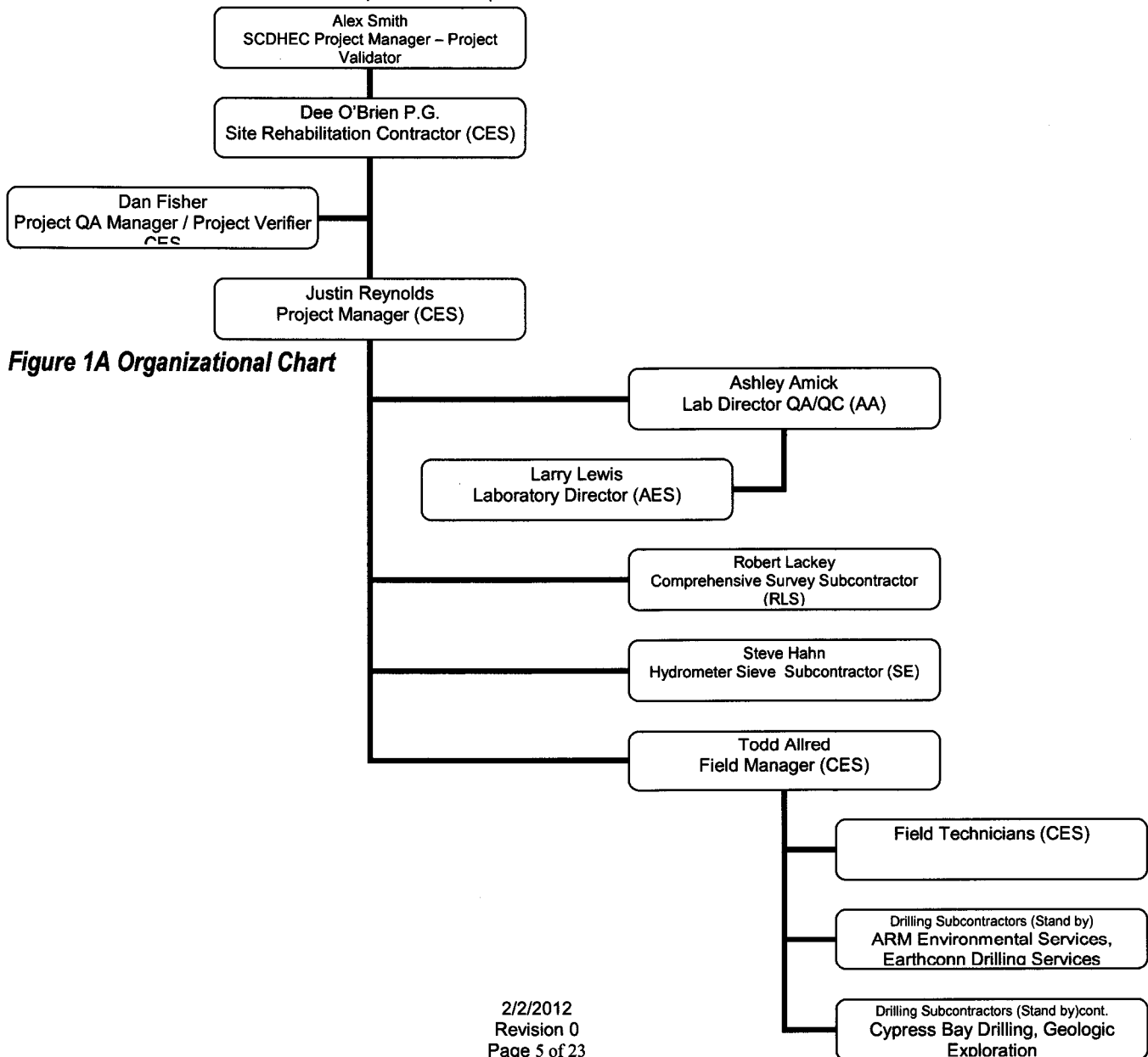


Figure 1A Organizational Chart

A5 Problem Definition/Background

Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed. According to SCDHEC and contractor records an IGWA and a Tier 1 was previously completed at this facility. During the previous assessments, several groundwater monitoring wells yielded dissolved-phase concentrations of Chemicals of Concern (CoCs) in exceedance of the risk based screening limits and maximum contaminant limits (RBSLs/MCLs).

Please answer the following: Does this project fall under UST or Brownfields area?

UST Area.

A6 Project/Task Description

- 1. Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).**

- Complete a comprehensive survey
- Complete a receptor survey
- Obtain and summarize local property information (Tax Map)
- Install up to 22 field screening points (12 shallow, 5 deep, 5 contingent) to define the horizontal and vertical extent of impact. A CME 55 drill rig and/or Geoprobe 5400 will be used to complete this task. Groundwater samples will be collected via temporary well or discreet sampler.
- Install up to 15 (10 proposed, 5 contingent) shallow monitoring wells to define the horizontal extent of impact. A CME 55 drill rig and/or Geoprobe 5400 will be used to complete this task.
- Install up to 7 (5 proposed, 2 contingent) deep monitoring wells to define the vertical extent of impact. A CME 55 drill rig will be used to complete this task.
- Collect soil samples from locations described in section B2
- Collect hydrometer sieve analysis for porosity results
- Gauge and sample all existing and newly installed monitoring wells and submit samples to laboratory for analysis.
- Sample local water supply wells (4)
- Sample local surface waters (wetlands)
- Complete slug tests for hydraulic conductivity
- Dispose of impacted IDW materials with disposal subcontractor
- Prepare and submit a report of findings to SCDHEC UST project manager

- 2. The work will begin within:** Approximately two weeks for cost approval. Field screening will take approximately one week, shallow well installation approximately one week and deep well installation will take approximately one week. Well installation will be followed (48 hours after installation, 24 hours after development) by groundwater sampling (within 5 days of deep well installation) the lab will require 7-9 days for sample analysis. Slug Tests will take one day. The comprehensive survey will take one day. Report development will take an additional week. If more samples are required to achieve 90% valid samples, the

project may be extended. The SCDHEC project manger will be contacted via email or telephone if project requires an extension.

3. **Are there any time or resource constraints? Include those factors that may interfere with the tentative schedule.** Drilling, field equipment, laboratory equipment failures may cause up to a two week delay. Property access issues due to their unpredictable nature, may cause a delay that will exceed the initial timeframe given for this project. No resource constraints are anticipated.

A7 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

Please refer to Appendix D of this QAPP for proposed shallow and deep monitoring well installation locations. The assessment boundaries are limited to area necessary to define the edges of the impact plume. SCDHEC will be notified on any accessibility issues.

A8 Training and Certificates

Required training and licenses:

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Site Rehabilitation Contractor	Dee O'Brien	BS/MS Geology	5/16/2011 (OSHA)	S.C.P.G.	873
Project Manager	Justin Reynolds	OSHA Haswoper 40	9/18/2011 (OSHA)	-	-
Field Manager	Todd Allred	OSHA Haswoper 40	4/27/2011 (OSHA)	SCLLR Class B	1446
Field Technicians	Jake Roper	OSHA Haswoper 40	5/20/2011 (OSHA)	N/A	N/A
Lab Director (AA)	Ashley Amick	BS Biology		SC Certified Lab	32575001
Lab Director (AES)	Larry Lewis	N/A	N/A	SC Certified Lab	98016003
Comprehensive Survey Subcontractor (RLS)	Robert Lackey	Registered Land Surveyor	N/A	Registered Land Surveyor	14799
Hydrometer / Sieve Subcontractor (SE)	Steve Hahn (Schnabel Enginnering)	N/A	N/A	N/A	N/A

Table 3A Required Training and Licenses

Crawford Environmental Services
Steady Simmons
Site ID: 18856

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Justin Reynolds of CES is responsible to ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location: 15 Church Street Roanoke, VA 24011

It is understood that training records will be produced if requested by SC DHEC.

The Following Laboratory(ies) will be used for this Project:
Commercial Lab(s)

Full Name of the Contractor performing Lab Analyses: Analytical Environmental Services Inc.

Name of Lab Director: Larry Lewis (QA/QC Ashley Amick- Access Analytical inc.)

SCDHEC Certification Number: SC Cert #: 98016003

Parameters this Lab/Contractor will analyze for this project:

BTEX, naphthalene, MTBE , 1,2 DCA, 7 Oxygenates by EPA method 8260B

EDB by EPA method 8011

Unfiltered Lead by EPA method 6010C

Ethanol by EPA method 8260B

Full Name of the Contractor performing Lab Analyses: Schnabel Engineering

Name of Lab Director: Steve Hahn

SCDHEC Certification Number: n/a (Hydrometer Sieve only)

Parameters this Lab/Contractor will analyze for this project:

Hydrometer Sieve (method ASTM D422 and ASTM 1140)

Please note: SC DHEC may require that the contractor submit some or all of the Laboratory's SOPs as part of this QAPP.

A9 Documents and Records

**Personnel will receive the most current version of the QAPP Addendum via:
 (Check all that apply)**

US Mail Courier Hand delivered

Personnel will receive the QAPP via, US Mail, Email, or by downloading from CES internal network. Notification of updates to the Master QAPP will be through email from the contractor. CES personnel can access the QAPP by downloading through the internal network.

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Field Data Sheets/ Sampling logs	Environmental Contractor	Hard Copy	At Contractor Office Hard Copy for 5 Years	Included in Report
Laboratory Data	Laboratory Contractor	Electronic	At Laboratory Electronic for 25 Years	See Lab Archive plan
Weekly Update	Environmental Contractor	Electronic	At Contractors Office Electronic copy for 5 years	Included in Report
Monitoring Report	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Correspondence	Environmental Contractor/ SCDHEC/ Subcontractors	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Well Logs/1903s	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Invoices	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Manifests	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Figures	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Surveys	Environmental Contractor/ Comprehensive Survey Subcontractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Disposal Manifests	Environmental Contractor/ Disposal Subcontractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy

Table 4A Record Identification, Storage, and Disposal

Section B Measurement/Data Acquisition

B1 Sampling Process/Experimental Design

Item	Start Date	End Date	Comments
Gauge Wells	D +7 days	D +7 days	
Sample Wells	D+7 days	D+7 days	
Samples Delivered to Lab	D+7 days	D+7 days	Samples delivered to Access Analytical by CES.
Samples are analyzed	D+8 days	D +21 days	
Report received by contractor	D+35 days	N/A	
Project Data verified and report constructed	D + 35 days	D +49 days	
SCDHEC Project manger receives report	D +50 days	N/A	
Project Validation	D +50 days	D + 80 days	

Table 5A Sampling Activities

D= Drilling

B2 Sampling Methods

Up to a total of 6 soil samples and 74 groundwater samples may be submitted for laboratory analysis. These totals are anticipated to be maximums. The actual number of samples collected and submitted for laboratory analysis will be dependent upon the effort required to complete the scope of work. Soil and groundwater (GWS & FS) samples will be submitted to AA and analyzed for BTEX, Naph, MtBE. Groundwater (GWS) samples will be also be analyzed for 1,2 DCA, ethanol and 7 Oxygenates via EPA method SW-846 8260B, EDB via EPA method SW-846 8011 and Lead via EPA SW-846 6010/7470A. Field blanks, trip blanks and duplicates will be taken for groundwater samples (1 per every 20 samples collected).

The contractor must follow sampling protocols as given in the UST QAPP. Soil laboratory samples will be collected from the UST basin, the dispenser island and along product lines if not collected during an earlier event (i.e. Tier 1). Soil laboratory samples will also be collected from field screening locations that exhibit PID values greater than 50 parts per million (ppm) during OVA analysis and will be collected using methods described in the UST QAPP. Field screening groundwater trip blanks and field blanks will be used to represent the soil samples as well as the groundwater samples collected during field screening / monitor well installation. Field blanks and trip blanks will be analyzed for BTEX, Naphthalene and MtBE. Groundwater laboratory samples will be collected from field screening locations that encounter the groundwater interface and exhibit less than 50 ppm during OVA analysis.

Estimate the number of samples of each matrix that are expected to be collected:

Note: numbers provided are intended as a maximum probable under the current plan

Sample Type	Amount (apx)
Soil	5
Soil Duplicates	1
Total Soil Samples*	6
<i>*Soil sample field and trip blanks will be represented by groundwater samples collected during the associated sample collection.</i>	
Groundwater from field screening	26
Groundwater from monitoring wells	25
From drinking/ irrigation water wells	9
From surface water features	2
Field Blanks (groundwater)(FS) (Soil)	2
Field Blanks (groundwater)(GWS)	2
Trip Blanks (groundwater)(FS) (Soil)	2
Trip Blanks (groundwater)(GWS)	2
Duplicates (groundwater)(FS) (Soil)	2
Duplicates (groundwater)(GWS)	2
Total Water Samples	74

FS = Field Screening

GWS= Groundwater Sampling

If any of the above are circled please indicate how will it be done and the equipment needed. Sample collection that results in groundwater chemical analysis will include depth to water, depth to product, and groundwater quality indicators. Sampling will include gauging the depth to water and/or depth to free product utilizing an electronic water level indicator or similar device capable of recording the water level or thickness of any free product to an accuracy of 0.01 feet. Measurements of groundwater quality indicators (pH, temperature, D.O. and specific conductivity) will be recorded during sampling to ensure that groundwater quality is representative of the formation prior to collection of samples. Groundwater samples will be collected from a monitoring well by manual bailing using disposable polyethylene bailers. One sample will be collected from each monitoring well beginning with the wells on the outside perimeter of the contamination plume and working from the wells exhibiting the lowest CoC's to the highest CoC's. Sample duplicates will be collected per every 20 samples. For sample collection the bailer will be slowly lowered into the well until the top of the bailer has penetrated the water table surface, and slowly removed once full. Purge waters will be containerized on site and disposed of properly. (Section 2.10 CES SOP)

Will Sampling Equipment have to be cleaned and decontaminated or is everything disposable? Decontamination procedures will be the responsibility of the CES field technicians reviewed by the field manager. As outlined in Appendix A of the UST Guidance Document " QAPP Revision 1", all reusable sampling equipment will be stainless steel or constructed of a material that is compatible with the specified analysis and will be cleaned prior to and following the collection of each sample. Disposable bailers, , string and gloves will be utilized for sample collection, and will be disposed of after use. (Section 2.10.1 CES SOP)

If sampling equipment must be cleaned please give a detailed description of how this is done and the disposal of by-products from the cleaning and decontamination. pH, specific conductance, dissolved oxygen, and temperature meters {parameter meters} and water meter probes {sampling equipment} will be decontaminated between monitoring wells. In the field, parameter meter probes will be decontaminated utilizing deionized water. Each meter will be rinsed and then allowed to air dry. Decontamination waste from the cleaning processes will be contained and disposed of with the associated IDW for the site. (Section 2.10.1 CES SOP)

Sampling equipment and/or instruments will be decontaminated by washing with a laboratory-grade detergent such as Alconox, rinsed with tap water and then rinsed with analyte free water. If the equipment is not used immediately, it will be covered in plastic and stored in a clean, dry place. If required by UST project manager, verification of the effectiveness of the decontamination procedure will be acquired through equipment rinsate samples. (Section 2.10.1 CES SOP)

Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.

Access Analytical will be the laboratory and is responsible for shipment of all samples via Fedex, to the subcontractor laboratory of AES. A CME 55 /Geoprobe operated by CES will be utilized for field screening. A CME 55 operated by CES / Geoprobe will be utilized for shallow and deep monitoring well installation. Refer to CES SOP Section 2.9 for methodology. If a situation as described in section A6.3 occurs, a standby drilling subcontractor (as identified in section A4), under the supervision of CES personnel, may be utilized to meet scheduling requirements.

Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.

Failure	Response	Documentation	Individual Responsible
Equipment Failure (Drilling){ie. Drill rig, concrete}	Contact CES project manager. Use alternative equipment if available. Initiate field repairs if possible	Identify failure. Log date, time and equipment.	Field Manager Todd Allred 803-708-0079
Equipment Failure (sampling) {ie. Parameter meters, pump failure, calibration error}	Contact CES project manager. Use alternative equipment if available. Initiate field repairs if possible.	Identify failure. Log date, time and equipment.	Field Manager Todd Allred 803-708-0079
Loss or delay of lab samples	Resample	Notice by Access of lost or delayed samples	Access Analytical Ashley Amick 803-781-4243
Drilling Refusal (Rock)	Contact CES project manager. Contact SCDHEC project manager	Log location, time and depth.	Field Manager Todd Allred 803-708-0079
Drilling Issue (utility line impact etc.)	Contact CES project Manager, Contact Palmetto Utilities Protection Service.	Log location, time and depth.	Field Manager Todd Allred 803-708-0079
Passive Diffusion Bag deployment / sampling failure	Redeploy. Use alternate method if applicable.	Log location, time and equipment.	Field Manager Todd Allred 803-708-0079
Snap collector deployment failure.	Redeploy. Use alternate method if applicable.	Log location, time and equipment.	Field Manager Todd Allred 803-708-0079
Lost samples in the lab	Resample	Email from lab to CES project manager and QA/ project verifier	Access Analytical Ashley Amick 803-781-4243
Sample failure (hold time limit exceeded/temperature limit exceeded)	Contact CES project manager	Email from lab to CES project manager and QA/ project verifier	Access Analytical Ashley Amick 803-781-4243

Table 6A Field Corrective Action

B3 Sample Handling and Custody

- 1. How will the samples get from the Site to the Lab to ensure holding requirements are met?** Samples will be delivered to Access Analytical by CES personnel within 24-72 hours of sample collection. Access Analytical will then ship the samples via Fedex to AES. Temperature and condition of the samples will be checked upon arrival at Access Analytical and arrival to AES.
- 2. How will the contactors cool the samples and keep the samples cool?** Sample containers will be held in a refrigerator or cooler filled with ice until they are shipped. Appropriate shipping containers for samples include insulated polypropylene or aluminum-clad coolers. The coolers should contain ice in a sealed container or other cooling source to maintain a temperature of 6°C in the container and to prevent degradation of the samples (Section 2.11 CES SOP)

3. How will the lab determine the temperature of the samples upon receipt? Will they be using a temperature blank?

Project laboratories will use a certified thermometer to determine at-receipt sample temperatures. The temperature will be recorded on the chain-of-custody, temperature blanks will be used. (Section 2.11 CES SOP)

4. Where will the samples be stored in the Lab once they are received?

Samples to be shipped for analysis will be handled and packaged in a manner that maintains a complete chain-of-custody record and prevents damage during shipment. All samples will be transported to the laboratory directly or by a commercial carrier. When using a commercial carrier, a custody seal will be used to preserve the integrity of the sample from the time it is collected until the container is opened in the laboratory. Samples received at project laboratories will be kept in secure refrigerators. (Section 2.11 CES SOP)

5. Describe the chain of custody procedure and attach a copy of each chain of custody that will be used. If a Chain of Custody SOP exists from the Lab and the Contractor is willing to adhere to it, then this may be attached.

A chain of custody record supplied by the contracted laboratory will be used to document and track possession of the samples. The chain of custody record will be sent with each sample shipment from the field to the laboratory and will serve as a record for the receipt of samples by the laboratory. (Section 2.11 CES SOP)

B4 Analytical Methods

1. Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:

Parameter	SOP ID*	Method Referenced	Equipment	Comments
pH	Section 2.10	SM 4500 H+B	HACH SenselON 156 HANNA HI	Refer section 2.10 CES SOP
Specific Conductance	Section 2.10	SM2510B	HACH SenselON 156 HANNA HI	Refer section 2.10 CES SOP
Temperature	Section 2.10	SM2550B	HACH SenselON 156 HANNA HI	Refer section 2.10 CES SOP
Dissolved Oxygen	Section 2.10	SM4500-O-G	HACH SenselON 156 HANNA HI	Refer section 2.10 CES SOP
BTEX, naphthalene, MTBE, 1,2 DCA, 8 Oxygenates	OA 11010	EPA Method 8260B	AES QAP p.195	AES SOP OA 11010 APDX III CES SOP
EDB	OA 11007	EPA Method 8011	AES QAP p.195	AES SOP OA 11007 APDX III CES SOP
Unfiltered Lead	OA 13002	EPA Method 6010C	AES QAP p.195	AES SOP IA 13002 APDX III CES SOP

Table 7A Analytical SOPs and Referenced Methods

- This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

Abbreviation	Lab Identification of this SOP	Full Name of the SOP
Section 2.10	CES SOP Section 2.10	State Lead Tier II Assessment Program: Standard Operating Procedure & Quality Assurance/Quality Control
OA 11010	AES SOP OA-11010	Analytical Environmental Services Standard Operating Procedure for Volatile Organic Compound by EPA SW-846 Method 8260B/5030/5035
OA 13002	AES SOP OA-13002	Analytical Environmental Services Standard Operating Procedure Determination of Metals in Water, Soils and Wastes by ICPBY EPA SW-846 Method 6010C and Prep Methods 3010A/3050B/SM3030C
OA 11007	AES SOP OA-11007	Analytical Environmental Services Standard Operating Procedure for 1,2-Dibromoethane (EDB) and 1,2-Bibromo-3-chloropropane (DBCP) by EPA SW-846 Method 8011
AES QAP Section 9.0	AES QAP Rev 15	Access Analytical, Inc. & Analytical Environmental Services (AES) Comprehensive Quality Assurance Plan (Revision 15): Section 9.0 Calibration Procedures and Frequency

Table 8A: SOP Abbreviation Key

2. Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Failure	Response	Documented Where?	Individual Responsible
Equipment Failure (drilling equipment) i.e. drill rig, concrete saw, etc.	Contact CES Project Manager	Record problem, use alternate method / equipment if available / applicable or reschedule field activities after equipment is repaired	CES Project Manager Justin Reynolds 803-708-0079
Equipment Failure (sampling equipment) i.e. passive diffusion bags, parameter meters	Contact CES Project Manager	Record problem, use alternate method if applicable/ available or reschedule field activities after equipment is repaired.	CES Project Manager Justin Reynolds 803-708-0079
QC Failure	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report	CES Project Manager Justin Reynolds 803-708-0079
Sample accident in transit	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report	Laboratory Director (AA) Ashley Amick 803-781-4243
Sample accident in lab	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report	Laboratory Director (AA) Ashley Amick 803-781-4243
Insufficient sample for analysis or repeat analysis	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report	Laboratory Director (AA) Ashley Amick 803-781-4243
Analytical Errors	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report.	CES Project Manager Justin Reynolds 803-708-0079
CoC or Sample Receiving Issues	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report.	CES Project Manager Justin Reynolds 803-708-0079
On-Time delivery	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report.	CES Project Manager Justin Reynolds 803-708-0079

Table 9A Corrective Action Procedures

3. Identify sample disposal procedures.

Analysis	Matrix	Schedule for disposal	Method for disposal	Comments
DO	Groundwater	As Generated	55 gallon drum on site	A&D Environmental Services
Specific Conductance	Groundwater	As Generated	55 gallon drum on site	A&D Environmental Services
pH	Groundwater	As Generated	55 gallon drum on site	A&D Environmental Services
Lab	All	As Generated	See AES SOP WM 17001	Analytical Environmental Services Inc.,

Table 10A Sample Disposal

4. **Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).**
 N/A

B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. **Identify all field and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Not the availability and location of spare parts.**

Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible
CME-55 Drill Rig	n/a	Check Fluids, Check Hydraulics, clean/ check auger head	Monthly, as needed	Columbia Office Supply Area	Todd Allred Field Manager 803-708-0079
Geoprobe 5400	n/a	Check Fluids, Check Hydraulics, clean/ check auger head	Monthly, as needed	Columbia Office Supply Area	Todd Allred Field Manager 803-708-0079
HACH SenseION 156 Parameter Meter (ph, Con, temp, DO)	8228266	Check Batteries, Check buffer solutions, calibration, factory check, clean/change probe (s)	Monthly, Change out daily as needed	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
HACH Colorimeter (turbidity)	010420015672	Check Batteries, Check buffer solutions, calibration, factory check,	Monthly, Change out daily as needed	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
HANNA HI 991001 Parameter Meter (pH, Temp)	182298	Check Batteries, Check buffer solutions, calibration, factory check, clean/change probe (s)	Monthly, Change out daily as needed	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
HANNA Dissolved Oxygen Meter	9142	Check Batteries, Check buffer solutions, calibration, factory check, clean/change probe (s)	Monthly, Change out daily as needed	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
KECK Water Level Indicator	2185	Check Batteries, clean probe	Weekly	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
KECK Oil Interface Probe	2011	Check Batteries, clean probe	Weekly	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
Solonist Water Level Indicator	004602	Check Batteries, clean probe	Weekly	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
Laboratory Equipment	P. 195 AES QAP Apdx III Equipment List	p.122 AES QAP Section 10.0	AES QAP Section 10.0	AES QAP Section 10.0	Laboratory Personnel

Table 11A Instrument and Equipment Maintenance

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this:

Instrument/Equipment & Serial Number	Type of Inspection	Requirement	Individual Responsible	Resolution of Deficiencies
CME-55 Drill Rig	Preparatory Check	N/A	Todd Allred Field Manager 803-708-0079	Repair, reschedule
Geoprobe 5400	Preparatory Check	N/A	Todd Allred Field Manager 803-708-0079	Repair, reschedule
HACH SenseION 156 Parameter Meter (ph, Con, temp, DO)	Calibration	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
HACH Colorimeter (turbidity)	Calibration	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
HANNA HI 991001 Parameter Meter (pH, Temp)	Calibration	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
HANNA Dissolved Oxygen Meter	Calibration	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
KECK Water Level Indicator	Preparatory Check	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
KECK Oil Interface Probe	Preparatory Check	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
Solonist Water Level Indicator	Preparatory Check	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
Laboratory Equipment	p.116 AES QAP Section 9.0	p.116 AES QAP Section 9.0	Laboratory Personnel	AES QAP Section 9.0

Table 12A Instrument and Equipment Inspection

B7 Instrument Calibration and Frequency

1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
CME-55 Drill Rig	N/A	N/A	N/A	N/A	Todd Allred Field Manager 803-708-0079	N/A
Geoprobe 5400	N/A	N/A	N/A	N/A	Todd Allred Field Manager 803-708-0079	N/A
HACH SenseION 156 Parameter Meter (ph, Con, temp, DO)	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
HACH Colorimeter (turbidity)	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
HANNA HI 991001 Parameter Meter (pH, Temp)	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
HANNA Dissolved Oxygen Meter	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
KECK Water Level Indicator	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
KECK Oil Interface Probe	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
Solonist Water Level Indicator	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
Laboratory Equipment	See-AES QAP Section 9.0	See-AES QAP Section 9.0	See-AES QAP Section 9.0	See-AES QAP Section 9.0	Laboratory Personnel	See-AES QAP Section 9.0

Table 13A Instrument Calibration Criteria and Corrective Action

* This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

B8 Inspection/Acceptance Requirements for Supplies and Consumables

1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
2. Identify the individual(s) responsible for this.

Item	Vendor	Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.
pH Buffer Solution	Fisher	Within expiration date	Cool. Dry cabinet	Justin Reynolds CES Project Manager 803-708-0079
Specific Conductivity Standard	Fisher	Within expiration date	Cool, dry cabinet	Justin Reynolds CES Project Manager 803-708-0079
Nitrile Gloves	Clearwater	Sealed	Cool, dry room	Justin Reynolds CES Project Manager 803-708-0079
Batteries	Any	Sealed	Cool, dry cabinet	Todd Allred Field Manager 803-708-0079
Bailers	Clearwater	Sealed (individually)	Cool, dry room	Todd Allred Field Manager 803-708-0079
Bottles	Access Analytical	Sealed	Cool, dry room	Todd Allred Field Manager 803-708-0079
Nylon String	Clearwater	Sealed	Cool, dry room	Todd Allred Field Manager 803-708-0079
Passive Diffusion Bags	EON	Sealed (individually)	Cool, dry room	Todd Allred Field Manager 803-708-0079
Snap Collectors	EON	Sealed (individually)	Cool, dry room	Todd Allred Field Manager 803-708-0079
Coolers	Access Analytical	Sealed	Cool, dry room	Todd Allred Field Manager

				803-708-0079
Laboratory Equipment	AES	AES QAP Section 11.0	AES QAP Section 11.0	Laboratory Personnel (AES) & (AA)

Table 14A List of Consumables and Acceptance Criteria

B9 Data Acquisition Requirements (Non-Direct Measurements)

1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
3. Indicate the acceptance criteria for these data sources and/or models.

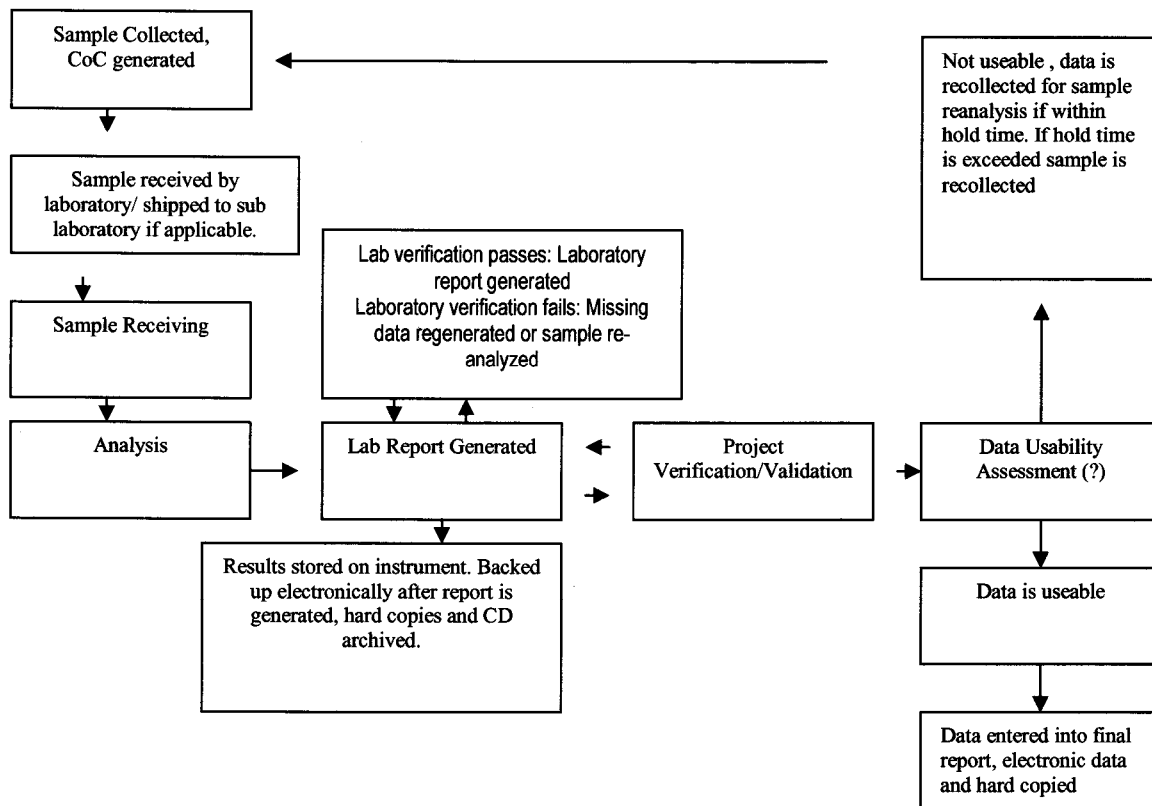
Data Source	Used for	Justification for use in this project	Comments
Previous Assessment documentation	Historic Groundwater elevations, historic chemical concentrations, historic well construction logs, historic surveys, historic diagrams, historic topography, historic boring data.	Determining field screening placement, depth, construction details, property access, and historic summary tables.	

Table 15A Non-Direct Measurements

4. Identify key resources/support facilities needed. Not applicable.

B10 Data Management

Describe the data management scheme from field to final use and storage.



1. **How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?** Field data is kept in a dedicated notebook with no pages removed. All data (reports from the lab, field notes, drafts and final reports) are saved on the company server. Original field data hard copies are filed into relevant project folders and archived in filing cabinets. Report data, to include tables and figures, are double checked from the original source by the CES project manager before the report is signed.
2. **How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted.** Lab internal QA/QC checks and check sheets for all received coolers will determine if laboratory data is credible, or if the groundwater samples are suspect and new samples must be collected and reanalyzed. Laboratory supervisor will check all data before it leaves the laboratory. Laboratory data will be sent electronically to the environmental contractors of the USA for storage on their server.
3. **How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).** Hard copies

will be maintained at the West Columbia office for five years. The electronic copies will be maintained for 25 years at the West Columbia office.

Section C Assessment and Oversight

C1 Assessment and Response Actions

- 1. Field Oversight:** The Field Manager is responsible for ensuring SOPs to include equipment decontamination and calibration are properly conducted by the field staff. The Field Manager will be present and monitor the field staff every day that field activities occur. The Field Manager is also responsible for ensuring that field personnel adhere to the QAPP. If problems occur the Field Manager will immediately contact the CES Project Manager to determine the corrective action. If the situation cannot be resolved on site, another visit will be scheduled to resample the wells. The Field Manager can stop work at any time: The Project Manager can decide if the sampling party will return to the office without completing sampling of all the monitoring wells. The Field Manager's observations will be submitted to the project manager on a daily basis.
- 2. Commercial Lab Offsite Technical Assessment:** The supervisors for each section will review the procedures for another section of the laboratory on a monthly basis to check quality procedures. The Project QA Manager will conduct specific assessments for the methods addressed by this QAPP. Anyone may suspend work if a situation arises, but only the supervisor can stop work. The laboratory QA manager will report all observations to the Laboratory Director. SCDHEC has the right to inspect work at any time. This will be documents and kept as part of project records.
- 3. Project Assessment:** Assessment of project activities will be performed by the CES Project Manager. Field assessments will ensure that proper field methods are followed. At the end of each day of field activities, the Subcontractor Project manager will review the work completed during that day with the Subcontractor Field Manager. If methods were not adequately followed, affected items will be corrected. If corrective action is implemented, the Subcontractor Project Manager or Project QA/QC Manager will verify that the corrective action was adequate and was properly documented. Any discrepancies will be addressed in Appendix K of the contractor checklist and in section 1.5 of the assessment report.

C2 Reports to Management

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Section D Data Validation and Usability

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Tier II Assessment
Underground Storage Tank Management Program – State Lead Tier II
Quality Assurance Program Plan – Site Specific

APPENDIX B
Proposed Cost Agreement

CRAWFORD

ENVIRONMENTAL
SERVICES

ASSESSMENT COMPONENT COST AGREEMENT

Crawford Environmental Services, Inc. Solocitation IFB-5400002721

Facility Steady SimmonsPermit # 18856 Cost Agreement # Pending

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
1. B. Tax Map	1.0	x	\$150.00	\$150.00
C. Tier II or Comp. Plan/QAPP Appendix B	1.0	x	\$300.00	\$300.00
2. Receptor Survey *	1.0	x	\$300.00	\$300.00
3. Comprehensive Survey				
A. Registered Land Survey	2.0	x	\$880.00	\$1,760.00
B. Subsurface Geophysical Survey				
Less than 10 meters below ground surface		x	\$1,035.00	\$0.00
More than 10 meters below ground surface		x	\$1,150.00	\$0.00
C. Subsurface Geophysical UST or drum survey		x	\$575.00	\$0.00
4. Mob/Demob				
A. Equipment	2.0	x	\$500.00	\$1,000.00
B. Personnel	6.0	x	\$200.00	\$1,200.00
C. Adverse Train Vehicle		x	\$250.00	\$0.00
5. Soil Borings (hand auger)*		feet x	\$4.59	\$0.00
6. Field Screening (includes lab analyses and abandonment)				
A. Standard	565.0	feet x	\$3.12	\$1,762.80
C. Fractured rock		feet x	\$10.00	\$0.00
7. Soil Leachability Model		each x	\$27.50	\$0.00
8. Abandonment- NOT Part of Screening *				
A. Abandonment 2 inch well or smaller		feet x	\$3.00	\$0.00
B. Abandonment 4 inch well or smaller		feet x	\$7.00	\$0.00
C. Dug Well Up to 6' diameter		feet x	\$15.00	\$0.00
9. Well Installation*				
A. Water Table (hand auger)		feet x	\$16.32	\$0.00
B. Water Table (drilled)	180.0	feet x	\$9.80	\$1,764.00
C. Telescoping	210.0	feet x	\$18.07	\$3,794.70
D. Rock Drilling		feet x	\$20.00	\$0.00
E. Core Drilling		feet x	\$20.00	\$0.00
F. Multi sampling ports/screen intervals		feet x	\$16.32	\$0.00
H. Recovery well (4" ID well)		feet x	\$14.89	\$0.00
I. Prepacked screen monitoring well		feet x	\$15.00	\$0.00
J. Rhotosonic well		feet x	\$5.00	\$0.00
10. Groundwater Sample Collection (per well or sample)				
A. Groundwater	21.0	samples x	\$13.01	\$273.21
B. Air Vapor		samples x	\$5.00	\$0.00
C. Water Supply	9.0	samples x	\$7.51	\$67.59
D. Groundwater No Purge, Surface Waters, Field Blanks	8.0	samples x	\$8.89	\$71.12
E. Gauge Well Only	4.0	samples x	\$2.75	\$11.00
F. Sample below product		samples x	\$13.01	\$0.00
G. Passive Diffusion Bag		each x	\$31.90	\$0.00
11. Analyses-Groundwater (See Analytical Methodology for analyses)				
A1. BTEX+Naphth.+ 7 oxygenates + ethanol + 1,2 DCA	42.0	samples x	\$73.70	\$3,095.40
B1. Rush BTEX+Naphth.+ 7 oxygenates + ethanol + DCA		samples x	\$184.25	\$0.00
C1. Trimethyl, butyl, & isopropyl benzene		samples x	\$42.90	\$0.00
D. PAH's other than Naphth.		samples x	\$63.80	\$0.00
E. Total Lead, Unfiltered	31.0	samples x	\$10.45	\$323.95
F. EDB	42.0	samples x	\$29.70	\$1,247.40
FF. EDB Rush Analysis. Not for Screening		samples x	\$77.00	\$0.00
G. 8 RCRA Metals		samples x	\$63.80	\$0.00
H. TPH (9070)		samples x	\$35.20	\$0.00
I. pH		samples x	\$5.50	\$0.00
J. BOD		samples x	\$10.50	\$0.00
AA. Filtered Lead		samples x	\$13.75	\$0.00
P1. Ethanol		samples x	\$11.00	\$0.00

ASSESSMENT COMPONENT COST AGREEMENT

Crawford Environmental Services, Inc. Solocitation IFB-5400002721

Facility Steady Simmons
 Permit # 18856 Cost Agreement # Pending

11. Analyses-Soil				
Q. BTEX + Napth.	6.0	samples x	\$36.30	\$217.80
R. PAH's other than Napth.		samples x	\$63.80	\$0.00
S. 8 RCRA Metals		samples x	\$55.00	\$0.00
U. TPH (3550B/8015B)		samples x	\$32.45	\$0.00
V. TPH (5030B/8015B)		samples x	\$32.45	\$0.00
W. Grain size/hydrometer	2.0	samples x	\$99.00	\$198.00
X. Total Organic Carbon		samples x	\$27.50	\$0.00
11. Analyses-Air				
Y. BTEX + Napth.		samples x	\$55.00	\$0.00
11. Z. Hydrocarbon Fuel Identification		samples x	\$55.00	\$0.00
12. A. Pumping Test*		hours x	\$27.90	\$0.00
B. Slug Test*	2.0	tests x	\$27.90	\$55.80
C. Fractured Rock*		tests x	\$38.50	\$0.00
13. Free Product Recovery Rate Test*		tests x	\$27.50	\$0.00
14. A. Mathematical Model		each x	\$27.50	\$0.00
B. Computer Model		each x	\$27.50	\$0.00
15 B. Tier II Risk Evaluation		x	\$27.50	\$0.00
16. Subsequent Survey*		x	\$300.00	\$0.00
17. Disposal*				
A. Wastewater per gallon	200.0	gallons x	\$0.55	\$110.00
B1. Free Product per gallon		gallons x	\$0.55	\$0.00
C. Soil (Treatment/Disposal) per ton	20.0	tons x	\$49.50	\$990.00
D. Drilling Fluids per gallon	100.0	gallons x	\$0.55	\$55.00
25 Well Repair				
A. Additional Copies of Report	5.0	each x	\$11.00	\$55.00
B. Repair 2x2 monitoring well pad		each x	\$100.00	\$0.00
C. Repair 4x4 monitoring well pad		each x	\$250.00	\$0.00
D. Replace well vault & up to 4x4 pad		each x	\$150.00	\$0.00
F. Replace Missing Bolts in Well Cover		each x	\$10.00	\$0.00
H. Convert/repair Stickup well		each x	\$150.00	\$0.00
I. Convert flush mount to stickup well		each x	\$250.00	\$0.00
J. Convert stick up to flush mounted well		each x	\$100.00	\$0.00
K. Replace Missing or Illegible Well ID Plate		each x	\$25.00	\$0.00
19. Report/Project Management and Coordination	0%	x	None	\$0.00
25. TOTAL				\$18,802.77

*The appropriate mobilization cost can be added to complete these tasks, as necessary

Tier II Assessment
Underground Storage Tank Management Program – State Lead Tier II
Quality Assurance Program Plan – Site Specific

APPENDIX C
Tier II Plan

CRAWFORD
ENVIRONMENTAL
SERVICES



Tier II Assessment Plan Underground Storage Tank Program

UST Permit #: 18856 County: Jasper Facility Name: Steady Simmons

Facility Address: 16661 Gray's Highway City: Early Branch State: South Carolina Zipcode: 29916-8016

Responsible Party: Orphan - Simmons Address: _____

City: _____ State: _____ Zipcode: _____

No. USTs: 2 Removed? 07/16/2002 Replaced? _____

Current use of facility/property: _____ (date: MM/DD/YYYY) _____ (date: MM/DD/YYYY)

Abandoned Store

Current property owner name: Thompson, Wayne Address: 16657 Gray's Highway

City: Early Branch State: South Carolina Zipcode: 29916

Field Screening Methodology

Specify the field screening methodology to be used. The use of field screening methods to optimize the number and location of permanent wells is required.

Up to 565 feet of field screening is requested to install:
12 shallow field screening locations (12 ft deep)(180ft)
6 deep field screening locations (35 ft deep)(210ft)
8 contingent (175 ft)

(32)(26 Groundwater Field Screening Samples, 2 field blanks, 2 trip blanks, 2 duplicates) Field Screening Groundwater Laboratory Samples
Not included in Analyses Section

Locations are included on Figure D2

Permanent Monitoring Wells (estimate number and total completed depth)

of shallow wells: 15 Total depth: 180

of deep wells: 6 Total depth: 210

Comments, if warranted:

15 Shallow wells to a depth of 12 feet below land surface are proposed for installation {12 proposed locations are shown on included diagram} 6 deep wells {6 proposed locations} to a depth 30-35 feet below land surface are proposed for installation.

Analyses

List the analytical parameters (e.g., BTEX, MTBE) and estimated number.

(42)(4 Existing Monitoring Wells, 21 proposed monitoring wells, 9 water supply wells, 2 surface water samples, 2 field blanks, 2 trip blanks, 2 duplicates) BTEX, Naph, MTBE, 7 Oxygenates, Ethanol, 1,2 DCA

(42)(4 Existing Monitoring Wells, 21 proposed monitoring wells, 9 water supply wells, 2 surface water samples, 2 field blanks, 2 trip blanks, 2 duplicates) EDB

(31)(4 Existing Monitoring Wells, 21 proposed monitoring wells, 2 field blanks, 2 trip blanks, 2 duplicates) (Lead)

(6)BTEX, Naph (Soil) Collected from locations as described in the Site Specific QAPP

*The actual number of samples collected and submitted for laboratory analysis will be dependent upon the effort required to complete the scope of work.

Implementation Schedule (Use MM/DD/YYYY format - Example 01/23/2004)

Start up date: 03/02/2012 Completion date: 06/02/2012
(MM/DD/YYYY) (MM/DD/YYYY)

Report submittal date: 06/02/2012 (MM/DD/YYYY)

UST Permit #: 18856

Facility Name: Steady Simmons

Site Maps

1. Attach a copy of the relevant portion of the USGS topographic map showing the site location.
2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following:

North arrow	Legend with facility name and address, UST Permit number, date, and a bar scale
Location of property lines	Streets or highways (indicate names and numbers)
Location of buildings	Identification of located buildings
Paved areas on or adjacent to site	Location of all present and former ASTs and USTs
Previous soil sampling locations	Underground and above ground utilities on or adjacent to site
Previous monitoring well locations	Location of any other potential receptor

Aquifer Characterization

Pump test: Slug tests: (check one and provide explanation for choice)

2 Slug tests for shallow (two) and deep (two) saturation zone characterization.
2 hydrometer sieve analysis samples for shallow and deep saturation zone characterization.

Small Volume Disposal Type and Method

Soil:

Approximately 20 tons of soil for disposal

Purge water:

Approximately 200 gallons of groundwater for disposal
Approximately 200 gallons of drilling fluids for disposal

Additional comments:

15 Shallow wells to a depth of 12 feet below land surface are proposed for installation {12 proposed locations are shown on included diagram} 6 deep wells {6 proposed locations} to a depth 30-35 feet below land surface are proposed for installation.

MW-1, MW-2, MW-3, and MW-4 all exhibited groundwater within the screened bracket on the 2/2/2012 site check. Shallow and Deep well locations will be determined after the completion of the field screening.

2 {Item 3A} Comprehensive surveys are requested for this phase of work.

1 {Item 1C} Tax Map collection is requested for this phase of work.

1 {Item 2} Receptor Survey is requested for this phase of work.

2 equipment mobilizations are requested for items; 6A, 9B&9C

5 personnel mobilizations are requested for items; 2, 10A, 10C and 10D, 12B, 16 and 17

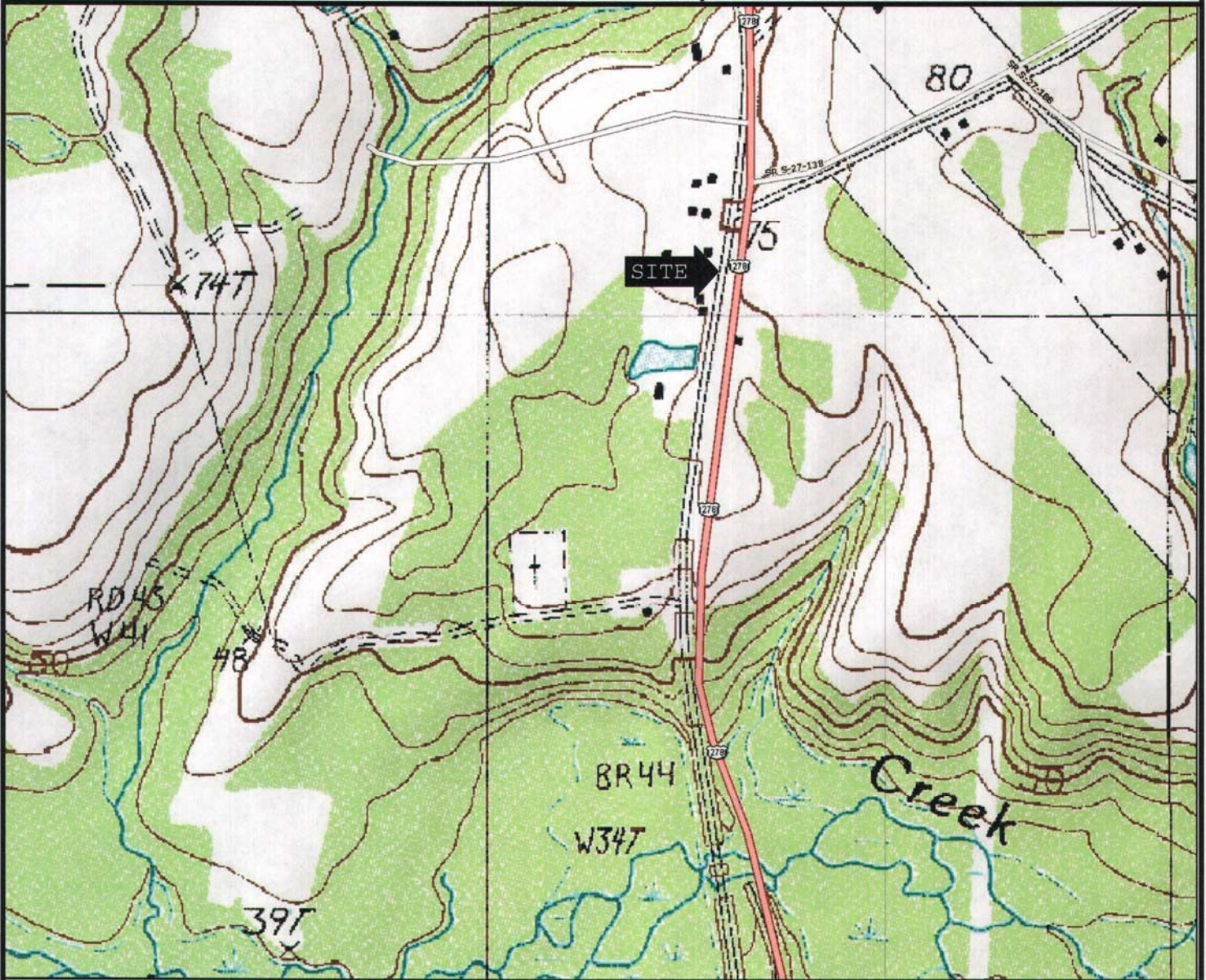
Request an additional personnel mobilizations for property access issues. (6 total personnel mobilizations)

Proposed field screening locations as indicated on the included diagrams are preliminary locations only, actual locations may vary.

Tier II Assessment
Underground Storage Tank Management Program – State Lead Tier II
Quality Assurance Program Plan – Site Specific

APPENDIX D
Figures

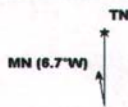
FIGURE 1
Site Location Map



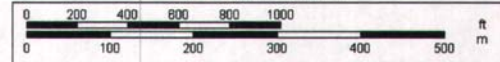
Data use subject to license.

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www.delorme.com



Scale 1 : 12,000



1" = 1,000.0 ft

Data Zoom 15-0

CRAWFORD
ENVIRONMENTAL
SERVICES

Division of C.F. Crawford, Inc.

104 Corporate Blvd..
West Columbia, SC 29169

803-708-0079 (office) 803-708-8137 (fax)

GRAYS, SOUTH CAROLINA

Source: DeLorme Topo USA 7.0
Scale: 1:12,000 Contour Interval: 10 Feet

Steady Simmons
16661 Grays Highway
Early Branch, SC 29916-08016
UST Permit: 18856

Project: Tier II Assessment

Client: SCDHEC

CES Job #: 15.102

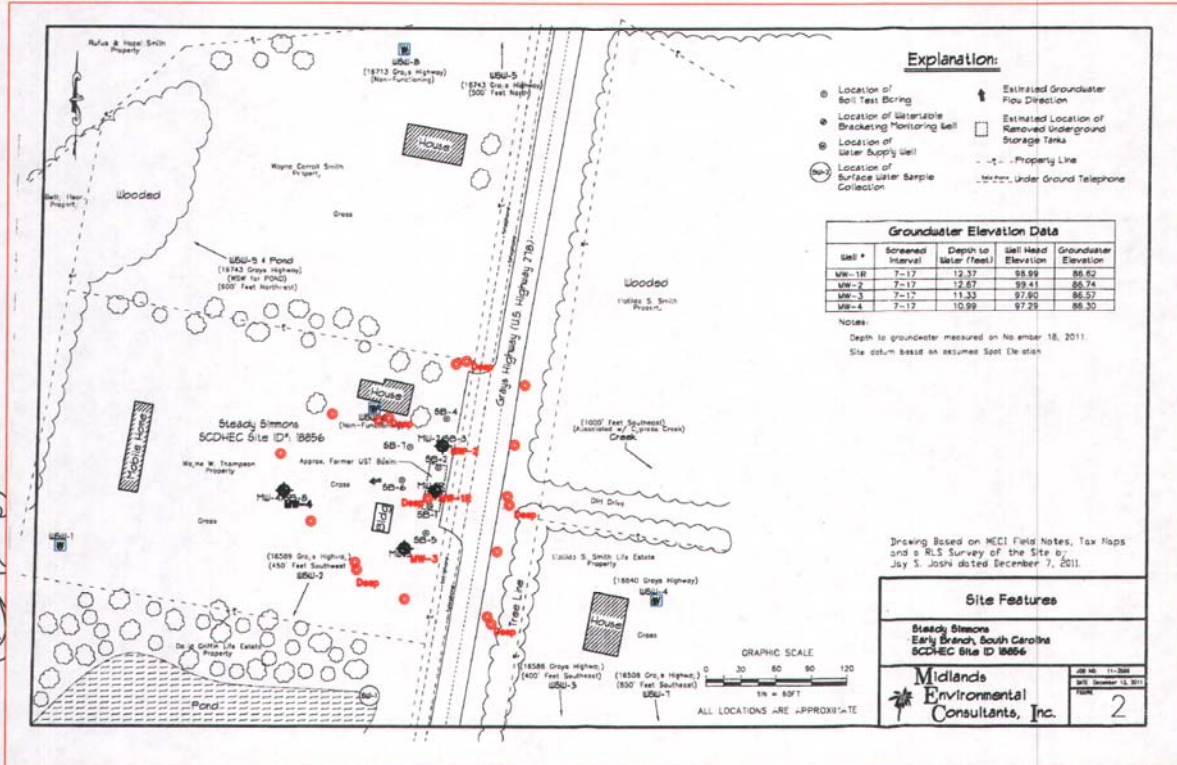
Date: January 2012



GRAPHIC SCALE
(Estimated)



(In Feet)
As Shown



Note: Diagram based upon Meridian Diagram, aerial photograph, and CES field notes.

LEGEND

	Monitoring Well
	Field Screening Sampling Location
	Water Supply Well

DR: JSR
DK: HDO
SCALE: AS SHOWN
CES PROJ. NO.15.102

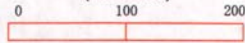
CRAWFORD ENVIRONMENTAL SERVICES

104 Corporate Blvd.
Suite 412
West Columbia, SC 29210
803-708-0079 (ph)
803-708-8137 (fax)

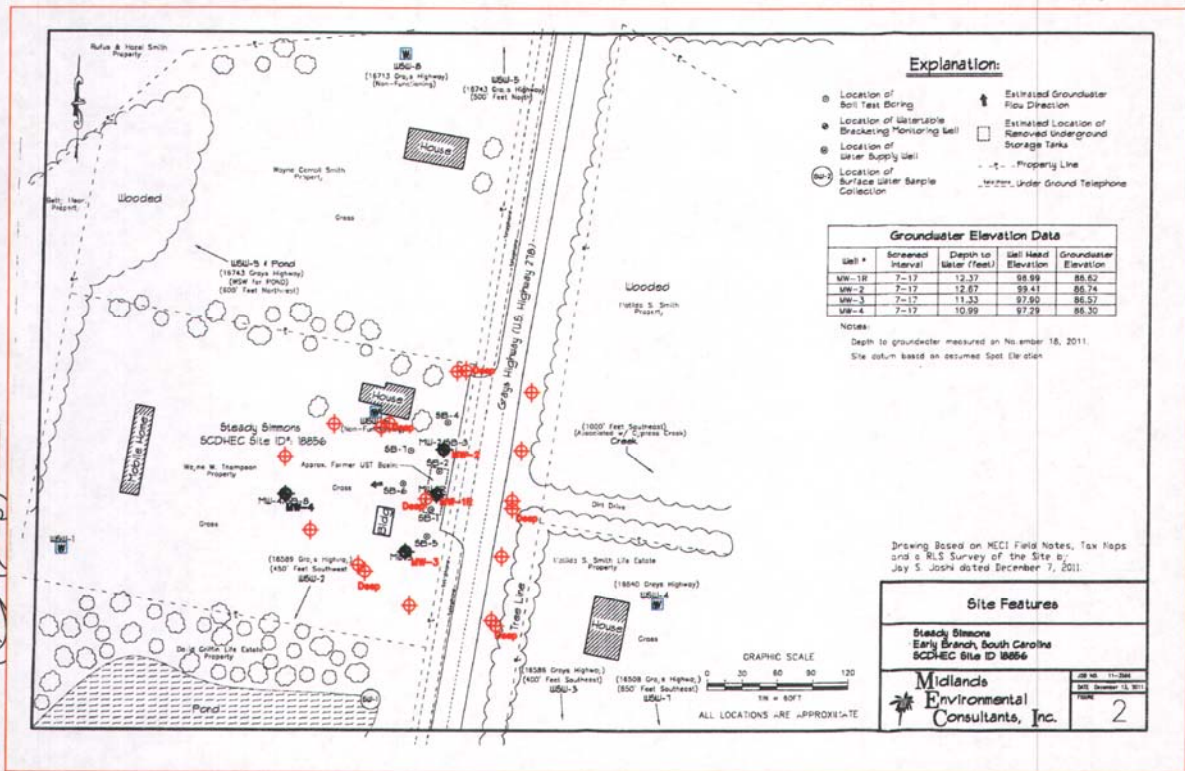
FIGURE TITLE
Field Screening Proposal Map
Steady Simmons
16651 Grays Highway
Early Branch, SC 29516-8016
UST Permit ID: 18856

FIGURE NUMBER
REV 0
2.2.12
Figure D2

GRAPHIC SCALE
(Estimated)



(In Feet)
As Shown



Note: Diagram based upon Meridian Diagram, aerial photograph, and CES field notes.

LEGEND		DR: JSR
●	Monitoring Well	CK: HDO
○	Proposed Monitoring Well Location	SCALE: AS SHOWN
W	Water Supply Well	CES PROJ. NO.15.102
		REV BY DATE

CRAWFORD ENVIRONMENTAL SERVICES

104 Corporate Blvd.
Suite 412
West Columbia, SC 29210
803-708-0079 (ph)
803-708-8137 (fax)

FIGURE TITLE	
Monitoring Well Proposal Map Steady Simmons 16661 Grays Highway Early Branch, SC 29916-8016 UST Permit ID: 18856	
FIGURE NUMBER	REV
Figure D3	0 8.8.10

Tier II Assessment
Underground Storage Tank Management Program – State Lead Tier II
Quality Assurance Program Plan – Site Specific

APPENDIX E
Chain of Custody

CRAWFORD

**ENVIRONMENTAL
SERVICES**

LAB USE ONLY

Access Analytical - Chain of Custody Record

Project Work Order #

Sales Order #

PO #

Access Quote #

Laboratory ID:

Company Name:

Preservative: (*see codes)

Report To:

Container Type: (*see codes)

Address:

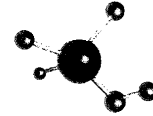
City: State: Zip:

Phone: Fax:

Email:

Project ID:

Sampled By:



ACCESS ANALYTICAL, INC.

7478 Carlisle Street Phone: (803) 781-4243
Irmo, SC 29063 Fax: 781-4303
www.axs-inc.com

*Preservative Codes (place corresponding # in block above analysis field):
0 = None, 1 = HCL, 2 = HNO3, 3 = H2SO4, 4 = NaOH, 5 = Na2S2O8,
6 = Method 5035 set w/ NaHSO3 & CH3OH, 7 = NaOH/ZnOAC, 8 = H3PO4.

*Matrix Codes (place corresponding code in matrix column):
GW = ground water, WW = waste water, DW = drinking water, S = soil,
SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other
(specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA
Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous
Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

REQUESTED LAB ANALYSIS:

Table with columns: Sample ID/Description, Date Collected, Time Collected, Type, Matrix, Program Area, TOTAL # of containers, and a grid for analysis results.

NOTES / COMMENTS

(if sample is a composite please use space below to note start/finish times & dates)

Turnaround Time:

Standard
RUSH*
Date Required:
(For rush work, results
emailed/faxed by end of busi-
ness day on date required)

Project Location:

SC
NC
Other
(specify)

Relinquished By:

Received By:

Date (mm-dd-yy)

Time (24hr)

Sample Temp. Upon Receipt (°C):

(°C) (N/A)
(°C) (N/A)
(°C) (N/A)
(°C) (N/A)

See Reverse for Terms and Conditions

Pg of

Original Copy - Returned w/Report
Yellow Copy - Access File Copy
Pink Copy - Client Copy

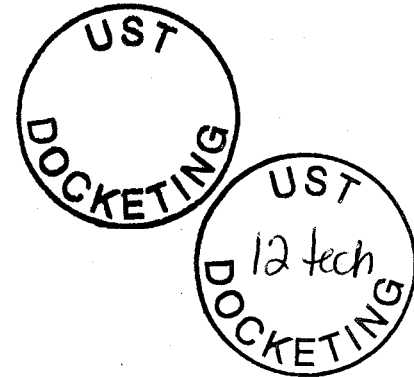


C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

DEE OBRIEN PG
DIVISION MANAGER
CRAWFORD ENVIRONMENTAL SERVICES INC
104 CORPORATE BLVD STE 412
WEST COLUMBIA SC 29169-4600

FEB 13 2012



Re: Tier II Directive
Steady Simmons, 16661 Grays Highway, Early Branch, SC
UST Permit # 18856; Cost Agreement # 43095; Monitoring Well Approval # UMW-24444
Solicitation Number IFB-5400002721-3/3/2011-EMW, Purchase Order # 4600089989
Tier II Plan and Site Specific QAPP Contractor Addendum received February 3, 2012
Jasper County

Dear Mr. O'Brien:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the Site-specific Quality Assurance Project Plan (QAPP), Tier II Assessment Plan and associated Cost Agreement for the referenced site. Assessment activities should begin immediately upon receipt of this letter.

Cost agreement number 43095 has been approved in the amount shown on the enclosed cost agreement spreadsheet and will be kept on file so that compensation can begin. **The SCDHEC reserves the authority to pay only for work properly performed and/or technically justified and will only pay rates in accordance with the referenced Invitation for Bid (IFB).** Further, SCDHEC reserves the right to question and/or reject costs if deemed unreasonable. The SCDHEC reserves the right to audit project records at any time during the project or after completion of the work. **The Tier II Assessment Report (1 hardcopies, 1 electronic copy, 1 copy to each property owner who has a well on their property), QAPP checklist, and invoice should be submitted within 60 days from the date of this correspondence.** Please note the following adjustments to the submitted plans:

- Personnel mobilizations were reduced from six to five. A personnel mobilization is included in the cost of preparation of a QAPP Contractor Addendum.
- Receptor survey has been deleted as the receptor survey was recently completed as part of the Tier I Report.
- Soil analyses for one sample with the highest screening value above the water table have been added for each new shallow monitoring well. Please segregate cuttings from newly installed wells to the extent possible.
- While costs for collection and laboratory analyses of two surface water have been approved, if the distance is over 1,000 feet to the surface water; cost will not be reimbursed.

A copy of the signed site specific QAPP Contractor Addendum and approved assessment component cost agreement is enclosed for your information. Crawford Environmental Services, Incorporated can submit an invoice for direct billing from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. Future invoices and/or other criteria included therein must comply with current SUPERB criteria per Section 44-2-20(2). Please reference cost agreement number 43095 on all pertinent invoices and correspondence. Please note that Sections 44-2-110(4) and 44-2-130(B) of the SUPERB Statute state that no costs will be allowed (considered for payment) unless prior approval from the Department is obtained. If for any reason there is a change in this cost agreement, any associated changes must be pre-approved in writing by this Department in order for Crawford Environmental Services, Incorporated to seek future cost compensation.

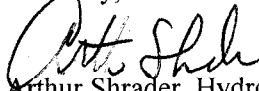
Any item(s) not clearly or completely addressed in the report (SC certified driller's number, disposal manifest for soil cuttings, disposal manifests for generated ground water, etc.) WILL NOT be compensated by the SUPERB Account. As agreed to in the referenced contract, the owner/operator and property owner of the referenced facility will not be responsible for any costs associated with this assessment.

Monitoring well approval for up to 26 temporary, 15 shallow, and six pit cased monitoring wells is enclosed for your records. Please note that all applicable South Carolina certification requirements regarding laboratory analyses, well installation, and report preparation must be met. All shallow wells are to be installed with screen intervals that bracket the water table.

The Department grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. The Division suggests a roll off container will be used for disposal. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. IDW should not be stored on-site longer than ninety (90) days. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included as an appendix to the report. As required by the referenced bid, reimbursement for disposal will be based on a per ton and a per gallon rate. If the CoC concentrations, based on laboratory analysis, are below Risk Based Screening Levels (RBSLs), please contact the project manager for approval to dispose of soil and/or groundwater on site. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs.

On all correspondence regarding this site, please reference the UST Permit # 18856 and Cost Agreement # 43095. If you have questions concerning this correspondence, or would like to submit additional information, please contact me at (803) 896-6669, fax me at (803) 896-6245, or e-mail me at shradeaa@dhec.sc.gov.

Sincerely,



Arthur Shrader, Hydrogeologist

Assessment Section

Underground Storage Tank Management Division

Bureau of Land & Waste Management

enc: Signed Site Specific QAPP Addendum
Approved Cost Agreement
Monitoring Well Approval

Cc: Mr. Thompson, 16657 Grays Highway, Early Branch, SC 29916 (w/o enc.)
Technical File (w/ enc.)



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

Monitoring Well Installation Approval Form

Approval is hereby granted to: Crawford Environmental Services, Incorporated
Facility: Steady Simmons, 16661 Greys Highway, Early Branch, SC
UST Permit Number: 18856
County: Jasper

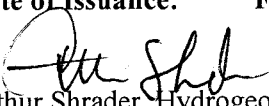
This approval is for the installation of 26 temporary, 15 shallow, and six deep pit cased monitoring wells. The monitoring wells are to be installed in the approved locations. Monitoring wells are to be installed following the South Carolina Well Standards, R.61-71, and the applicable guidance documents.

Please note that R.61-71 requires the following:

1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
3. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless another schedule has been approved by the Department. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
4. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
5. If any of the information provided to the Department changes, notification to Art Shrader (tel: (803) 896-6669 or e-mail: shradeaa@dhec.sc.gov) shall be provided a minimum of twenty-four (24) hours prior to well construction as required by R.61-71.H.1.a.
6. All temporary monitoring wells shall be abandoned within 5 days of borehole completion using appropriate methods as required by R.61-71.H.4.c. All other wells shall be properly developed per R.61-71.H.2.d.
7. Monitoring wells shall have Department approval prior to abandonment as required by R.61-71.H.1.a. A copy of this approval should be on the site during well installation.

Date of Issuance: February 6, 2012

Approval #: UMW-24444


Arthur Shrader, Hydrogeologist
Assessment Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For
Steady Simmons UST Permit #: 18856

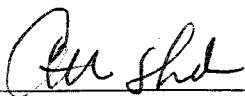
16661 Gray's Highway, Early Branch, SC 29916-8016

Prepared by:

Justin Reynolds
Crawford Environmental Services
104 Corporate Blvd. Suite 412
West Columbia, SC 29196
SCDHEC Site Rehabilitation Contractor Certification Number: UCC-0388

Approvals


Alex Smith
SC DHEC Project Manager


Signature _____ Date 2/6/12


Dee O'Brien
Site Rehabilitation Contractor


Signature _____ Date 2/3/12

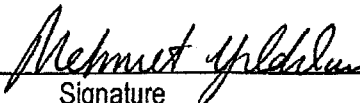
Dan Fisher
Project Verifier


Signature _____ Date 2/1/2012

Ashley Amick
Laboratory Director
Access Analytical Inc.


Signature _____ Date 2/3/12
Ashley B. Amick
Fri Feb 3 2012 11:22:50

Mehmet Yildirim
VP of Operations
Analytical Environmental Services Inc.,


Signature _____ Date 2/3/12

Approved Cost Agreement 43095

Facility: 18856 STEADY SIMMONS

SMITHA2

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
01 PLAN		B TAX MAPS	1.0000	150.00	150.00
		C TIER II/COMP. PLAN/QAPP APP B	1.0000	300.00	300.00
03 COMPREHENSIVE SURVEY		COMPREHENSIVE SURVEY	2.0000	880.00	1,760.00
04 MOB/DEMOB		A EQUIPMENT	2.0000	500.00	1,000.00
		B PERSONNEL	5.0000	200.00	1,000.00
06 SOIL BORINGS (DRILLED)		A SOIL BORINGS & FLD SCREENING	565.0000	3.12	1,762.80
09 WELL INSTALLATION		B WATER TABLE (DRILLED)	180.0000	9.80	1,764.00
		C TELESCOPING	210.0000	18.07	3,794.70
10 SAMPLE COLLECTION		A GROUND WATER	21.0000	13.01	273.21
		C WATER SUPPLY	9.0000	7.51	67.59
		D GROUNDWATER NO-PURGE	8.0000	8.89	71.12
		E GAUGE WELL ONLY	4.0000	2.75	11.00
11 ANALYSES	GW GROUNDWATER	A1 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	42.0000	73.70	3,095.40
		E LEAD	31.0000	10.45	323.95
		F EDB	42.0000	29.70	1,247.40
	SOIL SOIL	Q BTEX+NAPTH	15.0000	36.30	544.50
		W GRAIN SIZE/HYDROMETER	2.0000	99.00	198.00
12 AQUIFER CHARACTERIZATION		B SLUG TEST	2.0000	27.90	55.80
17 DISPOSAL		A WASTEWATER	200.0000	0.55	110.00
		C SOIL (TREATMENT/DISPOSAL)	20.0000	49.50	990.00
		D DRILLING FLUIDS	100.0000	0.55	55.00
25 WELL REPAIR		A ADDITIONAL COPIES OF REPORT	5.0000	11.00	55.00
				Total Amount	18,629.47



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

FEB 28 2012



MR WAYNE THOMPSON
16657 GRAYS HIGHWAY
EARLY BRANCH SC 29916

Re: Recent Telephone Call Concerning Tier II Directive
Steady Simmons, 16661 Grays Highway, Early Branch, SC
UST Permit # 18856
Solicitation Number IFB-5400002721-3/3/2011-EMW, Purchase Order # 4600089989
Jasper County

Dear Mr. Thompson:

I received your telephone call yesterday afternoon, and tried to return your call. However, the telephone numbers listed in our system, (843) 726-8215 and (803) 842-4530, apparently are not correct. I apologize for not being able to call you back.

I want to assure you that the Underground Storage Tank (UST) Management Division wants to define the problem on your property as quickly as possible without conducting any unnecessary assessment activities. Crawford Environmental Services will be installing additional monitoring wells on your property and adjacent properties to completely define the extent of the problem. Field technicians from Crawford Environmental will discuss the location and number of monitoring wells with you before any work is conducted. The location of monitoring wells can be adjusted to meet your continued use of the property. Once the extent of the problem is defined, rehabilitation activities can be initiated that will result in the issuance of a closure letter and abandonment of the monitoring well network.

Your continued cooperation so the problem can be addressed as quickly as possible and successfully closed is greatly appreciated. On all correspondence regarding this site, please reference the UST Permit # 18856 and Cost Agreement # 43095. If you would like to discuss the future work, please contact me at (803) 896-6669, fax me at (803) 896-6245, or e-mail me at shradeaa@dhec.sc.gov. If I am not in the office, please provide me with a current telephone number or e-mail address. If you would like to discuss specific well locations, please contact Dee O'Brien or Justin Reynolds at (803) 708-0079.

Sincerely,

Arthur Shrader, Hydrogeologist
Assessment Section

Underground Storage Tank Management Division
Bureau of Land & Waste Management

Cc: Crawford Environmental Services, 104 Corporate Blvd. Suite 412, West Columbia, SC 29169
Technical File

CRAWFORD
ENVIRONMENTAL
SERVICES



April 11, 2012

Art Shrader, Hydrogeologist
Assessment Section
UST Management Division
Bureau of Land and Waste Management
SCDHEC
2600 Bull Street
Columbia, SC 29201

Re: Extension Request
Steady Simmons
16661 Grays Highway, Early Branch, SC 29916
UST Permit: 18856
Cost Agreement: Pending
Jasper County

Dear Mr. Shrader

Please find the following request for extension for the Steady Simmons Tier II Assessment. Crawford Environmental Services would request a 14 day extension, moving the submission date of the report from April 13, 2012 to April 27, 2012. This extension is requested due to property access issues with the Thompson Property that has resulted in delay. No additional items for CA: 43095 are requested at this time.

If you have any questions or comments regarding this request please feel free to contact me at 803-708-0079, or by email at dobrien@crawfordenvironmental.com.

Best Regards,

Dee O'Brien
Division Manager
SC Rehabilitation Contractor Number: 0388

MID-ATLANTIC REGION

15 CHURCH AVENUE, SW
ROANOKE, VIRGINIA 24011

OFFICE 540 343.6256
FAX 540 343.6259

ccrawford@crawfordenvironmental.com

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Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

APR 16 2012



DEE OBRIEN PG
DIVISION MANAGER
CRAWFORD ENVIRONMENTAL SERVICES INC
104 CORPORATE BLVD STE 412
WEST COLUMBIA SC 29169-4600

Re: Tier II Report Extension Request Approval
Solicitation Number IFB-5400002721-3/3/2011-EMW, Purchase Order # 4600089989
Steady Simmons, 16661 Grays Highway Early Branch, SC
UST Permit # 18856
Tier II Directive dated February 13, 2012
Screening Data Review on February 27 and March 5, 2012
Request for Extension Requests received April 16, 2012
Former American Oil, 808 US Highway 52, Lake City, SC
UST Permit # 19547
Tier II Directive dated February 13, 2012
Screening Data Review on March 29, 2012
Request for Extension Requests received April 16, 2012

Dear Mr. O'Brien:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed your request for extension at the referenced UST facilities. Your requested extension of 14 days for Steady Simons and 7 days for Former American Oil are both approved.

Please be sure and adjust your bi-weekly status report to reflect these extensions to well installation, sampling, and report preparation as appropriate. Under the terms of the American Recovery and Reinvestment Act (ARRA), the Department is required to pay funds for rehabilitation activities on or before September 30, 2012 for any sites.

On all correspondence, please reference the appropriate UST Permit and Cost Agreement. If you have questions concerning this correspondence, or would like to submit additional information, please contact me at (803) 896-6669, fax me at (803) 896-6245, or e-mail me at shradeaa@dhec.sc.gov.

Sincerely,

Arthur Shrader, Hydrogeologist
Assessment Section
Underground Storage Tank Management Division
Bureau of Land & Waste Management

Cc: Technical File (18856 and 19547)

Tier II Assessment

**Steady Simmons
16661 Grays Highway
Early Branch, SC 29916
Jasper County
UST Permit #: 18856
CA #: 43095
CES #: 15.102
May 7, 2012**

CRAWFORD

**ENVIRONMENTAL
SERVICES**

Tier II Assessment Report

Steady Simmons
16661 Grays Highway
Early Branch, SC 29916
Jasper County
UST Permit #:18856
CES Project: 15.102

May 7, 2012

Submitted To:

South Carolina Department of Health and Environmental Control
Underground Storage Tank Program
Bureau of Land and Waste Management
2600 Bull Street
Columbia, South Carolina 29201-1708

Submitted By:

Crawford Environmental Services
104 Corporate Blvd. Suite 412
West Columbia, SC 29196
SCDHEC Site Rehabilitation Contractor Certification #: UCC-0388



Justin Reynolds
Project Manager



H. Dee O'Brien, P.G.
Division Manager
SC Registration No: 873

CRAWFORD
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1.0 Project Information

1.1 Introduction

As part of the ongoing assessment of the Steady Simmons facility, Crawford Environmental Services (CES) has completed a Tier II Assessment for the purpose of determining if the petroleum hydrocarbon release, reported for the Steady Simmons facility, poses a potential risk to human health or to the environment. This assessment specifically provides information outlined in the scope of work as defined in the CES quality assurance program plan (QAPP), the Steady Simmons Tier II directive – dated February 13, 2012, cost agreements 43095 and SCDHEC Bid Specification IDB-5400002721-3/3/2011-EMW. Please reference the CES Standard Operating Procedure (SOP) document, dated April 27, 2011. This report was written by Justin Reynolds reviewed by Dee O'Brien (P.G. Registration 873) and verified by Dan Fisher.

1.2 Facility Information:

1.2.1 Site Address

Steady Simmons
16661 Grays Highway
Early Branch, SC 29916
UST Permit: 18856

1.2.2 Owner Operator Information

Orphan- Simmons

1.2.3 Current Land Owner

Thompson, Wayne
16657 Grays Highway
Early Branch, SC 29916
803-398-7718

1.2.4 Contractor Information

Crawford Environmental Services
104 Corporate Blvd. Suite 412
West Columbia, SC 29169
1 (803) 708-0079
Contractor Number: UCC-0388

1.2.5 Drilling Information

Todd Allred {Field Manager}
Crawford Environmental Services
104 Corporate Blvd. Suite 412
West Columbia, SC 29169
1 (803) 708-0079
Certification Number: 1446
UMW:MWA:24385

1.2.6 Laboratory Information

Access Analytical, Inc. (AA)
7478 Carlisle Street
Irmo, SC 29063
1 (803) 781-4243
SC Certification: 32575001

Analytical Environmental Services Inc. (AES)
3785 Presidential Pkwy.
Atlanta, GA 30340
1 (770) 457-8177
SC Certification: 98016003

Schnabel Engineering
104 Corporate Blvd. Suite 420
West Columbia, SC 29169
1 (803) 796-6240

1.3 Site Description

The site is currently owned by Mr. Wayne Thompson and is located on the west side of Gray's Highway in Early Branch, Jasper County, South Carolina. The site is currently occupied by a single story block building and several residences. The surrounding area consists of residential properties. The site is bordered by a residential property to the south with undeveloped property beyond. To the west the site is bordered by residential properties and undeveloped lots. To the north the site is bordered residential properties and undeveloped lots. To the east the site is bordered by Grays Highway with residential properties beyond. The site location is indicated on a USGS topographic map of the Grays Quadrangle, South Carolina and is included as Figure 1

1.4 Site History

Former American Oil has one reported release. The release was reported on September 9, 2002, confirmed on October 31, 2002. Two underground storage tanks (USTs), are recorded for the site and it and the tanks are recorded as abandoned (removed from ground). The tank basin is located in the eastern section of the facility. The site was last sampled on November 18, 2011.

1.4.1 Tier 1 Assessment

Midlands Environmental Associates Inc., (MECI) completed a Tier 1 Assessment at the Steady Simmons facility in November 2011. Monitoring wells MW-1R, MW-2, MW-3, and MW-4 were installed during the Tier I Assessment.

1.4.2 QAPP and Site Visit

SCDHEC requested a site specific QAPP in a notice to proceed (NtP) issued on January 3, 2012. A site check was performed by CES personnel on January 31, 2012. The finalized QAPP was submitted on February 3, 2012, and was approved on February 13, 2012.

2.0 Site Characteristics

2.1 Regional Geology and Hydrogeology

The subject facility is located within the Atlantic Coastal Plain Physiographic Province. The soils in this province are typically composed of interbedded silts, sands and clays that have been deposited during successive advances and retreats of the ocean over the past several million years. Recent sedimentary deposits comprise the shallow subsurface of the study area and are underlain by the Ocala Limestone, Santee Limestone, Williamsburg, and Rhems formations. Sedimentary deposits of the Coastal Plain comprise a total approximate thickness of 1550 feet in this area and underlain by crystalline bedrock.

2.2 Site Specific Geology and Hydrogeology

Based upon lithologic descriptions of subsurface soils encountered during drilling activities, the shallow subsurface of the site is composed of a tan sandy silt encountered from the surface to approximately five to six feet below land surface (bls). The silt is underlain by a yellow to grey to tan clayey sand which was encountered from approximately six feet to the total investigated depth of 36 - 40 feet where the field crews encountered auger refusal suggesting the presence of rock. Lithologic descriptions are included in the boring logs provided in Appendix D. Grain size (sieve/hydrometer) analyses were conducted on representative soil samples collected from the shallow and deep saturated zones. Soils in the shallow saturated zone {5-15 feet bls} consisted of 73.5% sand, 5.7% silt and 20.4% clay. Soils in the deep saturated zone {35 - 40 feet} consisted of 75.7% sand, 6.8% silt, and 17.5% clay.

Groundwater was generally encountered during field screening installation at a depth of ten to eleven feet bls.

2.3 Receptor Survey and Tax Map

A receptor survey was completed by MECI during the November 2011 Tier 1 Assessment. A receptor survey was not requested for this phase of work. Nine water supply wells were identified during the Tier 1 Assessment receptor survey. Three water supply wells, and three surface water samples were collected and submitted for analysis during this assessment. Surface water sample locations are included on Figure 2. A Tax map data collection was previously completed by MECI during the November 2011 Tier 1 Assessment. A Tax map survey was not completed during this phase of work.

3.0 Assessment Activities

3.1 Field Screening

Field screening activities were conducted by CES personnel on March 15 – 16, 2012. The field screening activities consisted of the installation of thirteen temporary monitoring wells and associated groundwater sample collection. Groundwater samples were collected utilizing disposable polyethylene bailers. OVA results were recorded utilizing a MiniRAE lite parts per million (PPM) photoionization detector (PID). The PID was calibrated on a daily basis before use on assessment activities.

Temporary well locations (GW-10, GW-11, GW-12, GW-13, GW-14, GW-15, GW-16D, GW-17, GW-18, GW-19, GW-20, and GW-21) are depicted on Figure 3. Lithologic characterizations are provided on the soil boring logs which are included as Appendix D. Field screening results are included as Table 1. Installation of the temporary monitoring wells was completed following the methodology outlined in the CES standard operating procedure (SOP) section 2.6.

Groundwater samples collected during field screening activities were placed in coolers, maintaining 4°C, and delivered to AA. AA then transferred the samples to AES via FEDEX for laboratory analysis.

3.2 Well Installation

Based upon the field screening results, the SCDHEC approved proposed monitoring well locations on March 28, 2012. In accordance with the monitoring well approvals, CES installed twelve shallow monitoring wells and seven deep wells. Monitoring wells were installed, constructed and developed following the methodology outlined in the CES standard operating procedure. . Designations, installation dates, and development dates are summarized on Table 2. Locations of the monitoring wells are depicted on

Figure 2. Boring logs and SCDHEC 1903 (Water Well Records) forms are included in Appendices D & E.

3.2.1 Soil Samples

Soil samples for hydrometer sieve analysis were collected from MW-16 and DW-6 and submitted for analysis. Soil sample results from the Tier 1 are included as Table 5.

3.3 Water Sample Collection

A comprehensive groundwater sampling event, including; recording equilibrated static water levels, product thicknesses, and the collection of chemical samples was completed by CES personnel on April 13, 2012. Samples for the monitoring wells were collected utilizing disposable polyethylene bailers. Monitoring wells that exhibited groundwater above the screened bracket, were sampled more than six months prior to this assessment, or were installed during this assessment were purged of at least three well volumes or purged till dry before sample collection. Bailers were lowered slowly to the top of the water column (after purging in some cases) allowed to fill one volume, then removed.

Groundwater was then transferred to the appropriate laboratory supplied sampling containers and then placed in coolers, maintaining 4°C, and delivered to AA. AA then transferred the samples to AES via FEDEX for laboratory analysis. Temperature, pH, specific conductance and dissolved oxygen readings were recorded during sampling. Groundwater chemical samples were submitted to Access Analytical, Inc., (AA) {SC Certification: 98016} for analysis. Groundwater sampling was completed following the methodology outlined in the CES standard operating procedure (SOP) section 2.10.

3.3.1 Groundwater Sampling

Equilibrated static water levels and free-product thicknesses were recorded for monitoring wells MW-1R, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, DW-1, DW-2, DW-3, DW-4, DW-5, DW-6 and DW-7 by CES personnel on April 13, 2012. Field notes are summarized on table 4.

Prior to sample collection MW-1R, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, DW-1, DW-2, DW-3, DW-4, DW-5, DW-6 and DW-7 were purged either three well volumes or purged till dry.

Groundwater samples were submitted for the following chemical analyses; BTEX, naphthalene, MtBE, 1,2 DCA, 8 Oxygenates, EDB and Lead.

3.3.2 Surface Water Sampling

CES collected three water samples from the near-by ponds and creek to the west and south of the subject facility. Water was transferred to the appropriate laboratory supplied sampling containers and then placed in coolers, maintaining 4°C, and delivered to AA. AA then transferred the samples to AES via FEDEX for laboratory analysis.

Surface water samples were submitted for the following chemical analyses; BTEX, naphthalene, MtBE, 1,2 DCA, 8 Oxygenates, and EDB.

Sample locations are depicted on Figure 2 and in Appendix C.

3.3.3 Water Supply Well Sampling

CES collected three water supply samples, one from the on- site water supply well (WSW-1) and the other two from WSW-3, and WSW-4. WSW-2, WSW-6, and WSW-8 were not functional and not sampled. Access to WSW-5 was not secured and therefore was not sampled. WSW-7 and WSW-9 were not located during this assessment. Water from the supply wells were transferred to the appropriate laboratory supplied sampling containers and then placed in coolers, maintaining 4°C, and delivered to AA. AA then transferred the samples to AES via FEDEX for laboratory analysis.

Sample locations are depicted on Figure 2.

Table 3 presents the laboratory data for the submitted groundwater and surface water samples collected as part of this assessment. The groundwater isoconcentration maps are included as Figure(s) 4. The potentiometric surface maps are included as Figure(s) 5.

3.4 Comprehensive Survey

A comprehensive survey recording; structures, underground utilities, potential receptors, USTs and associated piping and dispensers, and locations of all sampling points and monitoring wells associated with this assessment, was

completed by Robert Lackey Surveying (Registered Land Surveyor 14799) on May 2, 2012.

3.5 Disposal Manifests

The non-hazardous waste manifests for the transportation and disposal of residual soil/water generated during monitoring well installations and groundwater sampling are included as Appendix G. Amounts and details are included on table 4.

4.0 Aquifer Characteristics/Calculations

4.1 Hydraulic Conductivity

As part of this assessment, hydraulic conductivity for the shallow and deep saturation zone was determined by slug tests completed on MW-16 and DW-6. The computed hydraulic conductivity (K) for the shallow saturation zone horizon is 0.0473 ft/day and for the deep saturation zone is 0.158 ft/day. Well construction details are presented on Table 2. The Slug test summary forms (DHEC 3531), slug test data, and graphs are included in Appendix F.

4.2 Hydraulic Gradient

The hydraulic gradient was calculated using surveyed top of casing (ToC) elevations and equilibrated static water levels obtained during the April 13, 2012, 2012 sampling events. The average calculated hydraulic gradient of the shallow saturation zone across the site was determined to be 0.015 ft/ft. The average hydraulic gradient of the deep saturation zone across the site was calculated to be 0.06 ft/ft. Potentiometric diagrams are presented as Figure(s) 5. Details of these calculations are included in Appendix F.

4.3 Porosity

Grain size (sieve/hydrometer) analyses were conducted on soil samples collected from MW-16 and DW-6. Laboratory results are included in Appendix F. Porosity results were derived from the hydrometer/sieve analysis results compared to Figure G1 in the UST QAPP. Based on the results described in Section 2.2, the shallow saturation zone yields an estimated total porosity value of 0.45 and the deep saturation zone yields a tabulated total porosity value of 0.45. Descriptions included on Figure(s) 6.

4.4 Estimated Seepage Velocity

Using the previously calculated parameters (hydraulic gradient, hydraulic conductivity, assumed porosity), an estimated seepage velocity was determined for the area. A value of 0.571 ft/yr and 7.68 ft/yr was calculated for the estimated seepage velocity for the shallow saturation zone and deep saturation zone respectively. Details of these calculations also are included in Appendix F.

5.0 Summary

During assessment activities performed at the subject property, CES installed twelve shallow monitoring wells and seven deep monitoring wells, conducted a comprehensive groundwater monitoring event, performed aquifer characterization studies and completed a comprehensive survey in an effort to define the horizontal and vertical extent of petroleum impacts. The qualitative and quantitative data collected from recent assessment activities indicates the following regarding current site conditions;

1. Shallow groundwater flow at the Steady Simmons facility was mapped with southern and northern flow components as inferred from the relative groundwater elevations and calculated gradients on April 13, 2012.
2. Free-phase petroleum was not detected during the April 13, 2012 sampling events.
3. Groundwater from monitoring wells MW-1R, MW-2 and MW-3 exhibited hydrocarbon constituent concentrations above the RBSLs/MCLs for the chemicals of concern.
4. Groundwater from monitoring wells MW-2, MW-5, MW-6, MW-7, MW-10, MW-12, MW-14, MW-15, and MW-16 exhibited lead concentrations above the RBSL/MCL. These results are probably due to the turbidity of the groundwater samples submitted for analysis.

6.0 Conclusion

Based upon the data collected during the April 13, 2012 sampling events and previous assessment activities, the horizontal extent of the dissolved-phase hydrocarbon plume extends from the former UST basin toward the east / northeast. The limits of the dissolved-phase compounds are adequately defined by the shallow monitoring wells MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, and MW-16..

The vertical extent of the plume is adequately defined as DW-1, DW-2, DW-3, DW-4, DW-5, DW-6 and DW-7 did not exhibit chemical concentrations above the RBSL/MCL.

7.0 Recommendations

Based on the hydrocarbon constituent related exceedances determined in MW-1R, MW-2 and MW-3 CES recommends that the Steady Simmons project proceed to corrective action for site rehabilitation activities.

8.0 Limitations

This report is based upon a specific scope of work requested by SCDHEC. This report is intended only for the use of CES's client and anyone else specifically listed on this report. Some data contained within this report was previously collected by other consultants and is assumed to be correct. CES will not and cannot be liable for the unauthorized release by any third party. Other than as contained in this paragraph, CES makes no expressed or implied warranty as to the contents of this report.

Tables

- Table 1: Field Screening Laboratory Analytical Summary
- Table 2: Well Construction and Historical Groundwater Elevation Summary
- Table 3: Groundwater Laboratory Analytical Result Summary
- Table 4: Field Data Information Summary
- Table 5: Soil Laboratory Analytical Summary

Facility Name: Steady Simmons
 Address: 16661 Grays Highway, Early Branch, SC 29916
 UST Permit ID: 18856
 CES Project Number: 15.102

Table 1
Groundwater Screening Analytical Summary

Sample ID:	Sample date	Total Depth (ft)	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	1,2 DCA	EDB
#	RBSL/MCL	ug/L	5	1000	700	10000	40	25	5	0.05
1	GW 10	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
2	GW 11	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
3	GW 12	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
4	GW 13	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
5	GW 14	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
6	GW 15	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
7	GW 16	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
8	GW 16D	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
9	GW 17	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
10	GW 18	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
11	GW 19	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
12	GW 20	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
13	GW 21	3/16/2012	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS

Maximum Advancement Depth, no water
Maximum Advancement Depth, no water

Quality Control

GW 16DUP	3/16/2012	10	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
Field Blank	3/16/2012	n/a	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
Trip Blank	3/16/2012	n/a	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS

All Values are in ug/L

Total Drilled Depth 173

Total Field Screening locations 13

NS = Not Sampled



Table 2

Well Construction and Historical Groundwater Elevation Summary											
Monitor Well	Well Depth (ft)	Screened Interval	Top of Casing (ft)	Date Installed	Date Developed	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-1R	17	7	69.69	11/1/2011	11/18/2011	4/13/2012	0	11.12	0	0	58.57
MW-2	17	7	70.1	11/1/2011	11/18/2011	4/13/2012	0	11.64	0	0	58.05
MW-3	17	7	68.59	11/1/2011	11/18/2011	4/13/2012	0	12.37	0	0	57.32
MW-4	17	7	67.95	11/1/2011	11/18/2011	4/13/2012	0	11.13	0	0	58.97
MW-5	15	5	71.78	4/10/2012	4/11/2012	4/13/2012	0	11.54	0	0	58.56
MW-6	15	5	71.47	4/10/2012	4/11/2012	4/13/2012	0	12.67	0	0	57.43
MW-7	15	5	71.27	4/10/2012	4/11/2012	4/13/2012	0	11.16	0	0	57.43
MW-8	15	5	70.90	4/10/2012	4/11/2012	4/13/2012	0	11.33	0	0	57.26
MW-9	15	5	70.70	4/10/2012	4/11/2012	4/13/2012	0	9.32	0	0	58.63
MW-10	15	5	66.65	4/10/2012	4/11/2012	4/13/2012	0	9.78	0	0	58.17
MW-11	15	5	67.16	4/10/2012	4/11/2012	4/13/2012	0	10.99	0	0	56.96
MW-12	15	5	67.18	4/10/2012	4/11/2012	4/13/2012	0	12.51	0	0	59.27
MW-13	15	5	68.50	4/10/2012	4/11/2012	4/13/2012	0	12.89	0	0	58.58
MW-14	15	5	70.14	4/10/2012	4/11/2012	4/13/2012	0	12.46	0	0	58.81
MW-15	20	10	70.01	4/10/2012	4/11/2012	4/13/2012	0	12.05	0	0	58.85
MW-16	20	10	71.65	4/10/2012	4/11/2012	4/13/2012	0	12.00	0	0	58.70
DW-1	40	35	70.95	4/10/2012	4/11/2012	4/13/2012	0	7.35	0	0	59.30
DW-2	40	35	70.89	4/10/2012	4/11/2012	4/13/2012	0	8.38	0	0	58.78
DW-3	40	35	67.20	4/10/2012	4/11/2012	4/13/2012	0	8.29	0	0	58.89
DW-4	38	33	67.51	4/10/2012	4/11/2012	4/13/2012	0	9.82	0	0	58.68
DW-5	38	33	70.02	4/10/2012	4/11/2012	4/13/2012	0	11.12	0	0	59.02
DW-6	36	31	71.41	4/10/2012	4/11/2012	4/13/2012	0	11.00	0	0	59.01
DW-7	36	31	69.82	4/10/2012	4/11/2012	4/13/2012	0	12.13	0	0	59.52

Deep Wells
 Wells developed using bail / surge method
 Shallow monitoring wells installed 12 Footage
 Telescoping wells installed 7 Footage
 Recovery Wells installed 0 Footage

CRAWFORD ENVIRONMENTAL SERVICES
 190
 268
 0

Bolded Values corrected for presence of free product
 n/a = not applicable
 INA = Information not available

Table 3

Facility Name:
Address:

Steady Simmons
16661 Grays Highway, Early Branch, SC 29916

UST Permit ID:
CES Project Number:

18856
15.102

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	Naphthalene	MTBE	1,2 DCA	EDB	Pb	ETBA	Ethanol	ETBE	DIPE	TAA	TAME	TBA	TBF	Date:	Well ID:	
RBSL	up/L	5	1000	700	10000	25	40	5	0.05	15	NE	10000	47	150	240	128	1400	NE	ug/L	RBSL	
MW-1R	4/13/2012	220	2100	1100	9900	570	9.1	<1.0	0.223	10.5	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-1R
	11/18/2011	1900	10000	2500	1300	330J	83J	<500	14	0.03	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
MW-2	4/13/2012	200	1400	280	3000	41	7.3	<1.0	2.04	21	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-2
	11/18/2011	62J	830	930	5300	180	<100	<100	0.44	0.018	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
MW-3	4/13/2012	<1.0	3	0.083J	6.1	<5.0	<1.0	<1.0	<0.02	9.29	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-3
	11/18/2011	160	1.9J	25	50	31	85	<5.0	0.2	0.0064J	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
MW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	7.32	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-4
	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.019	0.0024J	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
MW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	30.9	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-5
MW-6	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	55.4	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-6
MW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	32.1	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-7
MW-8	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	6.62	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-8
MW-9	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	1.03	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-9
MW-10	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	46.8	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-10
MW-11	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2.99	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-11
MW-12	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	45.6	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-12
MW-13	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	8.26	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-13
MW-14	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	77.8	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-14
MW-15	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	47.6	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-15
MW-16	4/13/2012	0.46J	<1.0	0.48J	2.5J	<5.0	<1.0	<1.0	<0.02	23.6	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	MW-16
Deep Wells																					
DW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.530J	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	DW-1
DW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	3.05	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	DW-2
DW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.626J	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	DW-3
DW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2.38	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	DW-4
DW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	DW-5
DW-6	4/13/2012	<1.0	<1.0	<1.0	1.6J	<5.0	<1.0	<1.0	<0.02	1.55	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	DW-6
DW-7	4/13/2012	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<0.02	2.85	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	DW-7
Water Supply Wells																					
WSW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	WSW-1
WSW-2	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	WSW-2
	4/13/2012	Not Functioning/ No Access																			
WSW-3	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	WSW-3
	4/13/2012	<1.0	<1.0	<1.0	1.1J	<5.0	<1.0	<1.0	<0.02	NS	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	
WSW-4	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	WSW-4
	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	
WSW-5	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.019	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	WSW-5
	4/13/2012	No Access																			
WSW-6	4/13/2012	Not Functioning																			
WSW-7	4/13/2012	No Access																			
WSW-8	4/13/2012	Not Functioning / No Access																			
WSW-9	4/13/2012	No Access																			
Surface Water Samples																					
SW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	SW-1
SW-2	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.019	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	SW-2
	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	
SW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	SW-3
Quality Control																					
DUP 1 MW-1	4/13/2012	240	2000	1000	9000	650	7.5	<1.0	0.13	15.5	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	DUP 1 MW-1
DUP 2 MW-2	4/13/2012	280	1800	430	4100	47	7.6	<1.0	1.45	19.5	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	DUP 2 MW-2
Field Blank	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.707J	<100	<100	<100	<10	<100	<10	<100	<10	<100	4/13/2012	Field Blank

Table 3

Facility Name:
Address:

Steady Simmons
16661 Grays Highway, Early Branch, SC 29916

UST Permit ID:
CES Project Number:

18856
15.102

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	Naphthalene	MTBE	1,2 DCA	EDB	Pb	ETBA	Ethanol	ETBE	DIPE	TAA	TAME	TBA	TBF	Date:	Well ID:	
RBSL	ug/L	5	1000	700	10000	25	40	5	0.05	15	NE	10000	47	150	240	128	1400	NE	ug/L	RBSL	
Field Blank 2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.364J	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	Field Blank 2
Trip Blank	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	NS	NS	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	Trip Blank
Trip Blank	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	NS	NS	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	Trip Blank

BDL= Below Detectable Limit

RBSL= Risk Based Screening Levels

NE= Not Established

EDB= 1,2 Dibromoethane

Totals

8260B

8011

5030

35

33

27



1,2 DCA = 1,2 Dichloroethane

Shaded values are above the detection limit

Italicized values are above the RBSL

NS=Not Sampled

ND = Not Detect

Table 4

Groundwater Sampling Field Activity Summary

Sampling Date (s) 4/13/2012

Field Personnel J. Reynolds, T. Allred, and B. Scott

General Weather Conditions Clear and Sunny

Ambient Air Temperature (°C) 24

pH Meter: Calibration

4.0 = 4

7.0 = 7

10.0 =

Specific Conductance Meter: Calibration

500 = 505

Meters calibrated on

April 13, 2012 @ 6.45

#	Sample ID	Sampled	Date	Total Depth	Depth to water	Depth to product	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	6th Vol	Total Purged (Gall)	D.O	Odor	Remarks	Purge	No Purge	
1	MW-1R	Yes	4/13/2012	16.59	11.12	n/a	Gal	Initial	0.74	1.49	2.23				2.2	0.8	slight			
							Time	1350	1351	1354	1356									
							pH	8.67	8.78	8.8	8.8									
							Con.	79	76	76	81									
							Temp.	20.6	21.0	21.0	22.0									
							Turbidity	11	96	337	41									
2	MW-2	Yes	4/13/2012	16.57	11.13	n/a	Gal	Initial	0.74	1.48	2.22				2.2	2	slight			
							Time	1334	1335	1337	1339									
							pH	7.86	7.97	8.03	8.12									
							Con.	104	96	91	90									
							Temp.	20.8	21.6	22.6	23.5									
							Turbidity	27	62	116	73									
3	MW-3	Yes	4/13/2012	16.77	11.32	n/a	Gal	Initial	0.74	1.48	2.22				2.2	2.3	slight			
							Time	1316	1319	1321	1324									
							pH	6.19	6.34	6.25	6.23									
							Con.	82	55	55	56									
							Temp.	20.4	21.0	21.5	21.5									
							Turbidity	29	93	330	26									
4	MW-4	Yes	4/13/2012	16.83	9.32	n/a	Gal	Initial	1.02	2.04	3.06				3.1	3	None			
							Time	1311	1313	1314	1316									
							pH	7.66	7.47	7.46	7.39									
							Con.	65	71	71	69									
							Temp.	19.5	19.5	20.1	20.2									
							Turbidity	13	84	244	17									
5	MW-5	Yes	4/13/2012	15.11	12.51	n/a	Gal	Initial	0.35	0.71					0.7	2.9	None	Bailed Dry after 2nd set; Sampled		
							Time	1034	1035	1036										
							pH	8.22	8.12	8.13										
							Con.	79	67	69										
							Temp.	19.9	20.2	21.1										
							Turbidity	31	106	194										
6	MW-6	Yes	4/13/2012	15.26	12.89	n/a	Gal	Initial	0.32	0.64					0.6	0.6	None	Bailed Dry after 2nd set; Sampled		
							Time	1047	1049	1050										
							pH	8.76	8.59	8.6										
							Con.	98	96	104										
							Temp.	19.8	20.2	20.6										
							Turbidity	31	36	302										
7	MW-7	Yes	4/13/2012	15.17	12.46	n/a	Gal	Initial	0.37	0.74					0.7	1.1	None	Bailed Dry after 2nd set; Sampled		
							Time	1054	1056	1057										
							pH	8.32	8.39	8.32										
							Con.	78	92	101										
							Temp.	19.8	20.0	20.9										
							Turbidity	19	87	320										
8	MW-8	Yes	4/13/2012	15.06	12.05	n/a	Gal	Initial	0.41	0.82	1.23				1.2	2.2	None			
							Time	1110	1111	1113	1115									
							pH	8.3	8.24	8.27	8.24									
							Con.	61	48	52	50									
							Temp.	19.8	20.1	20.3	21.1									
							Turbidity	31	88	203	63									
9	MW-9	Yes	4/13/2012	15.33	12	n/a	Gal	Initial	0.45	0.91	1.36				1.4	2.6	None			
							Time	1153	1156	1157	1159									
							pH	7.0	6.9	6.96	6.89									
							Con.	89	40	39	42									
							Temp.	21.0	21.6	22.0	22.8									
							Turbidity	25	73	158	41									
10	MW-10	Yes	4/13/2012	15.14	7.35	n/a	Gal	Initial	1.06	2.12	3.18				3.2	2.9	None			
							Time	1116	1118	1121	1124									
							pH	6.33	6.24	6.26	6.2									
							Con.	67	73	66	61									
							Temp.	20.4	21.0	21.0	21.5									
							Turbidity	11	108	299	30									
11	MW-11	Yes	4/13/2012	15.47	8.38	n/a	Gal	Initial	0.96	1.93	2.89				2.9	3.1	None			
							Time	1134	1136	1137	1139									
							pH	8.47	8.65	8.56	8.66									
							Con.	101	112	121	127									
							Temp.	19.9	20.3	20.6	21.2									
							Turbidity	35	81	160	40									
12	MW-12	Yes	4/13/2012	15.03	8.29	n/a	Gal	Initial	0.92	1.83					1.8	0.6	None	Bailed Dry after 2nd set; Sampled		
							Time	1159	1201	1203										
							pH	6.36	6.27	6.34										
							Con.	85	104	101										
							Temp.	20.2	20.5	21.1										
							Turbidity	33	91	328										
13	MW-13	Yes	4/13/2012	15.21	9.82	n/a	Gal	Initial	0.73	1.47	2.20				2.2	2.6	None			
							Time	1214	1217	1220	1223									
							pH	8.17	8.21	8.29	8.2									
							Con.	85	111	116	109									
							Temp.	20.2	20.6	20.8	21.0									
							Turbidity	20	55	240	53									
14	MW-14	Yes	4/13/2012	15.17	11.12	n/a	Gal	Initial	0.55	1.10					1.1	1	None	Bailed Dry after 2nd set; Sampled		
							Time	1241	1244	1247										
							pH	6.88	6.74	6.8										
							Con.	89	65	62										
							Temp.	21.3	21.9	22.0										
							Turbidity	3	50	336										
15	MW-15	Yes	4/13/2012	19.78	11	n/a	Gal	Initial	1.19	2.39					2.4	2.2	None	Bailed Dry after 2nd set; Sampled		
							Time	1257	1300	1301										
							pH	7.7	7.75	7.84										
							Con.	83	54	59										
							Temp.	21.0	21.7	22.5										
							Turbidity	25	82	168										
16	MW-16	Yes	4/13/2012	20.11	12.13	n/a	Gal	Initial	1.09	2.17					2.2	2.6	None	Bailed Dry after 2nd set; Sampled		
							Time	1353	1356	1357										
							pH	8.41	8.25	8.25										
							Con.	78	90	94										
							Temp.	19.3	19.3	20.0										
							Turbidity	18	74	349										

Con = Specific Conductance

Temp = Temperature (°C)

Gal = Gallons

Volume equals one well volume

Turbidity Values in = Nephelometric Turbidity Unit (NTU)

Total Purged Amount 30 Gallons
 Total Wells 16
 Total Wells Purged 16
 Total Wells No Purge 0

Facility Name:		Steady Simmons		Table 4B		UST Permit ID:		18856											
Address:		16661 Grays Highway Early Branch, SC 29916				CES Number:		15,103											
Groundwater Sampling Field Activity Summary																			
Sampling Date (s)				4/13/2012 <th colspan="4">pH Meter: Calibration</th> <td colspan="2">Specific Conductance Meter: Calibration</td>		pH Meter: Calibration				Specific Conductance Meter: Calibration									
Field Personnel				J. Reynolds, T. Allred, and B. Scott		4.0 = 4				500 = 505									
General Weather Conditions				Clear and Sunny		7.0 = 7				Meters calibrated on									
Ambient Air Temperature (°C)				24		10.0 =				April 13, 2012 @ 6:45									
#	Sample ID:	Sampled	Date	Total Depth	Depth to water	Depth to product	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Total Purged (Gall)	D.O.	Odor	Remarks	Purge	No Purge	
1	DW-1	Yes	4/13/2012	40.12	12.5	n/a	Gal	Initial	3.76	7.51	11.27			11.3	2.7	None			
							Time	746	756	805	815								
							pH	6.84	6.92	6.97	7.04								
							Con.	75	96	87	84								
							Temp.	21.2	22.2	22.5	22.7								
							Turbidity	9	48	143	9								
2	DW-2	Yes	4/13/2012	40.16	13.34	n/a	Gal	Initial	3.65	7.30	10.94			10.9	1.1	None			
							Time	834	842	848	856								
							pH	6.46	6.35	6.39	6.34								
							Con.	46	70	63	62								
							Temp.	19.9	20.1	21	22								
							Turbidity	18	63	170	49								
3	DW-3	Yes	4/13/2012	39.67	13.29	n/a	Gal	Initial	3.59	7.18	10.76			10.8	2.2	None			
							Time	901	906	914	923								
							pH	8.04	7.86	7.78	7.71								
							Con.	51	36	33	36								
							Temp.	19.9	20.1	20.6	21.3								
							Turbidity	8	92	314	83								
4	DW-4	Yes	4/13/2012	37.88	19.21	n/a	Gal	Initial	2.54	5.08	7.62			7.6	1.7	None			
							Time	934	942	951	958								
							pH	6.07	6.05	6.14	6.19								
							Con.	59	34	35	33								
							Temp.	21.1	22	22.4	22.9								
							Turbidity	8	77	201	68								
5	DW-5	Yes	4/13/2012	38.14	12.32	n/a	Gal	Initial	3.51	7.02	10.53			10.5	2.6	None			
							Time	1025	1033	1038	1046								
							pH	6.05	6	6.08	6.04								
							Con.	61	49	53	55								
							Temp.	20.4	21.4	22.3	23								
							Turbidity	5	73	204	36								
6	DW-6	Yes	4/13/2012	35.94	12.29	n/a	Gal	Initial	3.22	6.43	9.65			9.6	0.9	None			
							Time	1111	1119	1124	1131								
							pH	7.39	7.39	7.44	7.43								
							Con.	89	94	92	87								
							Temp.	19.4	19.4	20.3	21.3								
							Turbidity	27	71	205	47								
7	DW-7	Yes	4/13/2012	36.11	11.13	n/a	Gal	Initial	3.40	6.79	10.19			10.2	2.5	None			
							Time	1219	1224	1234	1239								
							pH	6.68	6.66	6.62	6.71								
							Con.	63	85	86	79								
							Temp.	20.3	20.8	21.5	21.5								
							Turbidity	31	61	345	107								
Con= Specific Conductance Temp = Temperature (°C) Gal = Gallons Volume equals one well volume Turbidity Values in = Nephelometric Turbidity Unit (NTU)													Total Purged Amount Total Wells Total Wells Purged Total Wells No Purge		71 7 7 0		Gallons		

Table 5
Soil Laboratory Analytical Results Summary
 Facility Name: Steady Simmons
 Address: 16661 Grays Highway, Early Branch, SC 29916
 UST Permit ID: 18856
 CES Project #: 15.102

#	Location	RBSL/MCLs (ug/kg){Sandy Soil}	Date	Depth	Benzene	Toluene	Ethylbenzene	Xylenes (total)	Naphthalene	TOC	Comments
1	SB 1		11/18/2011	8 to 10	7	1450	1150	14500	36	n/a	Tier 1
2	SB 2		11/18/2011	8 to 10	<4.8	2.2J	12.0	120.0	12.0	NS	Tier 1
3	SB 3		11/18/2011	8 to 10	<4.6	3.0J	7.6	46.0	7.3	NS	Tier 1
4	SB 4		11/18/2011	8 to 10	<6.0	<6.0	11.0	150.0	200.0	NS	Tier 1
5	SB 5		11/18/2011	8 to 10	<5.6	<5.6	<5.6	13.0	22.0	NS	Tier 1
6	SB 6		11/18/2011	8 to 10	<7.4	9.9	21.0	180.0	21.0	NS	Tier 1
7	SB 7		11/18/2011	8 to 10	<4.3	<4.3	3.1J	24	8.3	NS	Tier 1
8	SB 8		11/18/2011	8 to 10	<5.7	6.2	4.6J	26.0	2.9J	NS	Tier 1
9	MW 3		11/18/2011	5 to 10	NS	NS	NS	NS	NS	420.0	Tier 1
					2.8J	15.0	13.0	84.0	16.0	NS	Tier 1

values are in ug/kg

RBSLs/MCLs taken from UST QAPP Table C2 for Sandy Soil

TOC= Total Organic Carbon



Soil Samples Collected 0

Figures

Figure 1: Topographic Map

Figure 2: Site Facility Base Map

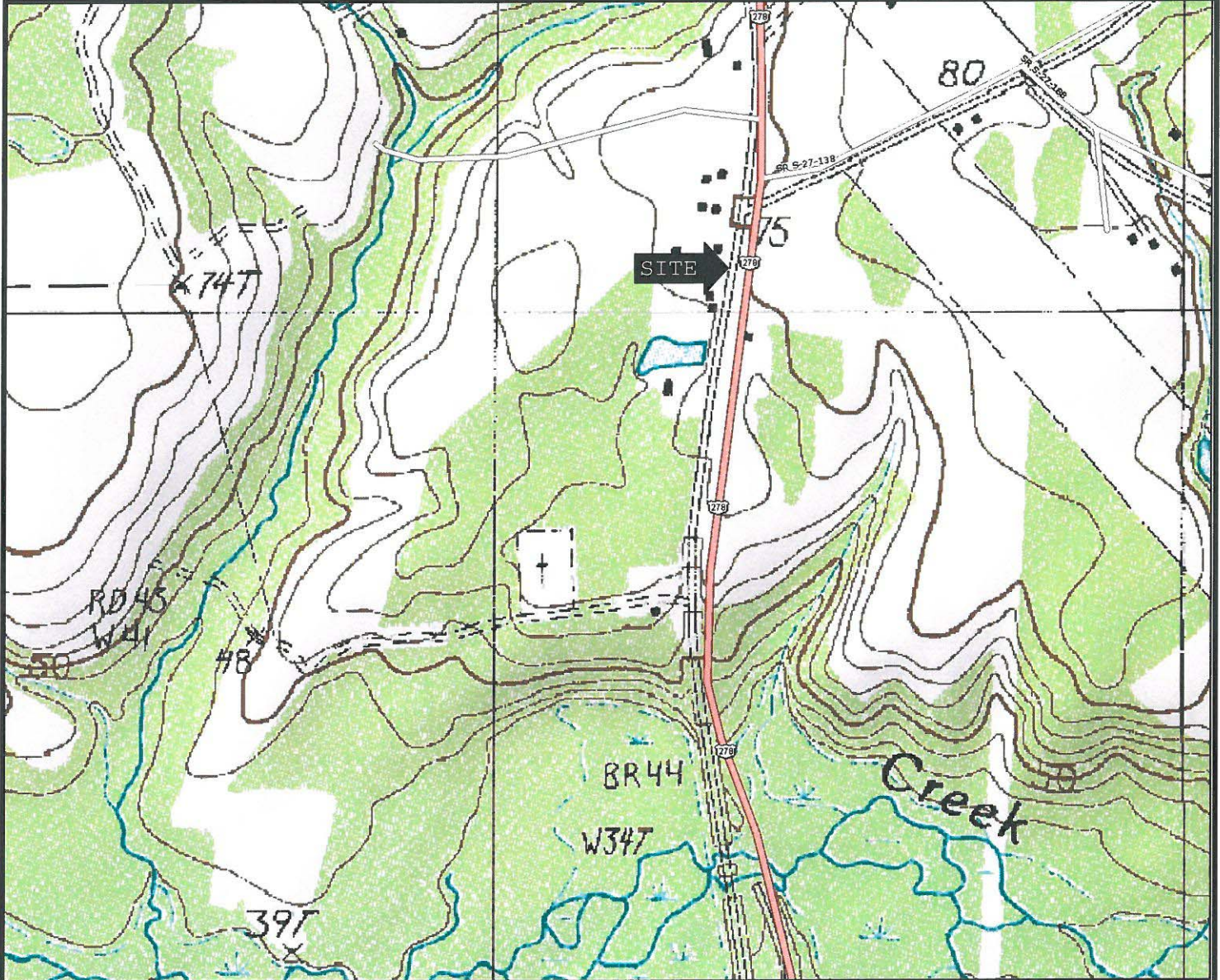
Figure 3: Field Screening and Soil Map

Figure 4(A-E): Groundwater Chemicals of Concern Maps

Figure 5(A-B) Potentiometric Diagrams

Figure 6 (A-C) Cross-sections and Cross-section Reference

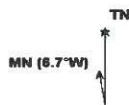
FIGURE 1
Site Location Map



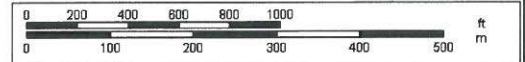
Data use subject to license.

© DeLorme. DeLorme Topo USA® 7.0.

www.delorme.com



Scale 1 : 12,000



1" = 1,000.0 ft

Data Zoom 15-0

CRAWFORD
ENVIRONMENTAL
SERVICES

Division of C.F. Crawford, Inc.

104 Corporate Blvd..
West Columbia, SC 29169

803-708-0079 (office) 803-708-8137 (fax)

GRAYS, SOUTH CAROLINA

Source: DeLorme Topo USA 7.0
Scale: 1:12,000 Contour Interval: 10 Feet

Steady Simmons
16661 Grays Highway
Early Branch, SC 29916-08016
UST Permit: 18856

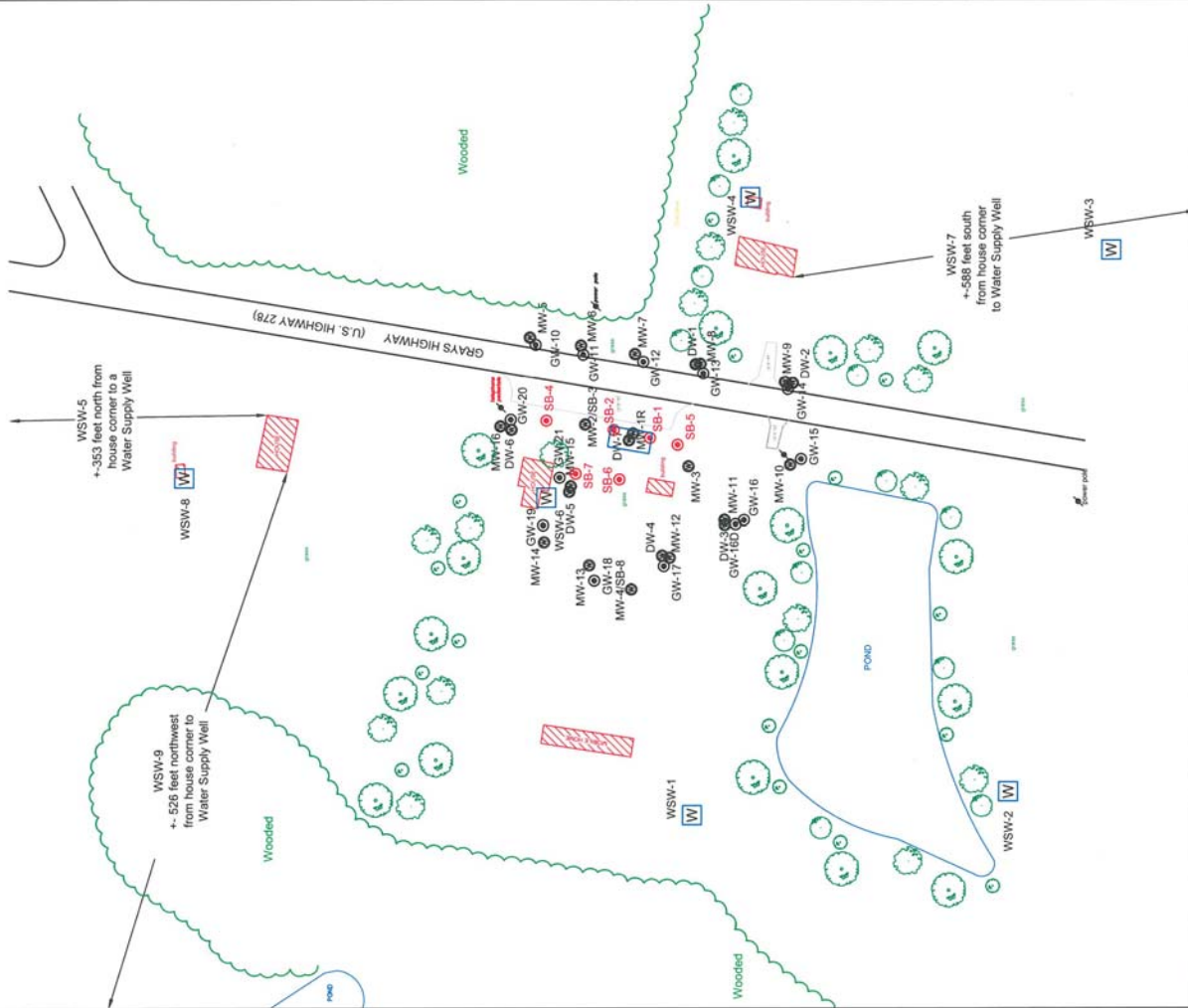
Project: Tier II Assessment

Client: SCDHEC

CES Job #: 15.102

Date: January 2012





NOTES
 1. Diagram based RLS Survey, Aerial Photographs, GS records and CES field notes

Legend

- JUST Basin
- Building
- Monitoring Well
- Water Supply Well
- Soil boring Location
- Field Screening Location

GRAPHIC SCALE
 0 40 80 160
 (In Feet)

Figure 3
Soil Field Screening Summary Map
 Steady Simmons
 16601 Grays Highway
 Early Branch, SC 29916

Project No.	15.103
Issue Date	5/4/12
Client	CRAWFORD ENVIRONMENTAL SERVICES
Checked By	JSR
Drawn By	JSR
Field Screening Location	HDO
Scale	0
Project ID	18856

124 Corporate Blvd, Suite 412
 West Columbia, SC 29391
 803-708-8130 (F)
 803-708-8130 (R)

Groundwater Laboratory Analytical Result Summary

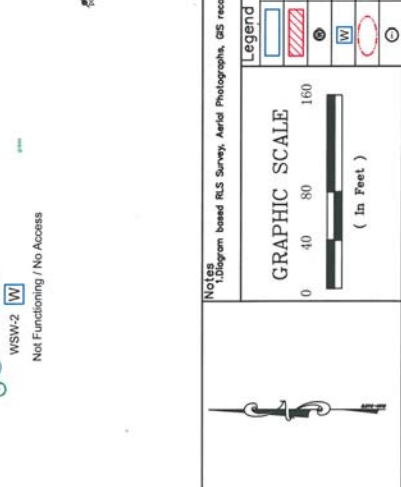
Well ID	Date	Parameter	Value	Unit	Method	Lab
WSW-1	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-2	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-3	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-4	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-5	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-6	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-7	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-8	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-9	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-10	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-11	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-12	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-13	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-14	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-15	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-16	4/13/2012	Benzene	0.00	mg/L	MS/MS	15

Water Supply Wells

Well ID	Date	Parameter	Value	Unit	Method	Lab
WSW-1	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-2	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-3	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-4	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-5	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-6	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-7	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-8	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-9	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-10	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-11	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-12	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-13	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-14	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-15	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
WSW-16	4/13/2012	Benzene	0.00	mg/L	MS/MS	15

Monitoring Wells

Well ID	Date	Parameter	Value	Unit	Method	Lab
MW-1	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-2	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-3	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-4	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-5	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-6	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-7	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-8	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-9	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-10	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-11	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-12	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-13	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-14	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-15	4/13/2012	Benzene	0.00	mg/L	MS/MS	15
MW-16	4/13/2012	Benzene	0.00	mg/L	MS/MS	15



Notes

1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes

2. WSW-1, WSW-2, WSW-3, WSW-4, WSW-5, WSW-6, WSW-7, WSW-8, WSW-9, WSW-10, WSW-11, WSW-12, WSW-13, WSW-14, WSW-15, WSW-16 are not functioning / no access.

3. MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16 are not functioning / no access.

Figure 4A

Groundwater Chemicals of Concern - Benzene

Steady Simmons
16661 Grays Highway
Early Branch, SC 29916

Project No: 15.103
Date: 5/4/12
Revision: 0

Prepared by: HDO
Checked by: JSR
Drawn by: JSR

151 Corporate Blvd., Suite 412
Wilmington, NC 28403
910-338-2200
803-708-8138 (fax)

CRAWFORD ENVIRONMENTAL SERVICES

Legend

- Building
- Monitoring Well
- Water Supply Well
- Below RBSL
- Surface Water Sample

GRAPHIC SCALE

0 40 80 160
(In Feet)

Groundwater Summary										
Monitor Well	Depth (ft.)	Screened Interval	Top of Casing (ft.)	Date Installed	Date Developed	Date Measured	Product	Depth to Water (ft.)	Product Thickness (ft.)	Product Elevation (ft.)
MW-1	17	7	68.69	11/17/2011	11/18/2011	4/13/2012	Water	11.12	0	58.57
MW-2	17	7	68.69	11/17/2011	11/18/2011	4/13/2012	Water	11.12	0	58.57
MW-3	17	7	68.69	11/17/2011	11/18/2011	4/13/2012	Water	11.12	0	58.57
MW-4	17	7	67.95	11/17/2011	11/18/2011	4/13/2012	Water	9.32	0	58.63
MW-5	15	5	71.78	4/10/2012	4/11/2012	4/13/2012	Water	12.51	0	59.27
MW-6	15	5	71.78	4/10/2012	4/11/2012	4/13/2012	Water	12.51	0	59.27
MW-7	15	5	71.27	4/10/2012	4/11/2012	4/13/2012	Water	12.48	0	59.30
MW-8	15	5	70.9	4/10/2012	4/11/2012	4/13/2012	Water	12.05	0	58.83
MW-9	15	5	70.7	4/10/2012	4/11/2012	4/13/2012	Water	12.00	0	58.70
MW-10	15	5	70.7	4/10/2012	4/11/2012	4/13/2012	Water	12.00	0	58.70
MW-11	15	5	67.56	4/10/2012	4/11/2012	4/13/2012	Water	8.35	0	59.30
MW-12	15	5	67.18	4/10/2012	4/11/2012	4/13/2012	Water	8.26	0	58.89
MW-13	15	5	68.5	4/10/2012	4/11/2012	4/13/2012	Water	9.62	0	58.68
MW-14	15	5	70.15	4/10/2012	4/11/2012	4/13/2012	Water	11.12	0	59.02
MW-15	15	5	70.15	4/10/2012	4/11/2012	4/13/2012	Water	11.12	0	59.02
MW-16	20	10	71.65	4/10/2012	4/11/2012	4/13/2012	Water	12.13	0	59.53

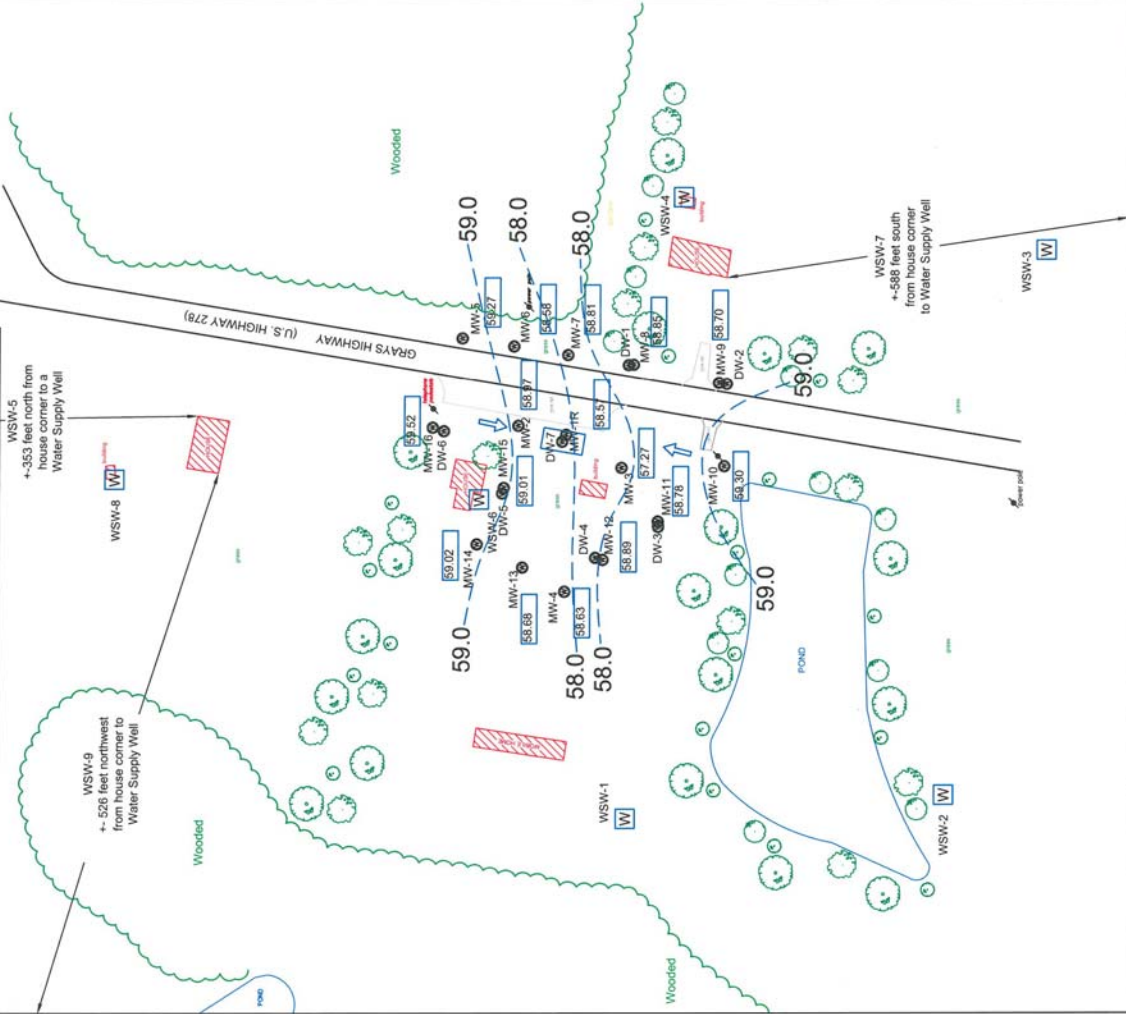


Figure 5A
Potentiometric Surface - Shallow

Notes: 1:100m based RLS Survey, Aerial Photographs, GS records and CES field notes

Legend:

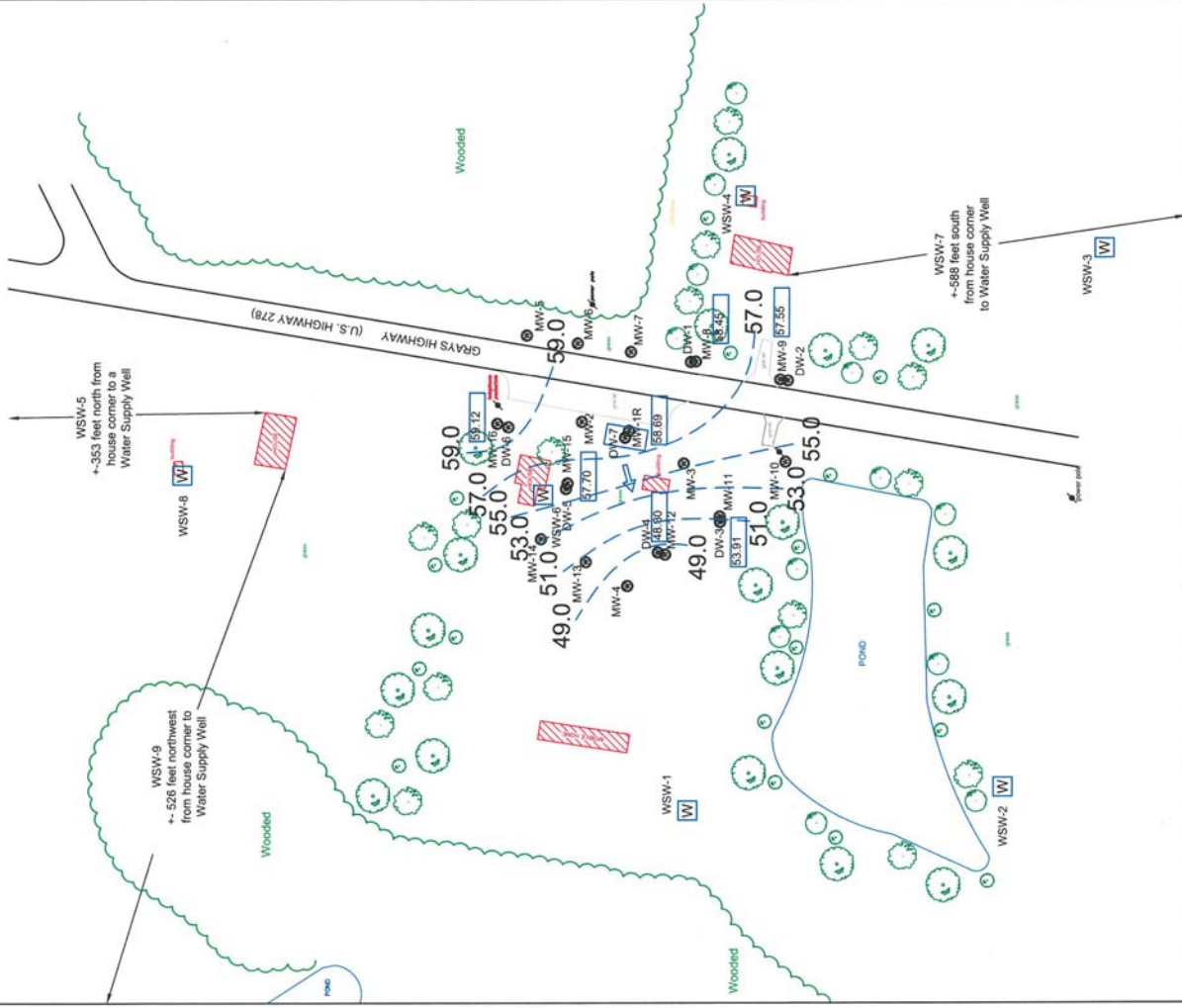
- UST Basin
- Building
- Monitoring Well
- Water Supply Well
- Potentiometric Surface (Est)
- Groundwater Flow Direction

GRAPHIC SCALE
0 40 80 160
(In Feet)

Project No.: 15.103
Client: ISR
Contract No.: 5/4/12
Revision: 0
Scale: 0
Date: 5/4/12
Drawn by: HDO
Checked by: HDO

Prepared by: CRAWFORD ENVIRONMENTAL SERVICES
104 Corporate Blvd., Suite 412
Wingate, NC 28394
803.708.4130 (PA)
188556

Monitor Well	Well Depth (ft)	Screened Interval	Top of Casing (ft)	Date Installed	Date Developed	Depth to Product		Product Elevation (ft)	Conductivity (µmhos/cm)	
						Product Water (ft)	Water (ft)			
DW-1	40	35	40	70.85	4/10/2012	4/13/2012	0	12.50	0	58.45
DW-2	40	35	40	70.89	4/10/2012	4/13/2012	0	13.34	0	57.55
DW-3	40	35	40	67.2	4/10/2012	4/13/2012	0	13.29	0	53.91
DW-4	38	33	38	70.02	4/10/2012	4/13/2012	0	12.52	0	48.39
DW-5	38	33	38	71.41	4/10/2012	4/13/2012	0	12.29	0	59.12
DW-6	36	31	36	69.82	4/10/2012	4/13/2012	0	11.13	0	58.89
DW-7	36	31	36	69.82	4/10/2012	4/13/2012	0	11.13	0	58.89



Notes
 1. Diagram based on RLS Survey, Aerial Photographs, GE records and CES field notes

Legend

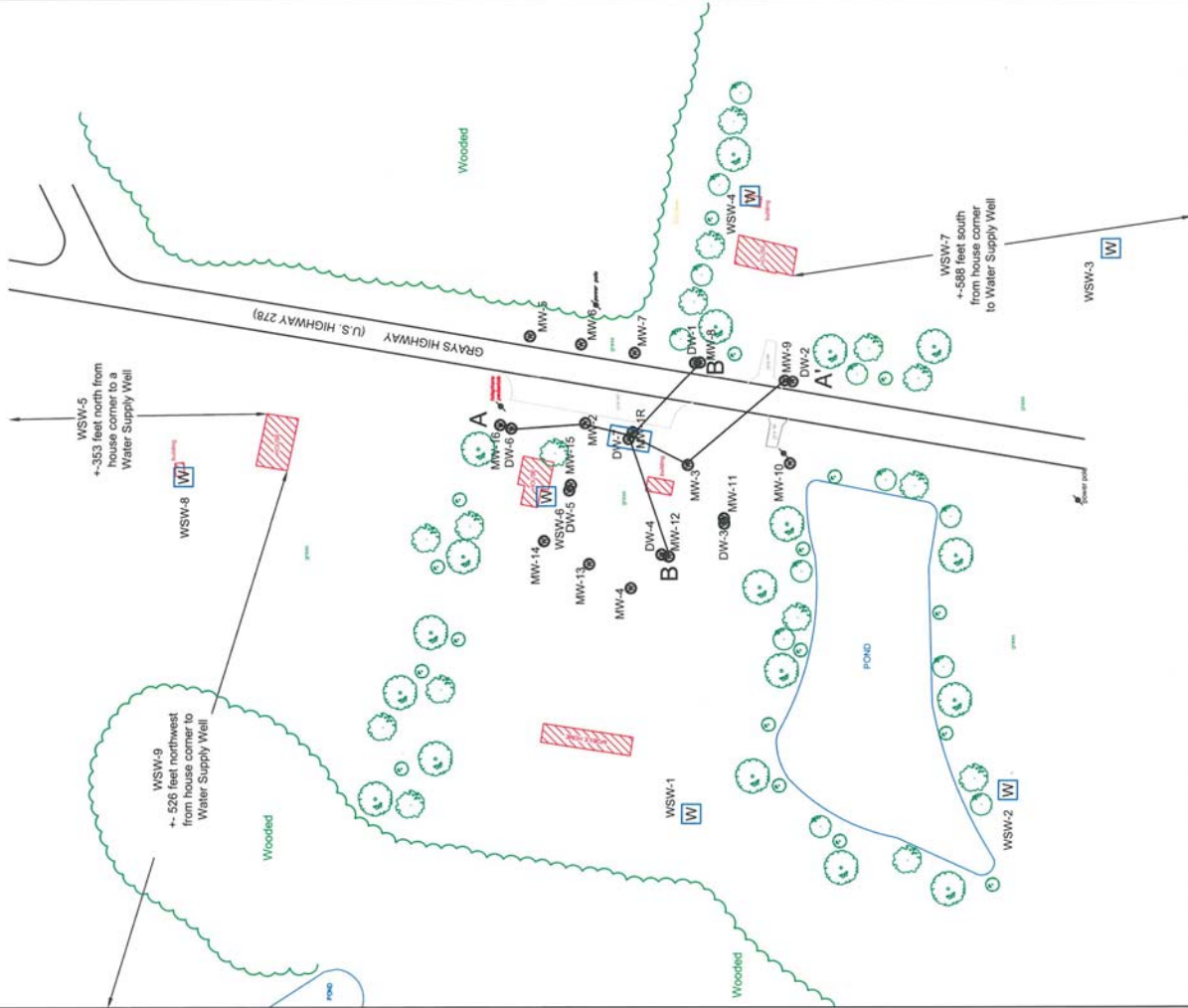
- UST Basin
- Building
- Monitoring Well
- Water Supply Well
- Potentiometric Surface (Est)
- Groundwater Flow Direction

GRAPHIC SCALE
 0 40 80 160
 (In Feet)

Figure 5B Potentiometric Surface : Deep
 Steady Simmons
 16601 Grays Highway
 Early Branch, SC 29916

Project No: 15.103
 Date: 5/4/12
 Checked By: HDO
 Drawn By: ISR
 Project Manager: ISR
 Client: CRAWFORD ENVIRONMENTAL SERVICES
 154 Corporate Blvd, Suite 412
 Wallingford, CT 06495
 860-708-4120 (V)
 860-708-4120 (F)

18856



Notes
 1. Diagram based RLS Survey, Aerial Photograph, GS records and OCS field notes

Legend

	UST Basin
	Building
	Monitoring Well
	Water Supply Well
	Below RBSL

GRAPHIC SCALE
 0 40 80 160
 (In Feet)

Figure 6A
Cross-section Reference Map
 Steady Simmons
 16661 Grays Highway
 Early Branch, SC 29916

Project No.	15.103
Issue No.	5/4/12
Revision	0
Client	154 Corporate Blvd, Suite 412 Wade, Carolina, SC 29001
Contract No.	803-705-4130 (P/L)
Project ID	18856

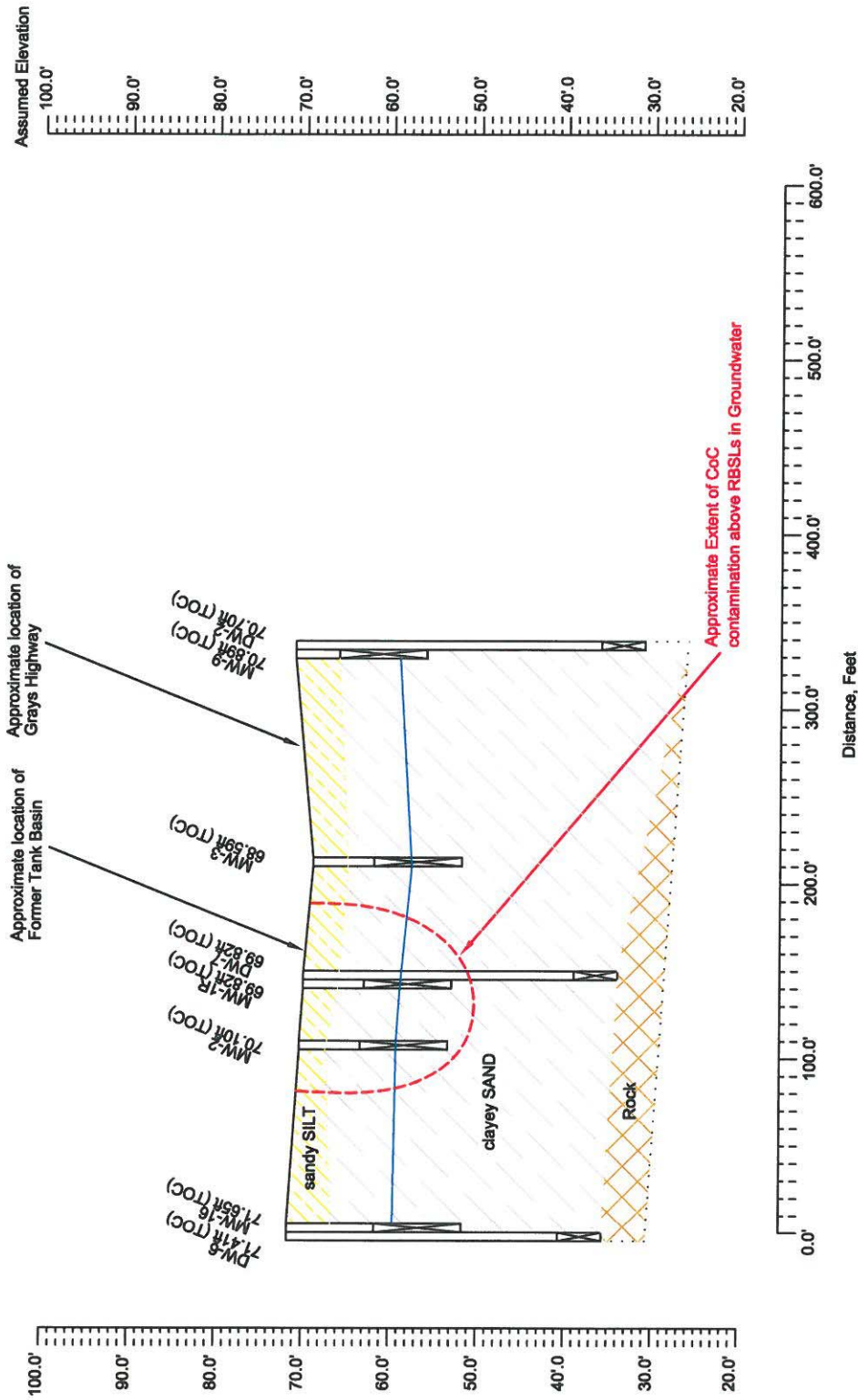
CRAWFORD ENVIRONMENTAL SERVICES

Project Manager: JSR
 Designer: JSR
 Checked By: HDO

A

A'

- Characteristics**
- 5-10 feet
clayey SAND (sandy loam)
73.5% SAND, 20.4% CLAY
k=0.069 ft/day
i=0.015 ft/ft
n=0.45
Vs= 0.839 ft/yr
 - 35-40 feet
clayey SAND (loamy sand)
75.7% SAND, 17.5 % CLAY
k=0.158 ft/day
i=0.06 ft/ft
n=0.45
Vs= 7.68 ft/yr



RBSL = Risk Based Screening Level

EXPLANATION

Groundwater Elevation

Tier II Assessment Report

DR: JSR
 CK: HDO
 SCALE: AS SHOWN
 CES PROJ. NO. 15.102

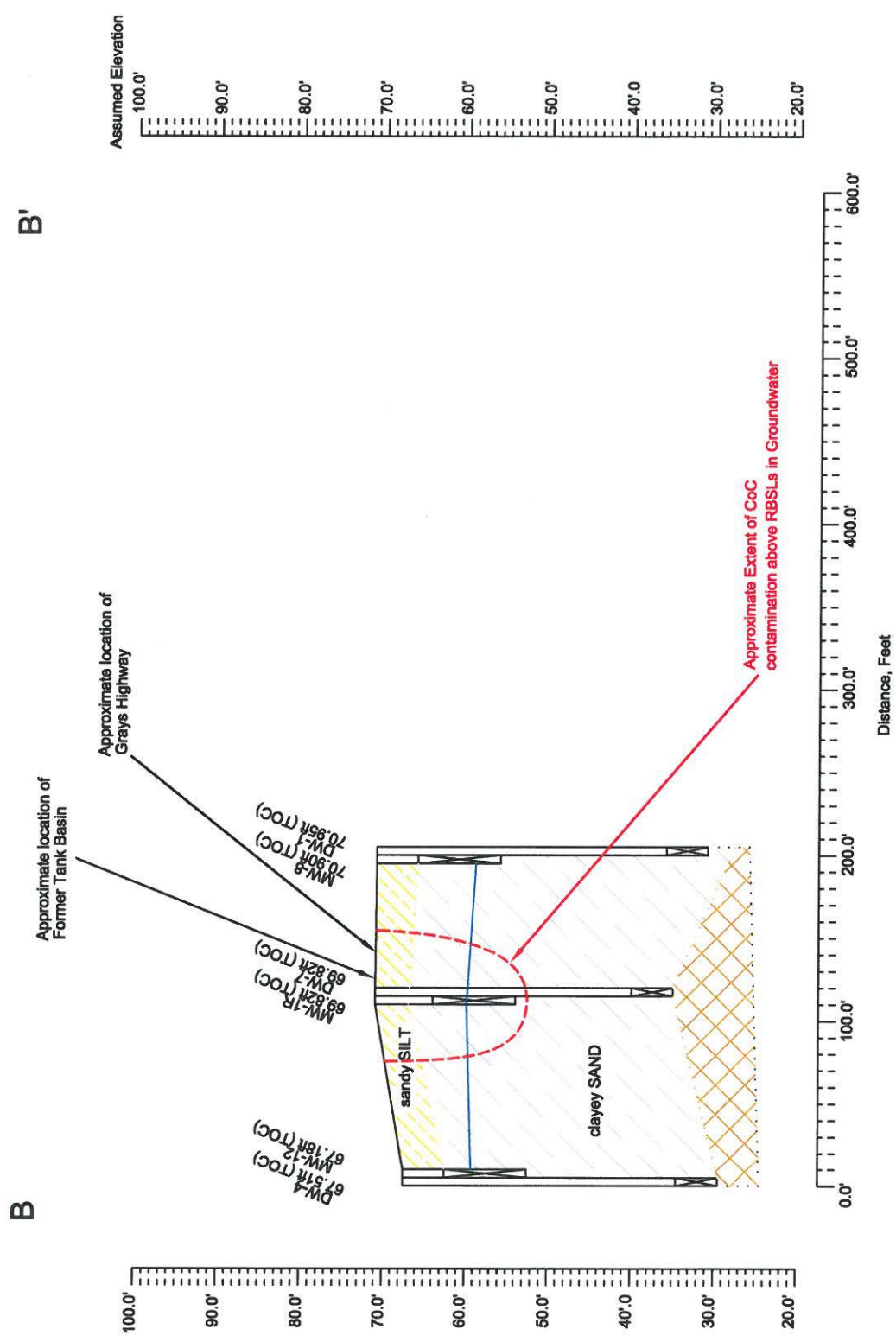


104 Corporate Blvd.
 Suite 412
 West Columbia, SC 29210
 803-708-0079 (ph)
 803-708-6137 (fax)

FIGURE TITLE
 Cross-Section A - A'
 Steady Simmonds
 16661 Grays Highway
 Early Branch, SC 29916
 Site ID: 16856

REVISION NUMBER
 0
 DATE
 4/27/2008

Figure 6B



- Characteristics**
- 5-10 feet clayey SAND (sandy loam) 73.5% SAND, 20.4% CLAY
 - k=0.069 ft/day
 - i=0.015 ft/ft
 - n=0.45
 - Ve= 0.839 ft/yr
 - 35-40 feet clayey SAND (loamy sand) 75.7% SAND, 17.5 % CLAY
 - k=0.158 ft/day
 - i=0.06 ft/ft
 - n=0.45
 - Ve= 7.68 ft/yr

RBSL = Risk Based Screening Level

EXPLANATION

Groundwater Elevation

Tier II Assessment Report

DR: JSR	DATE
CK: HDO	BY
SCALE: AS SHOWN	DATE
CES PROJ. NO. 15.102	DATE

CRAWFORD ENVIRONMENTAL SERVICES

104 Corporate Blvd.
Suite 412
West Columbia, SC 29210
803-708-0079 (ph)
803-708-8137 (fax)

Cross-Section B-B'
Steady Simmons
16661 Grays Highway
Early Branch, SC 29916
Site ID: 18856

Figure 6C

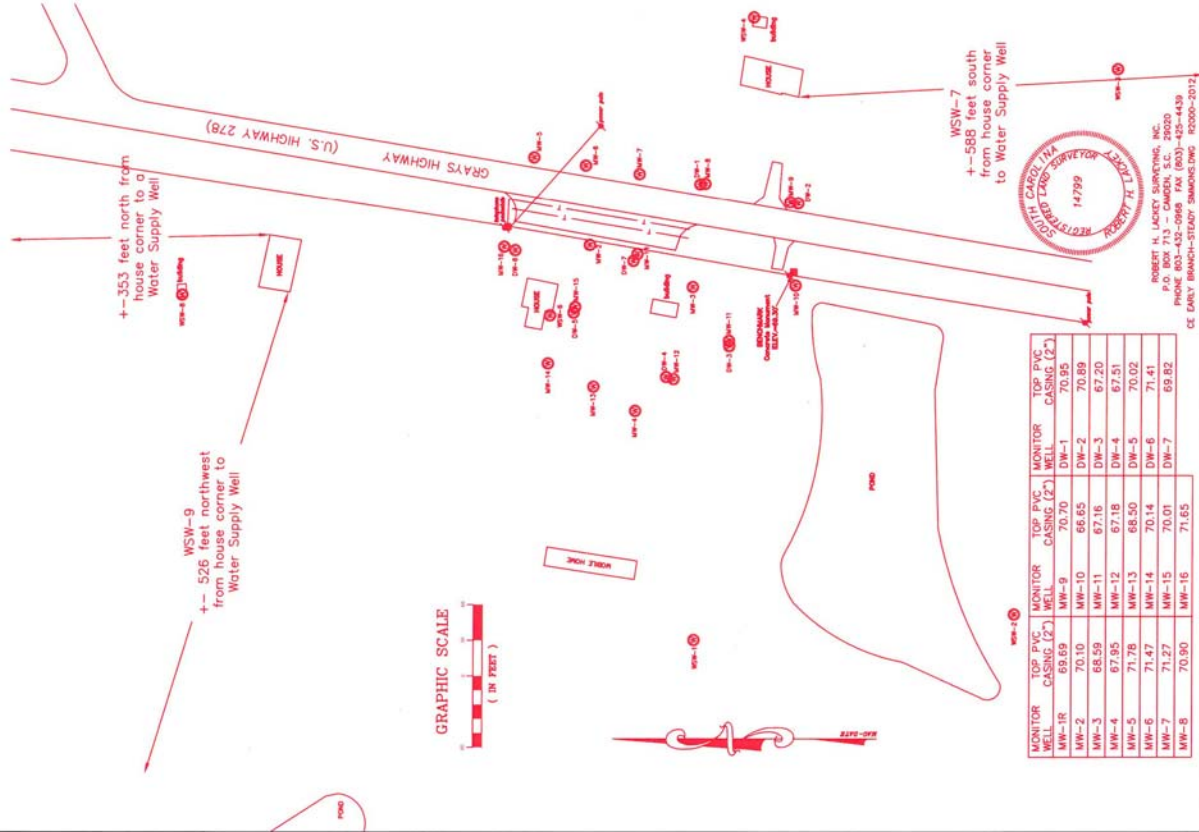
REV 0
4/27/2008

APPENDIX A
Site Facility Base Map

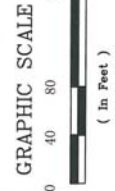
STEADY SIMMONS
16661 GRAYS HIGHWAY
EARLY BRANCH, SC



SITE MAP
Prepared for
CRAWFORD
ENVIRONMENTAL
SERVICES
May 2, 2012



Notes:
1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes



Legend

Figure A
Comprehensive Survey
Steady Simmons
16661 Gray Highway
Early Branch, SC 29916

Project No: 15.103
Date: 5/4/12
Drawn by: JSR
Checked by: HDO
Scale: 0
Drawing No: 18856

Project Manager: JSR
Client: JSR
Contractor: HDO

CRAWFORD ENVIRONMENTAL SERVICES
151 Corporate Blvd, Suite 412
Vanderbilt, SC 29571
803-708-4070 (ph)
803-708-4139 (fx)

APPENDIX B

Laboratory Data Reports, Chain of Custodies and Field Data Information Sheets

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Page 1 of 16

Date: Friday, April 13, 2012

Field Personnel: J. Reynolds, T. Allred, and B. Scott

General Weather Conditions: Clear and Sunny

Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter

Serial #: SENSEION 156 8328-266

pH= 4.0

pH= 7.0

pH=10.0

Conductivity Meter

Serial #: Same

Standard 505

Standard

Standard

Chain of Custody

Meters calibrated on

April 13, 2012 @ 6:45

Facility Name: Steady Simmons

UST Permit #: 18856

Water Supply Well

Monitoring Well MW-1R

Public = inches

Private 2 in

Monitoring Well Diameter (D):

Conversion factor (C): $31.4 \times (D/2)^2$

for a 2 inch well C= 0.163

for a 4 inch well C= 0.652

Depth to Product (DtP)

Depth to Ground Water (DGW) n/a

Total Well Depth (TWD) 11.12

Length of Water Column (LWC = TWD-DGW) 16.59

5.47

1 Casing Volume (CV = LWC x C) = 5.47 X 0.163 = 0.89

3 Casing Volumes (3 x CV) = 2.67 Gallons

Total Volume Purged Before Sampling 2.7 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		0.89	1.78	2.67		
Time (military)	1350	1351	1354	1356		
pH (s.u.)	8.67	8.78	8.80	8.80		
Specific Conductivity. (µmhos/cm)	79	76	76	81		
Water Temperature (°C)	20.6	21.0	21.0	22.0		
Turbidity (NTU)	11	96	337	41		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	0.8	slight

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Date: Friday, April 13, 2012
Field Personnel: J. Reynolds, T. Allred, and B. Scott
General Weather Conditions: Clear and Sunny
Ambient Air Temperature: 24 (°C)
Quality Assurance
pH meter
Serial #: SenseION 156 8328-266
pH= 4.0 4
pH= 7.0 7
pH=10.0
Conductivity Meter
Serial #: Same
Standard 505
Standard
Standard
Chain of Custody
 Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons
UST Permit #: 18856
Water Supply Well
Monitoring Well MW-1R
 Public = inches Private
 feet = 0.16 ft = 2 in
Monitoring Well Diameter (D):
Conversion factor (C): 31.4 X (D/2)²
 for a 2 inch well C= 0.163
 for a 4 inch well C= 0.652
Depth to Product (DtP) n/a
Depth to Ground Water (DGW) 11.12
Total Well Depth (TWD) 16.59
Length of Water Column (LWC = TWD-DGW) 5.47
1 Casing Volume (CV = LWC x C) = 5.47 X 0.163 = 0.89
3 Casing Volumes (3 x CV) = 2.67 Gallons
Total Volume Purged Before Sampling 2.7 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		0.89	1.78	2.67		
Time (military)	1350	1351	1354	1356		
pH (s.u.)	8.67	8.78	8.80	8.80		
Specific Conductivity. (µmhos/cm)	79	76	76	81		
Water Temperature (°C)	20.6	21.0	21.0	22.0		
Turbidity (NTU)	11	96	337	41		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks: Bailed Dry after 4th set. Sampled

D.O.	Odor
0.8	slight

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Date: Friday, April 13, 2012
Field Personnel: J. Reynolds, T. Allred, and B. Scott
General Weather Conditions: Clear and Sunny
Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter
Serial #: SenseION 156 8328-266
pH= 4.0
pH= 7.0
pH= 10.0

Conductivity Meter
Serial #: Same
Standard 505
Standard
Standard

Chain of Custody

Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons
UST Permit #: 18856
Water Supply Well
Monitoring Well MW-2
Public = inches
Private 2 in
feet = 0.16 ft
for a 2 inch well C= 0.163
for a 4 inch well C= 0.652
Monitoring Well Diameter (D):
Conversion factor (C): 31.4 X (D/2)²
Depth to Product (D&P) n/a
Depth to Ground Water (DGW) 11.13
Total Well Depth (TWD) 16.57
Length of Water Column (LWC = TWD-DGW) 5.44
1 Casing Volume (CV = LWC x C) = 5.44 X 0.163 = 0.89
3 Casing Volumes (3 x CV) = 2.66 Gallons
Total Volume Purged Before Sampling 2.7 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		0.89	1.77	2.66		
Time (military)	1334	1335	1337	1339		
pH (s.u.)	7.86	7.97	8.03	8.12		
Specific Conductivity (µmhos/cm)	104	96	91	90		
Water Temperature (°C)	20.8	21.6	22.6	23.5		
Turbidity (NTU)	27	62	116	73		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	2.00	slight

Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management

CES Ver. 1.0

Date: Friday, April 13, 2012

Field Personnel: J. Reynolds, T. Allred, and B. Scott

General Weather Conditions: Clear and Sunny

Ambient Air Temperature: 24 (°C)

Quality Assurance

Conductivity Meter

pH meter
 Serial #: SenselON 156 8328-266
 pH= 4.0
 pH= 7.0
 pH=10.0

Chain of Custody

Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons

UST Permit #: 18656

Water Supply Well

Monitoring Well MW-3

Public

feet = inches

2 in

Monitoring Well Diameter (D):

0.16 ft

for a 2 inch well C= 0.163

for a 4 inch well C= 0.652

Conversion factor (C): $31.4 \times (D/2)^2$

Depth to Product (DtP) n/a

Depth to Ground Water (DGW) 11.32

Total Well Depth (TWD) 16.77

Length of Water Column (LWC = TWD-DGW) 5.45

1 Casing Volume (CV = LWC x C) = 5.45 X 0.163 = 0.89

3 Casing Volumes (3 x CV) = 2.67 Gallons

Total Volume Purged Before Sampling 2.7 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		0.89	1.78	2.67		
Time (military)	1316	1319	1321	1324		
pH (s.u.)	6.19	6.34	6.25	6.23		
Specific Conductivity (µmhos/cm)	82	55	55	56		
Water Temperature (°C)	20.4	21.0	21.5	21.5		
Turbidity (NTU)	29	93	330	26		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	2.3	slight

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Date: Friday, April 13, 2012
 Field Personnel: J. Reynolds, T. Allred, and B. Scott
 General Weather Conditions: Clear and Sunny
 Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter
 Serial #: SenseION 156 8328-266
 pH= 4.0
 pH= 7.0
 pH=10.0

Conductivity Meter
 Serial #: Same
 Standard 505
 Standard
 Standard

Chain of Custody

Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons
 UST Permit #: 18856
 Water Supply Well
 Monitoring Well MW-4
 Public Private
 feet = inches
 0.16 ft = 2 in
 Conversion factor (C): $31.4 \times (D/2)^2$
 for a 2 inch well C= 0.163
 for a 4 inch well C= 0.652
 n/a
 Depth to Product (DIP) 9.32
 Depth to Ground Water (DGW) 16.83
 Total Well Depth (TWD) 7.51
 Length of Water Column (LWC = TWD-DGW)
 1 Casing Volume (CV = LWC x C) = 7.51 X 0.163 = 1.22
 3 Casing Volumes (3 x CV) = 3.67 Gallons
 Total Volume Purged Before Sampling 3.7 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		1.22	2.45	3.67		
Time (military)	1311	1313	1314	1316		
pH (s.u.)	7.66	7.47	7.46	7.39		
Specific Conductivity. (µmhos/cm)	65	71	71	69		
Water Temperature (°C)	19.5	19.5	20.1	20.2		
Turbidity (NTU)	13	84	244	17		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

D.O.	3	Odor	None
------	---	------	------

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Page 5 of 16

Date: Friday, April 13, 2012

Field Personnel: J. Reynolds, T. Allred, and B. Scott

General Weather Conditions: Clear and Sunny

Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter

Serial #: SenseION 156 8328-266

pH= 4.0

pH= 7.0

pH=10.0

Conductivity Meter

Serial #: Same

Standard 505

Standard

Standard

Chain of Custody

Meters calibrated on

April 13, 2012 @ 6:45

Facility Name: Steady Simmons

UST Permit #: 18856

Water Supply Well

Monitoring Well MW-5

Public

feet = 0.16 ft

inches = 2 in

Monitoring Well Diameter (D):

Conversion factor (C): $31.4 \times (D/2)^2$

for a 2 inch well C= 0.163

for a 4 inch well C= 0.652

Depth to Product (DfP) n/a

Depth to Ground Water (DGW) 12.51

Total Well Depth (TWD) 15.11

Length of Water Column (LWC = TWD-DGW) 2.6

1 Casing Volume (CV = LWC x C) = 2.6 X 0.163 = 0.42

3 Casing Volumes (3 x CV) = 1.27 Gallons

Total Volume Purged Before Sampling

Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		0.42	0.85			
Time (military)	1034	1035	1036			
pH (s.u.)	8.22	8.12	8.13			
Specific Conductivity (µmhos/cm)	79	67	69			
Water Temperature (°C)	19.9	20.2	21.1			
Turbidity (NTU)	31	108	194			
PID Readings (if required)	N/A	N/A	N/A			

Remarks:

Bailed Dry after 2nd set; Sampled

D.O.

2.9

Odor

None

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

<p>Date: Friday, April 13, 2012</p> <p>Field Personnel: J. Reynolds, T. Allred, and B. Scott</p> <p>General Weather Conditions: Clear and Sunny</p> <p>Ambient Air Temperature: 24 (°C)</p> <p>pH meter</p> <p>Serial #: SenseON 156 8328-266</p> <p>pH= 4.0</p> <p>pH= 7.0</p> <p>pH=10.0</p>	<p>Facility Name: Steady Simmons</p> <p>UST Permit #: 18856</p> <p>Water Supply Well</p> <p>Monitoring Well MW-6</p> <p>feet = inches</p> <p>0.16 ft = 2 in</p> <p>Monitoring Well Public</p> <p>for a 2 inch well C= 0.163</p> <p>for a 4 inch well C= 0.652</p> <p>n/a</p> <p>12.89</p> <p>15.26</p> <p>2.37</p>
<p>Quality Assurance</p> <p>Conductivity Meter</p> <p>Serial #: Same</p> <p>Standard 505</p> <p>Standard</p> <p>Standard</p> <p>Chain of Custody</p> <p>Meters calibrated on</p> <p>April 13, 2012 @ 6:45</p>	<p>Conversion factor (C): $31.4 \times (D/2)^2$</p> <p>Depth to Product (DIP)</p> <p>Depth to Ground Water (DGW)</p> <p>Total Well Depth (TWD)</p> <p>Length of Water Column (LWC = TWD-DGW)</p> <p>1 Casing Volume (CV = LWC x C) = 2.37 X 0.163 = 0.39</p> <p>3 Casing Volumes (3 x CV) = 1.16 Gallons</p> <p>Total Volume Purged Before Sampling Gallons</p>

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		0.39	0.77			
Time (military)	1047	1049	1050			
pH (s.u.)	8.78	8.59	8.60			
Specific Conductivity. (µmhos/cm)	98	96	104			
Water Temperature (°C)	19.8	20.2	20.6			
Turbidity (NTU)	31	36	302			
PID Readings (if required)	N/A	N/A	N/A			

Remarks:

Bailed Dry after 2nd set; Sampled	D.O.	Odor
	0.8	None

Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management

CES Ver. 1.0

Date: Friday, April 13, 2012

Field Personnel: J. Reynolds, T. Allred, and B. Scott

General Weather Conditions: Clear and Sunny

Ambient Air Temperature: 24 (°C)

Quality Assurance

Conductivity Meter

pH meter
 Serial #: SenseION 156 8328-266
 pH= 4.0
 pH= 7.0
 pH=10.0

Chain of Custody

Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons
 UST Permit #: 18856
 Water Supply Well

Monitoring Well MW-7
 Public = inches
 Private 2 in

Monitoring Well Diameter (D):

Conversion factor (C): $31.4 \times (D/2)^2$
 for a 2 inch well C= 0.163
 for a 4 inch well C= 0.652

Depth to Product (DfP) n/a

Depth to Ground Water (DGW) 12.46

Total Well Depth (TWD) 15.17

Length of Water Column (LWC = TWD-DGW) 2.71

1 Casing Volume (CV = LWC x C) = 2.71 X 0.163 = 0.44

3 Casing Volumes (3 x CV) = 1.33 Gallons

Total Volume Purged Before Sampling Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		0.44	0.88			
Time (military)	1054	1056	1057			
pH (s.u.)	8.32	8.39	8.32			
Specific Conductivity (µmhos/cm)	78	92	101			
Water Temperature (°C)	19.8	20.0	20.9			
Turbidity (NTU)	19	87	320			
PID Readings (if required)	N/A	N/A	N/A			

Remarks:

Bailed Dry after 2nd set; Sampled

D.O. 1.1
 Odor None

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Date: Friday, April 13, 2012
Field Personnel: J. Reynolds, T. Allred, and B. Scott
General Weather Conditions: Clear and Sunny
Ambient Air Temperature: 24 (°C)

pH meter
Serial #: SenseION 156 8328-266
pH= 4.0
pH= 7.0
pH= 10.0

Quality Assurance
Conductivity Meter
Serial #: Same
Standard 505
Standard
Standard

Chain of Custody
 Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons
UST Permit #: 18856
Water Supply Well
Monitoring Well MW-8
 Public = inches Private = 2 in
 feet = 0.16 ft
Monitoring Well Diameter (D): for a 2 inch well C= 0.163
 for a 4 inch well C= 0.652
Conversion factor (C): 31.4 X (D/2)²
Depth to Product (DtP) n/a
Depth to Ground Water (DGW) 12.05
Total Well Depth (TWD) 15.06
Length of Water Column (LWC = TWD-DGW) 3.01

1 Casing Volume (CV = LWC x C) = 3.01 X 0.163 = 0.49
3 Casing Volumes (3 x CV) = 1.47 Gallons
Total Volume Purged Before Sampling 1.5 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		0.49	0.98	1.47		
Time (military)	1110	1111	1113	1115		
pH (s.u.)	8.30	8.24	8.27	8.24		
Specific Conductivity (µmhos/cm)	61	48	52	50		
Water Temperature (°C)	19.8	20.1	20.3	21.1		
Turbidity (NTU)	31	88	203	63		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	2.2	None

Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management

CES Ver. 1.0

Date: Friday, April 13, 2012
Field Personnel: J. Reynolds, T. Allred, and B. Scott
General Weather Conditions: Clear and Sunny
Ambient Air Temperature: 24 (°C)
Quality Assurance
pH meter
Serial #: SenseION 156 8328-266
pH= 4.0
pH= 7.0
pH= 10.0
Conductivity Meter
Serial #: Same
Standard 505
Standard
Standard
Chain of Custody
 Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons
UST Permit #: 18856
Water Supply Well
Monitoring Well MW-9
 Public = inches Private 2 in
 feet = 0.16 ft
Monitoring Well Diameter (D):
Conversion factor (C): 31.4 X (D/2)²
 for a 2 inch well C= 0.163
 for a 4 inch well C= 0.652
Depth to Product (DfP) n/a
Depth to Ground Water (DGW) 12
Total Well Depth (TWD) 15.33
Length of Water Column (LWC = TWD-DGW) 3.33
1 Casing Volume (CV = LWC x C) = 3.33 X 0.163 = 0.54
3 Casing Volumes (3 x CV) = 1.63 Gallons
Total Volume Purged Before Sampling 1.6 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		0.54	1.09	1.63		
Time (military)	1153	1156	1157	1159		
pH (s.u.)	7.06	6.90	6.96	6.89		
Specific Conductivity. (µmhos/cm)	69	40	39	42		
Water Temperature (°C)	21.0	21.6	22.0	22.8		
Turbidity (NTU)	25	73	158	41		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	2.6	None

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Date: Friday, April 13, 2012

Field Personnel: J. Reynolds, T. Allred, and B. Scott

General Weather Conditions: Clear and Sunny

Ambient Air Temperature: 24 (°C)

Quality Assurance

Conductivity Meter

Serial #: Same

Standard: 505

Standard

Standard

pH meter

Serial #: SenseION 156 8328-266

pH= 4.0

pH= 7.0

pH=10.0

Chain of Custody

Meters calibrated on

April 13, 2012 @ 6:45

Facility Name: Steady Simmons

UST Permit #: 18856

Water Supply Well

Monitoring Well

Public

feet = 0.16 ft

inches = 2 in

MW-10

Private

Monitoring Well Diameter (D):

Conversion factor (C): $31.4 \times (D/2)^2$

for a 2 inch well C= 0.163

for a 4 inch well C= 0.652

Depth to Product (DTP)

n/a

Depth to Ground Water (DGW)

7.35

Total Well Depth (TWD)

15.14

Length of Water Column (LWC = TWD-DGW)

7.79

1 Casing Volume (CV = LWC x C) =

7.79 X 0.163 = 1.27

3 Casing Volumes (3 x CV) =

3.81 Gallons

Total Volume Purged Before Sampling

3.8 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		1.27	2.54	3.81		
Time (military)	1116	1118	1121	1124		
pH (s.u.)	6.33	6.24	6.26	6.20		
Specific Conductivity (µmhos/cm)	67	73	66	61		
Water Temperature (°C)	20.4	21.0	21.0	21.5		
Turbidity (NTU)	11	108	299	30		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	2.9	None

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Date: Friday, April 13, 2012

Field Personnel: J. Reynolds, T. Allred, and B. Scott

General Weather Conditions: Clear and Sunny

Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter
 Serial #: SenselON 156 8328-266
 pH= 4.0
 pH= 7.0
 pH=10.0

Conductivity Meter
 Serial #: Same
 Standard 505
 Standard

Chain of Custody
 Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons
 UST Permit #: 18856
 Water Supply Well
 Monitoring Well MW-12
 Public = inches
 Private = 2 in

Monitoring Well Diameter (D): 0.16 ft
 Conversion factor (C): $31.4 \times (D/2)^2$ for a 2 inch well C= 0.163
 for a 4 inch well C= 0.652

Depth to Product (DtP) n/a
 Depth to Ground Water (DGW) 8.29
 Total Well Depth (TWD) 15.03
 Length of Water Column (LWC = TWD-DGW) 6.74

1 Casing Volume (CV = LWC x C) = 6.74 X 0.163 = 1.10
 3 Casing Volumes (3 x CV) = 3.30 Gallons

Total Volume Purged Before Sampling Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		1.10	2.20			
Time (military)	1159	1201	1203			
pH (s.u.)	6.36	6.27	6.34			
Specific Conductivity. (µmhos/cm)	85	104	101			
Water Temperature (°C)	20.2	20.5	21.1			
Turbidity (NTU)	33	91	328			
PID Readings (if required)	N/A	N/A	N/A			

Remarks: Bailed Dry after 2nd set; Sampled

D.O.	0.6
Odor	None

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Date: Friday, April 13, 2012

Field Personnel: J. Reynolds, T. Allred, and B. Scott

General Weather Conditions: Clear and Sunny

Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter
 Serial #: SENSEION 156 8328-266
 pH= 4.0
 pH= 7.0
 pH=10.0

Conductivity Meter
 Serial #: Same
 Standard 505
 Standard
 Standard

Chain of Custody

Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons
 UST Permit #: 18856
 Water Supply Well
 Monitoring Well MW-13
 Public = inches
 Private = 2 in

Monitoring Well Diameter (D): 0.16 ft
 Conversion factor (C): 31.4 X (D/2)²
 for a 2 inch well C= 0.163
 for a 4 inch well C= 0.652

Depth to Product (D&P) n/a
 Depth to Ground Water (DGW) 9.82
 Total Well Depth (TWD) 15.21
 Length of Water Column (LWC = TWD-DGW) 5.39

1 Casing Volume (CV = LWC x C) = 5.39 X 0.163 = 0.88
 3 Casing Volumes (3 x CV) = 2.64 Gallons

Total Volume Purged Before Sampling 2.6 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		0.88	1.76	2.64		
Time (military)	1214	1217	1220	1223		
pH (s.u.)	8.17	8.21	8.29	8.20		
Specific Conductivity. (µmhos/cm)	85	111	116	109		
Water Temperature (°C)	20.2	20.6	20.8	21.0		
Turbidity (NTU)	20	55	240	53		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	2.6	None

Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management

CES Ver. 1.0

Date: Friday, April 13, 2012

Field Personnel: J. Reynolds, T. Allred, and B. Scott

General Weather Conditions: Clear and Sunny

Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter

Serial #: SenseION 156 8328-266

pH= 4.0

pH= 7.0

pH=10.0

Conductivity Meter

Serial #: Same

Standard 505

Standard

Standard

Chain of Custody

Meters calibrated on

April 13, 2012 @ 6:45

Facility Name: Steady Simmons

UST Permit #: 18856

Water Supply Well

Monitoring Well

Public

feet = 0.16 ft

inches = 2 in

MW-14

Private

Monitoring Well Diameter (D):

Conversion factor (C): $31.4 \times (D/2)^2$

for a 2 inch well C= 0.163

for a 4 inch well C= 0.652

Depth to Product (DfP)

Depth to Ground Water (DGW)

Total Well Depth (TWD)

Length of Water Column (LWC = TWD-DGW)

1 Casing Volume (CV = LWC x C) = 4.05 X

3 Casing Volumes (3 x CV) = 1.98 Gallons

0.163 = 0.66 Gallons

Total Volume Purged Before Sampling

Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		0.66	1.32			
Time (military)	1241	1244	1247			
pH (s.u.)	6.88	6.74	6.80			
Specific Conductivity (µmhos/cm)	89	65	62			
Water Temperature (°C)	21.3	21.9	22.0			
Turbidity (NTU)	3	50	336			
PID Readings (if required)	N/A	N/A	N/A			

Remarks: Bailed Dry after 2nd set; Sampled

D.O.	1
Odor	None

Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management

CES Ver. 1.0

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Date: Friday, April 13, 2012
Field Personnel: J. Reynolds, T. Allred, and B. Scott
General Weather Conditions: Clear and Sunny
Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter
Serial #: SenseION 156 8328-266
pH= 4.0
pH= 7.0
pH= 10.0

Conductivity Meter
Serial #: Same
Standard 505
Standard
Standard

Chain of Custody
Meters calibrated on
April 13, 2012 @ 6:45

Facility Name: Steady Simmons
UST Permit #: 18856
Water Supply Well
Monitoring Well MW-15
Public = inches
Private 2 in
Monitoring Well Diameter (D): 0.16 ft
Conversion factor (C): $31.4 \times (D/2)^2$ for a 2 inch well **C= 0.163**
for a 4 inch well **C= 0.652**
Depth to Product (DfP) n/a
Depth to Ground Water (DGW) 11
Total Well Depth (TWD) 19.78
Length of Water Column (LWC = TWD-DGW) 8.78
1 Casing Volume (CV = LWC x C) = 8.78 X 0.163 = 1.43
3 Casing Volumes (3 x CV) = 4.29 Gallons

Total Volume Purged Before Sampling
Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		1.43	2.86			
Time (military)	1257	1300	1301			
pH (s.u.)	7.70	7.75	7.84			
Specific Conductivity. (µmhos/cm)	83	54	59			
Water Temperature (°C)	21.0	21.7	22.5			
Turbidity (NTU)	25	82	168			
PID Readings (if required)	N/A	N/A	N/A			

Remarks:

Bailed Dry after 2nd set; Sampled

D.O.		Odor	
2.2		None	

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

Date: Friday, April 13, 2012
Field Personnel: J. Reynolds, T. Allred, and B. Scott
General Weather Conditions: Clear and Sunny
Ambient Air Temperature: 24 (°C)

pH meter
Serial #: SenseION 156 8328-266
pH= 4.0
pH= 7.0
pH= 10.0

Quality Assurance
Conductivity Meter
Serial #: Same
Standard 505
Standard
Standard

Chain of Custody
 Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons
UST Permit #: 18856
Water Supply Well

Monitoring Well MW-16
 Public
 Private

feet = 0.16 ft = inches
 for a 2 inch well C= 0.163
 for a 4 inch well C= 0.652

Monitoring Well Diameter (D): 2 in
Conversion factor (C): 31.4 X (D/2)²
Depth to Product (D&P) n/a
Depth to Ground Water (DGW) 12.13
Total Well Depth (TWD) 20.11
Length of Water Column (LWC = TWD-DGW) 7.98

1 Casing Volume (CV = LWC x C) = 7.98 X 0.163 = 1.30
3 Casing Volumes (3 x CV) = 3.90 Gallons

Total Volume Purged Before Sampling Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		1.30	2.60			
Time (military)	1353	1356	1357			
pH (s.u.)	8.41	8.25	8.25			
Specific Conductivity (µmhos/cm)	78	90	94			
Water Temperature (°C)	19.3	19.3	20.0			
Turbidity (NTU)	18	74	349			
PID Readings (if required)	N/A	N/A	N/A			

Remarks: Bailed Dry after 2nd set; Sampled

D.O.	
	2.6
Odor	None

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Date: Friday, April 13, 2012
Field Personnel: J. Reynolds, T. Allred, and B. Scott
General Weather Conditions: Clear and Sunny
Ambient Air Temperature: 24 (°C)

pH meter
Serial #: SenseION 156 8328-266
pH= 4.0
pH= 7.0
pH= 10.0

Conductivity Meter
Serial #: Same
Standard 505
Standard
Standard

Quality Assurance

Chain of Custody
Meters calibrated on
April 13, 2012 @ 6:45

Facility Name: Steady Simmons
UST Permit #: 18856
Water Supply Well

Monitoring Well DW-1
Public = inches
Private 2 in

Monitoring Well = 0.16 ft
for a 2 inch well C= 0.163
for a 4 inch well C= 0.652

Conversion factor (C): $31.4 \times (D/2)^2$
Depth to Product (DIP) n/a
Depth to Ground Water (DGW) 12.5
Total Well Depth (TWD) 40.12
Length of Water Column (LWC = TWD-DGW) 27.62

1 Casing Volume (CV = LWC x C) = 27.62 X 0.163 = 4.50
3 Casing Volumes (3 x CV) = 13.51 Gallons

Total Volume Purged Before Sampling 13.5 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		4.50	9.00	13.51		
Time (military)	746	756	805	815		
pH (s.u.)	6.84	6.92	6.97	7.04		
Specific Conductivity. (µmhos/cm)	75	96	87	84		
Water Temperature (°C)	21.2	22.2	22.5	22.7		
Turbidity (NTU)	9	48	143	9		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

D.O.	2.7	Odor	None
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**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Page 2 of 7

Date: Friday, April 13, 2012

Field Personnel: J. Reynolds, T. Allred, and B. Scott

General Weather Conditions: Clear and Sunny

Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter

Serial #: SenseION 156 8328-266

pH= 4.0

pH= 7.0

pH=10.0

Conductivity Meter

Serial #: Same

Standard 505

Standard

Standard

Chain of Custody

Meters calibrated on

April 13, 2012 @ 6:45

Facility Name: Steady Simmons

UST Permit #: 18856

Water Supply Well

Monitoring Well DW-2

Public

feet = inches

0.16 ft = 2 in

for a 2 inch well C= 0.163

for a 4 inch well C= 0.652

n/a

13.34

40.16

Length of Water Column (LWC = TWD-DGW) 26.82

1 Casing Volume (CV = LWC x C) = 26.82 X 0.163 = 4.37

3 Casing Volumes (3 x CV) = 13.11 Gallons

Total Volume Purged Before Sampling 13.1 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		4.37	8.74	13.11		
Time (military)	834	842	848	856		
pH (s.u.)	6.46	6.35	6.39	6.34		
Specific Conductivity (µmhos/cm)	46	70	63	62		
Water Temperature (°C)	19.9	20.1	21.0	22.0		
Turbidity (NTU)	18	63	170	49		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	1.10	None

Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management

CES Ver. 1.0

Page 3 of 7

Date: Friday, April 13, 2012

Field Personnel: J. Reynolds, T. Allred, and B. Scott

General Weather Conditions: Clear and Sunny

Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter

Serial #: SenseION 156 8328-266

pH= 4.0

pH= 7.0

pH=10.0

Conductivity Meter

Serial #: Same

Standard 505

Standard

Standard

Chain of Custody

Meters calibrated on

April 13, 2012 @ 6:45

Facility Name: Steady Simmons

UST Permit #: 18856

Water Supply Well

Monitoring Well DW-3

Public = inches Private 2 in

Monitoring Well Diameter (D):

Conversion factor (C): $31.4 \times (D/2)^2$ for a 2 inch well C= 0.163

for a 4 inch well C= 0.652

Depth to Product (DtP)

Depth to Ground Water (DGW) 13.29

Total Well Depth (TWD) 39.67

Length of Water Column (LWC = TWD-DGW) 26.38

1 Casing Volume (CV = LWC x C) = 26.38 X 0.163 = 4.30

3 Casing Volumes (3 x CV) = 12.90 Gallons

Total Volume Purged Before Sampling 12.9 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		4.30	8.60	12.90		
Time (military)	901	906	914	923		
pH (s.u.)	8.04	7.86	7.78	7.71		
Specific Conductivity (µmhos/cm)	51	36	33	36		
Water Temperature (°C)	19.9	20.1	20.6	21.3		
Turbidity (NTU)	8	92	314	83		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	2.2	None

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

Date: Friday, April 13, 2012
Field Personnel: J. Reynolds, T. Allred, and B. Scott
General Weather Conditions: Clear and Sunny
Ambient Air Temperature: 24 (°C)
Quality Assurance
pH meter
Serial #: SenseION 156 8328-266
pH= 4.0 4
pH= 7.0 7
pH=10.0
Conductivity Meter
Serial #: Same
Standard 505
Standard
Standard
Chain of Custody
 Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons
UST Permit #: 18856
Water Supply Well
Monitoring Well DW-4
 Public = inches Private = 2 in
 feet = 0.16 ft
Monitoring Well Diameter (D):
Conversion factor (C): $31.4 \times (D/2)^2$
 for a 2 inch well C= 0.163
 for a 4 inch well C= 0.652
Depth to Product (DtP) n/a
Depth to Ground Water (DGW) 19.21
Total Well Depth (TWD) 37.88
Length of Water Column (LWC = TWD-DGW) 18.67
1 Casing Volume (CV = LWC x C) = 18.67 X 0.163 = 3.04
3 Casing Volumes (3 x CV) = 9.13 Gallons
Total Volume Purged Before Sampling 9.1 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		3.04	6.09	9.13		
Time (military)	934	942	951	958		
pH (s.u.)	6.07	6.05	6.14	6.19		
Specific Conductivity (µmhos/cm)	59	34	35	33		
Water Temperature (°C)	21.1	22.0	22.4	22.9		
Turbidity (NTU)	8	77	201	68		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	1.7	None

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Date: Friday, April 13, 2012

Field Personnel: J. Reynolds, T. Allred, and B. Scott

General Weather Conditions: Clear and Sunny

Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter Conductivity Meter

Serial #: SenseION 156 8328-266

pH= 4.0 4 Standard

pH= 7.0 7 Standard

pH=10.0 7 Standard

Chain of Custody

Meters calibrated on

April 13, 2012 @ 6:45

Facility Name: Steady Simmons

UST Permit #: 18856

Water Supply Well

Monitoring Well DW-5

Public =

feet = 0.16 ft

inches = 2 in

Private

Monitoring Well Diameter (D):

Conversion factor (C): $31.4 \times (D/2)^2$

for a 2 inch well C= 0.163

for a 4 inch well C= 0.652

n/a

Depth to Product (DtP)

Depth to Ground Water (DGW)

Total Well Depth (TWD)

Length of Water Column (LWC = TWD-DGW)

25.82

1 Casing Volume (CV = LWC x C) =

25.82 X 0.163 = 4.21

3 Casing Volumes (3 x CV) =

12.63 Gallons

Total Volume Purged Before Sampling

12.6 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		4.21	8.42	12.63		
Time (military)	1025	1033	1038	1046		
pH (s.u.)	6.05	6.00	6.08	6.04		
Specific Conductivity. (µmhos/cm)	61	49	53	55		
Water Temperature (°C)	20.4	21.4	22.3	23.0		
Turbidity (NTU)	5	73	204	36		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	2.6	None

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Page 6 of 7

Date: Friday, April 13, 2012
 Field Personnel: J. Reynolds, T. Allred, and B. Scott
 General Weather Conditions: Clear and Sunny
 Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter
 Serial #: SenseION 156 8328-266
 pH= 4.0
 pH= 7.0
 pH=10.0

Conductivity Meter
 Serial #: Same
 Standard 505
 Standard
 Standard

Chain of Custody

Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons
 UST Permit #: 18856
 Water Supply Well
 Monitoring Well DW-6
 Public = inches
 Private = 2 in
 feet = 0.16 ft
 for a 2 inch well C= 0.163
 for a 4 inch well C= 0.652
 n/a
 12.29
 35.94
 23.65
 Length of Water Column (LWC = TWD-DGW)
 1 Casing Volume (CV = LWC x C) = 23.65 X 0.163 = 3.85
 3 Casing Volumes (3 x CV) = 11.56 Gallons
 Total Volume Purged Before Sampling 11.6 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		3.85	7.71	11.56		
Time (military)	1111	1119	1124	1131		
pH (s.u.)	7.39	7.39	7.44	7.43		
Specific Conductivity (µmhos/cm)	89	94	92	87		
Water Temperature (°C)	19.4	19.4	20.3	21.3		
Turbidity (NTU)	27	71	205	47		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	0.9	None

**Field Data Information Sheet for Ground-Water Sampling
Division of Underground Storage Tank Management**

CES Ver. 1.0

Date: Friday, April 13, 2012

Field Personnel: J. Reynolds, T. Allred, and B. Scott

General Weather Conditions: Clear and Sunny

Ambient Air Temperature: 24 (°C)

Quality Assurance

pH meter
 Serial #: SenseION 156 8328-266
 pH= 4.0
 pH= 7.0
 pH=10.0

Conductivity Meter
 Serial #: Same
 Standard 505
 Standard
 Standard

Chain of Custody

Meters calibrated on
 April 13, 2012 @ 6:45

Facility Name: Steady Simmons
 UST Permit #: 18856
 Water Supply Well
 Monitoring Well DW-7
 Public = inches
 Private = 2 in

Monitoring Well Diameter (D): 0.16 ft
 Conversion factor (C): $31.4 \times (D/2)^2$ for a 2 inch well C= 0.163
 for a 4 inch well C= 0.652

Depth to Product (DfP) n/a
 Depth to Ground Water (DGW) 11.13
 Total Well Depth (TWD) 36.11
 Length of Water Column (LWC = TWD-DGW) 24.98

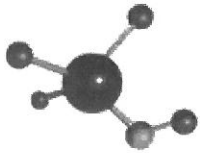
1 Casing Volume (CV = LWC x C) = 24.98 X 0.163 = 4.07 Gallons
 3 Casing Volumes (3 x CV) = 12.22 Gallons

Total Volume Purged Before Sampling 12.2 Gallons

	Initial	1st Volume	2nd Volume	3rd Volume	4th Volume	5th Volume
Cumulative Volume Purged (Gallons)		4.07	8.14	12.22		
Time (military)	1219	1224	1234	1239		
pH (s.u.)	6.68	6.66	6.62	6.71		
Specific Conductivity. (µmhos/cm)	63	85	86	79		
Water Temperature (°C)	20.3	20.8	21.5	21.5		
Turbidity (NTU)	31	61	345	107		
PID Readings (if required)	N/A	N/A	N/A	N/A		

Remarks:

	D.O.	Odor
	2.5	None



ACCESS
ANALYTICAL, INC.

ANALYTICAL REPORT

CLIENT

Crawford Environmental Services
101 Corporate Blvd. Suite 412
West Columbia SC 29196

ATTENTION
Justin Reynolds

PROJECT ID
15.102 Steady Simmons

LABORATORY REPORT NUMBER
1203F53

DATE
March 23, 2012

Primary Data Review By

Kathryn Waters
Project Manager, AES

Secondary Data Review By

Ashley Amick

Project Manager, Access Analytical
aamick@axs-inc.com

PLEASE NOTE:

- Unless otherwise noted, all analysis on this report performed at Analytical Environmental Services Inc. (AES Inc), 3785 Presidential Parkway, Atlanta, GA 30340.
- AES is SCDHEC certified laboratory # 98016, NCDENR certified lab # 562, GA certified lab # FL-E87582, NELAP certified laboratory # E87582
- Local support services for this project are provided by Access Analytical, Inc. Access Analytical is a representative of AES serving client in the SC/NC/GA areas. All questions regarding this report should be directed to your local Access Analytical representative at 803.781.4243 or toll free at 883.315.4243

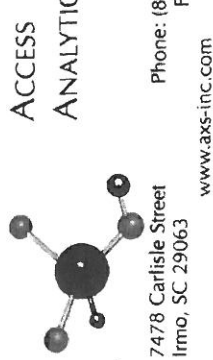
Access Analytical - Chain of Custody Record

Project Work Order # **1203F5**
 Laboratory ID: **ACS**

Access Quote # **1203F5**

LAB USE ONLY
 Sales Order # _____ PO # _____

Company Name: **ACS**
 Report To:
 Address:
 City: State: Zip:
 Phone: Fax:
 Email:



7478 Carlisle Street
 Irmo, SC 29063
 Phone: (803) 781-4243
 Fax: 781-4303
 www.aks-inc.com

Preservative Codes (place corresponding # in block above analysis field):
 0 = None, 1 = HCL, 2 = HNO₃, 3 = H₂SO₄, 4 = NaOH, 5 = Na₂SO₄, 6 = Method 5035 set w/ NaHSO₄, 6 CHOH, 7 = NiCl₂/ZnOAC, 8 = HPO₄.
 Matrix Codes (place corresponding code in matrix column):
 GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)
 Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)
 Container Type: G = Glass, P = Plastic

Notes / Comments
 (if sample is a composite please use space below to note start/finish times & dates)

Sample ID/Description	Date Collected	Time Collected	Type (grab or composite)	Matrix/Program Area (see codes)	TOTAL # of containers	Requested Lab Analysis	
						Preservative (*see codes)	Container Type (*see codes)
GW-10	3/16/12	9:11	G	GW SW 2	2		BREX, NAP, MTR
GW-11		9:26					
GW-12		9:38					
GW-13		9:51					
GW-14		10:04					
GW-15		10:21					
GW-16		10:46					
GW-160		11:21					
GW-17		11:40					
GW-18		11:56					

Turnaround Time: Standard RUSH*
 *Date Required: _____ (For rush work, results emailed/faxed by end of business day on date required)

Project Location: SC NC Other _____ (specify) _____

Relinquished By: *[Signature]* Received By: *[Signature]*

Time (24-Hr): 1655 Date (mm-dd-yy): 3/16/12 Sample Temp. Upon Receipt (°C): 4.6 (N/A)

Time (24-Hr): 1700 Date (mm-dd-yy): 3/16/12 Sample Temp. Upon Receipt (°C): (N/A)

Time (24-Hr): 915 Date (mm-dd-yy): 3-17-12 Sample Temp. Upon Receipt (°C): (N/A)

Time (24-Hr): Date (mm-dd-yy): Sample Temp. Upon Receipt (°C): (N/A)

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services	Client Sample ID: GW-10
Project Name: 15.102 Steady Simmons	Collection Date: 3/16/2012 9:11:00 AM
Lab ID: 1203F53-001	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/22/2012 13:52	JT
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/22/2012 13:52	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/22/2012 13:52	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/22/2012 13:52	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/22/2012 13:52	JT
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/22/2012 13:52	JT
Surr: 4-Bromofluorobenzene	79.6		0	67.4-123	%REC	159287	1	03/22/2012 13:52	JT
Surr: Dibromofluoromethane	113		0	75.5-128	%REC	159287	1	03/22/2012 13:52	JT
Surr: Toluene-d8	96.9		0	70-120	%REC	159287	1	03/22/2012 13:52	JT

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services	Client Sample ID: GW-11
Project Name: 15.102 Steady Simmons	Collection Date: 3/16/2012 9:26:00 AM
Lab ID: 1203F53-002	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/21/2012 19:43	JT
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/21/2012 19:43	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/21/2012 19:43	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/21/2012 19:43	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/21/2012 19:43	JT
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/21/2012 19:43	JT
Surr: 4-Bromofluorobenzene	87.4		0	67.4-123	%REC	159287	1	03/21/2012 19:43	JT
Surr: Dibromofluoromethane	102		0	75.5-128	%REC	159287	1	03/21/2012 19:43	JT
Surr: Toluene-d8	94.4		0	70-120	%REC	159287	1	03/21/2012 19:43	JT

Qualifiers:

* Value exceeds maximum contaminant level	E Estimated value above quantitation range
BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
N Analyte not NELAC certified	> Greater than Result value
B Analyte detected in the associated method blank	< Less than Result value
NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services	Client Sample ID: GW-12
Project Name: 15.102 Steady Simmons	Collection Date: 3/16/2012 9:38:00 AM
Lab ID: 1203F53-003	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/21/2012 20:12	JT
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/21/2012 20:12	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/21/2012 20:12	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/21/2012 20:12	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/21/2012 20:12	JT
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/21/2012 20:12	JT
Surr: 4-Bromofluorobenzene	87.6		0	67.4-123	%REC	159287	1	03/21/2012 20:12	JT
Surr: Dibromofluoromethane	104		0	75.5-128	%REC	159287	1	03/21/2012 20:12	JT
Surr: Toluene-d8	94.2		0	70-120	%REC	159287	1	03/21/2012 20:12	JT

Qualifiers:

* Value exceeds maximum contaminant level	E Estimated value above quantitation range
BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
N Analyte not NELAC certified	> Greater than Result value
B Analyte detected in the associated method blank	< Less than Result value
NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services
Project Name: 15.102 Steady Simmons
Lab ID: 1203F53-004

Client Sample ID: GW-13
Collection Date: 3/16/2012 9:51:00 AM
Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/22/2012 17:54	JT
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/22/2012 17:54	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/22/2012 17:54	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/22/2012 17:54	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/22/2012 17:54	JT
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/22/2012 17:54	JT
Surr: 4-Bromofluorobenzene	81.9		0	67.4-123	%REC	159287	1	03/22/2012 17:54	JT
Surr: Dibromofluoromethane	114		0	75.5-128	%REC	159287	1	03/22/2012 17:54	JT
Surr: Toluene-d8	96.1		0	70-120	%REC	159287	1	03/22/2012 17:54	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services	Client Sample ID: GW-14
Project Name: 15.102 Steady Simmons	Collection Date: 3/16/2012 10:04:00 AM
Lab ID: 1203F53-005	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/22/2012 11:56	JT
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/22/2012 11:56	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/22/2012 11:56	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/22/2012 11:56	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/22/2012 11:56	JT
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/22/2012 11:56	JT
Surr: 4-Bromofluorobenzene	82.9		0	67.4-123	%REC	159287	1	03/22/2012 11:56	JT
Surr: Dibromofluoromethane	112		0	75.5-128	%REC	159287	1	03/22/2012 11:56	JT
Surr: Toluene-d8	98.9		0	70-120	%REC	159287	1	03/22/2012 11:56	JT

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services	Client Sample ID: GW-15
Project Name: 15.102 Steady Simmons	Collection Date: 3/16/2012 10:21:00 AM
Lab ID: 1203F53-006	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/22/2012 18:23	JT
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/22/2012 18:23	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/22/2012 18:23	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/22/2012 18:23	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/22/2012 18:23	JT
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/22/2012 18:23	JT
Surr: 4-Bromofluorobenzene	77.6		0	67.4-123	%REC	159287	1	03/22/2012 18:23	JT
Surr: Dibromofluoromethane	116		0	75.5-128	%REC	159287	1	03/22/2012 18:23	JT
Surr: Toluene-d8	98.4		0	70-120	%REC	159287	1	03/22/2012 18:23	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services	Client Sample ID: GW-16
Project Name: 15.102 Steady Simmons	Collection Date: 3/16/2012 10:46:00 AM
Lab ID: 1203F53-007	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/22/2012 18:52	JT	
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/22/2012 18:52	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/22/2012 18:52	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/22/2012 18:52	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/22/2012 18:52	JT	
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/22/2012 18:52	JT	
Surr: 4-Bromofluorobenzene	78.5		0	67.4-123	%REC	159287	1	03/22/2012 18:52	JT	
Surr: Dibromofluoromethane	121		0	75.5-128	%REC	159287	1	03/22/2012 18:52	JT	
Surr: Toluene-d8	96.7		0	70-120	%REC	159287	1	03/22/2012 18:52	JT	

Qualifiers:

* Value exceeds maximum contaminant level	E Estimated value above quantitation range
BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
N Analyte not NELAC certified	> Greater than Result value
B Analyte detected in the associated method blank	< Less than Result value
NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services
Project Name: 15.102 Steady Simmons
Lab ID: 1203F53-008

Client Sample ID: GW-16D
Collection Date: 3/16/2012 11:21:00 AM
Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/22/2012 19:21	JT
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/22/2012 19:21	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/22/2012 19:21	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/22/2012 19:21	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/22/2012 19:21	JT
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/22/2012 19:21	JT
Surr: 4-Bromofluorobenzene	77.4		0	67.4-123	%REC	159287	1	03/22/2012 19:21	JT
Surr: Dibromofluoromethane	117		0	75.5-128	%REC	159287	1	03/22/2012 19:21	JT
Surr: Toluene-d8	98.1		0	70-120	%REC	159287	1	03/22/2012 19:21	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed
- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services	Client Sample ID: GW-17
Project Name: 15.102 Steady Simmons	Collection Date: 3/16/2012 11:40:00 AM
Lab ID: 1203F53-009	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/22/2012 19:50	JT
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/22/2012 19:50	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/22/2012 19:50	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/22/2012 19:50	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/22/2012 19:50	JT
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/22/2012 19:50	JT
Surr: 4-Bromofluorobenzene	76.9		0	67.4-123	%REC	159287	1	03/22/2012 19:50	JT
Surr: Dibromofluoromethane	119		0	75.5-128	%REC	159287	1	03/22/2012 19:50	JT
Surr: Toluene-d8	98.3		0	70-120	%REC	159287	1	03/22/2012 19:50	JT

Qualifiers:

* Value exceeds maximum contaminant level	E Estimated value above quantitation range
BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
N Analyte not NELAC certified	> Greater than Result value
B Analyte detected in the associated method blank	< Less than Result value
NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services	Client Sample ID: GW-18
Project Name: 15.102 Steady Simmons	Collection Date: 3/16/2012 11:56:00 AM
Lab ID: 1203F53-010	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/22/2012 20:20	JT	
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/22/2012 20:20	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/22/2012 20:20	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/22/2012 20:20	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/22/2012 20:20	JT	
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/22/2012 20:20	JT	
Surr: 4-Bromofluorobenzene	76.9		0	67.4-123	%REC	159287	1	03/22/2012 20:20	JT	
Surr: Dibromofluoromethane	118		0	75.5-128	%REC	159287	1	03/22/2012 20:20	JT	
Surr: Toluene-d8	99.1		0	70-120	%REC	159287	1	03/22/2012 20:20	JT	

Qualifiers:

* Value exceeds maximum contaminant level	E Estimated value above quantitation range
BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
N Analyte not NELAC certified	> Greater than Result value
B Analyte detected in the associated method blank	< Less than Result value
NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services	Client Sample ID: GW-19
Project Name: 15.102 Steady Simmons	Collection Date: 3/16/2012 12:09:00 PM
Lab ID: 1203F53-011	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/23/2012 08:29	JT
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/23/2012 08:29	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/23/2012 08:29	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/23/2012 08:29	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/23/2012 08:29	JT
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/23/2012 08:29	JT
Surr: 4-Bromofluorobenzene	75.5		0	67.4-123	%REC	159287	1	03/23/2012 08:29	JT
Surr: Dibromofluoromethane	114		0	75.5-128	%REC	159287	1	03/23/2012 08:29	JT
Surr: Toluene-d8	97.8		0	70-120	%REC	159287	1	03/23/2012 08:29	JT

Qualifiers:

* Value exceeds maximum contaminant level	E Estimated value above quantitation range
BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
N Analyte not NELAC certified	> Greater than Result value
B Analyte detected in the associated method blank	< Less than Result value
NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services	Client Sample ID: DUP (GW-16)
Project Name: 15.102 Steady Simmons	Collection Date: 3/16/2012 10:46:00 AM
Lab ID: 1203F53-012	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/23/2012 08:57	JT
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/23/2012 08:57	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/23/2012 08:57	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/23/2012 08:57	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/23/2012 08:57	JT
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/23/2012 08:57	JT
Surr: 4-Bromofluorobenzene	79.8		0	67.4-123	%REC	159287	1	03/23/2012 08:57	JT
Surr: Dibromofluoromethane	120		0	75.5-128	%REC	159287	1	03/23/2012 08:57	JT
Surr: Toluene-d8	98.3		0	70-120	%REC	159287	1	03/23/2012 08:57	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services	Client Sample ID: FIELD BLANK
Project Name: 15.102 Steady Simmons	Collection Date: 3/16/2012 1:04:00 PM
Lab ID: 1203F53-013	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/22/2012 20:49	JT
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/22/2012 20:49	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/22/2012 20:49	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/22/2012 20:49	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/22/2012 20:49	JT
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/22/2012 20:49	JT
Surr: 4-Bromofluorobenzene	78.7		0	67.4-123	%REC	159287	1	03/22/2012 20:49	JT
Surr: Dibromofluoromethane	122		0	75.5-128	%REC	159287	1	03/22/2012 20:49	JT
Surr: Toluene-d8	98.2		0	70-120	%REC	159287	1	03/22/2012 20:49	JT

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services	Client Sample ID: TRIP BLANK
Project Name: 15.102 Steady Simmons	Collection Date: 3/16/2012 6:20:00 AM
Lab ID: 1203F53-014	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	159287	1	03/23/2012 11:59	JT
Toluene	BRL		0.30	1.0	ug/L	159287	1	03/23/2012 11:59	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	159287	1	03/23/2012 11:59	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	159287	1	03/23/2012 11:59	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	159287	1	03/23/2012 11:59	JT
Naphthalene	BRL		0.30	5.0	ug/L	159287	1	03/23/2012 11:59	JT
Surr: 4-Bromofluorobenzene	80.1		0	67.4-123	%REC	159287	1	03/23/2012 11:59	JT
Surr: Dibromofluoromethane	122		0	75.5-128	%REC	159287	1	03/23/2012 11:59	JT
Surr: Toluene-d8	96.2		0	70-120	%REC	159287	1	03/23/2012 11:59	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed
- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Access Work Order Number 1203F53

Checklist completed by [Signature] Date 3/19/12

Carrier name: FedEx UPS Courier Client US Mail Other

Shipping container/cooler in good condition? Yes No Not Present
Custody seals intact on shipping container/cooler? Yes No Not Present
Custody seals intact on sample bottles? Yes No Not Present
Container/Temp Blank temperature in compliance? (4°C±2)* Yes No

Cooler #1 3-5°C Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler #5 _____ Cooler #6 _____

Chain of custody present? Yes No
Chain of custody signed when relinquished and received? Yes No
Chain of custody agrees with sample labels? Yes No
Samples in proper container/bottle? Yes No
Sample containers intact? Yes No
Sufficient sample volume for indicated test? Yes No
All samples received within holding time? Yes No
Was TAT marked on the COC? Yes No
Proceed with Standard TAT as per project history? Yes No Not Applicable
Water - VOA vials have zero headspace? No VOA vials submitted Yes No
Water - pH acceptable upon receipt? Yes No Not Applicable

Adjusted? _____ Checked by _____

Sample Condition: Good Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes No

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services
 Project: 15.102 Steady Simmons
 Lab Order: 1203F53

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1203F53-001A	GW-10	3/16/2012 9:11:00AM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/22/2012
1203F53-002A	GW-11	3/16/2012 9:26:00AM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/21/2012
1203F53-003A	GW-12	3/16/2012 9:38:00AM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/21/2012
1203F53-004A	GW-13	3/16/2012 9:51:00AM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/22/2012
1203F53-005A	GW-14	3/16/2012 10:04:00AM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/22/2012
1203F53-006A	GW-15	3/16/2012 10:21:00AM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/22/2012
1203F53-007A	GW-16	3/16/2012 10:46:00AM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/22/2012
1203F53-008A	GW-16D	3/16/2012 11:21:00AM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/22/2012
1203F53-009A	GW-17	3/16/2012 11:40:00AM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/22/2012
1203F53-010A	GW-18	3/16/2012 11:56:00AM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/22/2012
1203F53-011A	GW-19	3/16/2012 12:09:00PM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/23/2012
1203F53-012A	DUP (GW-16)	3/16/2012 10:46:00AM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/23/2012
1203F53-013A	FIELD BLANK	3/16/2012 1:04:00PM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/22/2012
1203F53-014A	TRIP BLANK	3/16/2012 6:20:00AM	Groundwater	Volatile Organic Compounds by GC/MS		03/21/2012	03/23/2012

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services
 Project Name: 15.102 Steady Simmons
 Workorder: 1203F53

ANALYTICAL QC SUMMARY REPORT

BatchID: 159287

Sample ID: MB-159287	Client ID:	Units: ug/L	Prep Date: 03/21/2012	Run No: 217563
Sample Type: MBLK	TestCode: Volatile Organic Compounds by GC/MS	BatchID: 159287	Analysis Date: 03/21/2012	Seq No: 4549145
SW8260B				

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	1.0	0	0	0	0	0	0	0	0	0
Ethylbenzene	BRL	1.0	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether	BRL	1.0	0	0	0	0	0	0	0	0	0
Naphthalene	BRL	5.0	0	0	0	0	0	0	0	0	0
Toluene	BRL	1.0	0	0	0	0	0	0	0	0	0
Xylenes, Total	BRL	1.0	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	40.39	0	50	0	80.8	67.4	123	0	0	0	0
Surr: Dibromofluoromethane	55.29	0	50	0	111	75.5	128	0	0	0	0
Surr: Toluene-d8	49.99	0	50	0	100	70	120	0	0	0	0

Sample ID: LCS-159287	Client ID:	Units: ug/L	Prep Date: 03/21/2012	Run No: 217563
Sample Type: LCS	TestCode: Volatile Organic Compounds by GC/MS	BatchID: 159287	Analysis Date: 03/21/2012	Seq No: 4549144
SW8260B				

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	54.85	1.0	50	0	110	70	130	0	0	0	0
Toluene	55.55	1.0	50	0	111	70	130	0	0	0	0
Surr: 4-Bromofluorobenzene	47.37	0	50	0	94.7	67.4	123	0	0	0	0
Surr: Dibromofluoromethane	52.31	0	50	0	105	75.5	128	0	0	0	0
Surr: Toluene-d8	52.34	0	50	0	105	70	120	0	0	0	0

Sample ID: 1203F53-005AMS	Client ID: GW-14	Units: ug/L	Prep Date: 03/21/2012	Run No: 217628
Sample Type: MS	TestCode: Volatile Organic Compounds by GC/MS	BatchID: 159287	Analysis Date: 03/22/2012	Seq No: 4550002
SW8260B				

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	59.36	1.0	50	0	119	61.2	150	0	0	0	0
Toluene	58.64	1.0	50	0	117	58.7	154	0	0	0	0
Surr: 4-Bromofluorobenzene	47.72	0	50	0	95.4	67.4	123	0	0	0	0
Surr: Dibromofluoromethane	54.29	0	50	0	109	75.5	128	0	0	0	0

Qualifiers:

- > Greater than Result value
- BRL Below reporting limit
- J Estimated value detected below Reporting Limit
- Rpt Lim Reporting Limit
- < Less than Result value
- E Estimated (value above quantitation range)
- N Analyte not NELAC certified
- S Spike Recovery outside limits due to matrix
- B Analyte detected in the associated method blank
- H Holding times for preparation or analysis exceeded
- R RPD outside limits due to matrix

Analytical Environmental Services, Inc

Date: 23-Mar-12

Client: Crawford Environmental Services
 Project Name: 15.102 Steady Simmons
 Workorder: 1203F53

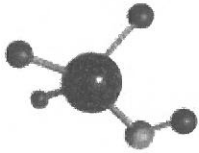
ANALYTICAL QC SUMMARY REPORT

BatchID: 159287

Sample ID: 1203F53-005AMS	Client ID: GW-14	Units: ug/L	Prep Date: 03/21/2012	Run No: 217628							
Sample Type: MS	Test Code: Volatile Organic Compounds by GC/MS	BatchID: 159287	Analysis Date: 03/22/2012	Seq No: 4550002							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Toluene-d8	53.64	0	50	0	107	70	120	0	0	0	0

Sample ID: 1203F53-005AMSD	Client ID: GW-14	Units: ug/L	Prep Date: 03/21/2012	Run No: 217628							
Sample Type: MSD	Test Code: Volatile Organic Compounds by GC/MS	BatchID: 159287	Analysis Date: 03/22/2012	Seq No: 4550003							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	57.53	1.0	50	0	115	61.2	150	59.36	3.13	19	
Toluene	56.73	1.0	50	0	113	58.7	154	58.64	3.31	20	
Surr: 4-Bromofluorobenzene	47.47	0	50	0	94.9	67.4	123	47.72	0	0	
Surr: Dibromofluoromethane	54.67	0	50	0	109	75.5	128	54.29	0	0	
Surr: Toluene-d8	54.31	0	50	0	109	70	120	53.64	0	0	

Qualifiers:	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



ANALYTICAL REPORT

CLIENT

Crawford Environmental Services
101 Corporate Blvd. Suite 412
West Columbia SC 29196

ATTENTION
Justin Reynolds

PROJECT ID
15.102 Steady Simmons

LABORATORY REPORT NUMBER
1204D61

DATE
April 30, 2012

Primary Data Review By

Kathryn E. Waters

Kathryn Waters
Project Manager, AES

Secondary Data Review By

Ashley Amick

Project Manager, Access Analytical
aamick@axs-inc.com

PLEASE NOTE:

- Unless otherwise noted, all analysis on this report performed at Analytical Environmental Services Inc. (AES Inc), 3785 Presidential Parkway, Atlanta, GA 30340.
- AES is SCDHEC certified laboratory # 98016, NCDENR certified lab # 562, GA certified lab # FL-E87582, NELAP certified laboratory # E87582
- Local support services for this project are provided by Access Analytical, Inc. Access Analytical is a representative of AES serving client in the SC/NC/GA areas. All questions regarding this report should be directed to your local Access Analytical representative at 803.781.4243 or toll free at 883.315.4243

Access Analytical - Chain of Custody Record

LAB USE ONLY

Project Work Order # 1704061

PO # _____

Access Quote # _____

Laboratory ID: _____

Company Name: CES

Report To: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

Email: _____

Project ID: 15.102 Steady Simmons

Sampled By: J. Reynolds

Preservative: (*see codes)

Container Type: (*see codes)

Requested Lab Analysis: 1

M

I

D

G

1,2,3,4

8 Oxygenate

8 Oxygenate

8 Oxygenate

8 Oxygenate

8 Oxygenate

8 Oxygenate

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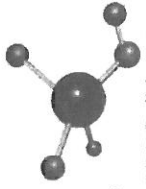
ACCESS

ANALYTICAL, INC.

Phone: (803) 781-4243

Fax: 781-4303

www.axs-inc.com



7478 Carlisle Street
Irmo, SC 29063

*Preservative Codes (Matrix corresponding # in block above analysis field):
0 = None, 1 = HCL, 2 = HNO₃, 3 = H₂SO₄, 4 = NaOH, 5 = Na₂SO₄,
6 = Method 5035 set w/ NaHSO₄, 7 = CH₃OH, 8 = NaOH/ZnCl₂, 9 = H₂O.

*Matrix Codes (Matrix corresponding code in matrix column):
GW = ground water, WW = waste water, DW = drinking water, S = soil,
SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other
(Specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA =
Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous
Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

NOTES / COMMENTS

(If sample is a composite please use space below to note start/finish times & dates)

Turnaround Time: _____

Standard RUSH*

*Date Required: _____

(For rush work, results emailed/faxed by end of business day on date required)

Project Location: _____

SC

NC

Other

(specify) _____

Relinquished By: _____

Received By: _____

[Signature]

[Signature]

Date (mm-dd-yy) 4-17-12 1600

Date (mm-dd-yy) 4-17-12 1000

Date (mm-dd-yy) 4/10/12 11:47

Date (mm-dd-yy) _____

Sample Temp. Upon Receipt (°C):

14.4°C (N/A)

____°C (N/A)

____°C (N/A)

____°C (N/A)

Access Analytical - Chain of Custody Record

LAB USE ONLY
Sales Order # _____ **PO #** _____ **Access Quote #** _____
Project Work Order # 1704061
Laboratory ID: _____

Company Name: ACCESS ANALYTICAL, INC.
Report To: _____
Address: 7478 Carlisle Street, Irmo, SC 29063
City: _____ **State:** _____ **Zip:** _____
Phone: (803) 781-4243 **Fax:** 781-4303
Email: www.axs-inc.com
Project ID: 15.102 Steady Simons
Sampled By: J. Reynolds

Sample ID/Description	Date Collected	Time Collected	Type (lab or comparison)	Matrix: Program (see codes)	TOTAL # of containers	Preservative: (*see codes)	Container Type: (*see codes)	Access Quote #
MU-11	4/13/12	1139	G	GW SW	5	None	G	
MU-12		1206						
MU-13		1223						
MU-14		1249						
MU-15		1304						
DU-1		815						
DU-2		856						
DU-3		923						
DU-4		958						
DU-5		1046						

Turnaround Time: _____
 Standard RUSH*
 *Date Required: _____
 (For rush work, results emailed/faxed by end of business day on date required)

Project Location: SC
 NC
 Other _____ (specify)

Relinquished By: *[Signature]*
Received By: M. Robertson
 Fgl 5 x
[Signature]

Date (mm-dd-yy): 4-17-12 14:04
Time (24HR): 14:04
Sample Temp. Upon Receipt (°C): (N/A)

NOTES / COMMENTS
 (If sample is a composite please use space below to note start/finish times & dates)

*Preservative Codes (place corresponding # in block above analysis field):
 0 = None, 1 = HCL, 2 = HNO₃, 3 = H₂SO₄, 4 = NaOH, 5 = Na₂SO₄,
 6 = Methiod 5655 set w/ NaHSO₄ & CHOH; 7 = NaOH/ZnOAC; 8 = H₂PO₄.
 *Matrix Codes (place corresponding code in matrix column):
 GW = ground water, WW = waste water, DW = drinking water, S = soil,
 SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other
 (Specify in comments section)
 *Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA =
 Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous
 Wastes (for soils, ground waters and waste samples)
 *Container Type: G = Glass, P = Plastic

Access Analytical - Chain of Custody Record

LAB USE ONLY

Sales Order # _____

PO # _____

Access Quote # _____

Project Work Order # 1704061

Laboratory ID: _____

Company Name: CE3

Report To: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

Email: _____

Project ID: 15.102 Steady Simons

Sampled By: J. Reynolds

Sample ID/Description	Date Collected	Time Collected	Type (gas or liquid)	Matrix/Program (see codes)	Area (see codes)	TOTAL # of containers
DW-6	1131	4/13/12	G	GW	SHU	5
DW-7	1239					
DUP 1 (MU-1)	1356					
DUP 2 (MU-2)	1359					

Preservative: (*see codes)

Container Type: (*see codes)

↑

REQUESTED LAB ANALYSIS:



ACCESS
ANALYTICAL, INC.

7478 Carlisle Street
Irmo, SC 29063

www.axs-inc.com

Phone: (803) 781-4243
Fax: 781-4303

*Preservative Codes (place corresponding # in block above analysis field):
0 = None, 1 = HCL, 2 = HNO₃, 3 = H₂SO₄, 4 = NaOH, 5 = Na₂SO₄, 6 = Method 8035 est w/ NaHSO₄ & CH₃OH, 7 = NaOH/ZnOAC, 8 = H₂O.

*Matrix Codes (place corresponding code in matrix column):
GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

NOTES / COMMENTS

(if sample is a composite please use space below to note start/finish times & dates)

Sample ID/Description	Date Collected	Time Collected	Type (gas or liquid)	Matrix/Program (see codes)	Area (see codes)	TOTAL # of containers	Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Sample Temp. Upon Receipt (°C)
DW-6	1131	4/13/12	G	GW	SHU	5	<i>M. R. Roberts</i>	<i>M. R. Roberts</i>	4-17-12	16:00	14.4
DW-7	1239								4-17-12	17:00	
DUP 1 (MU-1)	1356							<i>Fede</i>	4/18/12	11:40	
DUP 2 (MU-2)	1359										

Turnaround Time: _____
 Standard RUSH*
 *Date Required: _____
 (For rush work, results emailed/faxed by end of business day on date required)

Project Location: ASC
 _____ NC
 _____ Other
 (specify) _____

Relinquished By: *M. R. Roberts*

Received By: *M. R. Roberts*

Date (mm-dd-yy): 4-17-12
 Time (24HR): 16:00
 Sample Temp. Upon Receipt (°C): 14.4

See Reverse for Terms and Conditions

Original Copy - Returned w/Report
 Yellow Copy - Access File Copy
 Pink Copy - Client Copy

Access Analytical - Chain of Custody Record

LAB USE ONLY

Sales Order # PO # Access Quote #

Project Work Order # 1704061

Laboratory ID:

ACCESS ANALYTICAL, INC.

7478 Carlisle Street
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
www.axs-inc.com



***Preservative Codes (place corresponding # in block above analysis field):**
 0 = None, 1 = HCL, 2 = HNO₃, 3 = H₂SO₄, 4 = NaOH, 5 = Na₂SO₄,
 6 = Method 5035 sel w/ NaHSO₄ & CH₃OH, 7 = NiOH/ZnOAC, 8 = H₂O₂.

***Matrix Codes (place corresponding code in matrix column):**
 GW = ground water, WW = waste water, DW = drinking water, S = soil,
 SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other
 (specify in comments section)

***Program Area Codes: CWA = Clean Water Act (for wastewater), SDWA = Safe Drinking Water Act (for drinking water), SHW = Solid and Hazardous Wastes (for soils, ground water and waste samples)**

***Container Type:** G = Glass, P = Plastic

NOTES / COMMENTS
 (if sample is a composite please use space below in the appropriate times & days)

Sample ID/Description	Date Collected	Time Collected	Type (grab or composite)	Matrix (see codes)	Program Area (see codes)	TOTAL # of containers	REQUESTED LAB ANALYSIS:		Preservative (*see codes)	Container Type (*see codes)	Access Quote #
							collected	analyzed			
WSW-1	4-13-12	1315	G	GW	SW	4					
WSW-3		1326									
WSW-4		1349									
SW-1		1404									
SW-2		1409									
SW-3		1426									
Field Blank 1		1505				5					
Field Blank 2		1505				5					
Trip Blank 1		621				1					
Trip Blank 2		634				1					

8 Oxygen
 Brix, Mg, Mn, Fe, Zn, Pb

Turnaround Time:	Project Location:	Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Sample Temp. Upon Receipt (°C)
Standard RUSH*	SC	<i>[Signature]</i>	M. Roberts	4-17-12	1604	14.4°C
*Date Required: (For rush work, results emailed/faxed by end of business day on date required)	NC	<i>[Signature]</i>	Fele x	4-17-12	1700	°C
	Other	<i>[Signature]</i>	Wj	4/19/12	11:40	°C
	(specify)					°C

Client: Crawford Environmental Services
Project: 15.102 Steady Simmons
Lab ID: 1204D61

Case Narrative**Sample Receiving Nonconformance:**

For sample "DW-1", one of two VOAHL vials was received broken. Sufficient sample was available to perform the requested analysis.

Sample "MW-16" (1204D61-016) was received by the laboratory, but the sample was not listed on the chain of custody. Sample "MW-16" with collection date and time 4/13/2012 1:16:00 PM was added to the work order per written instructions received with the samples. The sample should be analyzed for BTEX, Naphthalene, Methyl tert-butyl ether, 1,2-Dichloroethane, 8 Oxygenates, EDB and Lead per written instructions received with the samples.

The second vial for samples 1204D61-011A and 1204D61-020A were received with headspace present as signified by >1/4 inch bubble present. The second vials for each sample were placed on hold and the requested analyses were performed from vials without headspace present.

Micro extractable VOC Analysis by Method 8011:

Sample 1204D61-008B, -020B, -023B as received did not meet method specified preservation requirements of pH <2 for the SW8011 analysis for EDB.

Client: Crawford Environmental Services	Client Sample ID: MW-1
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 1:56:00 PM
Lab ID: 1204D61-001	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	220		4.1	10	ug/L	160469	10	04/20/2012 19:22	JT
Toluene	2100		30	100	ug/L	160469	100	04/20/2012 18:23	JT
Ethylbenzene	1100		3.7	10	ug/L	160469	10	04/20/2012 19:22	JT
Xylenes, Total	9900		38	300	ug/L	160469	100	04/20/2012 18:23	JT
Methyl tert-butyl ether	9.1		0.35	1.0	ug/L	160469	1	04/20/2012 20:50	JT
Naphthalene	570		30	500	ug/L	160469	100	04/20/2012 18:23	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/20/2012 20:50	JT
Surr: 4-Bromofluorobenzene	86.8		0	67.4-123	%REC	160469	1	04/20/2012 20:50	JT
Surr: 4-Bromofluorobenzene	91.1		0	67.4-123	%REC	160469	10	04/20/2012 19:22	JT
Surr: 4-Bromofluorobenzene	91.3		0	67.4-123	%REC	160469	100	04/20/2012 18:23	JT
Surr: Dibromofluoromethane	99.6		0	75.5-128	%REC	160469	1	04/20/2012 20:50	JT
Surr: Dibromofluoromethane	109		0	75.5-128	%REC	160469	10	04/20/2012 19:22	JT
Surr: Dibromofluoromethane	124		0	75.5-128	%REC	160469	100	04/20/2012 18:23	JT
Surr: Toluene-d8	97		0	70-120	%REC	160469	10	04/20/2012 19:22	JT
Surr: Toluene-d8	97.3		0	70-120	%REC	160469	100	04/20/2012 18:23	JT
Surr: Toluene-d8	102		0	70-120	%REC	160469	1	04/20/2012 20:50	JT
Total Metals by ICP/MS		SW6020A			(SW3005A)				
Lead	10.5		0.165	1.00	ug/L	160452	1	04/21/2012 08:27	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/20/2012 20:50	JT
Ethanol	BRL		97	100	ug/L	160469	1	04/20/2012 20:50	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/20/2012 20:50	JT
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/20/2012 20:50	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/20/2012 20:50	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/20/2012 20:50	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/20/2012 20:50	JT
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/20/2012 20:50	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)				
1,2-Dibromoethane	0.223		0.002	0.021	ug/L	160463	1	04/20/2012 21:30	AK
Surr: 4-Bromofluorobenzene	98.3		0	65.6-135	%REC	160463	1	04/20/2012 21:30	AK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Client: Crawford Environmental Services	Client Sample ID: MW-2
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 1:39:00 PM
Lab ID: 1204D61-002	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	200		0.41	1.0	ug/L	160469	1	04/20/2012 21:19	JT
Toluene	1400		3.0	10	ug/L	160469	10	04/20/2012 18:52	JT
Ethylbenzene	280		3.7	10	ug/L	160469	10	04/20/2012 18:52	JT
Xylenes, Total	3000		3.8	30	ug/L	160469	10	04/20/2012 18:52	JT
Methyl tert-butyl ether	7.3		0.35	1.0	ug/L	160469	1	04/20/2012 21:19	JT
Naphthalene	41		0.30	5.0	ug/L	160469	1	04/20/2012 21:19	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/20/2012 21:19	JT
Surr: 4-Bromofluorobenzene	91.2		0	67.4-123	%REC	160469	1	04/20/2012 21:19	JT
Surr: 4-Bromofluorobenzene	90.5		0	67.4-123	%REC	160469	10	04/20/2012 18:52	JT
Surr: Dibromofluoromethane	100		0	75.5-128	%REC	160469	1	04/20/2012 21:19	JT
Surr: Dibromofluoromethane	112		0	75.5-128	%REC	160469	10	04/20/2012 18:52	JT
Surr: Toluene-d8	97.9		0	70-120	%REC	160469	1	04/20/2012 21:19	JT
Surr: Toluene-d8	101		0	70-120	%REC	160469	10	04/20/2012 18:52	JT
Total Metals by ICP/MS		SW6020A			(SW3005A)				
Lead	21.0		0.165	1.00	ug/L	160452	1	04/21/2012 08:33	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/20/2012 21:19	JT
Ethanol	BRL		97	100	ug/L	160469	1	04/20/2012 21:19	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/20/2012 21:19	JT
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/20/2012 21:19	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/20/2012 21:19	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/20/2012 21:19	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/20/2012 21:19	JT
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/20/2012 21:19	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)				
1,2-Dibromoethane	2.04		0.023	0.206	ug/L	160463	10	04/24/2012 11:40	AK
Surr: 4-Bromofluorobenzene	78.8		0	65.6-135	%REC	160463	1	04/20/2012 22:07	AK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: MW-3
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 1:24:00 PM
Lab ID: 1204D61-003	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/20/2012 16:55	JT
Toluene	3.0		0.30	1.0	ug/L	160469	1	04/20/2012 16:55	JT
Ethylbenzene	0.83	J	0.37	1.0	ug/L	160469	1	04/20/2012 16:55	JT
Xylenes, Total	6.1		0.38	3.0	ug/L	160469	1	04/20/2012 16:55	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/20/2012 16:55	JT
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/20/2012 16:55	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/20/2012 16:55	JT
Surr: 4-Bromofluorobenzene	80.1		0	67.4-123	%REC	160469	1	04/20/2012 16:55	JT
Surr: Dibromofluoromethane	123		0	75.5-128	%REC	160469	1	04/20/2012 16:55	JT
Surr: Toluene-d8	96		0	70-120	%REC	160469	1	04/20/2012 16:55	JT
Total Metals by ICP/MS		SW6020A		(SW3005A)					
Lead	9.29		0.165	1.00	ug/L	160452	1	04/21/2012 08:40	JY
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/20/2012 16:55	JT
Ethanol	BRL		97	100	ug/L	160469	1	04/20/2012 16:55	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/20/2012 16:55	JT
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/20/2012 16:55	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/20/2012 16:55	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/20/2012 16:55	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/20/2012 16:55	JT
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/20/2012 16:55	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011		(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/20/2012 22:44	AK
Surr: 4-Bromofluorobenzene	100		0	65.6-135	%REC	160463	1	04/20/2012 22:44	AK

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services
Project Name: 15.102 Steady Simmons
Lab ID: 1204D61-004

Client Sample ID: MW-4
Collection Date: 4/13/2012 1:16:00 PM
Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS SW8260B						(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/20/2012 13:00	JT	
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/20/2012 13:00	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/20/2012 13:00	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/20/2012 13:00	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/20/2012 13:00	JT	
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/20/2012 13:00	JT	
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/20/2012 13:00	JT	
Surr: 4-Bromofluorobenzene	78.9		0	67.4-123	%REC	160469	1	04/20/2012 13:00	JT	
Surr: Dibromofluoromethane	115		0	75.5-128	%REC	160469	1	04/20/2012 13:00	JT	
Surr: Toluene-d8	92.8		0	70-120	%REC	160469	1	04/20/2012 13:00	JT	
Total Metals by ICP/MS SW6020A						(SW3005A)				
Lead			7.32	0.165	1.00	ug/L	160452	1	04/21/2012 08:46	JY
Oxygenates (AES SOP OA-11010) SW8260B						(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/20/2012 13:00	JT	
Ethanol	BRL		97	100	ug/L	160469	1	04/20/2012 13:00	JT	
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/20/2012 13:00	JT	
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/20/2012 13:00	JT	
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/20/2012 13:00	JT	
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/20/2012 13:00	JT	
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/20/2012 13:00	JT	
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/20/2012 13:00	JT	
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011						(SW8011)				
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/20/2012 23:59	AK	
Surr: 4-Bromofluorobenzene	97.2		0	65.6-135	%REC	160463	1	04/20/2012 23:59	AK	

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: MW-5
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 10:38:00 AM
Lab ID: 1204D61-005	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)						
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/20/2012 13:29	JT	
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/20/2012 13:29	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/20/2012 13:29	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/20/2012 13:29	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/20/2012 13:29	JT	
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/20/2012 13:29	JT	
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/20/2012 13:29	JT	
Surr: 4-Bromofluorobenzene	77		0	67.4-123	%REC	160469	1	04/20/2012 13:29	JT	
Surr: Dibromofluoromethane	116		0	75.5-128	%REC	160469	1	04/20/2012 13:29	JT	
Surr: Toluene-d8	94.7		0	70-120	%REC	160469	1	04/20/2012 13:29	JT	
Total Metals by ICP/MS		SW6020A		(SW3005A)						
Lead			30.9	0.165	1.00	ug/L	160452	1	04/21/2012 08:53	JY
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)						
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/20/2012 13:29	JT	
Ethanol	BRL		97	100	ug/L	160469	1	04/20/2012 13:29	JT	
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/20/2012 13:29	JT	
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/20/2012 13:29	JT	
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/20/2012 13:29	JT	
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/20/2012 13:29	JT	
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/20/2012 13:29	JT	
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/20/2012 13:29	JT	
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011		(SW8011)						
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 00:36	AK	
Surr: 4-Bromofluorobenzene	97.2		0	65.6-135	%REC	160463	1	04/21/2012 00:36	AK	

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: MW-6
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 10:51:00 AM
Lab ID: 1204D61-006	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/20/2012 13:59	JT
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/20/2012 13:59	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/20/2012 13:59	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/20/2012 13:59	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/20/2012 13:59	JT
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/20/2012 13:59	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/20/2012 13:59	JT
Surr: 4-Bromofluorobenzene	75.5		0	67.4-123	%REC	160469	1	04/20/2012 13:59	JT
Surr: Dibromofluoromethane	119		0	75.5-128	%REC	160469	1	04/20/2012 13:59	JT
Surr: Toluene-d8	97.5		0	70-120	%REC	160469	1	04/20/2012 13:59	JT
Total Metals by ICP/MS		SW6020A		(SW3005A)					
Lead	55.4		0.165	1.00	ug/L	160452	1	04/21/2012 08:59	JY
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/20/2012 13:59	JT
Ethanol	BRL		97	100	ug/L	160469	1	04/20/2012 13:59	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/20/2012 13:59	JT
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/20/2012 13:59	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/20/2012 13:59	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/20/2012 13:59	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/20/2012 13:59	JT
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/20/2012 13:59	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011		(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 01:13	AK
Surr: 4-Bromofluorobenzene	92.4		0	65.6-135	%REC	160463	1	04/21/2012 01:13	AK

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Client: Crawford Environmental Services	Client Sample ID: MW-7
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 10:59:00 AM
Lab ID: 1204D61-007	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/20/2012 14:28	JT	
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/20/2012 14:28	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/20/2012 14:28	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/20/2012 14:28	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/20/2012 14:28	JT	
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/20/2012 14:28	JT	
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/20/2012 14:28	JT	
Surr: 4-Bromofluorobenzene	74.6		0	67.4-123	%REC	160469	1	04/20/2012 14:28	JT	
Surr: Dibromofluoromethane	120		0	75.5-128	%REC	160469	1	04/20/2012 14:28	JT	
Surr: Toluene-d8	95.6		0	70-120	%REC	160469	1	04/20/2012 14:28	JT	
Total Metals by ICP/MS		SW6020A			(SW3005A)					
Lead			32.1	0.165	1.00	ug/L	160452	1	04/21/2012 09:06	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/20/2012 14:28	JT	
Ethanol	BRL		97	100	ug/L	160469	1	04/20/2012 14:28	JT	
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/20/2012 14:28	JT	
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/20/2012 14:28	JT	
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/20/2012 14:28	JT	
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/20/2012 14:28	JT	
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/20/2012 14:28	JT	
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/20/2012 14:28	JT	
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 01:50	AK	
Surr: 4-Bromofluorobenzene	97.5		0	65.6-135	%REC	160463	1	04/21/2012 01:50	AK	

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: MW-8
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 11:15:00 AM
Lab ID: 1204D61-008	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)						
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/20/2012 14:57	JT	
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/20/2012 14:57	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/20/2012 14:57	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/20/2012 14:57	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/20/2012 14:57	JT	
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/20/2012 14:57	JT	
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/20/2012 14:57	JT	
Surr: 4-Bromofluorobenzene	80.7		0	67.4-123	%REC	160469	1	04/20/2012 14:57	JT	
Surr: Dibromofluoromethane	98		0	75.5-128	%REC	160469	1	04/20/2012 14:57	JT	
Surr: Toluene-d8	95		0	70-120	%REC	160469	1	04/20/2012 14:57	JT	
Total Metals by ICP/MS		SW6020A		(SW3005A)						
Lead			6.62	0.165	1.00	ug/L	160452	1	04/21/2012 09:31	JY
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)						
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/20/2012 14:57	JT	
Ethanol	BRL		97	100	ug/L	160469	1	04/20/2012 14:57	JT	
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/20/2012 14:57	JT	
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/20/2012 14:57	JT	
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/20/2012 14:57	JT	
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/20/2012 14:57	JT	
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/20/2012 14:57	JT	
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/20/2012 14:57	JT	
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011		(SW8011)						
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 02:27	AK	
Surr: 4-Bromofluorobenzene	98		0	65.6-135	%REC	160463	1	04/21/2012 02:27	AK	

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Client: Crawford Environmental Services	Client Sample ID: MW-9
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 11:59:00 AM
Lab ID: 1204D61-009	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)						
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/20/2012 15:26	JT	
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/20/2012 15:26	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/20/2012 15:26	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/20/2012 15:26	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/20/2012 15:26	JT	
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/20/2012 15:26	JT	
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/20/2012 15:26	JT	
Surr: 4-Bromofluorobenzene	76.4		0	67.4-123	%REC	160469	1	04/20/2012 15:26	JT	
Surr: Dibromofluoromethane	124		0	75.5-128	%REC	160469	1	04/20/2012 15:26	JT	
Surr: Toluene-d8	96		0	70-120	%REC	160469	1	04/20/2012 15:26	JT	
Total Metals by ICP/MS		SW6020A		(SW3005A)						
Lead			1.03	0.165	1.00	ug/L	160452	1	04/21/2012 09:38	JY
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)						
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/20/2012 15:26	JT	
Ethanol	BRL		97	100	ug/L	160469	1	04/20/2012 15:26	JT	
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/20/2012 15:26	JT	
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/20/2012 15:26	JT	
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/20/2012 15:26	JT	
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/20/2012 15:26	JT	
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/20/2012 15:26	JT	
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/20/2012 15:26	JT	
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011		(SW8011)						
1,2-Dibromoethane	BRL		0.002	0.021	ug/L	160463	1	04/21/2012 03:05	AK	
Surr: 4-Bromofluorobenzene	98.8		0	65.6-135	%REC	160463	1	04/21/2012 03:05	AK	

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: MW-10
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 11:24:00 AM
Lab ID: 1204D61-010	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/20/2012 15:56	JT
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/20/2012 15:56	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/20/2012 15:56	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/20/2012 15:56	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/20/2012 15:56	JT
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/20/2012 15:56	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/20/2012 15:56	JT
Surr: 4-Bromofluorobenzene	76.5		0	67.4-123	%REC	160469	1	04/20/2012 15:56	JT
Surr: Dibromofluoromethane	124		0	75.5-128	%REC	160469	1	04/20/2012 15:56	JT
Surr: Toluene-d8	94.2		0	70-120	%REC	160469	1	04/20/2012 15:56	JT
Total Metals by ICP/MS		SW6020A			(SW3005A)				
Lead	46.8		0.165	1.00	ug/L	160452	1	04/21/2012 09:44	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/20/2012 15:56	JT
Ethanol	BRL		97	100	ug/L	160469	1	04/20/2012 15:56	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/20/2012 15:56	JT
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/20/2012 15:56	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/20/2012 15:56	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/20/2012 15:56	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/20/2012 15:56	JT
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/20/2012 15:56	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)				
1,2-Dibromoethane	BRL		0.002	0.021	ug/L	160463	1	04/21/2012 03:42	AK
Surr: 4-Bromofluorobenzene	97.3		0	65.6-135	%REC	160463	1	04/21/2012 03:42	AK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: MW-11
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 11:39:00 AM
Lab ID: 1204D61-011	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/20/2012 16:25	JT
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/20/2012 16:25	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/20/2012 16:25	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/20/2012 16:25	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/20/2012 16:25	JT
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/20/2012 16:25	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/20/2012 16:25	JT
Surr: 4-Bromofluorobenzene	75.2		0	67.4-123	%REC	160469	1	04/20/2012 16:25	JT
Surr: Dibromofluoromethane	127		0	75.5-128	%REC	160469	1	04/20/2012 16:25	JT
Surr: Toluene-d8	96		0	70-120	%REC	160469	1	04/20/2012 16:25	JT
Total Metals by ICP/MS		SW6020A		(SW3005A)					
Lead	2.99		0.165	1.00	ug/L	160452	1	04/21/2012 09:51	JY
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/20/2012 16:25	JT
Ethanol	BRL		97	100	ug/L	160469	1	04/20/2012 16:25	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/20/2012 16:25	JT
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/20/2012 16:25	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/20/2012 16:25	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/20/2012 16:25	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/20/2012 16:25	JT
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/20/2012 16:25	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011		(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 04:19	AK
Surr: 4-Bromofluorobenzene	86.9		0	65.6-135	%REC	160463	1	04/21/2012 04:19	AK

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: MW-12
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 12:06:00 PM
Lab ID: 1204D61-012	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/23/2012 13:22	JT	
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/23/2012 13:22	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/23/2012 13:22	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/23/2012 13:22	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/23/2012 13:22	JT	
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/23/2012 13:22	JT	
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/23/2012 13:22	JT	
Surr: 4-Bromofluorobenzene	73.7		0	67.4-123	%REC	160469	1	04/23/2012 13:22	JT	
Surr: Dibromofluoromethane	131	S	0	75.5-128	%REC	160469	1	04/23/2012 13:22	JT	
Surr: Toluene-d8	97.3		0	70-120	%REC	160469	1	04/23/2012 13:22	JT	
Total Metals by ICP/MS		SW6020A			(SW3005A)					
Lead			45.6	0.165	1.00	ug/L	160452	1	04/21/2012 09:57	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/23/2012 13:22	JT	
Ethanol	BRL		97	100	ug/L	160469	1	04/23/2012 13:22	JT	
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/23/2012 13:22	JT	
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/23/2012 13:22	JT	
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/23/2012 13:22	JT	
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/23/2012 13:22	JT	
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/23/2012 13:22	JT	
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/23/2012 13:22	JT	
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 04:56	AK	
Surr: 4-Bromofluorobenzene	102		0	65.6-135	%REC	160463	1	04/21/2012 04:56	AK	

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: MW-13
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 12:23:00 PM
Lab ID: 1204D61-013	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/23/2012 13:52	JT	
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/23/2012 13:52	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/23/2012 13:52	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/23/2012 13:52	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/23/2012 13:52	JT	
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/23/2012 13:52	JT	
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/23/2012 13:52	JT	
Surr: 4-Bromofluorobenzene	76.9		0	67.4-123	%REC	160469	1	04/23/2012 13:52	JT	
Surr: Dibromofluoromethane	136	S	0	75.5-128	%REC	160469	1	04/23/2012 13:52	JT	
Surr: Toluene-d8	98.7		0	70-120	%REC	160469	1	04/23/2012 13:52	JT	
Total Metals by ICP/MS		SW6020A			(SW3005A)					
Lead			8.26	0.165	1.00	ug/L	160452	1	04/21/2012 10:03	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/23/2012 13:52	JT	
Ethanol	BRL		97	100	ug/L	160469	1	04/23/2012 13:52	JT	
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/23/2012 13:52	JT	
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/23/2012 13:52	JT	
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/23/2012 13:52	JT	
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/23/2012 13:52	JT	
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/23/2012 13:52	JT	
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/23/2012 13:52	JT	
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 06:11	AK	
Surr: 4-Bromofluorobenzene	98		0	65.6-135	%REC	160463	1	04/21/2012 06:11	AK	

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: MW-14
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 12:49:00 PM
Lab ID: 1204D61-014	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/26/2012 20:26	JT	
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/26/2012 20:26	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/26/2012 20:26	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/26/2012 20:26	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/26/2012 20:26	JT	
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/26/2012 20:26	JT	
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/26/2012 20:26	JT	
Surr: 4-Bromofluorobenzene	93.3		0	67.4-123	%REC	160469	1	04/26/2012 20:26	JT	
Surr: Dibromofluoromethane	97.9		0	75.5-128	%REC	160469	1	04/26/2012 20:26	JT	
Surr: Toluene-d8	99.6		0	70-120	%REC	160469	1	04/26/2012 20:26	JT	
Total Metals by ICP/MS		SW6020A			(SW3005A)					
Lead			77.8	0.165	1.00	ug/L	160452	1	04/21/2012 10:10	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/26/2012 20:26	JT	
Ethanol	BRL		97	100	ug/L	160469	1	04/26/2012 20:26	JT	
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/26/2012 20:26	JT	
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/26/2012 20:26	JT	
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/26/2012 20:26	JT	
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/26/2012 20:26	JT	
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/26/2012 20:26	JT	
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/26/2012 20:26	JT	
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 06:48	AK	
Surr: 4-Bromofluorobenzene	96.7		0	65.6-135	%REC	160463	1	04/21/2012 06:48	AK	

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Client: Crawford Environmental Services
 Project Name: 15.102 Steady Simmons
 Lab ID: 1204D61-015

Client Sample ID: MW-15
 Collection Date: 4/13/2012 1:04:00 PM
 Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/26/2012 20:51	JT	
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/26/2012 20:51	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/26/2012 20:51	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/26/2012 20:51	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/26/2012 20:51	JT	
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/26/2012 20:51	JT	
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/26/2012 20:51	JT	
Surr: 4-Bromofluorobenzene	93.5		0	67.4-123	%REC	160469	1	04/26/2012 20:51	JT	
Surr: Dibromofluoromethane	98.5		0	75.5-128	%REC	160469	1	04/26/2012 20:51	JT	
Surr: Toluene-d8	100		0	70-120	%REC	160469	1	04/26/2012 20:51	JT	
Total Metals by ICP/MS		SW6020A			(SW3005A)					
Lead			47.6	0.165	1.00	ug/L	160452	1	04/21/2012 10:16	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/26/2012 20:51	JT	
Ethanol	BRL		97	100	ug/L	160469	1	04/26/2012 20:51	JT	
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/26/2012 20:51	JT	
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/26/2012 20:51	JT	
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/26/2012 20:51	JT	
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/26/2012 20:51	JT	
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/26/2012 20:51	JT	
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/26/2012 20:51	JT	
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 07:26	AK	
Surr: 4-Bromofluorobenzene	98		0	65.6-135	%REC	160463	1	04/21/2012 07:26	AK	

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: MW-16
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 1:16:00 PM
Lab ID: 1204D61-016	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)					
Benzene	0.46	J	0.41	1.0	ug/L	160469	1	04/27/2012 01:03	JT	
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/27/2012 01:03	JT	
Ethylbenzene	0.49	J	0.37	1.0	ug/L	160469	1	04/27/2012 01:03	JT	
Xylenes, Total	2.5	J	0.38	3.0	ug/L	160469	1	04/27/2012 01:03	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/27/2012 01:03	JT	
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/27/2012 01:03	JT	
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/27/2012 01:03	JT	
Surr: 4-Bromofluorobenzene	92.9		0	67.4-123	%REC	160469	1	04/27/2012 01:03	JT	
Surr: Dibromofluoromethane	98.3		0	75.5-128	%REC	160469	1	04/27/2012 01:03	JT	
Surr: Toluene-d8	99.7		0	70-120	%REC	160469	1	04/27/2012 01:03	JT	
Total Metals by ICP/MS		SW6020A			(SW3005A)					
Lead	23.6		0.165	1.00	ug/L	160452	1	04/21/2012 10:22	JY	
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/27/2012 01:03	JT	
Ethanol	BRL		97	100	ug/L	160469	1	04/27/2012 01:03	JT	
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/27/2012 01:03	JT	
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/27/2012 01:03	JT	
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/27/2012 01:03	JT	
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/27/2012 01:03	JT	
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/27/2012 01:03	JT	
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/27/2012 01:03	JT	
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 08:04	AK	
Surr: 4-Bromofluorobenzene	92.7		0	65.6-135	%REC	160463	1	04/21/2012 08:04	AK	

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: DW-1
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 8:15:00 AM
Lab ID: 1204D61-017	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/26/2012 18:20	JT
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/26/2012 18:20	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/26/2012 18:20	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/26/2012 18:20	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/26/2012 18:20	JT
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/26/2012 18:20	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/26/2012 18:20	JT
Surr: 4-Bromofluorobenzene	91.9		0	67.4-123	%REC	160469	1	04/26/2012 18:20	JT
Surr: Dibromofluoromethane	97.6		0	75.5-128	%REC	160469	1	04/26/2012 18:20	JT
Surr: Toluene-d8	99		0	70-120	%REC	160469	1	04/26/2012 18:20	JT
Total Metals by ICP/MS		SW6020A			(SW3005A)				
Lead	0.530	J	0.165	1.00	ug/L	160452	1	04/21/2012 07:35	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/26/2012 18:20	JT
Ethanol	BRL		97	100	ug/L	160469	1	04/26/2012 18:20	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/26/2012 18:20	JT
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/26/2012 18:20	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/26/2012 18:20	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/26/2012 18:20	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/26/2012 18:20	JT
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/26/2012 18:20	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)				
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 08:40	AK
Surr: 4-Bromofluorobenzene	89.7		0	65.6-135	%REC	160463	1	04/21/2012 08:40	AK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: DW-2
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 5:56:00 AM
Lab ID: 1204D61-018	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/27/2012 01:29	JT
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/27/2012 01:29	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/27/2012 01:29	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/27/2012 01:29	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/27/2012 01:29	JT
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/27/2012 01:29	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/27/2012 01:29	JT
Surr: 4-Bromofluorobenzene	92.1		0	67.4-123	%REC	160469	1	04/27/2012 01:29	JT
Surr: Dibromofluoromethane	99		0	75.5-128	%REC	160469	1	04/27/2012 01:29	JT
Surr: Toluene-d8	100		0	70-120	%REC	160469	1	04/27/2012 01:29	JT
Total Metals by ICP/MS		SW6020A			(SW3005A)				
Lead	3.05		0.165	1.00	ug/L	160452	1	04/21/2012 10:29	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/27/2012 01:29	JT
Ethanol	BRL		97	100	ug/L	160469	1	04/27/2012 01:29	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/27/2012 01:29	JT
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/27/2012 01:29	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/27/2012 01:29	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/27/2012 01:29	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/27/2012 01:29	JT
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/27/2012 01:29	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)				
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 09:18	AK
Surr: 4-Bromofluorobenzene	90.5		0	65.6-135	%REC	160463	1	04/21/2012 09:18	AK

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: DW-3
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 9:23:00 AM
Lab ID: 1204D61-019	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/24/2012 04:03	JT
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/24/2012 04:03	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/24/2012 04:03	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/24/2012 04:03	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/24/2012 04:03	JT
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/24/2012 04:03	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/24/2012 04:03	JT
Surr: 4-Bromofluorobenzene	71.9		0	67.4-123	%REC	160469	1	04/24/2012 04:03	JT
Surr: Dibromofluoromethane	118		0	75.5-128	%REC	160469	1	04/24/2012 04:03	JT
Surr: Toluene-d8	101		0	70-120	%REC	160469	1	04/24/2012 04:03	JT
Total Metals by ICP/MS		SW6020A		(SW3005A)					
Lead	0.626	J	0.165	1.00	ug/L	160452	1	04/21/2012 10:53	JY
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/24/2012 04:03	JT
Ethanol	BRL		97	100	ug/L	160469	1	04/24/2012 04:03	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/24/2012 04:03	JT
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/24/2012 04:03	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/24/2012 04:03	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/24/2012 04:03	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/24/2012 04:03	JT
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/24/2012 04:03	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011		(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160463	1	04/21/2012 09:55	AK
Surr: 4-Bromofluorobenzene	89.2		0	65.6-135	%REC	160463	1	04/21/2012 09:55	AK

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Client: Crawford Environmental Services	Client Sample ID: DW-4
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 9:58:00 AM
Lab ID: 1204D61-020	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160469	1	04/26/2012 18:45	JT	
Toluene	BRL		0.30	1.0	ug/L	160469	1	04/26/2012 18:45	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	160469	1	04/26/2012 18:45	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	160469	1	04/26/2012 18:45	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160469	1	04/26/2012 18:45	JT	
Naphthalene	BRL		0.30	5.0	ug/L	160469	1	04/26/2012 18:45	JT	
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160469	1	04/26/2012 18:45	JT	
Surr: 4-Bromofluorobenzene	95.4		0	67.4-123	%REC	160469	1	04/26/2012 18:45	JT	
Surr: Dibromofluoromethane	99.3		0	75.5-128	%REC	160469	1	04/26/2012 18:45	JT	
Surr: Toluene-d8	99.8		0	70-120	%REC	160469	1	04/26/2012 18:45	JT	
Total Metals by ICP/MS		SW6020A			(SW3005A)					
Lead			2.38	0.165	1.00	ug/L	160452	1	04/21/2012 11:00	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160469	1	04/26/2012 18:45	JT	
Ethanol	BRL		97	100	ug/L	160469	1	04/26/2012 18:45	JT	
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160469	1	04/26/2012 18:45	JT	
Isopropyl ether	BRL		4.1	10	ug/L	160469	1	04/26/2012 18:45	JT	
tert-Amyl alcohol	BRL		20	100	ug/L	160469	1	04/26/2012 18:45	JT	
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160469	1	04/26/2012 18:45	JT	
tert-Butyl Alcohol	BRL		28	100	ug/L	160469	1	04/26/2012 18:45	JT	
tert-Butyl formate	BRL		34	100	ug/L	160469	1	04/26/2012 18:45	JT	
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160529	1	04/23/2012 20:44	AK	
Surr: 4-Bromofluorobenzene	55.5	S	0	65.6-135	%REC	160529	1	04/23/2012 20:44	AK	

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed
- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: DW-5
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 10:46:00 AM
Lab ID: 1204D61-021	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/23/2012 18:47	JT
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/23/2012 18:47	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/23/2012 18:47	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160547	1	04/23/2012 18:47	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/23/2012 18:47	JT
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/23/2012 18:47	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/23/2012 18:47	JT
Surr: 4-Bromofluorobenzene	76.7		0	67.4-123	%REC	160547	1	04/23/2012 18:47	JT
Surr: Dibromofluoromethane	122		0	75.5-128	%REC	160547	1	04/23/2012 18:47	JT
Surr: Toluene-d8	111		0	70-120	%REC	160547	1	04/23/2012 18:47	JT
Total Metals by ICP/MS		SW6020A		(SW3005A)					
Lead	2.00		0.165	1.00	ug/L	160453	1	04/21/2012 11:18	JY
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/23/2012 18:47	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/23/2012 18:47	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/23/2012 18:47	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/23/2012 18:47	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/23/2012 18:47	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/23/2012 18:47	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/23/2012 18:47	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/23/2012 18:47	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011		(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160529	1	04/23/2012 21:21	AK
Surr: 4-Bromofluorobenzene	91.2		0	65.6-135	%REC	160529	1	04/23/2012 21:21	AK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: DW-6
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 11:31:00 AM
Lab ID: 1204D61-022	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/26/2012 19:11	JT
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/26/2012 19:11	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/26/2012 19:11	JT
Xylenes, Total	1.6	J	0.38	3.0	ug/L	160547	1	04/26/2012 19:11	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/26/2012 19:11	JT
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/26/2012 19:11	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/26/2012 19:11	JT
Surr: 4-Bromofluorobenzene	93.1		0	67.4-123	%REC	160547	1	04/26/2012 19:11	JT
Surr: Dibromofluoromethane	99		0	75.5-128	%REC	160547	1	04/26/2012 19:11	JT
Surr: Toluene-d8	99.7		0	70-120	%REC	160547	1	04/26/2012 19:11	JT
Total Metals by ICP/MS		SW6020A			(SW3005A)				
Lead	1.55		0.165	1.00	ug/L	160453	1	04/21/2012 11:50	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/26/2012 19:11	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/26/2012 19:11	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/26/2012 19:11	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/26/2012 19:11	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/26/2012 19:11	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/26/2012 19:11	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/26/2012 19:11	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/26/2012 19:11	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)				
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160529	1	04/23/2012 21:58	AK
Surr: 4-Bromofluorobenzene	88.1		0	65.6-135	%REC	160529	1	04/23/2012 21:58	AK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: DW-7
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 12:39:00 PM
Lab ID: 1204D61-023	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/24/2012 05:30	JT
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/24/2012 05:30	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/24/2012 05:30	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160547	1	04/24/2012 05:30	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/24/2012 05:30	JT
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/24/2012 05:30	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/24/2012 05:30	JT
Surr: 4-Bromofluorobenzene	81.5		0	67.4-123	%REC	160547	1	04/24/2012 05:30	JT
Surr: Dibromofluoromethane	124		0	75.5-128	%REC	160547	1	04/24/2012 05:30	JT
Surr: Toluene-d8	102		0	70-120	%REC	160547	1	04/24/2012 05:30	JT
Total Metals by ICP/MS		SW6020A			(SW3005A)				
Lead	2.85		0.165	1.00	ug/L	160453	1	04/21/2012 12:14	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/24/2012 05:30	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/24/2012 05:30	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/24/2012 05:30	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/24/2012 05:30	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/24/2012 05:30	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/24/2012 05:30	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/24/2012 05:30	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/24/2012 05:30	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)				
1,2-Dibromoethane	BRL		0.002	0.021	ug/L	160529	1	04/23/2012 22:36	AK
Surr: 4-Bromofluorobenzene	62.7	S	0	65.6-135	%REC	160529	1	04/23/2012 22:36	AK

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Client: Crawford Environmental Services	Client Sample ID: DUP 1 (MW-1)
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 1:56:00 PM
Lab ID: 1204D61-024	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B		(SW5030B)							
Benzene	240		21	50	ug/L	160547	50	04/26/2012 16:38	JT
Toluene	2000		15	50	ug/L	160547	50	04/26/2012 16:38	JT
Ethylbenzene	1000		19	50	ug/L	160547	50	04/26/2012 16:38	JT
Xylenes, Total	9000		19	150	ug/L	160547	50	04/26/2012 16:38	JT
Methyl tert-butyl ether	7.5		0.35	1.0	ug/L	160547	1	04/24/2012 06:00	JT
Naphthalene	650		15	250	ug/L	160547	50	04/26/2012 16:38	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/24/2012 06:00	JT
Surr: 4-Bromofluorobenzene	95.4		0	67.4-123	%REC	160547	50	04/26/2012 16:38	JT
Surr: 4-Bromofluorobenzene	86.6		0	67.4-123	%REC	160547	1	04/24/2012 06:00	JT
Surr: Dibromofluoromethane	99.3		0	75.5-128	%REC	160547	50	04/26/2012 16:38	JT
Surr: Dibromofluoromethane	99.3		0	75.5-128	%REC	160547	1	04/24/2012 06:00	JT
Surr: Toluene-d8	99.9		0	70-120	%REC	160547	50	04/26/2012 16:38	JT
Surr: Toluene-d8	98.3		0	70-120	%REC	160547	1	04/24/2012 06:00	JT
Total Metals by ICP/MS SW6020A		(SW3005A)							
Lead	15.5		0.165	1.00	ug/L	160453	1	04/21/2012 12:21	JY
Oxygenates (AES SOP OA-11010) SW8260B		(SW5030B)							
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/24/2012 06:00	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/24/2012 06:00	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/24/2012 06:00	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/24/2012 06:00	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/24/2012 06:00	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/24/2012 06:00	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/24/2012 06:00	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/24/2012 06:00	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011		(SW8011)							
1,2-Dibromoethane	0.130		0.002	0.021	ug/L	160529	1	04/23/2012 23:13	AK
Surr: 4-Bromofluorobenzene	76.3		0	65.6-135	%REC	160529	1	04/23/2012 23:13	AK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Client: Crawford Environmental Services	Client Sample ID: DUP 2 (MW-2)
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 1:39:00 PM
Lab ID: 1204D61-025	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	280		4.1	10	ug/L	160547	10	04/26/2012 17:04	JT
Toluene	1800		3.0	10	ug/L	160547	10	04/26/2012 17:04	JT
Ethylbenzene	430		3.7	10	ug/L	160547	10	04/26/2012 17:04	JT
Xylenes, Total	4100		3.8	30	ug/L	160547	10	04/26/2012 17:04	JT
Methyl tert-butyl ether	7.6		0.35	1.0	ug/L	160547	1	04/24/2012 06:29	JT
Naphthalene	47		0.30	5.0	ug/L	160547	1	04/24/2012 06:29	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/24/2012 06:29	JT
Surr: 4-Bromofluorobenzene	88.9		0	67.4-123	%REC	160547	1	04/24/2012 06:29	JT
Surr: 4-Bromofluorobenzene	97.9		0	67.4-123	%REC	160547	10	04/26/2012 17:04	JT
Surr: Dibromofluoromethane	97.1		0	75.5-128	%REC	160547	1	04/24/2012 06:29	JT
Surr: Dibromofluoromethane	96.5		0	75.5-128	%REC	160547	10	04/26/2012 17:04	JT
Surr: Toluene-d8	97.1		0	70-120	%REC	160547	10	04/26/2012 17:04	JT
Surr: Toluene-d8	99.8		0	70-120	%REC	160547	1	04/24/2012 06:29	JT
Total Metals by ICP/MS		SW6020A			(SW3005A)				
Lead	19.5		0.165	1.00	ug/L	160453	1	04/21/2012 12:27	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/24/2012 06:29	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/24/2012 06:29	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/24/2012 06:29	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/24/2012 06:29	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/24/2012 06:29	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/24/2012 06:29	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/24/2012 06:29	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/24/2012 06:29	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)				
1,2-Dibromoethane	1.45		0.023	0.205	ug/L	160529	10	04/25/2012 07:06	AK
Surr: 4-Bromofluorobenzene	90.5		0	65.6-135	%REC	160529	1	04/24/2012 00:27	AK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: WSW-1
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 1:15:00 PM
Lab ID: 1204D61-026	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/26/2012 23:47	JT
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/26/2012 23:47	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/26/2012 23:47	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160547	1	04/26/2012 23:47	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/26/2012 23:47	JT
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/26/2012 23:47	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/26/2012 23:47	JT
Surr: 4-Bromofluorobenzene	94		0	67.4-123	%REC	160547	1	04/26/2012 23:47	JT
Surr: Dibromofluoromethane	99.1		0	75.5-128	%REC	160547	1	04/26/2012 23:47	JT
Surr: Toluene-d8	99.9		0	70-120	%REC	160547	1	04/26/2012 23:47	JT
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/24/2012 06:58	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/24/2012 06:58	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/24/2012 06:58	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/24/2012 06:58	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/24/2012 06:58	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/24/2012 06:58	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/24/2012 06:58	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/24/2012 06:58	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011		(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160529	1	04/24/2012 01:05	AK
Surr: 4-Bromofluorobenzene	94.5		0	65.6-135	%REC	160529	1	04/24/2012 01:05	AK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services
 Project Name: 15.102 Steady Simmons
 Lab ID: 1204D61-027

Client Sample ID: WSW-3
 Collection Date: 4/13/2012 1:26:00 PM
 Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/24/2012 07:27	JT
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/24/2012 07:27	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/24/2012 07:27	JT
Xylenes, Total	1.1	J	0.38	3.0	ug/L	160547	1	04/24/2012 07:27	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/24/2012 07:27	JT
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/24/2012 07:27	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/24/2012 07:27	JT
Surr: 4-Bromofluorobenzene	74.5		0	67.4-123	%REC	160547	1	04/24/2012 07:27	JT
Surr: Dibromofluoromethane	122		0	75.5-128	%REC	160547	1	04/24/2012 07:27	JT
Surr: Toluene-d8	93.1		0	70-120	%REC	160547	1	04/24/2012 07:27	JT
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/24/2012 07:27	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/24/2012 07:27	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/24/2012 07:27	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/24/2012 07:27	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/24/2012 07:27	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/24/2012 07:27	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/24/2012 07:27	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/24/2012 07:27	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011		(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160529	1	04/24/2012 01:43	AK
Surr: 4-Bromofluorobenzene	90.4		0	65.6-135	%REC	160529	1	04/24/2012 01:43	AK

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated value above quantitation range
BRL	Not detected at MDL	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N	Analyte not NELAC certified	>	Greater than Result value
B	Analyte detected in the associated method blank	<	Less than Result value
NC	Not confirmed	Narr	See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: WSW-4
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 1:49:00 PM
Lab ID: 1204D61-028	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/27/2012 01:54	JT
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/27/2012 01:54	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/27/2012 01:54	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160547	1	04/27/2012 01:54	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/27/2012 01:54	JT
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/27/2012 01:54	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/27/2012 01:54	JT
Surr: 4-Bromofluorobenzene	93.6		0	67.4-123	%REC	160547	1	04/27/2012 01:54	JT
Surr: Dibromofluoromethane	98.9		0	75.5-128	%REC	160547	1	04/27/2012 01:54	JT
Surr: Toluene-d8	100		0	70-120	%REC	160547	1	04/27/2012 01:54	JT
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/27/2012 01:54	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/27/2012 01:54	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/27/2012 01:54	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/27/2012 01:54	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/27/2012 01:54	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/27/2012 01:54	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/27/2012 01:54	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/27/2012 01:54	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011		(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.021	ug/L	160529	1	04/24/2012 02:20	AK
Surr: 4-Bromofluorobenzene	94		0	65.6-135	%REC	160529	1	04/24/2012 02:20	AK

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: SW-1
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 2:04:00 PM
Lab ID: 1204D61-029	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/27/2012 02:19	JT
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/27/2012 02:19	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/27/2012 02:19	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160547	1	04/27/2012 02:19	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/27/2012 02:19	JT
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/27/2012 02:19	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/27/2012 02:19	JT
Surr: 4-Bromofluorobenzene	92.1		0	67.4-123	%REC	160547	1	04/27/2012 02:19	JT
Surr: Dibromofluoromethane	98.1		0	75.5-128	%REC	160547	1	04/27/2012 02:19	JT
Surr: Toluene-d8	99.6		0	70-120	%REC	160547	1	04/27/2012 02:19	JT
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/27/2012 02:19	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/27/2012 02:19	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/27/2012 02:19	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/27/2012 02:19	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/27/2012 02:19	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/27/2012 02:19	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/27/2012 02:19	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/27/2012 02:19	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011		(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.021	ug/L	160529	1	04/24/2012 02:57	AK
Surr: 4-Bromofluorobenzene	91.9		0	65.6-135	%REC	160529	1	04/24/2012 02:57	AK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: SW-2
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 2:09:00 PM
Lab ID: 1204D61-030	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/26/2012 19:35	JT
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/26/2012 19:35	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/26/2012 19:35	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160547	1	04/26/2012 19:35	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/26/2012 19:35	JT
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/26/2012 19:35	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/26/2012 19:35	JT
Surr: 4-Bromofluorobenzene	92.9		0	67.4-123	%REC	160547	1	04/26/2012 19:35	JT
Surr: Dibromofluoromethane	98		0	75.5-128	%REC	160547	1	04/26/2012 19:35	JT
Surr: Toluene-d8	99.1		0	70-120	%REC	160547	1	04/26/2012 19:35	JT
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/26/2012 19:35	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/26/2012 19:35	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/26/2012 19:35	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/26/2012 19:35	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/26/2012 19:35	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/26/2012 19:35	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/26/2012 19:35	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/26/2012 19:35	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)				
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160529	1	04/24/2012 03:35	AK
Surr: 4-Bromofluorobenzene	93.7		0	65.6-135	%REC	160529	1	04/24/2012 03:35	AK

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: SW-3
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 2:26:00 PM
Lab ID: 1204D61-031	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/26/2012 20:01	JT
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/26/2012 20:01	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/26/2012 20:01	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160547	1	04/26/2012 20:01	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/26/2012 20:01	JT
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/26/2012 20:01	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/26/2012 20:01	JT
Surr: 4-Bromofluorobenzene	93.3		0	67.4-123	%REC	160547	1	04/26/2012 20:01	JT
Surr: Dibromofluoromethane	97.8		0	75.5-128	%REC	160547	1	04/26/2012 20:01	JT
Surr: Toluene-d8	99.4		0	70-120	%REC	160547	1	04/26/2012 20:01	JT
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/26/2012 20:01	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/26/2012 20:01	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/26/2012 20:01	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/26/2012 20:01	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/26/2012 20:01	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/26/2012 20:01	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/26/2012 20:01	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/26/2012 20:01	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)				
1,2-Dibromoethane	BRL		0.002	0.021	ug/L	160529	1	04/24/2012 04:12	AK
Surr: 4-Bromofluorobenzene	96.6		0	65.6-135	%REC	160529	1	04/24/2012 04:12	AK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Client: Crawford Environmental Services	Client Sample ID: FIELD BLANK 1
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 3:05:00 PM
Lab ID: 1204D61-032	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst	
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/27/2012 00:13	JT	
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/27/2012 00:13	JT	
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/27/2012 00:13	JT	
Xylenes, Total	BRL		0.38	3.0	ug/L	160547	1	04/27/2012 00:13	JT	
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/27/2012 00:13	JT	
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/27/2012 00:13	JT	
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/27/2012 00:13	JT	
Surr: 4-Bromofluorobenzene	91.8		0	67.4-123	%REC	160547	1	04/27/2012 00:13	JT	
Surr: Dibromofluoromethane	101		0	75.5-128	%REC	160547	1	04/27/2012 00:13	JT	
Surr: Toluene-d8	99.3		0	70-120	%REC	160547	1	04/27/2012 00:13	JT	
Total Metals by ICP/MS		SW6020A			(SW3005A)					
Lead	0.707	J	0.165	1.00	ug/L	160453	1	04/21/2012 12:33	JY	
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/27/2012 00:13	JT	
Ethanol	BRL		97	100	ug/L	160547	1	04/27/2012 00:13	JT	
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/27/2012 00:13	JT	
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/27/2012 00:13	JT	
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/27/2012 00:13	JT	
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/27/2012 00:13	JT	
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/27/2012 00:13	JT	
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/27/2012 00:13	JT	
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)					
1,2-Dibromoethane	BRL		0.002	0.021	ug/L	160529	1	04/24/2012 04:49	AK	
Surr: 4-Bromofluorobenzene	101		0	65.6-135	%REC	160529	1	04/24/2012 04:49	AK	

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: FIELD BLANK 2
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 3:05:00 PM
Lab ID: 1204D61-033	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/27/2012 00:38	JT
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/27/2012 00:38	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/27/2012 00:38	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160547	1	04/27/2012 00:38	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/27/2012 00:38	JT
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/27/2012 00:38	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/27/2012 00:38	JT
Surr: 4-Bromofluorobenzene	92.3		0	67.4-123	%REC	160547	1	04/27/2012 00:38	JT
Surr: Dibromofluoromethane	98.5		0	75.5-128	%REC	160547	1	04/27/2012 00:38	JT
Surr: Toluene-d8	99		0	70-120	%REC	160547	1	04/27/2012 00:38	JT
Total Metals by ICP/MS		SW6020A			(SW3005A)				
Lead	0.364	J	0.165	1.00	ug/L	160453	1	04/21/2012 12:39	JY
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/27/2012 00:38	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/27/2012 00:38	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/27/2012 00:38	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/27/2012 00:38	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/27/2012 00:38	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/27/2012 00:38	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/27/2012 00:38	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/27/2012 00:38	JT
MICRO-EXTRACTABLE VOLATILE ORGANICS		SW8011			(SW8011)				
1,2-Dibromoethane	BRL		0.002	0.020	ug/L	160529	1	04/24/2012 05:26	AK
Surr: 4-Bromofluorobenzene	100		0	65.6-135	%REC	160529	1	04/24/2012 05:26	AK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: TRIP BLANK 1
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 6:21:00 AM
Lab ID: 1204D61-034	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B		(SW5030B)					
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/26/2012 17:29	JT
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/26/2012 17:29	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/26/2012 17:29	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160547	1	04/26/2012 17:29	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/26/2012 17:29	JT
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/26/2012 17:29	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/26/2012 17:29	JT
Surr: 4-Bromofluorobenzene	93.1		0	67.4-123	%REC	160547	1	04/26/2012 17:29	JT
Surr: Dibromofluoromethane	98.3		0	75.5-128	%REC	160547	1	04/26/2012 17:29	JT
Surr: Toluene-d8	99.4		0	70-120	%REC	160547	1	04/26/2012 17:29	JT
Oxygenates (AES SOP OA-11010)		SW8260B		(SW5030B)					
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/26/2012 17:29	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/26/2012 17:29	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/26/2012 17:29	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/26/2012 17:29	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/26/2012 17:29	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/26/2012 17:29	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/26/2012 17:29	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/26/2012 17:29	JT

Qualifiers:	* Value exceeds maximum contaminant level	E Estimated value above quantitation range
	BRL Not detected at MDL	S Spike Recovery outside limits due to matrix
	H Holding times for preparation or analysis exceeded	J Estimated value detected below Reporting Limit
	N Analyte not NELAC certified	> Greater than Result value
	B Analyte detected in the associated method blank	< Less than Result value
	NC Not confirmed	Narr See case narrative

Analytical Environmental Services, Inc

Date: 30-Apr-12

Client: Crawford Environmental Services	Client Sample ID: TRIP BLANK 2
Project Name: 15.102 Steady Simmons	Collection Date: 4/13/2012 6:34:00 AM
Lab ID: 1204D61-035	Matrix: Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		SW8260B			(SW5030B)				
Benzene	BRL		0.41	1.0	ug/L	160547	1	04/26/2012 17:55	JT
Toluene	BRL		0.30	1.0	ug/L	160547	1	04/26/2012 17:55	JT
Ethylbenzene	BRL		0.37	1.0	ug/L	160547	1	04/26/2012 17:55	JT
Xylenes, Total	BRL		0.38	3.0	ug/L	160547	1	04/26/2012 17:55	JT
Methyl tert-butyl ether	BRL		0.35	1.0	ug/L	160547	1	04/26/2012 17:55	JT
Naphthalene	BRL		0.30	5.0	ug/L	160547	1	04/26/2012 17:55	JT
1,2-Dichloroethane	BRL		0.22	1.0	ug/L	160547	1	04/26/2012 17:55	JT
Surr: 4-Bromofluorobenzene	92.6		0	67.4-123	%REC	160547	1	04/26/2012 17:55	JT
Surr: Dibromofluoromethane	97.9		0	75.5-128	%REC	160547	1	04/26/2012 17:55	JT
Surr: Toluene-d8	99		0	70-120	%REC	160547	1	04/26/2012 17:55	JT
Oxygenates (AES SOP OA-11010)		SW8260B			(SW5030B)				
3,3-Dimethyl-1-butanol	BRL		14	100	ug/L	160547	1	04/26/2012 17:55	JT
Ethanol	BRL		97	100	ug/L	160547	1	04/26/2012 17:55	JT
Ethyl tert-butyl ether	BRL		3.1	100	ug/L	160547	1	04/26/2012 17:55	JT
Isopropyl ether	BRL		4.1	10	ug/L	160547	1	04/26/2012 17:55	JT
tert-Amyl alcohol	BRL		20	100	ug/L	160547	1	04/26/2012 17:55	JT
tert-Amyl methyl ether	BRL		2.9	10	ug/L	160547	1	04/26/2012 17:55	JT
tert-Butyl Alcohol	BRL		28	100	ug/L	160547	1	04/26/2012 17:55	JT
tert-Butyl formate	BRL		34	100	ug/L	160547	1	04/26/2012 17:55	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value
- Narr See case narrative

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Access Analytical

Work Order Number 1204061

Checklist completed by [Signature] 04/19/2012
Signature Date

Carrier name: FedEx UPS Courier Client US Mail Other

Shipping container/cooler in good condition? Yes No Not Present
Custody seals intact on shipping container/cooler? Yes No Not Present
Custody seals intact on sample bottles? Yes No Not Present
Container/Temp Blank temperature in compliance? (4°C±2)* Yes No

Cooler #1 3.7 Cooler #2 4.0 Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes No
Chain of custody signed when relinquished and received? Yes No
Chain of custody agrees with sample labels? Yes No
Samples in proper container/bottle? Yes No
Sample containers intact? Yes No
Sufficient sample volume for indicated test? Yes No
All samples received within holding time? Yes No
Was TAT marked on the COC? Yes No
Proceed with Standard TAT as per project history? Yes No Not Applicable
Water - VOA vials have zero headspace? No VOA vials submitted Yes No
Water - pH acceptable upon receipt? Yes No Not Applicable

Adjusted? _____ Checked by [Signature]

Sample Condition: Good Other(Explain) broken vial

(For diffusive samples or AIHA lead) Is a known blank included? Yes No

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.



Sample Receipt Checklist

Checklist Completed By: aam Date: 4-17-12
 Client: Crawford Project: Steady Simmons
 Receiving Laboratory Facility(s): agg

Sample Conditions:

- Samples received in good condition (unbroken and not leaking)? Yes No
- Sample temperatures in compliance (4°C +/- 2)? Yes No
- Sample temperatures recorded on Chain of Custody? Yes No
- Custody seals intact on bottles? Yes No Not Present
- Chain of Custody Present & Completed Properly? Yes No
- Chain of Custody and Sample Bottle Labels Correlate? Yes No
- Sufficient Sample Volumes Received for Requested Tests? Yes No
- Samples collected in proper containers w/correct preservatives? Yes No
- Samples received within holding time? Yes No
- VOC vials have zero headspace (WATERS ONLY) Yes No N/A

*Corrective action(s) taken for items indicated as "No" (if any):

Bottles were received for mw-16 but not
listed on COC. Per Justin Reynolds
via email please add mw-16
coll. date/time: 4-13-12 @ 1316

Name of client and date contacted (if applicable): _____

Notes for Receiving Lab:

Analytical Environmental Services, Inc

Date: 27-Apr-12

Client: Crawford Environmental Services
 Project: 15.102 Steady Simmons
 Lab Order: 1204D61

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1204D61-001A	MW-1	4/13/2012 1:56:00PM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/20/2012
1204D61-001A	MW-1	4/13/2012 1:56:00PM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/20/2012
1204D61-001B	MW-1	4/13/2012 1:56:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/20/2012
1204D61-001C	MW-1	4/13/2012 1:56:00PM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-002A	MW-2	4/13/2012 1:39:00PM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/20/2012
1204D61-002A	MW-2	4/13/2012 1:39:00PM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/20/2012
1204D61-002B	MW-2	4/13/2012 1:39:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/20/2012
1204D61-002B	MW-2	4/13/2012 1:39:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/24/2012
1204D61-002C	MW-2	4/13/2012 1:39:00PM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-003A	MW-3	4/13/2012 1:24:00PM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/20/2012
1204D61-003A	MW-3	4/13/2012 1:24:00PM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/20/2012
1204D61-003B	MW-3	4/13/2012 1:24:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/20/2012
1204D61-003C	MW-3	4/13/2012 1:24:00PM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-004A	MW-4	4/13/2012 1:16:00PM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/20/2012
1204D61-004A	MW-4	4/13/2012 1:16:00PM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/20/2012
1204D61-004B	MW-4	4/13/2012 1:16:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/20/2012
1204D61-004C	MW-4	4/13/2012 1:16:00PM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-005A	MW-5	4/13/2012 10:38:00AM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/20/2012
1204D61-005A	MW-5	4/13/2012 10:38:00AM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/20/2012
1204D61-005B	MW-5	4/13/2012 10:38:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/21/2012
1204D61-005C	MW-5	4/13/2012 10:38:00AM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-006A	MW-6	4/13/2012 10:51:00AM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/20/2012
1204D61-006A	MW-6	4/13/2012 10:51:00AM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/20/2012
1204D61-006B	MW-6	4/13/2012 10:51:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/21/2012
1204D61-006C	MW-6	4/13/2012 10:51:00AM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-007A	MW-7	4/13/2012 10:59:00AM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/20/2012
1204D61-007A	MW-7	4/13/2012 10:59:00AM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/20/2012
1204D61-007B	MW-7	4/13/2012 10:59:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/21/2012
1204D61-007C	MW-7	4/13/2012 10:59:00AM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012

Analytical Environmental Services, Inc

Date: 27-Apr-12

Client: Crawford Environmental Services
 Project: 15.102 Steady Simmons
 Lab Order: 1204D61

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1204D61-008A	MW-8	4/13/2012 11:15:00AM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/20/2012
1204D61-008A	MW-8	4/13/2012 11:15:00AM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/20/2012
1204D61-008B	MW-8	4/13/2012 11:15:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/21/2012
1204D61-008C	MW-8	4/13/2012 11:15:00AM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-009A	MW-9	4/13/2012 11:59:00AM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/20/2012
1204D61-009A	MW-9	4/13/2012 11:59:00AM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/20/2012
1204D61-009B	MW-9	4/13/2012 11:59:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/21/2012
1204D61-009C	MW-9	4/13/2012 11:59:00AM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-010A	MW-10	4/13/2012 11:24:00AM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/20/2012
1204D61-010A	MW-10	4/13/2012 11:24:00AM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/20/2012
1204D61-010B	MW-10	4/13/2012 11:24:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/21/2012
1204D61-010C	MW-10	4/13/2012 11:24:00AM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-011A	MW-11	4/13/2012 11:39:00AM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/20/2012
1204D61-011A	MW-11	4/13/2012 11:39:00AM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/20/2012
1204D61-011B	MW-11	4/13/2012 11:39:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/21/2012
1204D61-011C	MW-11	4/13/2012 11:39:00AM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-012A	MW-12	4/13/2012 12:06:00PM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/21/2012
1204D61-012A	MW-12	4/13/2012 12:06:00PM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/23/2012
1204D61-012B	MW-12	4/13/2012 12:06:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/21/2012
1204D61-012C	MW-12	4/13/2012 12:06:00PM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-013A	MW-13	4/13/2012 12:23:00PM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/23/2012
1204D61-013A	MW-13	4/13/2012 12:23:00PM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/23/2012
1204D61-013B	MW-13	4/13/2012 12:23:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/21/2012
1204D61-013C	MW-13	4/13/2012 12:23:00PM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-014A	MW-14	4/13/2012 12:49:00PM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/26/2012
1204D61-014A	MW-14	4/13/2012 12:49:00PM	Groundwater	Oxygenates by GC/MS		04/20/2012	04/26/2012
1204D61-014B	MW-14	4/13/2012 12:49:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		04/20/2012	04/21/2012
1204D61-014C	MW-14	4/13/2012 12:49:00PM	Groundwater	Total Metals by ICP/MS		04/20/2012	04/21/2012
1204D61-015A	MW-15	4/13/2012 1:04:00PM	Groundwater	Volatile Organic Compounds by GC/MS		04/20/2012	04/26/2012

Analytical Environmental Services, Inc

Date: 27-Apr-12

Client: Crawford Environmental Services
 Project: 15.102 Steady Simmons
 Lab Order: 1204D61

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1204D61-015A	MW-15	4/13/2012 1:04:00PM	Groundwater	Oxygenates by GC/MS	04/20/2012	04/20/2012	04/26/2012
1204D61-015B	MW-15	4/13/2012 1:04:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/20/2012	04/20/2012	04/21/2012
1204D61-015C	MW-15	4/13/2012 1:04:00PM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-016A	MW-16	4/13/2012 1:16:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/20/2012	04/20/2012	04/27/2012
1204D61-016A	MW-16	4/13/2012 1:16:00PM	Groundwater	Oxygenates by GC/MS	04/20/2012	04/20/2012	04/27/2012
1204D61-016B	MW-16	4/13/2012 1:16:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/20/2012	04/20/2012	04/21/2012
1204D61-016C	MW-16	4/13/2012 1:16:00PM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-017A	DW-1	4/13/2012 8:15:00AM	Groundwater	Volatile Organic Compounds by GC/MS	04/20/2012	04/20/2012	04/26/2012
1204D61-017A	DW-1	4/13/2012 8:15:00AM	Groundwater	Oxygenates by GC/MS	04/20/2012	04/20/2012	04/26/2012
1204D61-017B	DW-1	4/13/2012 8:15:00AM	Groundwater	MICRO-EXTRACTABLE VOCs	04/20/2012	04/20/2012	04/21/2012
1204D61-017C	DW-1	4/13/2012 8:15:00AM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-018A	DW-2	4/13/2012 5:56:00AM	Groundwater	Volatile Organic Compounds by GC/MS	04/20/2012	04/20/2012	04/27/2012
1204D61-018A	DW-2	4/13/2012 5:56:00AM	Groundwater	Oxygenates by GC/MS	04/20/2012	04/20/2012	04/27/2012
1204D61-018B	DW-2	4/13/2012 5:56:00AM	Groundwater	MICRO-EXTRACTABLE VOCs	04/20/2012	04/20/2012	04/21/2012
1204D61-018C	DW-2	4/13/2012 5:56:00AM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-019A	DW-3	4/13/2012 9:23:00AM	Groundwater	Volatile Organic Compounds by GC/MS	04/20/2012	04/20/2012	04/24/2012
1204D61-019A	DW-3	4/13/2012 9:23:00AM	Groundwater	Oxygenates by GC/MS	04/20/2012	04/20/2012	04/24/2012
1204D61-019B	DW-3	4/13/2012 9:23:00AM	Groundwater	MICRO-EXTRACTABLE VOCs	04/20/2012	04/20/2012	04/21/2012
1204D61-019C	DW-3	4/13/2012 9:23:00AM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-020A	DW-4	4/13/2012 9:58:00AM	Groundwater	Volatile Organic Compounds by GC/MS	04/20/2012	04/20/2012	04/26/2012
1204D61-020A	DW-4	4/13/2012 9:58:00AM	Groundwater	Oxygenates by GC/MS	04/20/2012	04/20/2012	04/26/2012
1204D61-020B	DW-4	4/13/2012 9:58:00AM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/23/2012
1204D61-020C	DW-4	4/13/2012 9:58:00AM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-021A	DW-5	4/13/2012 10:46:00AM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/23/2012
1204D61-021A	DW-5	4/13/2012 10:46:00AM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/23/2012
1204D61-021B	DW-5	4/13/2012 10:46:00AM	Groundwater	MICRO-EXTRACTABLE VOCs	04/20/2012	04/20/2012	04/21/2012
1204D61-021C	DW-5	4/13/2012 10:46:00AM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-022A	DW-6	4/13/2012 11:31:00AM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/26/2012
1204D61-022A	DW-6	4/13/2012 11:31:00AM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/26/2012

Analytical Environmental Services, Inc

Date: 27-Apr-12

Client: Crawford Environmental Services
 Project: 15.102 Steady Simmons
 Lab Order: 1204D61

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1204D61-022B	DW-6	4/13/2012 11:31:00AM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/23/2012
1204D61-022C	DW-6	4/13/2012 11:31:00AM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-023A	DW-7	4/13/2012 12:39:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/24/2012
1204D61-023A	DW-7	4/13/2012 12:39:00PM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/24/2012
1204D61-023B	DW-7	4/13/2012 12:39:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/23/2012
1204D61-023C	DW-7	4/13/2012 12:39:00PM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-024A	DUP 1 (MW-1)	4/13/2012 1:56:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/24/2012
1204D61-024A	DUP 1 (MW-1)	4/13/2012 1:56:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/26/2012
1204D61-024A	DUP 1 (MW-1)	4/13/2012 1:56:00PM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/24/2012
1204D61-024B	DUP 1 (MW-1)	4/13/2012 1:56:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/23/2012
1204D61-024C	DUP 1 (MW-1)	4/13/2012 1:56:00PM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-025A	DUP 2 (MW-2)	4/13/2012 1:39:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/24/2012
1204D61-025A	DUP 2 (MW-2)	4/13/2012 1:39:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/26/2012
1204D61-025A	DUP 2 (MW-2)	4/13/2012 1:39:00PM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/24/2012
1204D61-025B	DUP 2 (MW-2)	4/13/2012 1:39:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/24/2012
1204D61-025B	DUP 2 (MW-2)	4/13/2012 1:39:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/25/2012
1204D61-025C	DUP 2 (MW-2)	4/13/2012 1:39:00PM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-026A	WSW-1	4/13/2012 1:15:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/24/2012
1204D61-026A	WSW-1	4/13/2012 1:15:00PM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/26/2012
1204D61-026B	WSW-1	4/13/2012 1:15:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/24/2012
1204D61-027A	WSW-3	4/13/2012 1:26:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/24/2012
1204D61-027A	WSW-3	4/13/2012 1:26:00PM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/24/2012
1204D61-027B	WSW-3	4/13/2012 1:26:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/24/2012
1204D61-028A	WSW-4	4/13/2012 1:49:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/27/2012
1204D61-028A	WSW-4	4/13/2012 1:49:00PM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/27/2012
1204D61-028B	WSW-4	4/13/2012 1:49:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/24/2012
1204D61-029A	SW-1	4/13/2012 2:04:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/24/2012
1204D61-029A	SW-1	4/13/2012 2:04:00PM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/27/2012
1204D61-029B	SW-1	4/13/2012 2:04:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/24/2012

Analytical Environmental Services, Inc

Date: 27-Apr-12

Client: Crawford Environmental Services
 Project: 15.102 Steady Simmons
 Lab Order: 1204D61

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1204D61-030A	SW-2	4/13/2012 2:09:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/26/2012
1204D61-030A	SW-2	4/13/2012 2:09:00PM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/26/2012
1204D61-030B	SW-2	4/13/2012 2:09:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/24/2012
1204D61-031A	SW-3	4/13/2012 2:26:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/26/2012
1204D61-031A	SW-3	4/13/2012 2:26:00PM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/26/2012
1204D61-031B	SW-3	4/13/2012 2:26:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/24/2012
1204D61-032A	FIELD BLANK 1	4/13/2012 3:05:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/27/2012
1204D61-032A	FIELD BLANK 1	4/13/2012 3:05:00PM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/27/2012
1204D61-032B	FIELD BLANK 1	4/13/2012 3:05:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/24/2012
1204D61-032C	FIELD BLANK 1	4/13/2012 3:05:00PM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-033A	FIELD BLANK 2	4/13/2012 3:05:00PM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/27/2012
1204D61-033A	FIELD BLANK 2	4/13/2012 3:05:00PM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/27/2012
1204D61-033B	FIELD BLANK 2	4/13/2012 3:05:00PM	Groundwater	MICRO-EXTRACTABLE VOCs	04/23/2012	04/23/2012	04/24/2012
1204D61-033C	FIELD BLANK 2	4/13/2012 3:05:00PM	Groundwater	Total Metals by ICP/MS	04/20/2012	04/20/2012	04/21/2012
1204D61-034A	TRIP BLANK 1	4/13/2012 6:21:00AM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/26/2012
1204D61-034A	TRIP BLANK 1	4/13/2012 6:21:00AM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/26/2012
1204D61-035A	TRIP BLANK 2	4/13/2012 6:34:00AM	Groundwater	Volatile Organic Compounds by GC/MS	04/23/2012	04/23/2012	04/26/2012
1204D61-035A	TRIP BLANK 2	4/13/2012 6:34:00AM	Groundwater	Oxygenates by GC/MS	04/23/2012	04/23/2012	04/26/2012

Analytical Environmental Services, Inc.

Date: 27-Apr-12

CLIENT: Crawford Environmental Services
 Work Order: 1204D61
 Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT

TestCode: Total Metals by ICP/MS SW6020A

Sample ID: MB-160452	Samp Type: MBLK	Batch ID: 160452	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219638						
Client ID:	TestCode: Total Metals by ICP/MS SW6020A			Analysis Date: 4/21/2012	SeqNo: 4592653						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	BRL	1.00	0	0	0	0	0	0	0	0	0

Sample ID: MB-160453	Samp Type: MBLK	Batch ID: 160453	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219639						
Client ID:	TestCode: Total Metals by ICP/MS SW6020A			Analysis Date: 4/21/2012	SeqNo: 4592715						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	BRL	1.00	0	0	0	0	0	0	0	0	0

Sample ID: LCS-160452	Samp Type: LCS	Batch ID: 160452	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219638						
Client ID:	TestCode: Total Metals by ICP/MS SW6020A			Analysis Date: 4/21/2012	SeqNo: 4592651						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	106.6	1.00	100	0	107	80	120	0	0	0	0

Sample ID: LCS-160453	Samp Type: LCS	Batch ID: 160453	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219639						
Client ID:	TestCode: Total Metals by ICP/MS SW6020A			Analysis Date: 4/21/2012	SeqNo: 4592711						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	103.1	1.00	100	0	103	80	120	0	0	0	0

Sample ID: 1204D61-017CMS	Samp Type: MS	Batch ID: 160452	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219638						
Client ID: DW-1	TestCode: Total Metals by ICP/MS SW6020A			Analysis Date: 4/21/2012	SeqNo: 4592657						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	111.4	1.00	100	0.53	111	75	125	0	0	0	0

Qualifiers:

- < Less than Result value
- BRL Below Reporting Limit
- J Estimated value detected below Reporting Limit
- Rpt.Lim Reporting Limit
- > Greater than Result value
- E Estimated value above quantification range
- N Analyte not NELAC certified
- S Spike Recovery outside limits due to matrix
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- R RPD outside limits due to matrix

CLIENT: Crawford Environmental Services
Work Order: 1204D61
Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT
TestCode: Total Metals by ICP/MS SW6020A

Sample ID: 1204D61-021CMS	Samp Type: MS	Batch ID: 160453	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219639						
Client ID: DW-5	TestCode: Total Metals by ICP/MS SW6020A			Analysis Date: 4/21/2012	SeqNo: 4592725						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	112.2	1.00	100	2.003	110	75	125	0	0	0	

Sample ID: 1204D61-017CMSD	Samp Type: MSD	Batch ID: 160452	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219638						
Client ID: DW-1	TestCode: Total Metals by ICP/MS SW6020A			Analysis Date: 4/21/2012	SeqNo: 4592663						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	111.2	1.00	100	0.53	111	75	125	111.4	0.180	20	

Sample ID: 1204D61-021CMSD	Samp Type: MSD	Batch ID: 160453	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219639						
Client ID: DW-5	TestCode: Total Metals by ICP/MS SW6020A			Analysis Date: 4/21/2012	SeqNo: 4592728						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	113.5	1.00	100	2.003	111	75	125	112.2	1.15	20	

Qualifiers:

<	Less than Result value	>	Greater than Result value
BRL	Below Reporting Limit	E	Estimated value above quantitation range
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
		B	Analyte detected in the associated Method Blank
		H	Holding times for preparation or analysis exceeded
		R	RPD outside limits due to matrix

CLIENT: Crawford Environmental Services
 Work Order: 1204D61
 Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT
TestCode: MICRO-EXTRACTABLE VOLATILE ORGANICS SW8

Sample ID: MB-160463	Samp Type: MBLK	Batch ID: 160463	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219648						
Client ID:	TestCode: MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011			Analysis Date: 4/20/2012	SeqNo: 4592887						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	BRL	0.0200	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	4.864	0	5	0	97.3	65.6	135	0	0	0	0

Sample ID: MB-160529	Samp Type: MBLK	Batch ID: 160529	Units: ug/L	Prep Date: 4/23/2012	RunNo: 219819						
Client ID:	TestCode: MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011			Analysis Date: 4/23/2012	SeqNo: 4596195						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	BRL	0.0200	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	5.075	0	5	0	102	65.6	135	0	0	0	0

Sample ID: LCS-160463	Samp Type: LCS	Batch ID: 160463	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219648						
Client ID:	TestCode: MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011			Analysis Date: 4/20/2012	SeqNo: 4592889						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.105	0.0200	0.1	0	105	60	140	0	0	0	0
Surr: 4-Bromofluorobenzene	5.181	0	5	0	104	65.6	135	0	0	0	0

Sample ID: LCS-160529	Samp Type: LCS	Batch ID: 160529	Units: ug/L	Prep Date: 4/23/2012	RunNo: 219819						
Client ID:	TestCode: MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011			Analysis Date: 4/23/2012	SeqNo: 4596196						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.105	0.0200	0.1	0	105	60	140	0	0	0	0
Surr: 4-Bromofluorobenzene	4.898	0	5	0	98	65.6	135	0	0	0	0

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	BRL	Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Crawford Environmental Services
Work Order: 1204D61
Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT
TestCode: MICRO-EXTRACTABLE VOLATILE ORGANICS SW8

Sample ID: LCSD-160463	Samp Type: LCSD	Batch ID: 160463	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219648						
Client ID:	TestCode: MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011			Analysis Date: 4/20/2012	SeqNo: 4592890						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.098	0.0200	0.1	0	98	60	140	0.105	6.90	30	
Surr: 4-Bromofluorobenzene	4.995	0	5	0	99.9	65.6	135	5.181	0	0	

Sample ID: LCSD-160529	Samp Type: LCSD	Batch ID: 160529	Units: ug/L	Prep Date: 4/23/2012	RunNo: 219819						
Client ID:	TestCode: MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011			Analysis Date: 4/23/2012	SeqNo: 4596198						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.101	0.0200	0.1	0	101	60	140	0.105	3.88	30	
Surr: 4-Bromofluorobenzene	4.832	0	5	0	96.6	65.6	135	4.898	0	0	

Sample ID: 1204C71-041BMS	Samp Type: MS	Batch ID: 160463	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219648						
Client ID:	TestCode: MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011			Analysis Date: 4/20/2012	SeqNo: 4592893						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.112	0.0211	0.1057	0	106	54.3	138	0	0	0	
Surr: 4-Bromofluorobenzene	5.4	0	5.284	0	102	65.6	135	0	0	0	

Sample ID: 1204E64-002BMS	Samp Type: MS	Batch ID: 160529	Units: ug/L	Prep Date: 4/23/2012	RunNo: 219819						
Client ID:	TestCode: MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011			Analysis Date: 4/24/2012	SeqNo: 4596218						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.09685	0.0204	0.102	0	95	54.3	138	0	0	0	
Surr: 4-Bromofluorobenzene	4.785	0	5.098	0	93.9	65.6	135	0	0	0	

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Crawford Environmental Services
 Work Order: 1204D61
 Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT
TestCode: MICRO-EXTRACTABLE VOLATILE ORGANICS SW8

Sample ID: 1204E64-002BMSD Batch ID: 160529 Units: ug/L Prep Date: 4/23/2012 RunNo: 219819
 Client ID: TestCode: MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011 Analysis Date: 4/24/2012 SeqNo: 4596219

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.1006	0.0203	0.1016	0	99	54.3	138	0.09685	3.75	35.3	
Surr: 4-Bromofluorobenzene	4.891	0	5.078	0	96.3	65.6	135	4.785	0	0	

Qualifiers:

<	Less than Result value	>	Greater than Result value
BRL	Below Reporting Limit	E	Estimated value above quantitation range
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
		B	Analyte detected in the associated Method Blank
		H	Holding times for preparation or analysis exceeded
		R	RPD outside limits due to matrix

CLIENT: Crawford Environmental Services
 Work Order: 1204D61
 Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT
 TestCode: Oxygenates (AES SOP OA-11010) SW8260B

Sample ID: MB-160469	SampType: MBLK	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219588						
Client ID:	Oxygenates (AES SOP OA-11010) SW8260B			Analysis Date: 4/20/2012	SeqNo: 4591702						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3,3-Dimethyl-1-butanol	BRL	100	0	0	0	0	0	0	0	0	0
Ethanol	BRL	100	0	0	0	0	0	0	0	0	0
Ethyl tert-butyl ether	BRL	100	0	0	0	0	0	0	0	0	0
Isopropyl ether	BRL	10	0	0	0	0	0	0	0	0	0
tert-Amyl alcohol	BRL	100	0	0	0	0	0	0	0	0	0
tert-Amyl methyl ether	BRL	10	0	0	0	0	0	0	0	0	0
tert-Butyl Alcohol	BRL	100	0	0	0	0	0	0	0	0	0
tert-Butyl formate	BRL	100	0	0	0	0	0	0	0	0	0

Sample ID: MB-160547	SampType: MBLK	Batch ID: 160547	Units: ug/L	Prep Date: 4/23/2012	RunNo: 219708						
Client ID:	Oxygenates (AES SOP OA-11010) SW8260B			Analysis Date: 4/23/2012	SeqNo: 4594277						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3,3-Dimethyl-1-butanol	BRL	100	0	0	0	0	0	0	0	0	0
Ethanol	BRL	100	0	0	0	0	0	0	0	0	0
Ethyl tert-butyl ether	BRL	100	0	0	0	0	0	0	0	0	0
Isopropyl ether	BRL	10	0	0	0	0	0	0	0	0	0
tert-Amyl alcohol	BRL	100	0	0	0	0	0	0	0	0	0
tert-Amyl methyl ether	BRL	10	0	0	0	0	0	0	0	0	0
tert-Butyl Alcohol	BRL	100	0	0	0	0	0	0	0	0	0
tert-Butyl formate	BRL	100	0	0	0	0	0	0	0	0	0

Sample ID: LCS-160469	SampType: LCS	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219588						
Client ID:	Oxygenates (AES SOP OA-11010) SW8260B			Analysis Date: 4/20/2012	SeqNo: 4591738						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3,3-Dimethyl-1-butanol	805.7	100	1000	0	80.6	70	130	0	0	0	0
Ethanol	1298	100	1000	0	130	70	130	0	0	0	0

Qualifiers:

- < Less than Result value
- BRL Below Reporting Limit
- J Estimated value detected below Reporting Limit
- Rpt Lim Reporting Limit
- > Greater than Result value
- E Estimated value above quantitation range
- N Analyte not NELAC certified
- S Spike Recovery outside limits due to matrix
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- R RPD outside limits due to matrix

CLIENT: Crawford Environmental Services
 Work Order: 1204D61
 Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT
 TestCode: Oxygenates (AES SOP OA-11010) SW8260B

Sample ID: LCS-160469	SampType: LCS	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219588						
Client ID:	Oxygenates (AES SOP OA-11010) SW8260B			Analysis Date: 4/20/2012	SeqNo: 4591738						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ethyl tert-butyl ether	142.7	100	200	0	71.4	70	130	0	0	0	
Isopropyl ether	150.7	10	200	0	75.4	70	130	0	0	0	
tert-Amyl alcohol	968.1	100	1000	0	96.8	70	130	0	0	0	
tert-Amyl methyl ether	153.3	10	200	0	76.6	70	130	0	0	0	
tert-Butyl Alcohol	945.8	100	1000	0	94.6	70	130	0	0	0	
tert-Butyl formate	848.2	100	1000	0	84.8	70	130	0	0	0	

Sample ID: LCS-160547	SampType: LCS	Batch ID: 160547	Units: ug/L	Prep Date: 4/23/2012	RunNo: 219708						
Client ID:	Oxygenates (AES SOP OA-11010) SW8260B			Analysis Date: 4/23/2012	SeqNo: 4594276						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

3,3-Dimethyl-1-butanol	915.4	100	1000	0	91.5	70	130	0	0	0	
Ethanol	1140	100	1000	0	114	70	130	0	0	0	
Ethyl tert-butyl ether	173.2	100	200	0	86.6	70	130	0	0	0	
Isopropyl ether	157.6	10	200	0	78.8	70	130	0	0	0	
tert-Amyl alcohol	1150	100	1000	0	115	70	130	0	0	0	
tert-Amyl methyl ether	183.4	10	200	0	91.7	70	130	0	0	0	
tert-Butyl Alcohol	1002	100	1000	0	100	70	130	0	0	0	
tert-Butyl formate	978.5	100	1000	0	97.9	70	130	0	0	0	

Sample ID: 1204D61-007AMS	SampType: MS	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219588						
Client ID: MW-7	Oxygenates (AES SOP OA-11010) SW8260B			Analysis Date: 4/20/2012	SeqNo: 4592969						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

3,3-Dimethyl-1-butanol	917.4	100	1000	0	91.7	43.1	159	0	0	0	
Ethanol	1640	100	1000	0	164	40.2	146	0	0	0	S
Ethyl tert-butyl ether	185.6	100	200	0	92.8	61.6	140	0	0	0	
Isopropyl ether	207.6	10	200	0	104	63.8	146	0	0	0	

Qualifiers:

- < Less than Result value
- BRL Below Reporting Limit
- J Estimated value detected below Reporting Limit
- Rpt Lim Reporting Limit
- > Greater than Result value
- E Estimated value above quantitation range
- N Analyte not NELAC certified
- S Spike Recovery outside limits due to matrix
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- R RPD outside limits due to matrix

CLIENT: Crawford Environmental Services
 Work Order: 1204D61
 Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT
 TestCode: Oxygenates (AES SOP OA-11010) SW8260B

Sample ID: 1204D61-007AMS	Samp Type: MS	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219588						
Client ID: MW-7	TestCode: Oxygenates (AES SOP OA-11010) SW8260B			Analysis Date: 4/20/2012	SeqNo: 4592969						
Analyte	Result	RPT Limit	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
tert-Amyl alcohol	1183	100	1000	0	118	49.1	153	0	0		
tert-Amyl methyl ether	195.2	10	200	0	97.6	63.4	136	0	0		
tert-Butyl Alcohol	1787	100	1000	0	179	47.1	178	0	0		S
tert-Butyl formate	330	100	1000	0	33	10	162	0	0		

Sample ID: 1204D61-021AMS	Samp Type: MS	Batch ID: 160547	Units: ug/L	Prep Date: 4/23/2012	RunNo: 219708						
Client ID: DW-5	TestCode: Oxygenates (AES SOP OA-11010) SW8260B			Analysis Date: 4/23/2012	SeqNo: 4594849						
Analyte	Result	RPT Limit	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
3,3-Dimethyl-1-butanol	1032	100	1000	0	103	43.1	159	0	0		
Ethanol	1673	100	1000	0	167	40.2	146	0	0		
Ethyl tert-butyl ether	187.7	100	200	0	93.9	61.6	140	0	0		S
Isopropyl ether	195.3	10	200	0	97.7	63.8	146	0	0		
tert-Amyl alcohol	1180	100	1000	0	118	49.1	153	0	0		
tert-Amyl methyl ether	192.5	10	200	0	96.2	63.4	136	0	0		
tert-Butyl Alcohol	1671	100	1000	0	167	47.1	178	0	0		
tert-Butyl formate	180.6	100	1000	0	18.1	10	162	0	0		

Sample ID: 1204D61-007AMS	Samp Type: MSD	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219588						
Client ID: MW-7	TestCode: Oxygenates (AES SOP OA-11010) SW8260B			Analysis Date: 4/20/2012	SeqNo: 4592970						
Analyte	Result	RPT Limit	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
3,3-Dimethyl-1-butanol	1002	100	1000	0	100	43.1	159	917.4	8.83	17.6	
Ethanol	1747	100	1000	0	175	40.2	146	1640	6.31	22.8	S
Ethyl tert-butyl ether	189.8	100	200	0	94.9	61.6	140	185.6	2.19	20	
Isopropyl ether	211.3	10	200	0	106	63.8	146	207.6	1.75	20	
tert-Amyl alcohol	1210	100	1000	0	121	49.1	153	1183	2.28	19.1	
tert-Amyl methyl ether	199.8	10	200	0	99.9	63.4	136	195.2	2.33	20	

Qualifiers: < Less than Result value
 BRL Below Reporting Limit
 J Estimated value detected below Reporting Limit
 Rpt Lim Reporting Limit
 > Greater than Result value
 E Estimated value above quantitation range
 N Analyte not NELAC certified
 S Spike Recovery outside limits due to matrix
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 R RPD outside limits due to matrix

CLIENT: Crawford Environmental Services
Work Order: 1204D61
Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT

TestCode: Oxygenates (AES SOP OA-11010) SW8260B

Sample ID: 1204D61-007AMSD	Samp Type: MSD	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219588						
Client ID: MW-7	TestCode: Oxygenates (AES SOP OA-11010) SW8260B			Analysis Date: 4/20/2012	SeqNo: 4592970						
Analyte	Result	RPT Limit	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
tert-Butyl Alcohol	1809	100	1000	0	181	47.1	178	1787	1.19	23.3	S
tert-Butyl formate	281.7	100	1000	0	28.2	10	162	330	15.8	77	

Sample ID: 1204D61-021AMSD	Samp Type: MSD	Batch ID: 160547	Units: ug/L	Prep Date: 4/23/2012	RunNo: 219708						
Client ID: DW-5	TestCode: Oxygenates (AES SOP OA-11010) SW8260B			Analysis Date: 4/23/2012	SeqNo: 4594850						
Analyte	Result	RPT Limit	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3,3-Dimethyl-1-butanol	1087	100	1000	0	109	43.1	159	1032	5.18	17.6	
Ethanol	1870	100	1000	0	187	40.2	146	1673	11.2	22.8	S
Ethyl tert-butyl ether	171.4	100	200	0	85.7	61.6	140	187.7	9.06	20	
Isopropyl ether	176.4	10	200	0	88.2	63.8	146	195.3	10.2	20	
tert-Amyl alcohol	1205	100	1000	0	121	49.1	153	1180	2.10	19.1	
tert-Amyl methyl ether	191.6	10	200	0	95.8	63.4	136	192.5	0.453	20	
tert-Butyl Alcohol	1773	100	1000	0	177	47.1	178	1671	5.89	23.3	
tert-Butyl formate	152.7	100	1000	0	15.3	10	162	180.6	16.8	77	

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL	<	Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	<	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	<	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 27-Apr-12

CLIENT: Crawford Environmental Services
 Work Order: 1204D61
 Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT

TestCode: Volatile Organic Compounds by GC/MS SW8260B

Sample ID: MB-160469	Samp Type: MBLK	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219588						
Client ID:	TestCode: Volatile Organic Compounds by GC/MS	SW8260B	Analysis Date: 4/20/2012	SeqNo: 4591561							
Analyte	Result	RPT Limit	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dichloroethane	BRL	1.0	0	0	0	0	0	0	0	0	
Benzene	BRL	1.0	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	1.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	1.0	0	0	0	0	0	0	0	0	
Naphthalene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	1.0	0	0	0	0	0	0	0	0	
Xylenes, Total	BRL	1.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	38.99	0	50	0	78	67.4	123	0	0	0	
Surr: Dibromofluoromethane	59.53	0	50	0	119	75.5	128	0	0	0	
Surr: Toluene-d8	47.66	0	50	0	95.3	70	120	0	0	0	

Sample ID: MB-160547	Samp Type: MBLK	Batch ID: 160547	Units: ug/L	Prep Date: 4/23/2012	RunNo: 219708						
Client ID:	TestCode: Volatile Organic Compounds by GC/MS	SW8260B	Analysis Date: 4/23/2012	SeqNo: 4594073							
Analyte	Result	RPT Limit	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dichloroethane	BRL	1.0	0	0	0	0	0	0	0	0	
Benzene	BRL	1.0	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	1.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	1.0	0	0	0	0	0	0	0	0	
Naphthalene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	1.0	0	0	0	0	0	0	0	0	
Xylenes, Total	BRL	1.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	38.41	0	50	0	76.8	67.4	123	0	0	0	
Surr: Dibromofluoromethane	57	0	50	0	114	75.5	128	0	0	0	
Surr: Toluene-d8	48.83	0	50	0	97.7	70	120	0	0	0	

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	BRL	Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Crawford Environmental Services
 Work Order: 1204D61
 Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT

TestCode: Volatile Organic Compounds by GC/MS SW8260B

Sample ID: LCS-160469	SampType: LCSSCD	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219972						
Client ID:	TestCode: Volatile Organic Compounds by GC/MS SW8260B			Analysis Date: 4/26/2012	SeqNo: 4599662						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane	51.68	1.0	50	0	103	70	130	0	0	0	
Benzene	55.63	1.0	50	0	111	70	130	0	0	0	
Ethylbenzene	56.22	1.0	50	0	112	70	130	0	0	0	
Naphthalene	49.93	5.0	50	0	99.9	70	130	0	0	0	
Toluene	55.05	1.0	50	0	110	70	130	0	0	0	
Xylenes, Total	167.8	1.0	150	0	112	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	49.8	0	50	0	99.6	70	130	0	0	0	
Surr: Dibromofluoromethane	51.43	0	50	0	103	70	130	0	0	0	
Surr: Toluene-d8	49.64	0	50	0	99.3	70	130	0	0	0	

Sample ID: LCS-160547	SampType: LCSSCD	Batch ID: 160547	Units: ug/L	Prep Date: 4/23/2012	RunNo: 219972						
Client ID:	TestCode: Volatile Organic Compounds by GC/MS SW8260B			Analysis Date: 4/26/2012	SeqNo: 4599663						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane	54.2	1.0	50	0	108	70	130	0	0	0	
Benzene	58.5	1.0	50	0	117	70	130	0	0	0	
Ethylbenzene	60.15	1.0	50	0	120	70	130	0	0	0	
Naphthalene	53.8	5.0	50	0	108	70	130	0	0	0	
Toluene	57.65	1.0	50	0	115	70	130	0	0	0	
Xylenes, Total	179.2	1.0	150	0	119	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	49.91	0	50	0	99.8	70	130	0	0	0	
Surr: Dibromofluoromethane	50.64	0	50	0	101	70	130	0	0	0	
Surr: Toluene-d8	49.3	0	50	0	98.6	70	130	0	0	0	

Sample ID: 1204D61-007AMS	SampType: MSSC	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219588						
Client ID: MW-7	TestCode: Volatile Organic Compounds by GC/MS SW8260B			Analysis Date: 4/20/2012	SeqNo: 4597111						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
<	Less than Result value										
BRL	Below Reporting Limit										
J	Estimated value detected below Reporting Limit										
Rpt Lim	Reporting Limit										
>	Greater than Result value										
E	Estimated value above quantitation range										
N	Analyte not NELAC certified										
S	Spike Recovery outside limits due to matrix										
B	Analyte detected in the associated Method Blank										
H	Holding times for preparation or analysis exceeded										
R	RPD outside limits due to matrix										

CLIENT: Crawford Environmental Services
 Work Order: 1204D61
 Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT
 TestCode: Volatile Organic Compounds by GC/MS SW8260B

Sample ID: 1204D61-007AMS	Samp Type: MSSC	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219588						
Client ID: MW-7	TestCode: Volatile Organic Compounds by GC/MS SW8260B			Analysis Date: 4/20/2012	SeqNo: 4597111						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane	48.5	1.0	50	0	97	50	150	0	0	0	
Benzene	50.32	1.0	50	0	101	50	150	0	0	0	
Ethylbenzene	53.53	1.0	50	0	107	50	150	0	0	0	
Naphthalene	27.18	5.0	50	0	54.4	50	150	0	0	0	
Toluene	51.17	1.0	50	0	102	50	154	0	0	0	
Xylenes, Total	165.3	1.0	150	0	110	50	150	0	0	0	
Surr: 4-Bromofluorobenzene	46.45	0	50	0	92.9	67.4	123	0	0	0	
Surr: Dibromofluoromethane	53.54	0	50	0	107	75.5	128	0	0	0	
Surr: Toluene-d8	47.5	0	50	0	95	70	120	0	0	0	

Sample ID: 1204D61-021AMS	Samp Type: MSSC	Batch ID: 160547	Units: ug/L	Prep Date: 4/23/2012	RunNo: 219708						
Client ID: DW-5	TestCode: Volatile Organic Compounds by GC/MS SW8260B			Analysis Date: 4/23/2012	SeqNo: 4597156						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane	51.23	1.0	50	0	102	50	150	0	0	0	
Benzene	55.94	1.0	50	0	112	50	150	0	0	0	
Ethylbenzene	59.19	1.0	50	0	118	50	150	0	0	0	
Naphthalene	29.4	5.0	50	0	58.8	50	150	0	0	0	
Toluene	57.34	1.0	50	0	115	50	154	0	0	0	
Xylenes, Total	179.2	1.0	150	0	119	50	150	0	0	0	
Surr: 4-Bromofluorobenzene	45.91	0	50	0	91.8	67.4	123	0	0	0	
Surr: Dibromofluoromethane	54.88	0	50	0	110	75.5	128	0	0	0	
Surr: Toluene-d8	48.31	0	50	0	96.6	70	120	0	0	0	

Sample ID: 1204D61-007AMS	Samp Type: MSSCD	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219588						
Client ID: MW-7	TestCode: Volatile Organic Compounds by GC/MS SW8260B			Analysis Date: 4/20/2012	SeqNo: 4597112						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: < Less than Result value
 BRL Below Reporting Limit
 J Estimated value detected below Reporting Limit
 Rpt Lim Reporting Limit
 > Greater than Result value
 E Estimated value above quantitation range
 N Analyte not NELAC certified
 S Spike Recovery outside limits due to matrix
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 R RPD outside limits due to matrix

CLIENT: Crawford Environmental Services
 Work Order: 1204D61
 Project: 15.102 Steady Simmons

ANALYTICAL QC SUMMARY REPORT

TestCode: Volatile Organic Compounds by GC/MS SW8260B

Sample ID: 1204D61-007AMSD	SampType: MSSCD	Batch ID: 160469	Units: ug/L	Prep Date: 4/20/2012	RunNo: 219588						
Client ID: MW-7	TestCode: Volatile Organic Compounds by GC/MS SW8260B			Analysis Date: 4/20/2012	SeqNo: 4597112						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane	50.92	1.0	50	0	102	50	150	48.5	4.87	30	
Benzene	50.81	1.0	50	0	102	50	150	50.32	0.969	30	
Ethylbenzene	52.88	1.0	50	0	106	50	150	53.53	1.22	30	
Naphthalene	28.02	5.0	50	0	56	50	150	27.18	3.04	30	
Toluene	52.48	1.0	50	0	105	50	154	51.17	2.53	30	
Xylenes, Total	166	1.0	150	0	111	50	150	165.3	0.435	30	
Surr: 4-Bromofluorobenzene	47.87	0	50	0	95.7	67.4	123	46.45	0	0	
Surr: Dibromofluoromethane	57.08	0	50	0	114	75.5	128	53.54	0	0	
Surr: Toluene-d8	48.54	0	50	0	97.1	70	120	47.5	0	0	

Sample ID: 1204D61-021AMSD	SampType: MSSCD	Batch ID: 160547	Units: ug/L	Prep Date: 4/23/2012	RunNo: 219708						
Client ID: DW-5	TestCode: Volatile Organic Compounds by GC/MS SW8260B			Analysis Date: 4/23/2012	SeqNo: 4597158						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane	51.83	1.0	50	0	104	50	150	51.23	1.16	30	
Benzene	54.1	1.0	50	0	108	50	150	55.94	3.34	30	
Ethylbenzene	54.96	1.0	50	0	110	50	150	59.19	7.41	30	
Naphthalene	29.1	5.0	50	0	58.2	50	150	29.4	1.03	30	
Toluene	54.6	1.0	50	0	109	50	154	57.34	4.90	30	
Xylenes, Total	171.2	1.0	150	0	114	50	150	179.2	4.58	30	
Surr: 4-Bromofluorobenzene	45.41	0	50	0	90.8	67.4	123	45.91	0	0	
Surr: Dibromofluoromethane	55.42	0	50	0	111	75.5	128	54.88	0	0	
Surr: Toluene-d8	48.12	0	50	0	96.2	70	120	48.31	0	0	

Qualifiers:

<p>< Less than Reporting Limit BRL Below Reporting Limit J Estimated value detected below Reporting Limit Rpt Lim Reporting Limit</p>	<p>> Greater than Result value E Estimated value above quantitation range N Analyte not NELAC certified S Spike Recovery outside limits due to matrix</p>	<p>B Analyte detected in the associated Method Blank H Holding times for preparation or analysis exceeded R RPD outside limits due to matrix</p>
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Tier II Assessment
Steady Simmons
Site ID: 18856

Cost Agreement: 43095
CES Project #: 15.102

APPENDIX D
Soil Boring, Field Screening and Monitoring Well Geologist Logs

CRAWFORD
ENVIRONMENTAL
SERVICES

Boring ID: GW-10
 CES Project Number: 15.102
 Date Started: 3/15/2012
 Date Completed: 3/16/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29961
 UST Permit ID: 18856

CRAWFORD ENVIRONMENTAL SERVICES

Boring Log

Well Diagram		Geologic Description		Water Table	Moisture	Odor	Sample	Notes
Concrete Cap	Depth	PID	Description					
0 ft	0		Grass					
	1		Tan Fine Grained Sandy SILT					
	2							
	3							
	4							
	5	0.0 at 5 ft	Yellow to Tan fine to medium grained clayey SAND		DRY at 5 ft	None at 5 ft		
	6							
	7							
	8							
	9							
	10	0.0 at 10 ft			Moist at 10 ft	None at 10 ft		
	11							
	12						Groundwater Sample	
	13							
	14							
	15	0.0 at 15 ft			WET at 15 ft	None at 15 ft		
	16		Total Drilled Depth					
	17							
	18							
	19							
	20							
	21							
	22							
Total Drilled Depth 16 ft.		Depth Interval 1 ft						
Diagram not to scale		Comments:		CES Boring Log Ver. 1.1				

Abandoned with Bentonite / Cement mixture

Boring ID: GW-11
 CES Project Number: 15.102
 Date Started: 3/15/2012
 Date Completed: 3/16/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29961
 UST Permit ID: 18856



Boring Log

Well Diagram		Geologic Description		Water Table	Moisture	Odor	Sample	Notes	
Concrete Cap	Depth	PID	Description						
0 ft	0		Grass						
Abandoned with Bentonite / Cement mixture	1		Tan Fine Grained Sandy SILT						
	2								
	3								
	4								
	5	0.0 at 5 ft		Yellow to Tan fine to medium grained clayey SAND		DRY at 5 ft	None at 5 ft		
	6								
	7								
	8								
	9								
	10	0.0 at 10 ft				Moist at 10 ft	None at 10 ft		
	11							Groundwater Sample	
	12								
	13								
	14								
	15	0.0 at 15 ft		Total Drilled Depth		WET at 15 ft	None at 15 ft		
16									
17									
18									
19									
Total Drilled Depth 15 ft.									
	20								
	21								
	22								
	Depth Interval		1 ft						
Diagram not to scale		Comments:		CES Boring Log Ver. 1.1					

Boring ID: GW-12
 CES Project Number: 15.102
 Date Started: 3/15/2012
 Date Completed: 3/16/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29961
 UST Permit ID: 18856



Boring Log

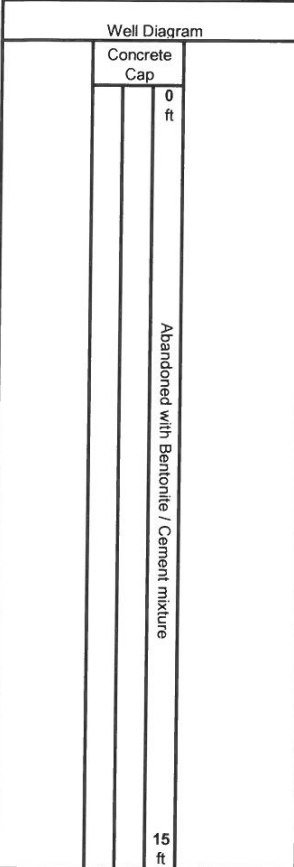
Well Diagram		Geologic Description			Water Table	Moisture	Odor	Sample	Notes
Concrete Cap	0 ft	Depth	PID	Description					
		0		Grass					
		1		Tan Fine Grained Sandy SILT					
		2							
		3							
		4							
		5	0.0 at 5 ft	Yellow to Tan fine to medium grained clayey SAND		DRY at 5 ft	None at 5 ft		
		6							
		7							
		8							
		9							
		10	0.0 at 10 ft			Moist at 10 ft	None at 10 ft		
		11							
		12						Groundwater Sample	
		13							
		14							
		15	0.0 at 15 ft	Total Drilled Depth		WET at 15 ft	None at 15 ft		
		16							
		17							
		18							
		19							
		20							
		21							
		22							
Total Drilled Depth 15 ft.		Depth Interval 1 ft							
Diagram not to scale		Comments:			CES Boring Log Ver. 1.1				

Boring ID: GW-13
 CES Project Number: 15.102
 Date Started: 3/15/2012
 Date Completed: 3/16/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29961
 UST Permit ID: 18856

CRAWFORD ENVIRONMENTAL SERVICES

Boring Log



Geologic Description		Water Table	Moisture	Odor	Sample	Notes
Depth	Description					
0	Grass					
1	Tan Fine Grained Sandy SILT					
2						
3						
4						
5	0.0 at 5 ft Yellow to Tan fine to medium grained clayey SAND		DRY at 5 ft	None at 5 ft		
6						
7						
8						
9						
10	0.0 at 10 ft		Moist at 10 ft	None at 10 ft		
11						
12						Groundwater Sample
13						
14						
15	0.0 at 15 ft Total Drilled Depth		WET at 15 ft	None at 15 ft		
16						
17						
18						
19						
20						
21						
22						

Depth Interval 1 ft

Comments:

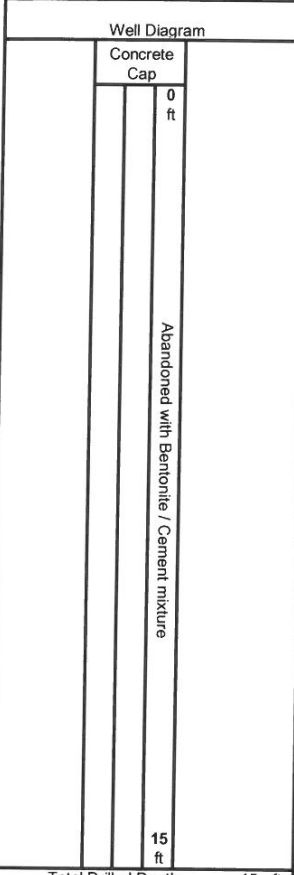
Diagram not to scale

Boring ID: GW-14
 CES Project Number: 15.102
 Date Started: 3/15/2012
 Date Completed: 3/16/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29961
 UST Permit ID: 18856



Boring Log



Geologic Description		Water Table	Moisture	Odor	Sample	Notes
Depth	Description					
0	Grass					
1	Tan Fine Grained Sandy SILT					
2						
3						
4						
5	0.0 at 5 ft Yellow to Tan fine to medium grained clayey SAND		DRY at 5 ft	None at 5 ft		
6						
7						
8						
9						
10	0.0 at 10 ft		Moist at 10 ft	None at 10 ft		
11						
12					Groundwater Sample	
13						
14						
15	0.0 at 15 ft Total Drilled Depth		WET at 15 ft	None at 15 ft		
16						
17						
18						
19						
20						
21						
22						
Depth Interval 1 ft						

Comments:

Diagram not to scale

Boring ID: GW-16
 CES Project Number: 15.102
 Date Started: 3/15/2012
 Date Completed: 3/16/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29961
 UST Permit ID: 18856



Boring Log

Well Diagram		Geologic Description		Water Table	Moisture	Odor	Sample	Notes
Concrete Cap	Depth	PID	Description					
0 ft			Grass					
	1		Tan Fine Grained Sandy SILT					
	2							
	3							
	4							
	5	0.0 at 5 ft			DRY at 5 ft	None at 5 ft		
	6		Yellow to Tan fine to medium grained clayey SAND					
	7							
	8							
	9							
	10	0.0 at 10 ft			Moist at 10 ft	None at 10 ft		Groundwater Sample
	11							
	12							
	13							
	14							
	15	0.0 at 15 ft	Total Drilled Depth		WET at 15 ft	None at 15 ft		
	16							
	17							
	18							
	19							
Total Drilled Depth 15 ft.								
	20							
	21							
	22							
		Depth Interval 1 ft						
Diagram not to scale		Comments:		CES Boring Log Ver. 1.1				

Boring ID: GW-17
 CES Project Number: 15.102
 Date Started: 3/15/2012
 Date Completed: 3/16/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29961
 UST Permit ID: 18856



Boring Log

Well Diagram		Geologic Description			Water Table	Moisture	Odor	Sample	Notes
Concrete Cap	Depth	PID	Description						
	0 ft		Grass						
	1		Tan Fine Grained Sandy SILT						
	2								
	3								
	4								
	5	0.0 at 5 ft				DRY at 5 ft	None at 5 ft		
	6		Yellow to Tan fine to medium grained clayey SAND						
	7								
	8								
	9								
	10	0.0 at 10 ft				Moist at 10 ft	None at 10 ft		
	11								
	12							Groundwater Sample	
	13								
	14								
	15	0.0 at 15 ft	Total Drilled Depth			WET at 15 ft	None at 15 ft		
	16								
	17								
	18								
	19								
Total Drilled Depth 15 ft.									
	20								
	21								
	22								
		Depth Interval 1 ft							
Diagram not to scale		Comments:			CES Boring Log Ver. 1.1				

Well Diagram

Concrete Cap

Abandoned with Bentonite / Cement mixture

15 ft

Total Drilled Depth 15 ft.

Diagram not to scale

Comments:

CES Boring Log Ver. 1.1

Boring ID: GW-18		Steady Simmons		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log		
CES Project Number: 15.102		16661 Grays Highway						
Date Started: 3/15/2012		Early Branch SC 29961						
Date Completed: 3/16/2012		UST Permit ID: 18856						
Drilled By: Todd Allred								
Well Diagram		Geologic Description						
Concrete Cap		Depth	Description	Water Table	Moisture	Odor	Sample	
0 ft		0	Grass					
Abandoned with Bentonite / Cement mixture		1	Tan Fine Grained Sandy SILT					
		2						
		3						
		4						
		5	0.0 at 5 ft	Yellow to Tan fine to medium grained clayey SAND		DRY at 5 ft	None at 5 ft	
		6						
		7						
		8						
		9						
		10	0.0 at 10 ft			Moist at 10 ft	None at 10 ft	
		11						Groundwater Sample
		12						
		13						
		14						
		15	0.0 at 15 ft	Total Drilled Depth		WET at 15 ft	None at 15 ft	
Total Drilled Depth 15 ft.		16						
		17						
		18						
		19						
		20						
		21						
		22						
		Depth Interval 1 ft						
Diagram not to scale		Comments:		CES Boring Log Ver. 1.1				

Boring ID: GW-19
 CES Project Number: 15.102
 Date Started: 3/15/2012
 Date Completed: 3/16/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29961
 UST Permit ID: 18856

CRAWFORD ENVIRONMENTAL SERVICES

Boring Log

Well Diagram		Geologic Description			Water Table	Moisture	Odor	Sample	Notes
Concrete Cap	Depth	PID	Description						
0 ft	0		Grass						
Abandoned with Bentonite / Cement mixture	1		Tan Fine Grained Sandy SILT						
	2								
	3								
	4								
	5	0.0 at 5 ft		Yellow to Tan fine to medium grained clayey SAND		DRY at 5 ft	None at 5 ft		
	6								
	7								
	8								
	9								
	10	0.0 at 10 ft				DRY at 10 ft	None at 10 ft		
	11								
	12								
	13								
	14							Groundwater Sample	
	15	0.0 at 15 ft				WET at 15 ft	None at 15 ft		
	16			Total Drilled Depth					
17									
18									
19									
Total Drilled Depth 16 ft.									
	20								
	21								
	22								
	Depth Interval		1 ft						
Diagram not to scale		Comments:			CES Boring Log Ver. 1.1				

Boring ID: GW-20
 CES Project Number: 15.102
 Date Started: 3/15/2012
 Date Completed: 3/16/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29961
 UST Permit ID: 18856



Boring Log

Well Diagram		Geologic Description		Water Table	Moisture	Odor	Sample	Notes
Concrete Cap	Depth	PID	Description					
0 ft			Grass					
	1		Tan Fine Grained Sandy SILT					
	2							
	3							
	4							
	5	0.0 at 5 ft	Yellow to Tan fine to medium grained clayey SAND		DRY at 5 ft	None at 5 ft		
	6							
	7							
	8							
	9							
	10	0.0 at 10 ft			DRY at 10 ft	None at 10 ft		
	11							
	12							
	13							
	14							
	15	0.0 at 15 ft			DRY at 15 ft	None at 15 ft		
	16							
	17		Total Drilled Depth					
	18							
	19							
Total Drilled Depth 17 ft.								
	20							
	21							
	22							
		Depth Interval 1 ft						
Diagram not to scale		Comments:		CES Boring Log Ver. 1.1				

Boring ID: GW-21
 CES Project Number: 15.102
 Date Started: 3/15/2012
 Date Completed: 3/16/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29961
 UST Permit ID: 18856



Boring Log

Well Diagram		Geologic Description		Water Table	Moisture	Odor	Sample	Notes
Concrete Cap	Depth	PID	Description					
0 ft			Grass					
	1		Tan Fine Grained Sandy SILT					
	2							
	3							
	4							
	5	0.0 at 5 ft	Yellow to Tan fine to medium grained clayey SAND		DRY at 5 ft	None at 5 ft		
	6							
	7							
	8							
	9							
	10	0.0 at 10 ft			DRY at 10 ft	None at 10 ft		
	11							
	12							
	13							
	14							
	15	0.0 at 15 ft			DRY at 15 ft	None at 15 ft		
	16							
	17		Total Drilled Depth					
	18							
	19							
Total Drilled Depth 17 ft.								
	20							
	21							
	22							
	Depth Interval		1 ft					
Diagram not to scale		Comments:		CES Boring Log Ver. 1.1				

Boring ID: GW-16D
 CES Project Number: 15.102
 Date Started: 3/15/2012
 Date Completed: 3/16/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29961
 UST Permit ID: 18856



Boring Log

Well Diagram		Geologic Description			Water Table	Moisture	Odor	Sample	Notes
Concrete Cap	Depth	PID	Description						
0 ft	0		Grass						
Abandoned with Bentonite / Cement mixture	2		Tan Fine Grained Sandy SILT						
	4	1.1 at 5 ft	Yellow to Grey fine to medium grained clayey SAND		DRY at 5 ft	None at 5 ft			
	6								
	8								
	10	0.0 at 10 ft			Moist at 10 ft	None at 10 ft			
	12								
	14	0.0 at 15 ft			Wet at 15 ft	None at 15 ft			
	16								
	18								
	20	0.0 at 20 ft			Wet at 20 ft	None at 20 ft			
	22			Total Drilled Depth @ 21 ft					
		24							
		26							
		28							
		30							
		32							
		34							
		36							
		38							
	Total Drilled Depth 21 ft.	40							
		42							
	44								
	Depth Interval 2 ft								

Diagram not to scale

Comments: *HAND ASSESS -*

Boring ID: MW-5		Steady Simmons		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log																																																																																																																																																																																																													
CES Project Number: 15.102		16661 Grays Highway																																																																																																																																																																																																																	
Date Started: 4/9/2012		Early Branch SC 29916																																																																																																																																																																																																																	
Date Completed: 4/10/2012		UST Permit ID: 18856																																																																																																																																																																																																																	
Drilled By: Todd Allred																																																																																																																																																																																																																			
Well Diagram		Geologic Description																																																																																																																																																																																																																	
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Boring ID: MW-6
 CES Project Number: 15.102
 Date Started: 4/9/2012
 Date Completed: 4/10/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29916
 UST Permit ID: 18856

CRAWFORD ENVIRONMENTAL SERVICES

Boring Log

Well Diagram		Geologic Description			Water Table	Moisture	Odor	Sample	Notes
Depth	PID	Description							
8 in Well Vault		0		Grass					
0 ft									
Grout		1		Tan Fine Grained Sandy SILT					
1 ft.									
2 in PVC Casing		2							
1 ft.									
Seal		4							
1 ft.									
1.5 ft.		5	0.0	Yellow to Tan fine to medium grained clayey SAND		DRY	None		
1.5 ft.			at 5 ft			at 5 ft	at 5 ft		
5 ft		6							
5 ft		7							
2 in PVC Screen		9							
5 ft									
Filter Pack		10	0.0			Moist	None		
15 ft			at 10 ft			at 10 ft	at 10 ft		
Total Drilled Depth 15 ft.		11			GW @ 11 ft				
		12							
		13							
		14							
		15	0.0	Total Drilled Depth		WET	None		
			at 15 ft			at 15 ft	at 15 ft		
		16							
		17							
		18							
		19							
		20							
		21							
		22							
		Depth Interval		1 ft					
Diagram not to scale		Comments:			CES Boring Log Ver. 1.1				

Boring ID: MW-7		Steady Simmons		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log	
CES Project Number: 15.102		16661 Grays Highway					
Date Started: 4/9/2012		Early Branch SC 29916					
Date Completed: 4/10/2012		UST Permit ID: 18856					
Drilled By: Todd Allred							

Well Diagram		Geologic Description		Water Table	Moisture	Odor	Sample	Notes
Depth	PID	Description						
0 ft		Grass						
1 ft		Tan Fine Grained Sandy SILT						
2 ft								
3 ft								
4 ft								
5 ft	0.0 at 5 ft	Yellow to Tan fine to medium grained clayey SAND			DRY at 5 ft	None at 5 ft		
6 ft								
7 ft								
8 ft								
9 ft								
10 ft	0.0 at 10 ft				Moist at 10 ft	None at 10 ft		
11 ft				GW @ 11 ft				
12 ft								
13 ft								
14 ft								
15 ft	0.0 at 15 ft	Total Drilled Depth			WET at 15 ft	None at 15 ft		
16 ft								
17 ft								
18 ft								
19 ft								
Total Drilled Depth 15 ft.								
20 ft								
21 ft								
22 ft								
		Depth Interval 1 ft						
Diagram not to scale		Comments:		CES Boring Log Ver. 1.1				

Boring ID: MW-8		Steady Simmons		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log		
CES Project Number: 15.102		16661 Grays Highway						
Date Started: 4/9/2012		Early Branch SC 29916						
Date Completed: 4/10/2012		UST Permit ID: 18856						
Drilled By: Todd Allred								
<p style="text-align: center;">Well Diagram</p>		Geologic Description						
		Depth	PID	Description	Water Table	Moisture	Odor	Sample
		0		Grass				
		1		Tan Fine Grained Sandy SILT				
		2						
		3						
		4						
		5	0.0 at 5 ft	Yellow to Tan fine to medium grained clayey SAND		DRY at 5 ft	None at 5 ft	
		6						
		7						
		8						
		9						
		10	0.0 at 10 ft			Moist at 10 ft	None at 10 ft	
		11			GW @ 11 ft			
		12						
		13						
		14						
		15	0.0 at 15 ft	Total Drilled Depth		WET at 15 ft	None at 15 ft	
		16						
		17						
		18						
		19						
		20						
		21						
		22						
		Depth Interval		1 ft				
Diagram not to scale		Comments:			CES Boring Log Ver. 1.1			

Boring ID: MW-9 CES Project Number: 15.102 Date Started: 4/9/2012 Date Completed: 4/10/2012 Drilled By: Todd Allred		Steady Simmons 16661 Grays Highway Early Branch SC 29916 UST Permit ID: 18856		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log		
Well Diagram		Geologic Description		Water Table	Moisture	Odor	Sample	Notes
		Depth	PID					
0 ft.		0		Grass				
Grout		1		Tan Fine Grained Sandy SILT				
1 ft.		2						
2 in PVC Casing		3						
1 ft.		4						
Seal		5	0.0 at 5 ft	Yellow to Tan fine to medium grained clayey SAND		DRY at 5 ft	None at 5 ft	
1.5 ft.		6						
1.5 ft.		7						
5 ft.		8						
5 ft.		9						
Filter Pack		10	0.0 at 10 ft			Moist at 10 ft	None at 10 ft	
2 in PVC Screen		11			GW @ 11 ft			
15 ft.		12						
Total Drilled Depth 15 ft.		13						
		14						
		15	0.0 at 15 ft	Total Drilled Depth		WET at 15 ft	None at 15 ft	
		16						
		17						
		18						
		19						
		20						
		21						
		22						
		Depth Interval		1	ft			
Diagram not to scale		Comments:		CES Boring Log Ver. 1.1				

Boring ID: MW-10		Steady Simmons		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log																																																																																																																																																																																																																			
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Boring ID: MW-11		Steady Simmons		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log		
CES Project Number: 15.102		16661 Grays Highway						
Date Started: 4/9/2012		Early Branch SC 29916						
Date Completed: 4/10/2012		UST Permit ID: 18856						
Drilled By: Todd Allred								
Well Diagram 		Geologic Description						
		Depth	PID	Description	Water Table	Moisture	Odor	Sample
		0		Grass				
		1		Tan Fine Grained Sandy SILT				
		2						
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		8						
		9						
		10	0.0 at 10 ft			Moist at 10 ft	None at 10 ft	
		11			GW @ 11 ft			
		12						
		13						
		14						
		15	0.0 at 15 ft	Total Drilled Depth		WET at 15 ft	None at 15 ft	
		16						
		17						
		18						
		19						
Total Drilled Depth 15 ft.		20						
		21						
		22						
		Depth Interval		1 ft				
Diagram not to scale		Comments:		CES Boring Log Ver. 1.1				

Boring ID: MW-13 CES Project Number: 15.102 Date Started: 4/9/2012 Date Completed: 4/10/2012 Drilled By: Todd Allred		Steady Simmons 16661 Grays Highway Early Branch SC 29916 UST Permit ID: 18856		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log			
<p style="text-align: center;">Well Diagram</p> <p style="text-align: center;">Total Drilled Depth 15 ft.</p>		Geologic Description		Water Table	Moisture	Odor	Sample	Notes	
		Depth	PID						Description
		0							Grass
		1							Tan Fine Grained Sandy SILT
		2							
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		5	0.0 at 5 ft						
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		7							
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		9							
		10	0.0 at 10 ft						
		11							GW @ 11 ft
		12							
		13							
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		15	0.0 at 15 ft						Total Drilled Depth
		16							
		17							
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		19							
		20							
		21							
22									
Depth Interval 1 ft									
Diagram not to scale		Comments:		CES Boring Log Ver. 1.1					

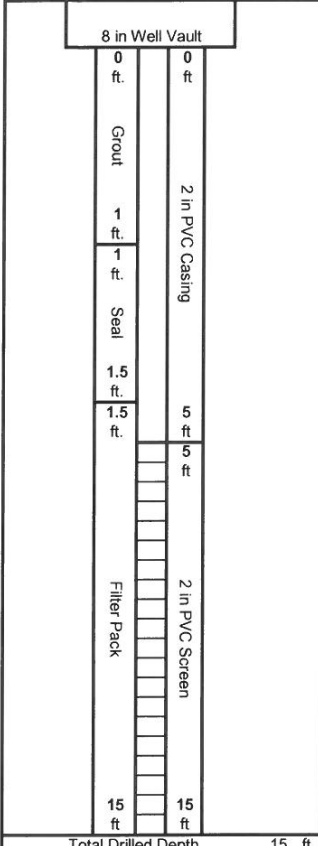
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 CES Project Number: 15.102
 Date Started: 4/9/2012
 Date Completed: 4/10/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29916
 UST Permit ID: 18856

CRAWFORD ENVIRONMENTAL SERVICES

Boring Log

Well Diagram		Geologic Description		Water Table	Moisture	Odor	Sample	Notes
Depth	PID	Description						
0 ft		Grass						
1 ft		Tan Fine Grained Sandy SILT						
2 ft								
3 ft								
4 ft								
5 ft	0.0 at 5 ft	Yellow to Tan fine to medium grained clayey SAND			DRY at 5 ft	None at 5 ft		
6 ft								
7 ft								
8 ft								
9 ft								
10 ft	0.0 at 10 ft				Moist at 10 ft	None at 10 ft		
11 ft				GW @ 11 ft				
12 ft								
13 ft								
14 ft								
15 ft	0.0 at 15 ft	Total Drilled Depth			WET at 15 ft	None at 15 ft		
16 ft								
17 ft								
18 ft								
19 ft								
20 ft								
21 ft								
22 ft								
Total Drilled Depth 15 ft.		Depth Interval 1 ft						
Diagram not to scale		Comments:		CES Boring Log Ver. 1.1				



Boring ID: MW-15		Steady Simmons		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log																																																																																																																																																																																																											
CES Project Number: 15.102		16661 Grays Highway																																																																																																																																																																																																															
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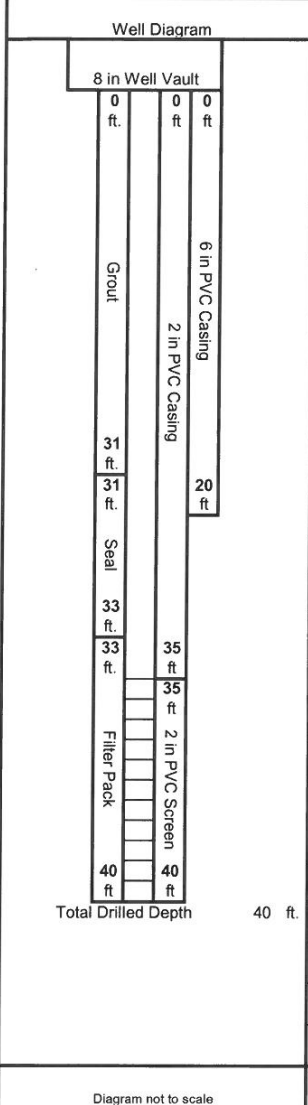
Boring ID: CES Project Number: Date Started: Date Completed: Drilled By:		DW-1 15.102 4/9/2012 4/10/2012 Todd Allred		Steady Simmons 16661 Grays Highway Early Branch SC 29916 UST Permit ID: 18856		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log			
Well Diagram				Geologic Description							
				Depth	P ID	Description	Water Table	Moisture	Odor	Sample	Notes
0 ft.				0		Grass					
0 ft.				2		Tan Fine Grained Sandy SILT					
0 ft.				4	0.0 at 5ft			DRY at 5ft	None at 5ft		
6 in PVC Casing				6		Yellow to Tan fine to medium grained clayey SAND					
2 in PVC Casing				8							
20 ft.				10	0.0 at 10 ft			Moist at 10 ft	None at 10 ft		
Grout				12			GW @ 11 ft				
Seal				14	0.0 at 15ft			WET at 15ft	None at 15ft		
31 ft.				16							
31 ft.				18							
33 ft.				20	0.0 at 20 ft			WET at 20 ft	None at 20 ft		
33 ft.				22							
33 ft.				24	0.0 at 25 ft			WET at 25 ft	None at 25 ft		
35 ft.				26							
35 ft.				28							
2 in PVC Screen				30	0.0 at 30 ft			WET at 30 ft	None at 30 ft		
Filter Pack				32							
40 ft.				34	0.0 at 35 ft			WET at 35 ft	None at 35 ft		
Total Drilled Depth 40 ft.				36							
40 ft.				38							
40 ft.				40	0.0 at 40 ft	Total Drilled Depth @ 40 ft		WET at 40 ft	None at 40 ft		
42 ft.				42							
44 ft.				44							
Depth Interval 2 ft											
Diagram not to scale				Comments:				CES Boring Log Ver. 1.1			

Boring ID: DW-2
 CES Project Number: 15.102
 Date Started: 4/9/2012
 Date Completed: 4/10/2012
 Drilled By: Todd Allred

Steady Simmons
 16661 Grays Highway
 Early Branch SC 29916
 UST Permit ID: 18856

CRAWFORD ENVIRONMENTAL SERVICES

Boring Log



Geologic Description		Water Table	Moisture	Odor	Sample	Notes
Depth	Description					
0	Grass					
2	Tan Fine Grained Sandy SILT					
4	0.0 at 5ft		DRY at 5ft	None at 5ft		
6	Yellow to Tan fine to medium grained clayey SAND					
8						
10	0.0 at 10 ft		Moist at 10 ft	None at 10 ft		
12		GW @ 11 ft				
14	0.0 at 15ft		WET at 15ft	None at 15ft		
16						
18						
20	0.0 at 20 ft		WET at 20 ft	None at 20 ft		
22						
24	0.0 at 25 ft		WET at 25 ft	None at 25 ft		
26						
28						
30	0.0 at 30 ft		WET at 30 ft	None at 30 ft		
32						
34	0.0 at 35 ft		WET at 35 ft	None at 35 ft		
36						
38						
40	0.0 at 40 ft		WET at 40 ft	None at 40 ft		
42						
44						
Depth Interval 2 ft						
Comments:		CES Boring Log Ver. 1.1				

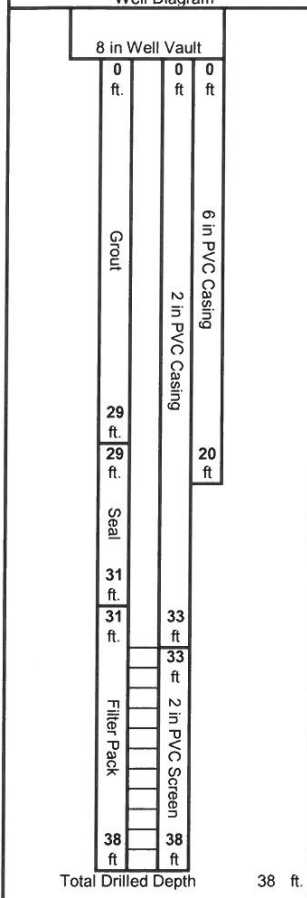
Diagram not to scale

Boring ID: CES Project Number: Date Started: Date Completed Drilled By:		DW-3 15.102 4/9/2012 4/10/2012 Todd Allred		Steady Simmons 16661 Grays Highway Early Branch SC 29916 UST Permit ID: 18856		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log		
<p>Well Diagram</p> <p>8 in Well Vault</p> <p>0 ft. 0 ft. 0 ft.</p> <p>6 in PVC Casing</p> <p>2 in PVC Casing</p> <p>31 ft. 31 ft.</p> <p>Seal</p> <p>33 ft. 33 ft.</p> <p>35 ft. 35 ft.</p> <p>2 in PVC Screen</p> <p>Filter Pack</p> <p>40 ft. 40 ft.</p> <p>Total Drilled Depth 40 ft.</p>				Geologic Description		Water Table	Moisture	Odor	Sample	Notes
				Depth	PID					
0		Grass								
2		Tan Fine Grained Sandy SILT								
4	0.0 at 5ft				DRY at 5ft	None at 5ft				
6		Yellow to Tan fine to medium grained clayey SAND								
8										
10	0.0 at 10 ft				Moist at 10 ft	None at 10 ft				
12					GW @ 11 ft					
14	0.0 at 15ft				WET at 15ft	None at 15ft				
16										
18										
20	0.0 at 20 ft				WET at 20 ft	None at 20 ft				
22										
24	0.0 at 25 ft				WET at 25 ft	None at 25 ft				
26										
28										
30	0.0 at 30 ft				WET at 30 ft	None at 30 ft				
32										
34	0.0 at 35 ft				WET at 35 ft	None at 35 ft				
36										
38										
40	0.0 at 40 ft	Total Drilled Depth @ 40 ft			WET at 40 ft	None at 40 ft				
42										
44										
		Depth Interval 2 ft								
Diagram not to scale				Comments:		CES Boring Log Ver. 1.1				

Boring ID: DW-4	15.102	Steady Simmons 16661 Grays Highway Early Branch SC 29916 UST Permit ID: 18856	CRAWFORD ENVIRONMENTAL SERVICES	Boring Log
CES Project Number: 4/9/2012	4/9/2012			
Date Started: 4/10/2012	4/10/2012			
Date Completed: Todd Allred	Todd Allred			
Drilled By:				

Well Diagram			Geologic Description					Water Table	Moisture	Odor	Sample	Notes
Depth	PID	Description										
0		Grass										
2		Tan Fine Grained Sandy SILT										
4	0.0 at 5ft						DRY at 5ft	None at 5ft				
6		Yellow to Tan fine to medium grained clayey SAND										
8												
10	0.0 at 10 ft						Moist at 10 ft	None at 10 ft				
12												
14	0.0 at 15ft						WET at 15ft	None at 15ft				
16												
18												
20	0.0 at 20 ft						WET at 20 ft	None at 20 ft				
22												
24	0.0 at 25 ft						WET at 25 ft	None at 25 ft				
26												
28												
30	0.0 at 30 ft						WET at 30 ft	None at 30 ft				
32												
34	0.0 at 35 ft						WET at 35 ft	None at 35 ft				
36												
38		Total Drilled Depth @ 38 ft										
40		Auger Refusal -Rock- @ 38 ft										
42												
44												
Depth Interval			2		ft							

Diagram not to scale	Comments:	CES Boring Log Ver. 1.1
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Boring ID: CES Project Number: Date Started: Date Completed Drilled By:		DW-5 15.102 4/9/2012 4/10/2012 Todd Allred		Steady Simmons 16661 Grays Highway Early Branch SC 29916 UST Permit ID: 18856		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log		
Well Diagram 			Geologic Description			Water Table	Moisture	Odor	Sample	Notes
			Depth	PID	Description					
			0		Grass					
			2		Tan Fine Grained Sandy SILT					
			4	0.0 at 5ft			DRY at 5ft	None at 5ft		
			6		Yellow to Tan fine to medium grained clayey SAND					
			8							
			10	0.0 at 10 ft			Moist at 10 ft	None at 10 ft		
			12			GW @ 11 ft				
			14	0.0 at 15ft			WET at 15ft	None at 15ft		
			16							
			18							
			20	0.0 at 20 ft			WET at 20 ft	None at 20 ft		
			22							
			24	0.0 at 25 ft			WET at 25 ft	None at 25 ft		
			26							
			28							
			30	0.0 at 30 ft			WET at 30 ft	None at 30 ft		
			32							
			34	0.0 at 35 ft			WET at 35 ft	None at 35 ft		
			36							
			38		Total Drilled Depth @ 38 ft					
			40		Auger Refusal -Rock- @ 38 ft					
			42							
			44							
			Depth Interval		2 ft					
Diagram not to scale			Comments:			CES Boring Log Ver. 1.1				

Boring ID: CES Project Number: Date Started: Date Completed Drilled By:		DW-6 15.102 4/9/2012 4/10/2012 Todd Allred		Steady Simmons 16661 Grays Highway Early Branch SC 29916 UST Permit ID: 18856		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log																																																																													
Well Diagram			Geologic Description			Water Table	Moisture	Odor	Sample	Notes																																																																											
			<table border="1"> <thead> <tr> <th>Depth</th> <th>PID</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>0</td><td></td><td>Grass</td></tr> <tr><td>2</td><td></td><td>Tan Fine Grained Sandy SILT</td></tr> <tr><td>4</td><td>0.0 at 5ft</td><td></td></tr> <tr><td>6</td><td></td><td>Yellow to Tan fine to medium grained clayey SAND</td></tr> <tr><td>8</td><td></td><td></td></tr> <tr><td>10</td><td>0.0 at 10 ft</td><td></td></tr> <tr><td>12</td><td></td><td></td></tr> <tr><td>14</td><td>0.0 at 15ft</td><td></td></tr> <tr><td>16</td><td></td><td></td></tr> <tr><td>18</td><td></td><td></td></tr> <tr><td>20</td><td>0.0 at 20 ft</td><td></td></tr> <tr><td>22</td><td></td><td></td></tr> <tr><td>24</td><td>0.0 at 25 ft</td><td></td></tr> <tr><td>26</td><td></td><td></td></tr> <tr><td>28</td><td></td><td></td></tr> <tr><td>30</td><td>0.0 at 30 ft</td><td></td></tr> <tr><td>32</td><td></td><td></td></tr> <tr><td>34</td><td>0.0 at 35 ft</td><td></td></tr> <tr><td>36</td><td></td><td>Total Drilled Depth @ 36 ft</td></tr> <tr><td>38</td><td></td><td>Auger Refusal -Rock- @ 36 ft</td></tr> <tr><td>40</td><td></td><td></td></tr> <tr><td>42</td><td></td><td></td></tr> <tr><td>44</td><td></td><td></td></tr> <tr> <td colspan="2">Depth Interval</td> <td>2 ft</td> </tr> </tbody> </table>			Depth	PID	Description	0		Grass	2		Tan Fine Grained Sandy SILT	4	0.0 at 5ft		6		Yellow to Tan fine to medium grained clayey SAND	8			10	0.0 at 10 ft		12			14	0.0 at 15ft		16			18			20	0.0 at 20 ft		22			24	0.0 at 25 ft		26			28			30	0.0 at 30 ft		32			34	0.0 at 35 ft		36		Total Drilled Depth @ 36 ft	38		Auger Refusal -Rock- @ 36 ft	40			42			44			Depth Interval		2 ft	GW @ 11 ft	DRY at 5ft	None at 5ft		
Depth	PID	Description																																																																																			
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Depth Interval		2 ft																																																																																			
Diagram not to scale			Comments:			CES Boring Log Ver. 1.1																																																																															

Boring ID: DW-7 CES Project Number: 15.102 Date Started: 4/9/2012 Date Completed: 4/10/2012 Drilled By: Todd Allred		Steady Simmons 16661 Grays Highway Early Branch SC 29916 UST Permit ID: 18856		CRAWFORD ENVIRONMENTAL SERVICES		Boring Log				
Well Diagram 			Geologic Description							
			Depth	PID	Description	Water Table	Moisture	Odor	Sample	Notes
			0		Grass					
			2		Tan Fine Grained Sandy SILT					
			4	1.1 at 5ft			DRY at 5ft	None at 5ft		
			6		Yellow to Grey fine to medium grained clayey SAND					
			8							
			10	0.0 at 10 ft			Moist at 10 ft	None at 10 ft		
			12			GW @ 11 ft				
			14	0.0 at 15ft			WET at 15ft	None at 15ft		
			16							
			18							
			20	0.0 at 20 ft			WET at 20 ft	None at 20 ft		
			22							
			24	0.0 at 25 ft			WET at 25 ft	None at 25 ft		
			26							
			28							
			30	0.0 at 30 ft			WET at 30 ft	None at 30 ft		
			32							
			34	0.0 at 35 ft			WET at 35 ft	None at 35 ft		
			36		Total Drilled Depth @ 36 ft					
			38		Auger Refusal -Rock- @ 36 ft					
			40							
			42							
			44							
			Depth Interval		2 ft					
Diagram not to scale			Comments:			CES Boring Log Ver. 1.1				

Tier II Assessment
Steady Simmons
Site ID: 18856

Cost Agreement: 43095
CES Project #: 15.102

APPENDIX E
SCDHEC 1903 Forms

CRAWFORD
ENVIRONMENTAL
SERVICES



Water Well Record Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803-4300)

1. Well Owner Information

Name: SCDHEC
Address: 2600 Bull Street
City: Columbia State SC Zip 29201
Telephone Work: Home:

7. Permit Number:

UST Permit ID: 18856 MWA:UMW 24444

8. Use:

Residential Public Supply Process
Irrigation Air Conditioning Emergency
Test Well Monitor Well Replacement

2. Location of Well:

County: Charleston

Name: Steady Simmons
Address: 16661 Grays Highway
City: Early Branch Zip 29961
Latitude: Longitude:

9. Well Depth (completed)

16 ft Date Started 3/15/2012

Date Completed 3/16/2012

10. Casing

Threaded Welded
Dia. inches Height: Above / Below
Type PVC Galvanized Surface ft
 Steel Other Weight lb/ft
in. to ft. depth Drive Shoe Yes No
in. to ft. depth

3. Public System Name: Public System Number:

GW-10

4. Abandonment

Yes No

Grouted Depth: from 0 ft. to 16 ft.

11. Screen:

Type: Diam: in.
Slot/Gauge: Length: ft.
Set Between: ft. and ft.
ft. and ft.
Sieve Analysis Yes (please enclose) No

12. Static Water Level

refer boring log ft. below land surface after 24 hours

13. Pumping Level

Below land surface.

ft. after hrs. Pumping G.P.M.
Pumping Test: Yes (please enclose) No
Yield:

14. Water Quality

Chemical Analysis Yes No Bacterial Analysis Yes No
Please enclose lab results.

15. Artificial Filter (filter pack)

Yes No

Installed from ft. to ft.
Effective Size Uniformity Coefficient

16. Well Grouted?

Yes No

Neat Cement Bentonite Bentonite/Cement Other
Depth: From 0 ft. to 16 ft.

17. Nearest Source of Possible Contamination:

ft. Direction

Type:
Well Disinfected Yes No Type: Amount:

18. Pump:

Date Installed: Not Installed

Mfr. Name: Model No.:
H.P. Volts: Length of Drop Pipe ft Capacity: gpm
TYPE: Submersible Jet (Shallow) Turbine
 Jet (Deep) Reciprocating Centrifugal

19. Well Driller

Todd Allred Cert. No. 1446

Address (Print) Level A B C D

104 Corporate Blvd. Suite 412 West Columbia, SC 29169

Telephone no.: 803-708-0079 Fax: 803-708-8137

20. Water Well Drillers Certification:

This well was drilled under my direction and this report is true to the best of my knowledge and belief

Signed Todd Allred Date 3/16/2012
If D Level Driller, provide the supervising driller's name:

5. Remarks

GW-10
Abandoned 0.0 ft to 16 ft
using bentonite cement mixture

6. Type

Mud Rotary Jetted Bored
 Dug Air Rotary Driven
 Cable Tool Other



**Water Well Record
Bureau of Water**

2600 Bull Street, Columbia, SC 29201-1708; (803-4300)

1. Well Owner Information

Name: SCDHEC
Address: 2600 Bull Street
City: Columbia State SC Zip 29201
Telephone Work: Home:

7. Permit Number:

UST Permit ID: 18856 MWA:UMW 24444

2. Location of Well:

County: Charleston

Name: Steady Simmons
Address: 16661 Grays Highway
City: Early Branch Zip 29961
Latitude: Longitude:

9. Well Depth (completed)

17 ft Date Started 3/15/2012
Date Completed 3/16/2012

3. Public System Name: Public System Number:

GW-21

4. Abandonment

Yes No

Grouted Depth: from 0 ft. to 17 ft.

10. Casing

Threaded Welded
Dia. inches
Type PVC Galvanized Steel Other
in. to ft. depth
Height: Above / Below ft
Surface lb/ft
Weight
Drive Shoe Yes No

11. Screen:

Type: Diam: in.
Slot/Gauge: Length: ft.
Set Between: ft. and ft.
Sieve Analysis Yes (please enclose) No

12. Static Water Level refer boring log ft. below land surface after 24 hours

13. Pumping Level Below land surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: Yes (please enclose) No
Yield:

14. Water Quality

Chemical Analysis Yes No Bacterial Analysis Yes No
Please enclose lab results.

15. Artificial Filter (filter pack)

Yes No
Installed from ft. to ft.
Effective Size Uniformity Coefficient

16. Well Grouted?

Yes No
 Neat Cement Bentonite Bentonite/Cement Other
Depth: From 0 ft. to 17 ft.

17. Nearest Source of Possible Contamination:

Type: ft. Direction
Well Disinfected Yes No Type: Amount:

18. Pump:

Date Installed: Not Installed
Mfr. Name: Model No.:
H.P. Volts: Length of Drop Pipe ft Capacity: gpm
TYPE: Submersible Jet (Shallow) Turbine
 Jet (Deep) Reciprocating Centrifugal

19. Well Driller

Todd Allred Cert. No. 1446
Address (Print) Level A B C D
 X
104 Corporate Blvd. Suite 412 West Columbia, SC 29169
Telephone no.: 803-708-0079 Fax: 803-708-8137

*Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

5. Remarks

GW-21
Abandoned 0.0 ft to 17 ft
using bentonite cement mixture

20. Water Well Drillers Certification: This well was drilled under my direction and this report is true to the best of my knowledge and belief

Signed Todd Allred Date 3/16/2012
If D Level Driller, provide the supervising driller's name:



Water Well Record Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803-4300)

1. Well Owner Information

Name: SCDHEC
 Address: 2600 Bull Street
 City: Columbia State SC Zip 29201
 Telephone Work: Home:

7. Permit Number:

UST Permit ID: 18856 MWA:UMW 24444

8. Use:

Residential Public Supply Process
 Irrigation Air Conditioning Emergency
 Test Well Monitor Well Replacement

2. Location of Well:

County: Florence

Name: Steady Simmons
 Address: 16661 Grays Highway
 City: Early Branch Zip 29916
 Latitude: Longitude:

9. Well Depth (completed)

20 ft Date Started 4/9/2012
 Date Completed 4/10/2012

10. Casing

Threaded Welded
 Dia. 2 inches Height: Above / Below
 Type PVC Galvanized Surface ft
 Steel Other Weight lb/ft
 2 in. to 10 ft. depth Drive Shoe Yes No
 in. to ft. depth

3. Public System Name: Public System Number:

MW-16

4. Abandonment

Yes No

Grouted Depth: from ft. to ft.

11. Screen:

Type: PVC Schedule 40 Diam: 2 in.
 Slot/Gauge: 0.01 Length: 10 ft.
 Set Between: 10 ft. and 20 ft.
 Sieve Analysis Yes (please enclose) No

12. Static Water Level refer Table 2 ft. below land surface after 24 hours

13. Pumping Level

Below land surface.
 ft. after hrs. Pumping G.P.M.
 Pumping Test: Yes (please enclose) No
 Yield:

14. Water Quality

Chemical Analysis Yes No Bacterial Analysis Yes No
 Please enclose lab results.

15. Artificial Filter (filter pack)

Yes No
 Installed from 1.5 ft. to 20 ft.
 Effective Size #2 Uniformity Coefficient

16. Well Grouted?

Yes No
 Neat Cement Bentonite Bentonite/Cement Other
 Depth: From 0 ft. to 1.5 ft.

17. Nearest Source of Possible Contamination:

Type: ft. Direction
 Well Disinfected Yes No Type: Amount:

18. Pump:

Date Installed: Not Installed
 Mfr. Name: Model No.:
 H.P. Volts: Length of Drop Pipe ft Capacity: gpm
 TYPE: Submersible Jet (Shallow) Turbine
 Jet (Deep) Reciprocating Centrifugal

19. Well Driller

Todd Allred Cert. No. 1446
 Address (Print) Level A B C D
 X
 104 Corporate Blvd. Suite 412 West Columbia, SC 29169
 Telephone no.: 803-708-0079 Fax: 803-708-8137

20. Water Well Drillers Certification: This well was drilled under

my direction and this report is true to the best of my knowledge and belief

Signed Todd Allred Date 4/10/2012
 If D Level Driller, provide the supervising driller's name:

5. Remarks

MW-16
 Bentonite Seal 1 ft to 1.5 ft

6. Type

Mud Rotary Jetted Bored
 Dug Air Rotary Driven
 Cable Tool Other



Water Well Record Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803-4300)

1. Well Owner Information

Name: SCDHEC
 Address: 2600 Bull Street
 City: Columbia State SC Zip 29201
 Telephone Work: Home:

7. Permit Number:

UST Permit ID: 18856 MWA:UMW 24444

8. Use:

Residential Public Supply Process
 Irrigation Air Conditioning Emergency
 Test Well Monitor Well Replacement

2. Location of Well:

County: Florence

Name: Steady Simmons
 Address: 16661 Grays Highway
 City: Early Branch Zip 29916
 Latitude: Longitude:

9. Well Depth (completed)

40 ft Date Started 4/9/2012

Date Completed 4/10/2012

10. Casing

Threaded Welded

Dia. 2 inches

Type PVC Galvanized

Steel Other

2 in. to 35 ft. depth

6 in. to 20 ft. depth

Height: Above / Below

Surface ft

Weight lb/ft

Drive Shoe Yes No

3. Public System Name: Public System Number:

DW-1

4. Abandonment

Yes No

Grouted Depth: from ft. to ft.

11. Screen:

Type: PVC Schedule 40 Diam: 2 in.

Slot/Gauge: 0.01 Length: 5 ft.

Set Between: 35 ft. and 40 ft.

ft. and ft.

Sieve Analysis Yes (please enclose) No

12. Static Water Level

refer Table 2 ft. below land surface after 24 hours

13. Pumping Level

Below land surface.

ft. after hrs. Pumping G.P.M.

Pumping Test: Yes (please enclose) No

Yield:

14. Water Quality

Chemical Analysis Yes No Bacterial Analysis Yes No

Please enclose lab results.

15. Artificial Filter (filter pack)

Yes No

Installed from 33 ft. to 40 ft.

Effective Size #2 Uniformity Coefficient

16. Well Grouted?

Yes No

Neat Cement Bentonite Bentonite/Cement Other

Depth: From 0 ft. to 33 ft.

17. Nearest Source of Possible Contamination:

ft. Direction

Type:

Well Disinfected Yes No Type: Amount:

18. Pump:

Date Installed: Not Installed

Mfr. Name: Model No.:

H.P. Volts: Length of Drop Pipe ft Capacity: gpm

TYPE: Submersible Jet (Shallow) Turbine

Jet (Deep) Reciprocating Centrifugal

19. Well Driller

Todd Allred Cert. No. 1446

Address (Print) Level A B C D

104 Corporate Blvd. Suite 412 West Columbia, SC 29169

Telephone no.: 803-708-0079 Fax: 803-708-8137

20. Water Well Drillers Certification:

This well was drilled under my direction and this report is true to the best of my knowledge and belief

Signed Todd Allred

Date 4/10/2012

If D Level Driller, provide the supervising driller's name:

*Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

5. Remarks

DW-1

Bentonite Seal 31 ft to 33 ft

6. Type

Mud Rotary Jetted Bored
 Dug Air Rotary Driven
 Cable Tool Other



Water Well Record Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803-4300)

1. Well Owner Information

Name: SCDHEC
 Address: 2600 Bull Street
 City: Columbia State SC Zip 29201
 Telephone Work: Home:

7. Permit Number:

UST Permit ID: 18856 MWA:UMW 24444

8. Use: Residential Public Supply Process
 Irrigation Air Conditioning Emergency
 Test Well Monitor Well Replacement

2. Location of Well: County: Florence

Name: Steady Simmons
 Address: 16661 Grays Highway
 City: Early Branch Zip 29916
 Latitude: Longitude:

9. Well Depth (completed) Date Started 4/9/2012
 40 ft Date Completed 4/10/2012

10. Casing Threaded Welded
 Dia. 2 inches Height: Above / Below
 Type PVC Galvanized Surface ft
 Steel Other Weight lb/ft
 2 in. to 35 ft. depth Drive Shoe Yes No
 6 in. to 20 ft. depth

3. Public System Name: Public System Number:

DW-3

4. Abandonment Yes No

Grouted Depth: from ft. to ft.

11. Screen:

Type: PVC Schedule 40 Diam: 2 in.
 Slot/Gauge: 0.01 Length: 5 ft.
 Set Between: 35 ft. and 40 ft.
 Sieve Analysis Yes (please enclose) No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Refer to Boring Log		

12. Static Water Level refer Table 2 ft. below land surface after 24 hours

13. Pumping Level Below land surface.

ft. after hrs. Pumping G.P.M.
 Pumping Test: Yes (please enclose) No
 Yield:

14. Water Quality

Chemical Analysis Yes No Bacterial Analysis Yes No
 Please enclose lab results.

15. Artificial Filter (filter pack) Yes No

Installed from 33 ft. to 40 ft.
 Effective Size #2 Uniformity Coefficient

16. Well Grouted? Yes No

Neat Cement Bentonite Bentonite/Cement Other
 Depth: From 0 ft. to 33 ft.

17. Nearest Source of Possible Contamination: ft. Direction

Type:
 Well Disinfected Yes No Type: Amount:

18. Pump: Date Installed: Not Installed

Mfr. Name: Model No.:
 H.P. Volts: Length of Drop Pipe ft Capacity: gpm
 TYPE: Submersible Jet (Shallow) Turbine
 Jet (Deep) Reciprocating Centrifugal

19. Well Driller Todd Allred Cert. No. 1446

Address (Print) Level A B C D
 104 Corporate Blvd. Suite 412 West Columbia, SC 29169

Telephone no.: 803-708-0079 Fax: 803-708-8137

*Indicate Water Bearing Zones
 (Use a 2nd sheet if needed)

5. Remarks

DW-3
 Bentonite Seal 31 ft to 33 ft

20. Water Well Drillers Certification: This well was drilled under my direction and this report is true to the best of my knowledge and belief

Signed Todd Allred Date 4/10/2012
 If D Level Driller, provide the supervising driller's name:

6. Type Mud Rotary Jetted Bored
 Dug Air Rotary Driven
 Cable Tool Other



Water Well Record Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803-4300)

1. Well Owner Information

Name: SCDHEC
 Address: 2600 Bull Street
 City: Columbia State SC Zip 29201
 Telephone Work: Home:

7. Permit Number:

UST Permit ID: 18856 MWA:UMW 24444

8. Use: Residential Public Supply Process
 Irrigation Air Conditioning Emergency
 Test Well Monitor Well Replacement

2. Location of Well:

County: Florence

Name: Steady Simmons
 Address: 16661 Grays Highway
 City: Early Branch Zip 29916
 Latitude: Longitude:

9. Well Depth (completed)

36 ft Date Started 4/9/2012
 Date Completed 4/10/2012

10. Casing Threaded Welded
 Dia. 2 inches Height: Above / Below
 Type PVC Galvanized Surface ft
 Steel Other Weight lb/ft
 2 in. to 31 ft. depth Drive Shoe Yes No
 6 in. to 20 ft. depth

3. Public System Name: Public System Number:

DW-6

4. Abandonment

Yes No

Grouted Depth: from ft. to ft.

11. Screen:

Type: PVC Schedule 40 Diam: 2 in.
 Slot/Gauge: 0.01 Length: 5 ft.
 Set Between: 31 ft. and 36 ft.
 Sieve Analysis Yes (please enclose) No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Refer to Boring Log		

12. Static Water Level refer Table 2 ft. below land surface after 24 hours

13. Pumping Level

Below land surface.

ft. after hrs. Pumping G.P.M.
 Pumping Test: Yes (please enclose) No
 Yield:

14. Water Quality

Chemical Analysis Yes No Bacterial Analysis Yes No
 Please enclose lab results.

15. Artificial Filter (filter pack)

Yes No

Installed from 29 ft. to 36 ft.
 Effective Size #2 Uniformity Coefficient

16. Well Grouted?

Yes No

Neat Cement Bentonite Bentonite/Cement Other
 Depth: From 0 ft. to 29 ft.

17. Nearest Source of Possible Contamination:

ft. Direction

Type:
 Well Disinfected Yes No Type: Amount:

18. Pump:

Date Installed: Not Installed

Mfr. Name: Model No.:
 H.P. Volts: Length of Drop Pipe ft Capacity: gpm
 TYPE: Submersible Jet (Shallow) Turbine
 Jet (Deep) Reciprocating Centrifugal

19. Well Driller

Todd Allred Cert. No. 1446

Address (Print) Level A B C D

104 Corporate Blvd. Suite 412 West Columbia, SC 29169

Telephone no.: 803-708-0079 Fax: 803-708-8137

20. Water Well Drillers Certification: This well was drilled under my direction and this report is true to the best of my knowledge and belief

*Indicate Water Bearing Zones (Use a 2nd sheet if needed)

5. Remarks

DW-6
 Bentonite Seal 27 ft to 29 ft

6. Type

Mud Rotary Jetted Bored
 Dug Air Rotary Driven
 Cable Tool Other

Signed

Todd Allred

Date 4/10/2012

If D Level Driller, provide the supervising driller's name:

APPENDIX F
Aquifer Calculations and Characteristics



SOUTH CAROLINA
Department of Health and Environmental Control
Summary of Slug Test Form

Site Data

UST Permit # 18856 County: JASPER
 Facility Name Steady Simmons

Slug Data

See Appendix F Table _____ Figure _____ for a list of all data measurements.
 (water level logs, etc.) (Complete as appropriate).

Water Level Recovery Data was measured by manually w/ water level indicator
 (Hermit Data Logger, Manually with Water Level Indicator, etc.) (List Method).

Complete the following table for each well tested.

COMPLETE A SECOND SHEET IF MORE THAN FOUR WELLS ARE TESTED

Slug Test Conducted in well(s) number	ML-16			
Initial Rise/Drawdown in well (feet)	2.11			
Radius of Well Casing (feet)	0.0833			
Effective Radius of Well (feet)	0.20833			
Static Saturated Aquifer Thickness (feet)	?			
Length of Well Screen (feet)	10			
Static Height of Water Column in Well (ft)	12.29			

Calculations

See Appendix F Table _____ Figure _____ for calculations. (Complete as appropriate).

The method for aquifer calculations was Bowen Eq

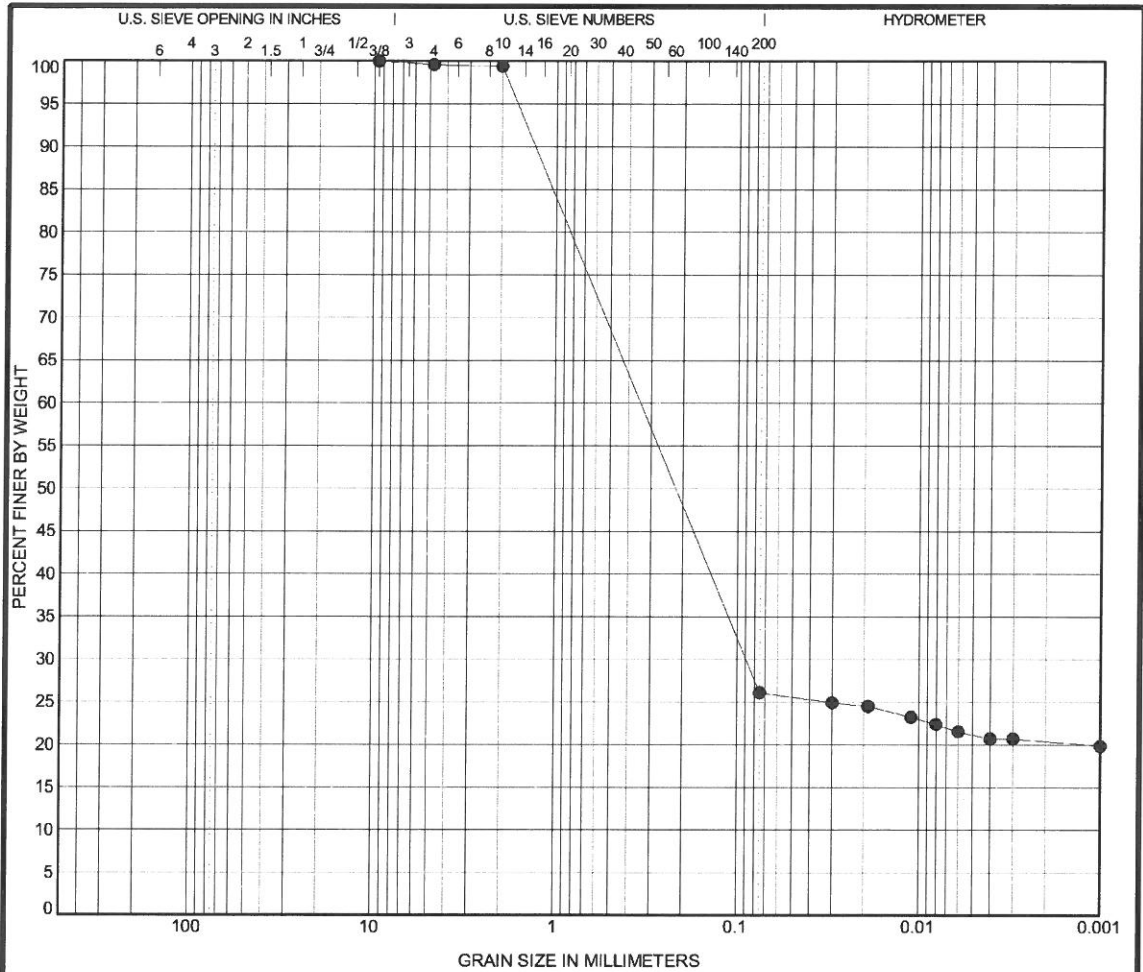
Calculated values by well were as follows:

Slug Test Conducted in well(s) number	ML-16			
Hydraulic Conductivity <u>ft/day</u>	0.069			

Thickness of the aquifer used to calculate hydraulic conductivity was _____ feet.

The aquifer is _____ confined _____ semi-confined water table (Check as appropriate).

The estimated seepage velocity is 0.839 ft/yr feet per year based on
 a hydraulic conductivity of 25.18 ft/yr, a hydraulic gradient of 0.015, and
 a porosity of 45 per cent for JANNEY LOAM soil (list type i.e., silty sand ,clay, etc).



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen	Sample Description	LL	PL	PI				
● MW-16	15.0 ft Sand, grayish brown	-	--	--				
Test Method	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
ASTM D1140					0.4	73.5	5.7	20.4

Sieve Size	No. 200	No. 10	No. 4	3/8"
% Finer	26.1	99.4	99.6	100.0

Tested By	Tested Date	Reviewed By	Calc By
CB	4/18/12	SH	SH



GRADATION CURVE
Project: Crawford Environmental Steacy Simmons
Contract: 11619029.00.35

SIEVE 1/SHEET LAB TESTING.GPJ SCHNABEL DATA TEMPLATE 2008 04 22.GDT 4/19/12

Data has not been saved

Title: Slug Test 1
Site Name: Steady Simmons
Location: 16661 Grays Highway Early Branch, SC
Client: SCDHEC
Project Number: 18856
Test Date: April 17, 2012
Well Number: MW-16
Casing Radius: 0.0832998 feet
Effective Well Radius: 0.20833 feet
Aquifer Thickness: 7.71 feet
Water Table to Screen Bottom: 7.71 feet
Screen Length: 10 feet
Static Water Level: 12.29 decimal feet

K ratio is not entered

There are 26 time and drawdown measurements

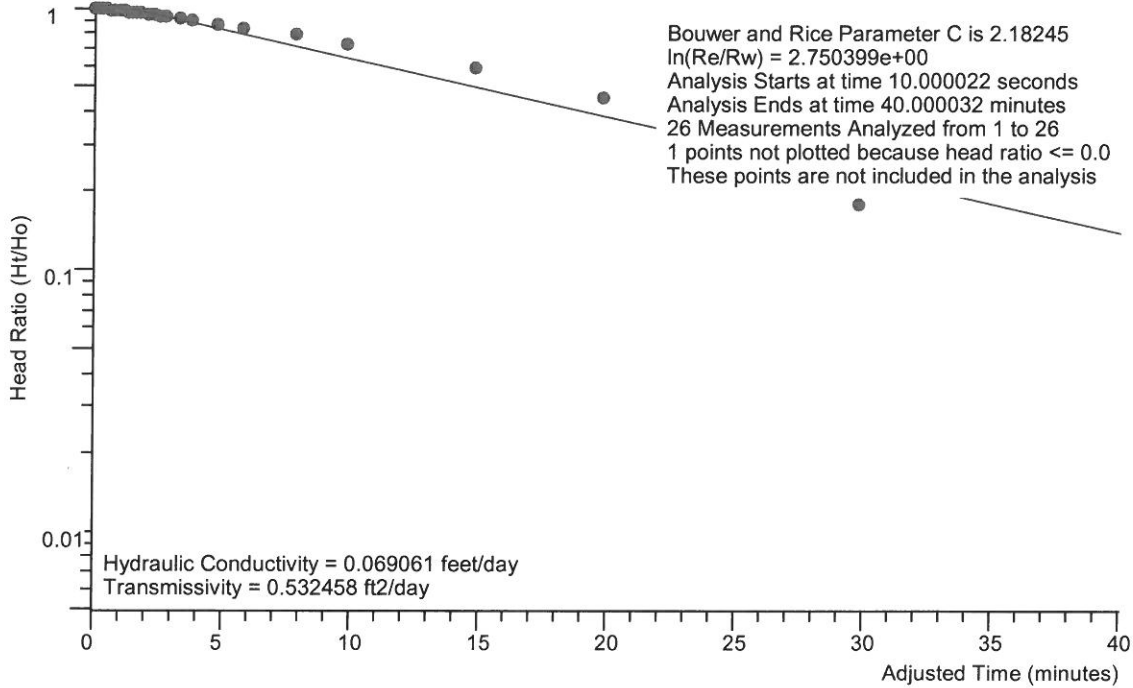
Tests starts with trial 1

Time values will be adjusted by 0.000115741 days (10.000022 seconds)

Trial	Time (seconds)	Adjusted Time (seconds)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
1	10	0	14.39	2.10002	1
2	20	9.99994	14.38	2.09001	0.995235
3	30	20	14.37	2.08	0.990471
4	40	30	14.36	2.07	0.985705
5	50	40	14.35	2.05999	0.98094
6	60	49.9999	14.34	2.04998	0.976176
7	70	60	14.33	2.04001	0.971426
8	80	70	14.32	2.03	0.966661
9	90.0003	80.0003	14.3	2.00999	0.957131
10	100	90.0002	14.3	2.00999	0.957131
11	110	100	14.29	1.99998	0.952366
12	120	110	14.29	1.99998	0.952366
13	135	125	14.27	1.98	0.942852
14	150	140	14.26	1.97	0.938087
15	165	155	14.24	1.94999	0.928558
16	180	170	14.22	1.93	0.919043
17	210	200	14.2	1.90999	0.909513
18	240	230	14.17	1.88	0.895234
19	300	290	14.11	1.82	0.86666
20	360	350	14.05	1.75999	0.838086
21	480	470	13.94	1.64999	0.785703
22	600	590	13.82	1.53001	0.728571
23	900.003	890.003	13.53	1.23999	0.590466
24	1200	1190	13.24	0.949997	0.452376
25	1800	1790	12.66	0.369984	0.176182
26	2400	2390	12.25	-0.0399847	-0.0190402

Slug Test 1 April 17, 2012
Steady Simmons 16661 Grays Highway Early Branch, SC

Bouwer and Rice Graph of MW-16
Ho is 2.10002 decimal feet at t = 10 sec





SOUTH CAROLINA
Department of Health and Environmental Control
Summary of Slug Test Form

Site Data

UST Permit # 18856 County: JASPER

Facility Name Steady Simons

Slug Data

See Appendix F Table _____ Figure _____ for a list of all data measurements.
 (water level logs, etc.) (Complete as appropriate).

Water Level Recovery Data was measured by manually w/ water level indicator
 (Hermit Data Logger, Manually with Water Level Indicator, etc.) (List Method).

Complete the following table for each well tested.

COMPLETE A SECOND SHEET IF MORE THAN FOUR WELLS ARE TESTED

Slug Test Conducted in well(s) number
 Initial Rise/Drawdown in well (feet)
 Radius of Well Casing (feet)
 Effective Radius of Well (feet)
 Static Saturated Aquifer Thickness (feet)
 Length of Well Screen (feet)
 Static Height of Water Column in Well (ft)

<u>DJ-6</u>			
<u>2.11</u>			
<u>0.0833</u>			
<u>0.70833</u>			
<u>23.66</u>			
<u>5</u>			
<u>12.36</u>			

Calculations

See Appendix F Table _____ Figure _____ for calculations. (Complete as appropriate).

The method for aquifer calculations was Bowen's

Calculated values by well were as follows:

Slug Test Conducted in well(s) number

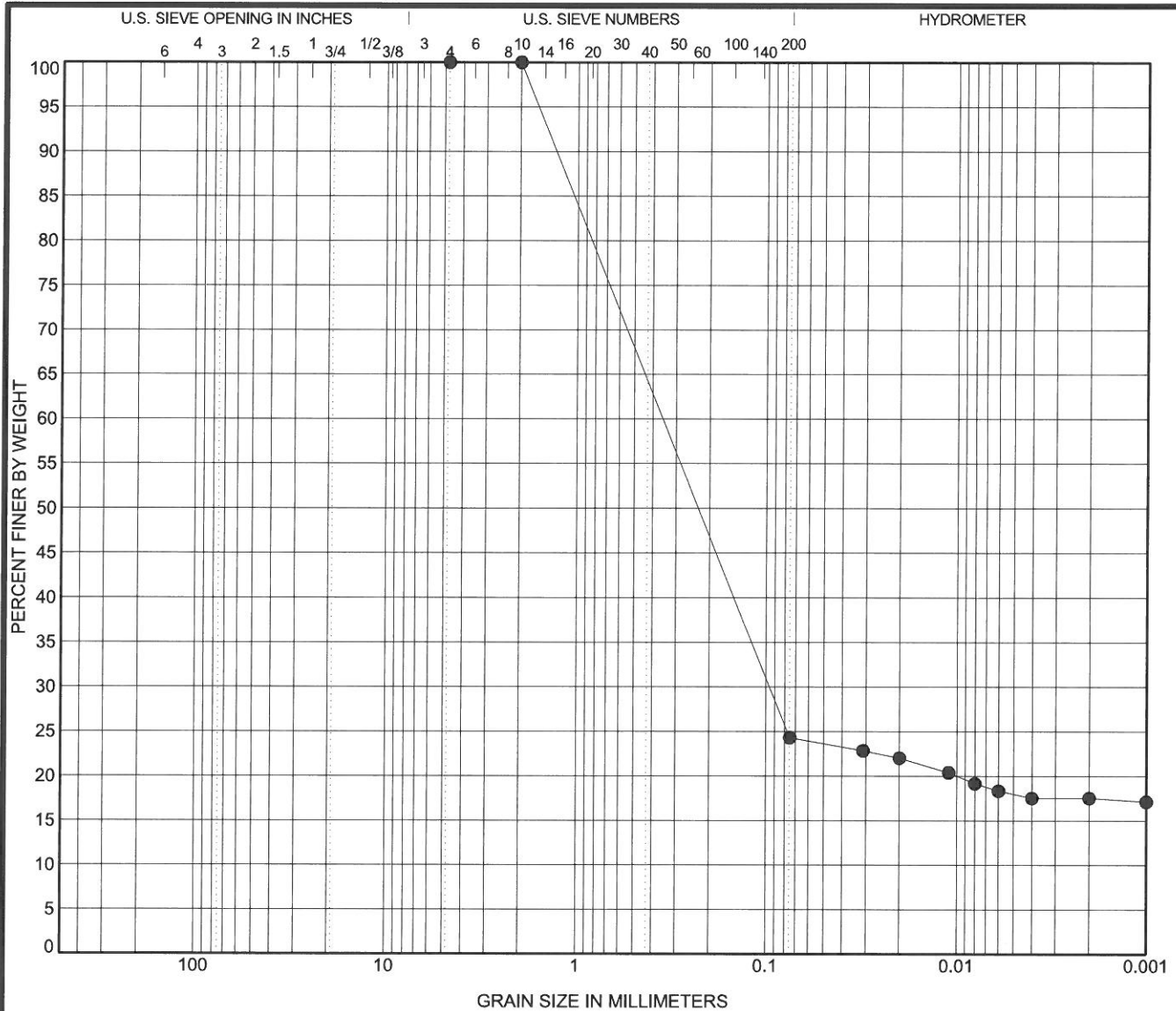
Hydraulic Conductivity ft/day

<u>DJ-6</u>			
<u>0.158</u>			

Thickness of the aquifer used to calculate hydraulic conductivity was _____ feet.

The aquifer is _____ confined _____ semi-confined water table (Check as appropriate).

The estimated seepage velocity is 7.68 ft/yr feet per year based on
 a hydraulic conductivity of 52.67 ft/yr, a hydraulic gradient of 0.06 ft/ft, and
 a porosity of .45 per cent for loamy sand soil (list type i.e., silty sand ,clay, etc).



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen	Sample Description	LL	PL	PI				
DW-6 35.0 ft	Sand, grayish brown	--	--	--				
Test Method	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
ASTM D1140					0.0	75.7	6.8	17.5

Percent Finer

Sieve Size	No. 200	No. 10	No. 4
% Finer	24.3	100.0	100.0

Tested By	Tested Date	Reviewed By	Calc By
CB	4/18/12	SH	SH

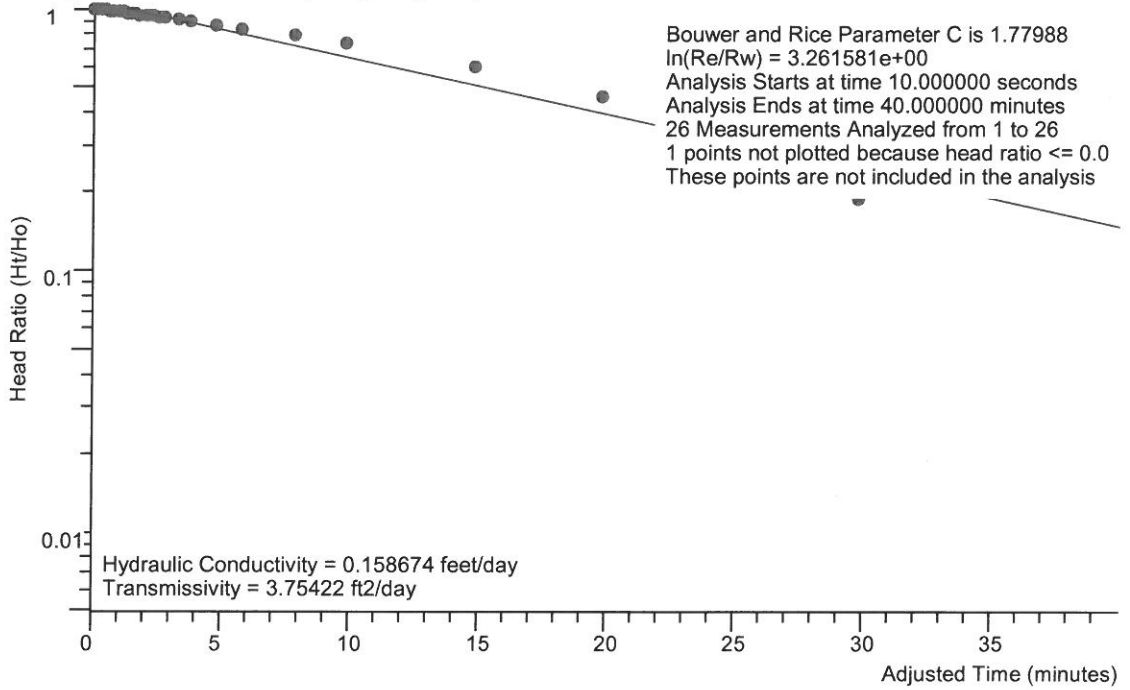


GRADATION CURVE
Project: Crawford Environmental Steacy Simmons
Contract: 11619029.00.36

SIEVE 1/SHEET LAB TESTING.GPJ SCHNABEL DATA TEMPLATE 2008 04 22.GDT 4/19/12

Slug Test 2 April 17, 2012
Steady Simmons 16661 Grays Highway Early Branch, SC

Bouwer and Rice Graph of DW-6
Ho is 2.13 decimal feet at t = 10 sec



Project Number 18856 for SCDHEC

Data has not been saved

Title: Slug Test 2
Site Name: Steady Simmons
Location: 16661 Grays Highway Early Branch, SC
Client: SCDHEC
Project Number: 18856
Test Date: April 17, 2012
Well Number: DW-6
Casing Radius: 0.0833 feet
Effective Well Radius: 0.20833 feet
Aquifer Thickness: 23.66 feet
Water Table to Screen Bottom: 23.66 feet
Screen Length: 5 feet
Static Water Level: 12.36 decimal feet

K ratio is not entered

There are 26 time and drawdown measurements

Tests starts with trial 1

Time values will be adjusted by 0.000115741 days (10.000000 seconds)

Trial	Time (seconds)	Adjusted Time (seconds)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
1	10	0	14.49	2.13	1
2	20	10	14.48	2.12	0.995305
3	30	20	14.47	2.11	0.990611
4	40	30	14.46	2.1	0.985916
5	50	40	14.45	2.09	0.98122
6	60	50	14.44	2.08	0.976526
7	70	60	14.43	2.07	0.971831
8	80	70	14.42	2.06	0.967136
9	90	80	14.41	2.05	0.962442
10	100	90	14.4	2.04	0.957746
11	110	100	14.39	2.03	0.953052
12	120	110	14.38	2.02	0.948357
13	135	125	14.37	2.01	0.943662
14	150	140	14.36	2	0.938968
15	165	155	14.34	1.98	0.929577
16	180	170	14.33	1.97	0.924883
17	210	200	14.3	1.94	0.910798
18	240	230	14.27	1.91	0.896714
19	300	290	14.21	1.85	0.868545
20	360	350	14.15	1.79	0.840376
21	480	470	14.04	1.68	0.788732
22	600	590	13.92	1.56	0.732394
23	900	890	13.63	1.27	0.596244
24	1200	1190	13.34	0.98	0.460094
25	1800	1790	12.76	0.399999	0.187793
26	2400	2390	12.36	0	0

APPENDIX G
Disposal Manifests

CRAWFORD
ENVIRONMENTAL
SERVICES

April 11, 2012

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management
Underground Storage Tank Management Division
2600 Bull Street
Columbia, SC 29201

Re: Purge Water Report- Development
Steady Simmons
16661 Grays Highway, Early Branch, SC 29916
Site ID#: 18856
CA: 43095
Jasper County
CES Number: 15.102

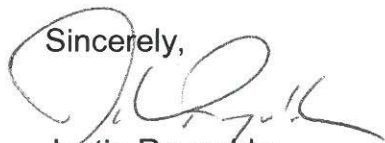
Dear Project Manager;

The letter presents the certification that Crawford Environmental Services (CES) treated purge waters referenced below with a granular activated carbon unit prior to discharge. This was completed in accordance with the conditions laid out in the "Proposed Conditions for use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater" produced by the SCDHEC Bureau of Water.

A total of 45 gallons were treated on April 11, 2012 for the above referenced facility.

A record of treatment is available upon request. If you have any questions or comments please feel free to contact us at 803-708-0079.

Sincerely,



Justin Reynolds
Project Manager
Crawford Environmental Services

MID-ATLANTIC REGION

15 CHURCH AVENUE
ROANOKE, VIRGINIA 24011
OFFICE 540 343.6256
FAX 540 343.6259

ccrawford@crawfordenvironmental.com

SOUTHEAST REGION

810 DUTCH SQUARE BLVD, SUITE 210
COLUMBIA, SOUTH CAROLINA 29210
OFFICE 803 772.6881
FAX 803 772.0913

dobrien@crawfordenvironmental.com

SOUTHEAST REGION

103 LOGAN STREET, SUITE B
CHARLESTON, SOUTH CAROLINA 29401
OFFICE 888 842.1101
FAX 803 753.9181

jcox@crawfordenvironmental.com

CRAWFORD
ENVIRONMENTAL
SERVICES

April 14, 2012

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management
Underground Storage Tank Management Division
2600 Bull Street
Columbia, SC 29201

Re: Purge Water Report- Groundwater Sampling
Steady Simmons
16661 Grays Highway, Early Branch, SC 29916
Site ID#: 18856
CA: 43095
Jasper County
CES Number: 15.102

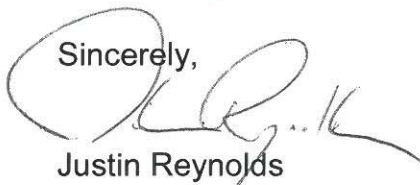
Dear Project Manager;

The letter presents the certification that Crawford Environmental Services (CES) treated purge waters referenced below with a granular activated carbon unit prior to discharge. This was completed in accordance with the conditions laid out in the "Proposed Conditions for use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater" produced by the SCDHEC Bureau of Water.

A total of 101 gallons were treated on April 13, 2012 for the above referenced facility.

A record of treatment is available upon request. If you have any questions or comments please feel free to contact us at 803-708-0079.

Sincerely,



Justin Reynolds
Project Manager
Crawford Environmental Services

MID-ATLANTIC REGION

15 CHURCH AVENUE
ROANOKE, VIRGINIA 24011
OFFICE 540 343.6256
FAX 540 343.6259

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jc Cox@crawfordenvironmental.com

APPENDIX H
Local Zoning Regulations

Zoning Regulations: Jasper County

At the time of this report (May 2012) Jasper County does not have any regulations restricting the placement or installation of drinking water wells or irrigation wells beyond that which SCDHEC requires. Further questions can be directed to the Jasper County Administration office at 843-717-3690

Zoning Regulations: Town of Early Branch

Contact reference for the Town of Early Branch could not be determined for this assessment.

APPENDIX J
Access Agreements and Property Owner Cover Letters

CRAWFORD
ENVIRONMENTAL
SERVICES

May 4, 2012

Wayne Thompson
16657 Grays Highway
Early Branch, SC 29916

Re: Tier II Assessment Report
Steady Simmons
16661 Grays Highway, Early Branch, SC 29916
UST Permit: 18856
Cost Agreement: 43095
CES Project #: 15.102
Jasper County

Mr. Thompson

Crawford Environmental Services, Inc. (CES) is pleased to submit the attached Tier II Assessment Report for the above mentioned facility. The included report describes assessment activities conducted at the above mentioned facility and on surrounding properties in general accordance with the South Carolina Department of Health and Environmental Control (SCDHEC). The assessment activities described in the included report, may have included work that was completed on your property. Please see attached report for further details.

If you have any questions or comments regarding site 18856, Steady Simmons please feel free to contact me at 803-708-0079, or by email at jreynolds@crawfordenvironmental.com.

Sincerely,



Justin Reynolds
Project Manager
Crawford Environmental Services
SC Rehabilitation Contractor Number: 0388

Attachments:
Tier II Assessment

MID-ATLANTIC REGION

15 CHURCH AVENUE
ROANOKE, VIRGINIA 24011
OFFICE 540 343.6256
FAX 540 343.6259

ccrawford@crawfordenvironmental.com

SOUTHEAST REGION

810 DUTCH SQUARE BLVD, SUITE 210
COLUMBIA, SOUTH CAROLINA 29210
OFFICE 803 772.6881
FAX 803 772.0913

dobrien@crawfordenvironmental.com

SOUTHEAST REGION

103 LOGAN STREET, SUITE B
CHARLESTON, SOUTH CAROLINA 29401
OFFICE 888 842.1101
FAX 803 753.9181

jcox@crawfordenvironmental.com

CRAWFORD
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Access Agreement

I, _____, hereby certify that I am the owner of record or otherwise have legal right to grant entry and access to the property for the purpose described below ("owner") and do hereby grant the South Carolina Department of Health and Environmental Control (SCDHEC), its consulting firm Crawford Environmental Services (CES) and its agents, employees, subcontractors, and assigns the right to enter upon the property located at or described as:

Address: 16661 GRAYS HIGHWAY EARLY BRANCH, SC

Tax Map ID: WAYNE THOMPSON PROPERTY

For the purpose of performing a Tier II Environmental Site Assessment, as requested by SCDHEC, which will include the following categories of work, if necessary;

- ❖ Drilling and installation of field screening test borings
- ❖ Spread non-contaminated drill cuttings at locations determined by property owner
- ❖ Drilling and installation of groundwater monitoring wells
- ❖ Periodically measuring groundwater, about once every three months
- ❖ Collection of groundwater samples, about once every three months
- ❖ Maintenance of monitoring wells

Access to the monitoring well(s) will be needed for a period not likely to exceed five years after monitoring well installation has been completed. At the time, the property owner may contact SCDHEC or CES if there are any questions or concerns about the work on the property. This permission to enter the property is effective upon execution of this document. This permission to Enter Property is granted with consideration of CES making reasonable restoration to the property by the conclusion of assessment activities resulting from CES activities on site.

Consented to Giving Access:

VERBAL GIVEN ON MARCH 15, 2012
Property Owners Signature BY WAYNE THOMPSON
due to health issues

Reference UST Permit #:

18865

Printed Name

Check Any That Apply:

Telephone Number

Access Denied:

Property Owners Signature

Please provide a copy of the report

Electronic Copy

Paper Copy

Please return to:
Crawford Environmental Services
104 Corporate Blvd. Suite 412 :
West Columbia, SC 29196

Printed Name
MID-ATLANTIC REGION
15 CHURCH AVENUE, SW
ROANOKE, VIRGINIA 24011
OFFICE 540 343.6256
FAX 540 343.6259

SOUTHEAST REGION
104 CORPORATE BLVD, SUITE 412
WEST COLUMBIA, SOUTH CAROLINA 29169
OFFICE 803 708.0079
FAX 803 708.8137

APPENDIX K
Data Verification Checklist

UST Programmatic QAPP Contractor Checklist

Item #:	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	Yes		
2	Is UST Owner/Operator name, address, provided?	Yes		
3	Is name, address, & phone number of current property owner provided?	Yes		
4	Is the SCDHEC Certified UST Site Rehabilitation Contractor's name, address, phone number, and certification number provided?	Yes		
5	Is the name, address, telephone number, and certification number of the well driller that installed the boring/monitoring wells provided?	Yes		
6	Is the name, address, telephone number, and certification number of the certified laboratories performing analytical analyses provided?	Yes		
7	Has the facility history be summarized?	Yes		
8	Has the regional geology and hydrogeology been summarized?	Yes		
9	Are the receptor survey results provided as required?			n/a
10	Has the current use of the site and adjacent land been described?	Yes		
11	Has the site specific geology been described?	Yes		
12	Has the primary soil type been described?	Yes		
13	Have the field screening results been described?	Yes		
14	Has a description of the soil sample collection and preservation been detailed?			n/a
15	Has the field screening methodology been detailed?	Yes		
16	Has the monitoring well installation and development dates been provided?	Yes		
17	Has the method of well development been detailed? (Table 2)	Yes		
18	Has the justification been provided for the locations of the monitoring wells?	Yes		
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?	Yes		
20	Has the groundwater sampling methodology been detailed?	Yes		
21	Have the groundwater sampling dates and groundwater measurements been provided?	Yes		
22	Has the purging methodology been detailed?	Yes		
23	Has the volume of water purged from each well been provided along with the measurements to verify purging is complete?	Yes		
24	If free-product is present, has the thickness been provided?	Yes		
25	Does the report include a brief discussion of the assessment done and the results?	Yes		
26	Does the report include a brief discussion of the aquifer evaluation and the results?	Yes		
27	Does the report include a brief discussion of the fate & transport models used?			N/A
28	Are the site-conceptual tables included (Tier 1 risk evaluation)			N/A
29	Have the exposure pathways been analyzed (Tier 2 risk evaluation)			N/A
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 risk evaluation)			N/A
31	Have recommendations for further action been provided and explained?	Yes		
32	Has the soil analytical data for the site been provided in tabular format? (Table 5)	Yes		
33	Has the potentiometric data for the site been provided in tabular format?	Yes		
34	Has the current and historical laboratory data been provided in tabular format	Yes		
35	Have the aquifer characteristics been provided and summarized on the appropriate form?	Yes		
36	Have the Site conceptual model tables been included (Tier 1 risk evaluation)			N/A
37	Has the topographic map been provided with all the required elements?	Yes		
38	Has the site base map been provided with all the required elements?	Yes		
39	Have the CoC maps been provided?	Yes		
40	Have the potentiometric maps been provided?	Yes		
41	Have the geologic cross-sections been provided	Yes		
42	Have maps showing the predicted migration of the CoCs through time been provided?			N/A
43	Has the site survey been provided and include all necessary elements? (Appendix A)	Yes		
44	Have the sampling logs, chain of custody forms and analytical data package been included with all elements? (Appendix B)	Yes		
45	Is the laboratory performing the analyses properly certified? (Appendix B)	Yes		
46	Has the tax map been included with all necessary elements? (Appendix C)			N/A
47	Have the soil/boring field screening logs been provided? (Appendix D)	Yes		
48	Have the well completion logs been provided? (Appendix E)	Yes		
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)	Yes		
50	Have the disposal manifests been provided? (Appendix G)	Yes		
51	Has a copy of the local zoning regulations been provided? (Appendix H)	Yes		
52	Has all fate and transport modeling been provided? (Appendix I)			N/A
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)	Yes		
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	Yes		

Comments:

APPENDIX L
Quality Assurance Program Plan

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For
Steady Simmons UST Permit #: 18856

16661 Gray's Highway, Early Branch, SC 29916-8016

Prepared by:

Justin Reynolds
Crawford Environmental Services
104 Corporate Blvd. Suite 412
West Columbia, SC 29196

SCDHEC Site Rehabilitation Contractor Certification Number: UCC-0388

Approvals

Alex Smith
SC DHEC Project Manager

Signature Date _____

Dee O'Brien
Site Rehabilitation Contractor


Signature Date 2/3/12

Dan Fisher
Project Verifier


Signature Date 2/1/2012

Ashley Amick
Laboratory Director
Access Analytical Inc.

Ashley B. Amick
Fri Feb 3 2012 11:22:50
Signature Date 2/3/12

Mehmet Yildirim
VP of Operations
Analytical Environmental Services Inc.,


Signature Date 2/3/12

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A3 Distribution List

Name	Title	Organization/Address	Telephone Number	Fax Number	Email Address
Alex Smith	SC DHEC Technical Project Manager	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6218	803-896- 6245	smitha2@dhec.sc.gov
Dee O'Brien	Site Rehabilitation Contractor	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708- 8137	dobrien@crawfordenvironmental.com
Dan Fisher	Project QA/QC Manager and Project Verifier	Crawford Environmental Services 15 Church Street Roanoke, VA 24011	540-343-6256	540-343- 6259	dfisher@crawfordenvironmental.com
Justin Reynolds	Project Manager	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708- 8137	jreynolds@crawfordenvironmental.com
Todd Allred	Field Manager/ Certified Well Driller	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708- 8137	tallred@crawfordenvironmental.com
Ashley Amick	Laboratory Director	Access Analytical, Inc. (AA) 7478 Carlisle Street Irmo, SC 29063	803-781-4243	803-781- 4303	aamick@axs-inc.com
Larry Lewis	Laboratory Director	Analytical Environmental (AES) Services Inc. 3785 Presidential Pkwy Atlanta, GA 30340	770-457-8177	770-457- 8188	llewis@aesatlanta.com

Table 1A Addendum Distribution List

A4 Project Organization

Role from the UST Master QAPP	Name of person in this Role for this Project	Organization/Address	Telephone Number	Fax Number	Email Address
Project Manager	Alex Smith	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6218	803-896-6245	smitha2@dhec.sc.gov
Site Rehabilitation Contractor	Dee O'Brien	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708-8137	dobrien@crawfordenvironmental.com
Project Manger	Justin Reynolds	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708-8137	jreynolds@crawfordenvironmental.com
Analytical Laboratory Director	Ashley Amick	Access Analytical, Inc. (AA) 7478 Carlisle Street Irmo, SC 29063	803-781-4243	803-781-4303	aamick@axs-inc.com
Analytical Laboratory Director	Larry Lewis	Analytical Environmental (AES) Services Inc. 3785 Presidential Pkwy Atlanta, GA 30340	770-457-8177	770-457-8188	llewis@aesatlanta.com
Field Manager/ Certified Well Driller	Todd Allred	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708-8137	tallred@crawfordenvironmental.com
Project QA/QC Manager and Project Verifier	Dan Fisher	Crawford Environmental Services 15 Church Street Roanoke, VA 24011	540-343-6256	540-343-6259	dfisher@crawfordenvironmental.com
Comprehensive Survey Subcontractor	Robert Lackey	Robert Lackey Surveying (RLS) P.O. Box 713 Camden, SC 29020	803-432-0968	803-425-4439	lackeyrh@att.net
Hydrometer Sieve Analysis Subcontractor	Steve Hahn	Schnabel Engineering (SE) 104 Corporate Blvd. Suite 420 West Columbia, SC 29169	803-796-6240	803-796-6240	shahn@schnabel-eng.com
Disposal Subcontractor	Paul Biery	A&D Environmental Services (A&D) 1741 Calks Ferry Road Lexington, SC 29073	803-957-9175	803-821-6021	pbiery@adenviro.com

Table 2A Addendum Role Identification and Contact Information

The responsibilities of the participants are as follows:

1. **UST Management Project Manager** – The UST Management Project Manager (UST Project Manager) is responsible for direct oversight of the contractor conducting this assessment. The UST Project Manager performs the review of the plan and the report associated with this assessment. These reviews include verification and analysis of data submitted to the UST Management Division by the Site Rehabilitation Contractor. The UST Project manager is responsible for the review of and approval of the site specific QAPP to ensure compliance with the Master QAPP. The UST Project Manager is also responsible for validating data.

2. **Site Rehabilitation Contractor** – The Site Rehabilitation Contractor is an independent contractor responsible for managing and coordinating field and office activities needed for this assessment.

3. **Project Manager** – The Project Manager is a representative of the Site Rehabilitation Contractor responsible for the day to day oversight of activities needed to complete this assessment. The Project Manager is responsible for the submission of plans, updates and reports associated with this assessment.

4. **Laboratory Analytical Director** – The Laboratory Analytical Director represents the Analytical Laboratory that will receive the soil and water samples from the Site Rehabilitation Contractor, performs the requested analyses and provides an analytical report.

5. **Field Manager** – The Field Manager is a representative of the Site Rehabilitation Contractor responsible for the oversight of the contractor technicians and field activities. The Field Manager is responsible for the review / QA of field activities to ensure compliance with the UST Master QAPP and contractor health and safety plans.

6. **Project QA/QC Manager and Project Verifier** – The Project QA/QC Manager and Project Verifier is a representative of the Site Rehabilitation Contractor responsible for the oversight of project activities to ensure quality control is in compliance with the UST Master QAPP.

7. **Disposal Contractor** – The Disposal Contractor is a subcontractor, chosen by the Site Rehabilitation Contractor, which will receive the industry derived waste created during the implementation of this assessment. The Disposal Contractor is responsible for the review of manifests to ensure the disposal is in compliance with the UST Master QAPP.

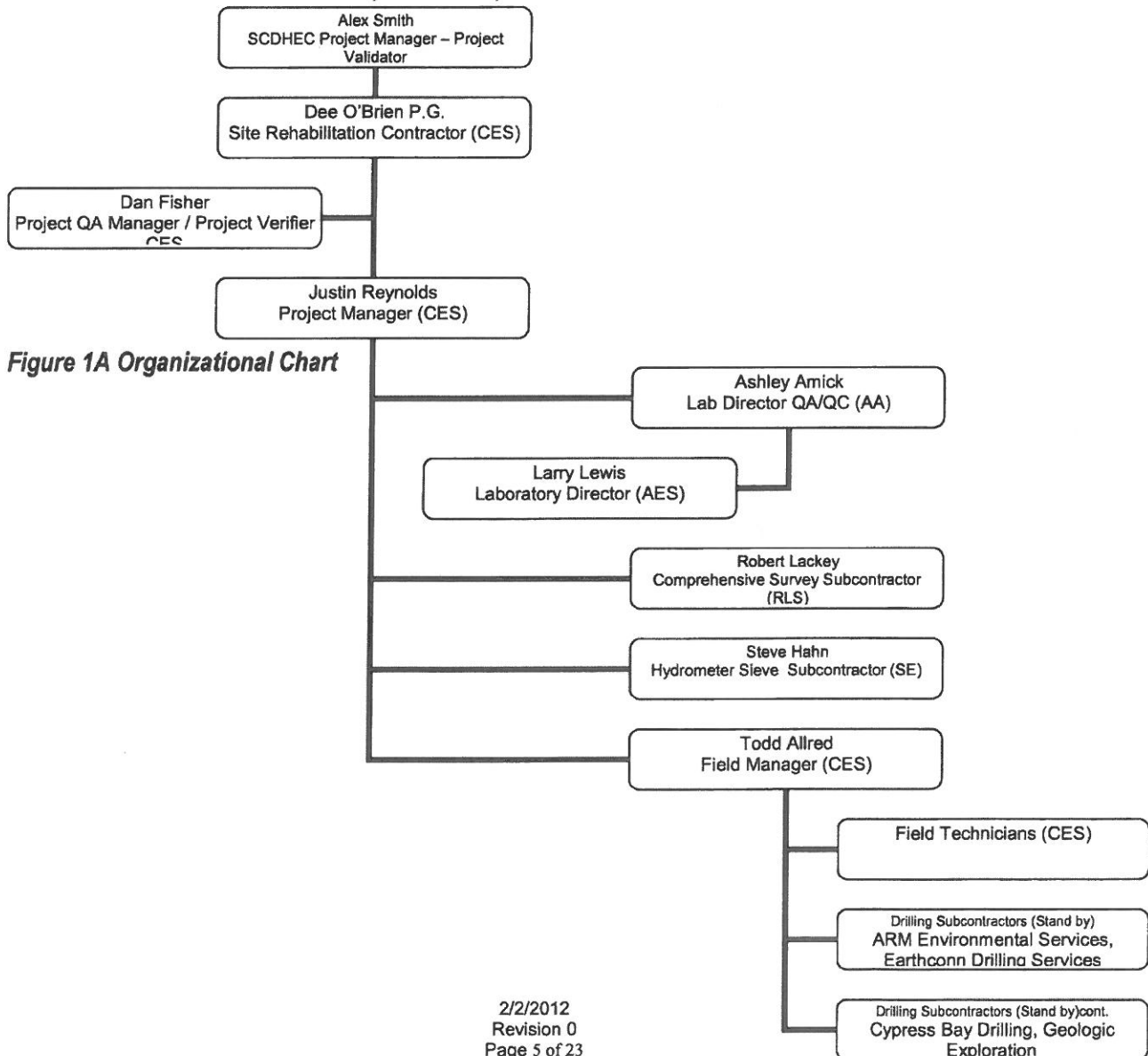


Figure 1A Organizational Chart

A5 Problem Definition/Background

Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed. According to SCDHEC and contractor records an IGWA and a Tier 1 was previously completed at this facility. During the previous assessments, several groundwater monitoring wells yielded dissolved-phase concentrations of Chemicals of Concern (CoCs) in exceedance of the risk based screening limits and maximum contaminant limits (RBSLs/MCLs).

Please answer the following: Does this project fall under UST or Brownfields area?

UST Area.

A6 Project/Task Description

- 1. Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).**

- Complete a comprehensive survey
- Complete a receptor survey
- Obtain and summarize local property information (Tax Map)
- Install up to 22 field screening points (12 shallow, 5 deep, 5 contingent) to define the horizontal and vertical extent of impact. A CME 55 drill rig and/or Geprobe 5400 will be used to complete this task. Groundwater samples will be collected via temporary well or discreet sampler.
- Install up to 15 (10 proposed, 5 contingent) shallow monitoring wells to define the horizontal extent of impact. A CME 55 drill rig and/or Geprobe 5400 will be used to complete this task.
- Install up to 7 (5 proposed, 2 contingent) deep monitoring wells to define the vertical extent of impact. A CME 55 drill rig will be used to complete this task.
- Collect soil samples from locations described in section B2
- Collect hydrometer sieve analysis for porosity results
- Gauge and sample all existing and newly installed monitoring wells and submit samples to laboratory for analysis.
- Sample local water supply wells (4)
- Sample local surface waters (wetlands)
- Complete slug tests for hydraulic conductivity
- Dispose of impacted IDW materials with disposal subcontractor
- Prepare and submit a report of findings to SCDHEC UST project manager

- 2. The work will begin within:** Approximately two weeks for cost approval. Field screening will take approximately one week, shallow well installation approximately one week and deep well installation will take approximately one week. Well installation will be followed (48 hours after installation, 24 hours after development) by groundwater sampling (within 5 days of deep well installation) the lab will require 7-9 days for sample analysis. Slug Tests will take one day. The comprehensive survey will take one day. Report development will take an additional week. If more samples are required to achieve 90% valid samples, the

project may be extended. The SCDHEC project manager will be contacted via email or telephone if project requires an extension.

3. **Are there any time or resource constraints? Include those factors that may interfere with the tentative schedule.** Drilling, field equipment, laboratory equipment failures may cause up to a two week delay. Property access issues due to their unpredictable nature, may cause a delay that will exceed the initial timeframe given for this project. No resource constraints are anticipated.

A7 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

Please refer to Appendix D of this QAPP for proposed shallow and deep monitoring well installation locations. The assessment boundaries are limited to area necessary to define the edges of the impact plume. SCDHEC will be notified on any accessibility issues.

A8 Training and Certificates

Required training and licenses:

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Site Rehabilitation Contractor	Dee O'Brien	BS/MS Geology	5/16/2011 (OSHA)	S.C.P.G.	873
Project Manager	Justin Reynolds	OSHA Haswoper 40	9/18/2011 (OSHA)	-	-
Field Manager	Todd Allred	OSHA Haswoper 40	4/27/2011 (OSHA)	SCLLR Class B	1446
Field Technicians	Jake Roper	OSHA Haswoper 40	5/20/2011 (OSHA)	N/A	N/A
Lab Director (AA)	Ashley Amick	BS Biology		SC Certified Lab	32575001
Lab Director (AES)	Larry Lewis	N/A	N/A	SC Certified Lab	98016003
Comprehensive Survey Subcontractor (RLS)	Robert Lackey	Registered Land Surveyor	N/A	Registered Land Surveyor	14799
Hydrometer / Sieve Subcontractor (SE)	Steve Hahn (Schnabel Engineering)	N/A	N/A	N/A	N/A

Table 3A Required Training and Licenses

Crawford Environmental Services
Steady Simmons
Site ID: 18856

CRAWFORD
ENVIRONMENTAL
SERVICES

Justin Reynolds of CES is responsible to ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location: 15 Church Street Roanoke, VA 24011

It is understood that training records will be produced if requested by SC DHEC.

The Following Laboratory(ies) will be used for this Project:
Commercial Lab(s)

Full Name of the Contractor performing Lab Analyses: Analytical Environmental Services Inc.

Name of Lab Director: Larry Lewis (QA/QC Ashley Amick- Access Analytical inc.)

SCDHEC Certification Number: SC Cert #: 98016003

Parameters this Lab/Contractor will analyze for this project:

BTEX, naphthalene, MTBE , 1,2 DCA, 7 Oxygenates by EPA method 8260B

EDB by EPA method 8011

Unfiltered Lead by EPA method 6010C

Ethanol by EPA method 8260B

Full Name of the Contractor performing Lab Analyses: Schnabel Engineering

Name of Lab Director: Steve Hahn

SCDHEC Certification Number: n/a (Hydrometer Sieve only)

Parameters this Lab/Contractor will analyze for this project:

Hydrometer Sieve (method ASTM D422 and ASTM 1140)

Please note: SC DHEC may require that the contractor submit some or all of the Laboratory's SOPs as part of this QAPP.

A9 Documents and Records

**Personnel will receive the most current version of the QAPP Addendum via:
 (Check all that apply)**

US Mail Courier Hand delivered

Personnel will receive the QAPP via, US Mail, Email, or by downloading from CES internal network. Notification of updates to the Master QAPP will be through email from the contractor. CES personnel can access the QAPP by downloading through the internal network.

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Field Data Sheets/ Sampling logs	Environmental Contractor	Hard Copy	At Contractor Office Hard Copy for 5 Years	Included in Report
Laboratory Data	Laboratory Contractor	Electronic	At Laboratory Electronic for 25 Years	See Lab Archive plan
Weekly Update	Environmental Contractor	Electronic	At Contractors Office Electronic copy for 5 years	Included in Report
Monitoring Report	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Correspondence	Environmental Contractor/ SCDHEC/ Subcontractors	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Well Logs/1903s	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Invoices	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Manifests	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Figures	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Surveys	Environmental Contractor/ Comprehensive Survey Subcontractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Disposal Manifests	Environmental Contractor/ Disposal Subcontractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy

Table 4A Record Identification, Storage, and Disposal

Section B Measurement/Data Acquisition

B1 Sampling Process/Experimental Design

Item	Start Date	End Date	Comments
Gauge Wells	D +7 days	D +7 days	
Sample Wells	D+7 days	D+7 days	
Samples Delivered to Lab	D+7 days	D+7 days	Samples delivered to Access Analytical by CES.
Samples are analyzed	D+8 days	D +21 days	
Report received by contractor	D+35 days	N/A	
Project Data verified and report constructed	D + 35 days	D +49 days	
SCDHEC Project manger receives report	D +50 days	N/A	
Project Validation	D +50 days	D + 80 days	

Table 5A Sampling Activities
 D= Drilling

B2 Sampling Methods

Up to a total of 6 soil samples and 74 groundwater samples may be submitted for laboratory analysis. These totals are anticipated to be maximums. The actual number of samples collected and submitted for laboratory analysis will be dependent upon the effort required to complete the scope of work. Soil and groundwater (GWS & FS) samples will be submitted to AA and analyzed for BTEX, Naph, MtBE. Groundwater (GWS) samples will be also be analyzed for 1,2 DCA, ethanol and 7 Oxygenates via EPA method SW-846 8260B, EDB via EPA method SW-846 8011 and Lead via EPA SW-846 6010/7470A. Field blanks, trip blanks and duplicates will be taken for groundwater samples (1 per every 20 samples collected).

The contractor must follow sampling protocols as given in the UST QAPP. Soil laboratory samples will be collected from the UST basin, the dispenser island and along product lines if not collected during an earlier event (i.e. Tier 1). Soil laboratory samples will also be collected from field screening locations that exhibit PID values greater than 50 parts per million (ppm) during OVA analysis and will be collected using methods described in the UST QAPP. Field screening groundwater trip blanks and field blanks will be used to represent the soil samples as well as the groundwater samples collected during field screening / monitor well installation. Field blanks and trip blanks will be analyzed for BTEX, Naphthalene and MtBE. Groundwater laboratory samples will be collected from field screening locations that encounter the groundwater interface and exhibit less than 50 ppm during OVA analysis.

Estimate the number of samples of each matrix that are expected to be collected:

Note: numbers provided are intended as a maximum probable under the current plan

Sample Type	Amount (apx)
Soil	5
Soil Duplicates	1
Total Soil Samples *	6
<i>*Soil sample field and trip blanks will be represented by groundwater samples collected during the associated sample collection.</i>	
Groundwater from field screening	26
Groundwater from monitoring wells	25
From drinking/ irrigation water wells	9
From surface water features	2
Field Blanks (groundwater)(FS) (Soil)	2
Field Blanks (groundwater)(GWS)	2
Trip Blanks (groundwater)(FS) (Soil)	2
Trip Blanks (groundwater)(GWS)	2
Duplicates (groundwater)(FS) (Soil)	2
Duplicates (groundwater)(GWS)	2
Total Water Samples	74

FS = Field Screening

GWS= Groundwater Sampling

If any of the above are circled please indicate how will it be done and the equipment needed. Sample collection that results in groundwater chemical analysis will include depth to water, depth to product, and groundwater quality indicators. Sampling will include gauging the depth to water and/or depth to free product utilizing an electronic water level indicator or similar device capable of recording the water level or thickness of any free product to an accuracy of 0.01 feet. Measurements of groundwater quality indicators (pH, temperature, D.O. and specific conductivity) will be recorded during sampling to ensure that groundwater quality is representative of the formation prior to collection of samples. Groundwater samples will be collected from a monitoring well by manual bailing using disposable polyethylene bailers. One sample will be collected from each monitoring well beginning with the wells on the outside perimeter of the contamination plume and working from the wells exhibiting the lowest CoC's to the highest CoC's. Sample duplicates will be collected per every 20 samples. For sample collection the bailer will be slowly lowered into the well until the top of the bailer has penetrated the water table surface, and slowly removed once full. Purge waters will be containerized on site and disposed of properly. (Section 2.10 CES SOP)

Will Sampling Equipment have to be cleaned and decontaminated or is everything disposable? Decontamination procedures will be the responsibility of the CES field technicians reviewed by the field manager. As outlined in Appendix A of the UST Guidance Document " QAPP Revision 1", all reusable sampling equipment will be stainless steel or constructed of a material that is compatible with the specified analysis and will be cleaned prior to and following the collection of each sample. Disposable bailers, , string and gloves will be utilized for sample collection, and will be disposed of after use. (Section 2.10.1 CES SOP)

If sampling equipment must be cleaned please give a detailed description of how this is done and the disposal of by-products from the cleaning and decontamination. pH, specific conductance, dissolved oxygen, and temperature meters {parameter meters} and water meter probes {sampling equipment} will be decontaminated between monitoring wells. In the field, parameter meter probes will be decontaminated utilizing deionized water. Each meter will be rinsed and then allowed to air dry. Decontamination waste from the cleaning processes will be contained and disposed of with the associated IDW for the site. (Section 2.10.1 CES SOP)

Sampling equipment and/or instruments will be decontaminated by washing with a laboratory-grade detergent such as Alconox, rinsed with tap water and then rinsed with analyte free water. If the equipment is not used immediately, it will be covered in plastic and stored in a clean, dry place. If required by UST project manager, verification of the effectiveness of the decontamination procedure will be acquired through equipment rinsate samples. (Section 2.10.1 CES SOP)

Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.

Access Analytical will be the laboratory and is responsible for shipment of all samples via Fedex, to the subcontractor laboratory of AES. A CME 55 /Geoprobe operated by CES will be utilized for field screening. A CME 55 operated by CES / Geoprobe will be utilized for shallow and deep monitoring well installation. Refer to CES SOP Section 2.9 for methodology. If a situation as described in section A6.3 occurs, a standby drilling subcontractor (as identified in section A4), under the supervision of CES personnel, may be utilized to meet scheduling requirements.

Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.

Failure	Response	Documentation	Individual Responsible
Equipment Failure (Drilling){ie. Drill rig, concrete}	Contact CES project manager. Use alternative equipment if available. Initiate field repairs if possible	Identify failure. Log date, time and equipment.	Field Manager Todd Allred 803-708-0079
Equipment Failure (sampling) {ie. Parameter meters, pump failure, calibration error}	Contact CES project manager. Use alternative equipment if available. Initiate field repairs if possible.	Identify failure. Log date, time and equipment.	Field Manager Todd Allred 803-708-0079
Loss or delay of lab samples	Resample	Notice by Access of lost or delayed samples	Access Analytical Ashley Amick 803-781-4243
Drilling Refusal (Rock)	Contact CES project manager. Contact SCDHEC project manager	Log location, time and depth.	Field Manager Todd Allred 803-708-0079
Drilling Issue (utility line impact etc.)	Contact CES project Manager, Contact Palmetto Utilities Protection Service.	Log location, time and depth.	Field Manager Todd Allred 803-708-0079
Passive Diffusion Bag deployment / sampling failure	Redeploy. Use alternate method if applicable.	Log location, time and equipment.	Field Manager Todd Allred 803-708-0079
Snap collector deployment failure.	Redeploy. Use alternate method if applicable.	Log location, time and equipment.	Field Manager Todd Allred 803-708-0079
Lost samples in the lab	Resample	Email from lab to CES project manager and QA/ project verifier	Access Analytical Ashley Amick 803-781-4243
Sample failure (hold time limit exceeded/temperature limit exceeded)	Contact CES project manager	Email from lab to CES project manager and QA/ project verifier	Access Analytical Ashley Amick 803-781-4243

Table 6A Field Corrective Action

B3 Sample Handling and Custody

- 1. How will the samples get from the Site to the Lab to ensure holding requirements are met?** Samples will be delivered to Access Analytical by CES personnel within 24-72 hours of sample collection. Access Analytical will then ship the samples via Fedex to AES. Temperature and condition of the samples will be checked upon arrival at Access Analytical and arrival to AES.
- 2. How will the contactors cool the samples and keep the samples cool?** Sample containers will be held in a refrigerator or cooler filled with ice until they are shipped. Appropriate shipping containers for samples include insulated polypropylene or aluminum-clad coolers. The coolers should contain ice in a sealed container or other cooling source to maintain a temperature of 6°C in the container and to prevent degradation of the samples (Section 2.11 CES SOP)

3. **How will the lab determine the temperature of the samples upon receipt? Will they be using a temperature blank?**
 Project laboratories will use a certified thermometer to determine at-receipt sample temperatures. The temperature will be recorded on the chain-of-custody, temperature blanks will be used. (Section 2.11 CES SOP)

4. **Where will the samples be stored in the Lab once they are received?**
 Samples to be shipped for analysis will be handled and packaged in a manner that maintains a complete chain-of-custody record and prevents damage during shipment. All samples will be transported to the laboratory directly or by a commercial carrier. When using a commercial carrier, a custody seal will be used to preserve the integrity of the sample from the time it is collected until the container is opened in the laboratory. Samples received at project laboratories will be kept in secure refrigerators. (Section 2.11 CES SOP)

5. **Describe the chain of custody procedure and attach a copy of each chain of custody that will be used. If a Chain of Custody SOP exists from the Lab and the Contractor is willing to adhere to it, then this may be attached.**
 A chain of custody record supplied by the contracted laboratory will be used to document and track possession of the samples. The chain of custody record will be sent with each sample shipment from the field to the laboratory and will serve as a record for the receipt of samples by the laboratory. (Section 2.11 CES SOP)

B4 Analytical Methods

1. **Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:**

Parameter	SOP ID*	Method Referenced	Equipment	Comments
pH	Section 2.10	SM 4500 H+B	HACH SenseION 156 HANNA HI	Refer section 2.10 CES SOP
Specific Conductance	Section 2.10	SM2510B	HACH SenseION 156 HANNA HI	Refer section 2.10 CES SOP
Temperature	Section 2.10	SM2550B	HACH SenseION 156 HANNA HI	Refer section 2.10 CES SOP
Dissolved Oxygen	Section 2.10	SM4500-O-G	HACH SenseION 156 HANNA HI	Refer section 2.10 CES SOP
BTEX, naphthalene, MTBE, 1,2 DCA, 8 Oxygenates	OA 11010	EPA Method 8260B	AES QAP p.195	AES SOP OA 11010 APDX III CES SOP
EDB	OA 11007	EPA Method 8011	AES QAP p.195	AES SOP OA 11007 APDX III CES SOP
Unfiltered Lead	OA 13002	EPA Method 6010C	AES QAP p.195	AES SOP IA 13002 APDX III CES SOP

Table 7A Analytical SOPs and Referenced Methods

- This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

Abbreviation	Lab Identification of this SOP	Full Name of the SOP
Section 2.10	CES SOP Section 2.10	State Lead Tier II Assessment Program: Standard Operating Procedure & Quality Assurance/Quality Control
OA 11010	AES SOP OA-11010	Analytical Environmental Services Standard Operating Procedure for Volatile Organic Compound by EPA SW-846 Method 8260B/5030/5035
OA 13002	AES SOP OA-13002	Analytical Environmental Services Standard Operating Procedure Determination of Metals in Water, Soils and Wastes by ICPBY EPA SW-846 Method 6010C and Prep Methods 3010A/3050B/SM3030C
OA 11007	AES SOP OA-11007	Analytical Environmental Services Standard Operating Procedure for 1,2-Dibromoethane (EDB) and 1,2-Dibromo-3-chloropropane (DBCP) by EPA SW-846 Method 8011
AES QAP Section 9.0	AES QAP Rev 15	Access Analytical, Inc. & Analytical Environmental Services (AES) Comprehensive Quality Assurance Plan (Revision 15): Section 9.0 Calibration Procedures and Frequency

Table 8A: SOP Abbreviation Key

2. Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Failure	Response	Documented Where?	Individual Responsible
Equipment Failure (drilling equipment) i.e. drill rig, concrete saw, etc.	Contact CES Project Manager	Record problem, use alternate method / equipment if available / applicable or reschedule field activities after equipment is repaired	CES Project Manager Justin Reynolds 803-708-0079
Equipment Failure (sampling equipment) i.e. passive diffusion bags, parameter meters	Contact CES Project Manager	Record problem, use alternate method if applicable/ available or reschedule field activities after equipment is repaired.	CES Project Manager Justin Reynolds 803-708-0079
QC Failure	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report	CES Project Manager Justin Reynolds 803-708-0079
Sample accident in transit	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report	Laboratory Director (AA) Ashley Amick 803-781-4243
Sample accident in lab	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report	Laboratory Director (AA) Ashley Amick 803-781-4243
Insufficient sample for analysis or repeat analysis	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report	Laboratory Director (AA) Ashley Amick 803-781-4243
Analytical Errors	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report.	CES Project Manager Justin Reynolds 803-708-0079
CoC or Sample Receiving Issues	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report.	CES Project Manager Justin Reynolds 803-708-0079
On-Time delivery	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report.	CES Project Manager Justin Reynolds 803-708-0079

Table 9A Corrective Action Procedures

3. Identify sample disposal procedures.

Analysis	Matrix	Schedule for disposal	Method for disposal	Comments
DO	Groundwater	As Generated	55 gallon drum on site	A&D Environmental Services
Specific Conductance	Groundwater	As Generated	55 gallon drum on site	A&D Environmental Services
pH	Groundwater	As Generated	55 gallon drum on site	A&D Environmental Services
Lab	All	As Generated	See AES SOP WM 17001	Analytical Environmental Services Inc.,

Table 10A Sample Disposal

4. **Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).**
 N/A

B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. **Identify all field and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Not the availability and location of spare parts.**

Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible
CME-55 Drill Rig	n/a	Check Fluids, Check Hydraulics, clean/ check auger head	Monthly, as needed	Columbia Office Supply Area	Todd Allred Field Manager 803-708-0079
Geoprobe 5400	n/a	Check Fluids, Check Hydraulics, clean/ check auger head	Monthly, as needed	Columbia Office Supply Area	Todd Allred Field Manager 803-708-0079
HACH SenseION 156 Parameter Meter (ph, Con, temp, DO)	8228266	Check Batteries, Check buffer solutions, calibration, factory check, clean/change probe (s)	Monthly, Change out daily as needed	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
HACH Colorimeter (turbidity)	010420015672	Check Batteries, Check buffer solutions, calibration, factory check,	Monthly, Change out daily as needed	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
HANNA HI 991001 Parameter Meter (pH, Temp)	182298	Check Batteries, Check buffer solutions, calibration, factory check, clean/change probe (s)	Monthly, Change out daily as needed	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
HANNA Dissolved Oxygen Meter	9142	Check Batteries, Check buffer solutions, calibration, factory check, clean/change probe (s)	Monthly, Change out daily as needed	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
KECK Water Level Indicator	2185	Check Batteries, clean probe	Weekly	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
KECK Oil Interface Probe	2011	Check Batteries, clean probe	Weekly	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
Solonist Water Level Indicator	004602	Check Batteries, clean probe	Weekly	Columbia Office, Supply Cabinet	Justin Reynolds CES Project Manager 803-708-0079
Laboratory Equipment	P. 195 AES QAP Apdx III Equipment List	p.122 AES QAP Section 10.0	AES QAP Section 10.0	AES QAP Section 10.0	Laboratory Personnel

Table 11A Instrument and Equipment Maintenance

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this:

Instrument/Equipment & Serial Number	Type of Inspection	Requirement	Individual Responsible	Resolution of Deficiencies
CME-55 Drill Rig	Preparatory Check	N/A	Todd Allred Field Manager 803-708-0079	Repair, reschedule
Geoprobe 5400	Preparatory Check	N/A	Todd Allred Field Manager 803-708-0079	Repair, reschedule
HACH SenseION 156 Parameter Meter (ph, Con, temp, DO)	Calibration	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
HACH Colorimeter (turbidity)	Calibration	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
HANNA HI 991001 Parameter Meter (pH, Temp)	Calibration	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
HANNA Dissolved Oxygen Meter	Calibration	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
KECK Water Level Indicator	Preparatory Check	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
KECK Oil Interface Probe	Preparatory Check	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
Solonist Water Level Indicator	Preparatory Check	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	Use another meter
Laboratory Equipment	p.116 AES QAP Section 9.0	p.116 AES QAP Section 9.0	Laboratory Personnel	AES QAP Section 9.0

Table 12A Instrument and Equipment Inspection

B7 Instrument Calibration and Frequency

1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
CME-55 Drill Rig	N/A	N/A	N/A	N/A	Todd Allred Field Manager 803-708-0079	N/A
Geoprobe 5400	N/A	N/A	N/A	N/A	Todd Allred Field Manager 803-708-0079	N/A
HACH SenseION 156 Parameter Meter (ph, Con, temp, DO)	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
HACH Colorimeter (turbidity)	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
HANNA HI 991001 Parameter Meter (pH, Temp)	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
HANNA Dissolved Oxygen Meter	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
KECK Water Level Indicator	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
KECK Oil Interface Probe	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
Solonist Water Level Indicator	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Justin Reynolds CES Project Manager 803-708-0079	See CES SOP Section 2.10
Laboratory Equipment	See-AES QAP Section 9.0	See-AES QAP Section 9.0	See-AES QAP Section 9.0	See-AES QAP Section 9.0	Laboratory Personnel	See-AES QAP Section 9.0

Table 13A Instrument Calibration Criteria and Corrective Action

* This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

B8 Inspection/Acceptance Requirements for Supplies and Consumables

1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
2. Identify the individual(s) responsible for this.

Item	Vendor	Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.
pH Buffer Solution	Fisher	Within expiration date	Cool. Dry cabinet	Justin Reynolds CES Project Manager 803-708-0079
Specific Conductivity Standard	Fisher	Within expiration date	Cool, dry cabinet	Justin Reynolds CES Project Manager 803-708-0079
Nitrile Gloves	Clearwater	Sealed	Cool, dry room	Justin Reynolds CES Project Manager 803-708-0079
Batteries	Any	Sealed	Cool, dry cabinet	Todd Allred Field Manager 803-708-0079
Bailers	Clearwater	Sealed (individually)	Cool, dry room	Todd Allred Field Manager 803-708-0079
Bottles	Access Analytical	Sealed	Cool, dry room	Todd Allred Field Manager 803-708-0079
Nylon String	Clearwater	Sealed	Cool, dry room	Todd Allred Field Manager 803-708-0079
Passive Diffusion Bags	EON	Sealed (individually)	Cool, dry room	Todd Allred Field Manager 803-708-0079
Snap Collectors	EON	Sealed (individually)	Cool, dry room	Todd Allred Field Manager 803-708-0079
Coolers	Access Analytical	Sealed	Cool, dry room	Todd Allred Field Manager

				803-708-0079
Laboratory Equipment	AES	AES QAP Section 11.0	AES QAP Section 11.0	Laboratory Personnel (AES) & (AA)

Table 14A List of Consumables and Acceptance Criteria

B9 Data Acquisition Requirements (Non-Direct Measurements)

1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
3. Indicate the acceptance criteria for these data sources and/or models.

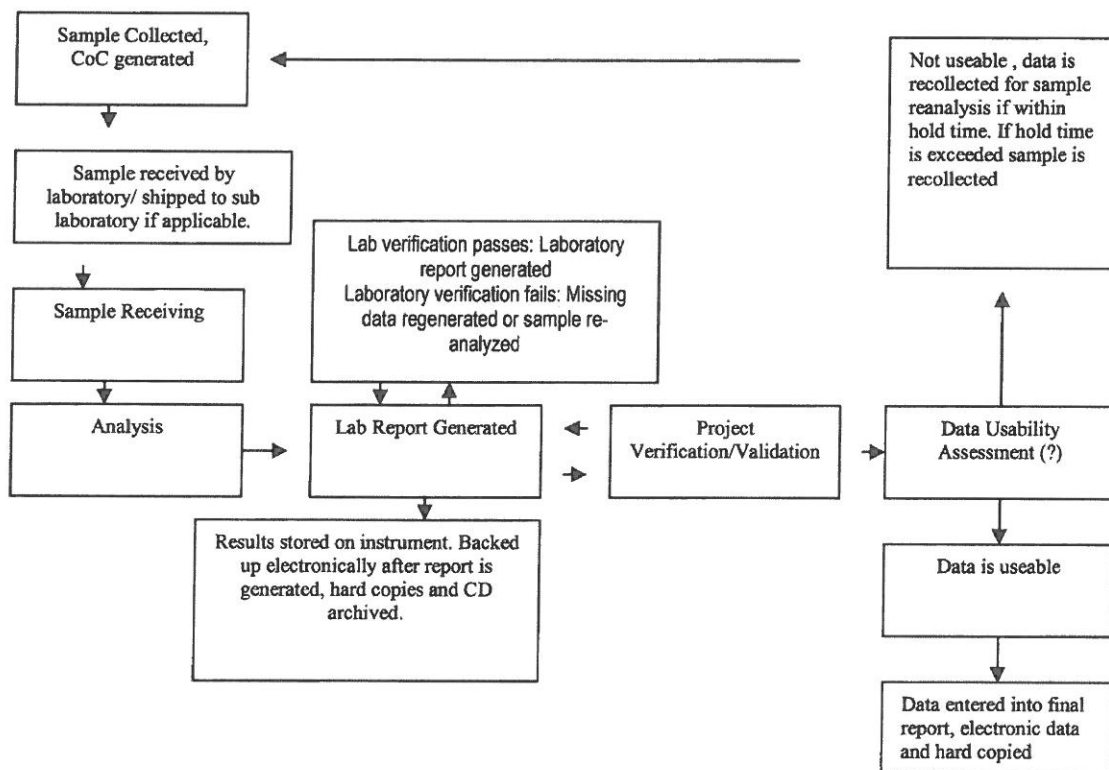
Data Source	Used for	Justification for use in this project	Comments
Previous Assessment documentation	Historic Groundwater elevations, historic chemical concentrations, historic well construction logs, historic surveys, historic diagrams, historic topography, historic boring data.	Determining field screening placement, depth, construction details, property access, and historic summary tables.	

Table 15A Non-Direct Measurements

4. Identify key resources/support facilities needed. Not applicable.

B10 Data Management

Describe the data management scheme from field to final use and storage.



1. **How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?** Field data is kept in a dedicated notebook with no pages removed. All data (reports from the lab, field notes, drafts and final reports) are saved on the company server. Original field data hard copies are filed into relevant project folders and archived in filing cabinets. Report data, to include tables and figures, are double checked from the original source by the CES project manager before the report is signed.
2. **How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted.** Lab internal QA/QC checks and check sheets for all received coolers will determine if laboratory data is credible, or if the groundwater samples are suspect and new samples must be collected and reanalyzed. Laboratory supervisor will check all data before it leaves the laboratory. Laboratory data will be sent electronically to the environmental contractors of the USA for storage on their server.
3. **How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).** Hard copies

will be maintained at the West Columbia office for five years. The electronic copies will be maintained for 25 years at the West Columbia office.

Section C Assessment and Oversight **C1 Assessment and Response Actions**

- 1. Field Oversight:** The Field Manager is responsible for ensuring SOPs to include equipment decontamination and calibration are properly conducted by the field staff. The Field Manager will be present and monitor the field staff every day that field activities occur. The Field Manager is also responsible for ensuring that field personnel adhere to the QAPP. If problems occur the Field Manager will immediately contact the CES Project Manager to determine the corrective action. If the situation cannot be resolved on site, another visit will be scheduled to resample the wells. The Field Manager can stop work at any time: The Project Manager can decide if the sampling party will return to the office without completing sampling of all the monitoring wells. The Field Manager's observations will be submitted to the project manager on a daily basis.
- 2. Commercial Lab Offsite Technical Assessment:** The supervisors for each section will review the procedures for another section of the laboratory on a monthly basis to check quality procedures. The Project QA Manager will conduct specific assessments for the methods addressed by this QAPP. Anyone may suspend work if a situation arises, but only the supervisor can stop work. The laboratory QA manager will report all observations to the Laboratory Director. SCDHEC has the right to inspect work at any time. This will be documents and kept as part of project records.
- 3. Project Assessment:** Assessment of project activities will be performed by the CES Project Manager. Field assessments will ensure that proper field methods are followed. At the end of each day of field activities, the Subcontractor Project manager will review the work completed during that day with the Subcontractor Field Manager. If methods were not adequately followed, affected items will be corrected. If corrective action is implemented, the Subcontractor Project Manager or Project QA/QC Manager will verify that the corrective action was adequate and was properly documented. Any discrepancies will be addressed in Appendix K of the contractor checklist and in section 1.5 of the assessment report.

C2 Reports to Management

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Section D Data Validation and Usability

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Facility Name: Steady Simmons
 Address: 16661 Grays Highway, Early Branch, SC 29916

Table 1
 UST Pe
 CES Pr

Groundwater Screening An

Sample ID:		Sample date	Total Depth	Benzene	Toluene	Ethylbenzene	Xylene
#	RBSL/MCL	ug/L	(ft)	5	1000	700	10
1	GW 10	3/16/2012	16	<1.0	<1.0	<1.0	<
2	GW 11	3/16/2012	15	<1.0	<1.0	<1.0	<
3	GW 12	3/16/2012	15	<1.0	<1.0	<1.0	<
4	GW 13	3/16/2012	15	<1.0	<1.0	<1.0	<
5	GW 14	3/16/2012	15	<1.0	<1.0	<1.0	<
6	GW 15	3/16/2012	15	<1.0	<1.0	<1.0	<
7	GW 16	3/16/2012	15	<1.0	<1.0	<1.0	<
8	GW 16D	3/16/2012	21	<1.0	<1.0	<1.0	<
9	GW 17	3/16/2012	15	<1.0	<1.0	<1.0	<
10	GW 18	3/16/2012	15	<1.0	<1.0	<1.0	<
11	GW 19	3/16/2012	16	<1.0	<1.0	<1.0	<
12	GW 20	3/16/2012	17				Ma
13	GW 21	3/16/2012	17				Ma
Quality Control							
GW 16DUP		3/16/2012	10	<1.0	<1.0	<1.0	<
Field Blank		3/16/2012	n/a	<1.0	<1.0	<1.0	<
Trip Blank		3/16/2012	n/a	<1.0	<1.0	<1.0	<

All Values are in ug/L

Facility Name: Steady Simmons

Address: 16661 Grays Highway, Early Branch, SC 29916

Table

UST

CES

Soil Laboratory Analytic

Location		Date	Depth	Benzene	Toluene	Ethylb
#	RBSL/MCLs (ug/kg){Sandy Soil}			7	1450	
1	SB	1	11/18/2011	8 to 10	<4.8	2.2J
2	SB	2	11/18/2011	8 to 10	<4.6	3.0J
3	SB	3	11/18/2011	8 to 10	<6.0	<6.0
4	SB	4	11/18/2011	8 to 10	<5.6	<5.6
5	SB	5	11/18/2011	8 to 10	<7.4	9.9
6	SB	6	11/18/2011	8 to 10	<4.3	<4.3
7	SB	7	11/18/2011	8 to 10	<5.7	6.2
8	SB	8	11/18/2011	8 to 10	NS	NS
9	MW	3	11/18/2011	5 to 10	2.8J	15.0

values are in ug/kg

Soil Samples Collected

0

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SERVICES

Facility Name:

Address:

16661 Grays Hig

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)
RBSL	ug/L	5	1000	700	10000
MW-1R	4/13/2012	220	2100	1100	9900
	11/18/2011	1900	10000	2500	1300
MW-2	4/13/2012	200	1400	280	3000
	11/18/2011	62J	830	930	5300
MW-3	4/13/2012	<1.0	3	0.083J	6.1
	11/18/2011	160	1.9J	25	50
MW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0
	11/18/2011	<5.0	<5.0	<5.0	<5.0
MW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0
MW-6	4/13/2012	<1.0	<1.0	<1.0	<3.0
MW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0
MW-8	4/13/2012	<1.0	<1.0	<1.0	<3.0
MW-9	4/13/2012	<1.0	<1.0	<1.0	<3.0
MW-10	4/13/2012	<1.0	<1.0	<1.0	<3.0
MW-11	4/13/2012	<1.0	<1.0	<1.0	<3.0

Facility Name:
Address:

S
16661 Grays Hig

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)
RBSL	ug/L	5	1000	700	10000
Trip Blank	4/13/2012	<1.0	<1.0	<1.0	<3.0
Trip Blank	4/13/2012	<1.0	<1.0	<1.0	<3.0

BDL= Below Detectable Limit
RBSL= Risk Based Screening Levels
NE= Not Established
EDB= 1,2 Dibromoethane

Totals
8260B
8011
5030

Table 2

Facility Name:

Steady Simmons

Address:

16661 Grays Highway, Early Branch, SC 2991

Well Construction and Historical Ground

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Installed	Date Developed
MW-1R	17	7	17	69.69	11/1/2011	11/18/2011
MW-2	17	7	17	70.1	11/1/2011	11/18/2011
MW-3	17	7	17	68.59	11/1/2011	11/18/2011
MW-4	17	7	17	67.95	11/1/2011	11/18/2011
MW-5	15	5	15	71.78	4/10/2012	4/11/2012
MW-6	15	5	15	71.47	4/10/2012	4/11/2012
MW-7	15	5	15	71.27	4/10/2012	4/11/2012
MW-8	15	5	15	70.90	4/10/2012	4/11/2012
MW-9	15	5	15	70.70	4/10/2012	4/11/2012
MW-10	15	5	15	66.65	4/10/2012	4/11/2012

Table 2

Facility Name:

Steady Simmons

Address:

16661 Grays Highway, Early Branch, SC 2991

Well Construction and Historical Ground

Monitor Well	Well Depth (ft)	Screened Interval	Top of Casing (ft)	Date Installed	Date Developed
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Tables

- Table 1: Field Screening Laboratory Analytical Summary
- Table 2: Well Construction and Historical Groundwater Elevation Summary
- Table 3: Groundwater Laboratory Analytical Result Summary
- Table 4: Field Data Information Summary
- Table 5: Soil Laboratory Analytical Summary

Facility Name:		Steady Simmons		Table 1		UST Permit ID:		18856		
Address:		16661 Grays Highway, Early Branch, SC 29916		CES Project Number:		15.102				
Groundwater Screening Analytical Summary										
Sample ID:	Sample date	Total Depth	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	1,2 DCA	EDB
#	RBSL/MCL	(ft)	5	1000	700	10000	40	25	5	0.05
1	GW 10	3/16/2012	16	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
2	GW 11	3/16/2012	15	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
3	GW 12	3/16/2012	15	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
4	GW 13	3/16/2012	15	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
5	GW 14	3/16/2012	15	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
6	GW 15	3/16/2012	15	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
7	GW 16	3/16/2012	15	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
8	GW 16D	3/16/2012	21	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
9	GW 17	3/16/2012	15	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
10	GW 18	3/16/2012	15	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
11	GW 19	3/16/2012	16	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
12	GW 20	3/16/2012	17	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
13	GW 21	3/16/2012	17	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
Maximum Advancement Depth, no water										
Maximum Advancement Depth, no water										
Quality Control										
GW 16DUJ	3/16/2012	10	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
Field Blank	3/16/2012	n/a	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS
Trip Blank	3/16/2012	n/a	<1.0	<1.0	<1.0	<3.0	<1.0	<5.0	NS	NS

173
13

All Values are in ug/L
Total Drilled Depth
Total Field Screening locations
NS = Not Sampled

CRAWFORD
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SERVICES

Facility Name: Address:		Steady Simmons 16661 Grays Highway, Early Branch, SC 29916				UST Permit ID: CES Project Number:				18856 15.102		
Table 2 Well Construction and Historical Groundwater Elevation Summary												
Monitor Well	Well Depth (ft)	Screened Interval	Top of Casing (ft)	Date Installed	Date Developed	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)	
MW-1R	17	7	69.89	11/1/2011	11/18/2011	4/13/2012	0	11.12	0	0	58.57	
						1/31/2012	0	11.64	0	0	58.05	
						4/13/2012	0	12.37	0	0	57.32	
MW-2	17	7	70.1	11/1/2011	11/18/2011	1/31/2012	0	11.13	0	0	58.97	
						4/13/2012	0	11.84	0	0	58.56	
						4/13/2012	0	12.67	0	0	57.43	
MW-3	17	7	68.59	11/1/2011	11/18/2011	4/13/2012	0	11.32	0	0	57.27	
						1/31/2012	0	11.16	0	0	57.43	
						4/13/2012	0	11.33	0	0	57.26	
MW-4	17	7	67.95	11/1/2011	11/18/2011	4/13/2012	0	9.32	0	0	58.63	
						1/31/2012	0	9.78	0	0	58.17	
MW-5	15	5	71.78	4/10/2012	4/11/2012	4/13/2012	0	10.99	0	0	56.96	
MW-6	15	5	71.47	4/10/2012	4/11/2012	4/13/2012	0	12.51	0	0	59.27	
MW-7	15	5	71.27	4/10/2012	4/11/2012	4/13/2012	0	12.89	0	0	58.58	
MW-8	15	5	70.90	4/10/2012	4/11/2012	4/13/2012	0	12.46	0	0	58.81	
MW-9	15	5	70.70	4/10/2012	4/11/2012	4/13/2012	0	12.05	0	0	58.85	
MW-10	15	5	66.65	4/10/2012	4/11/2012	4/13/2012	0	12.00	0	0	58.70	
MW-11	15	5	67.16	4/10/2012	4/11/2012	4/13/2012	0	7.35	0	0	59.30	
MW-12	15	5	67.18	4/10/2012	4/11/2012	4/13/2012	0	8.38	0	0	58.78	
MW-13	15	5	68.50	4/10/2012	4/11/2012	4/13/2012	0	8.29	0	0	58.89	
MW-14	15	5	70.14	4/10/2012	4/11/2012	4/13/2012	0	9.82	0	0	58.68	
MW-15	20	10	70.01	4/10/2012	4/11/2012	4/13/2012	0	11.12	0	0	59.02	
MW-16	20	10	71.65	4/10/2012	4/11/2012	4/13/2012	0	11.00	0	0	59.01	
						4/13/2012	0	12.13	0	0	59.52	
Deep Wells												
DW-1	40	35	70.95	4/10/2012	4/11/2012	4/13/2012	0	12.50	0	0	58.45	
DW-2	40	35	70.89	4/10/2012	4/11/2012	4/13/2012	0	13.34	0	0	57.55	
DW-3	40	35	67.20	4/10/2012	4/11/2012	4/13/2012	0	13.29	0	0	53.91	
DW-4	38	33	67.51	4/10/2012	4/11/2012	4/13/2012	0	19.21	0	0	48.30	
DW-5	38	33	70.02	4/10/2012	4/11/2012	4/13/2012	0	12.32	0	0	57.70	
DW-6	36	31	71.41	4/10/2012	4/11/2012	4/13/2012	0	12.29	0	0	59.12	
DW-7	36	31	69.82	4/10/2012	4/11/2012	4/13/2012	0	11.13	0	0	58.69	
Bolded Values corrected for presence of free product												
Wells developed using bail / surge method		12	Footage	190	CRAWFORD ENVIRONMENTAL SERVICES							n/a = not applicable
Shallow monitoring wells installed		7	Footage	268							INA = information not available	
Telescoping wells installed		0	Footage	0								
Recovery Wells Installed		0	Footage	0								

Table 3

Facility Name:
Address:

Steady Simmons
16661 Grays Highway, Early Branch, SC 29916

UST Permit ID:
CES Project Number:

18856
15.102

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	Naphthalene	MTBE	1,2 DCA	EDB	Pb	ETBA	Ethanol	ETBE	DIPE	TAA	TAME	TBA	TBF	Date:	Well ID:	
	ug/L																		ug/L		
RBSL		5	1000	700	10000	25	40	5	0.05	15	NE	10000	47	150	240	128	1400	NE		RBSL	
MW-1R	4/13/2012	220	2100	1100	9900	570	9.1	<1.0	0.223	10.5	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-1R
	11/18/2011	1900	10000	2500	1300	330J	83J	<500	14	0.03	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
MW-2	4/13/2012	200	1400	280	3000	41	7.3	<1.0	2.04	21	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-2
	11/18/2011	62J	830	930	5300	180	<100	<100	0.44	0.018	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
MW-3	4/13/2012	<1.0	3	0.083J	6.1	<5.0	<1.0	<1.0	<0.02	9.29	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-3
	11/18/2011	160	1.9J	25	50	31	85	<5.0	0.2	0.0064J	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
MW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	7.32	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-4
	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.019	0.0024J	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
MW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	30.9	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-5
MW-6	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	55.4	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-6
MW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	32.1	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-7
MW-8	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	6.62	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-8
MW-9	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	1.03	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-9
MW-10	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	46.8	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-10
MW-11	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2.99	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-11
MW-12	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	45.6	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-12
MW-13	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	8.26	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-13
MW-14	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	77.8	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-14
MW-15	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	47.8	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-15
MW-16	4/13/2012	0.46J	<1.0	0.49J	2.5J	<5.0	<1.0	<1.0	<0.02	23.6	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	MW-16
Deep Wells																					
DW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.530J	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	DW-1
DW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	3.05	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	DW-2
DW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.626J	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	DW-3
DW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2.38	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	DW-4
DW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	DW-5
DW-6	4/13/2012	<1.0	<1.0	<1.0	1.6J	<5.0	<1.0	<1.0	<0.02	1.55	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	DW-6
DW-7	4/13/2012	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<0.02	2.85	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	DW-7
Water Supply Wells																					
WSW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	WSW-1
	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
WSW-2	4/13/2012	Not Functioning/ No Access																		4/13/2012	WSW-2
	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.02	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
WSW-3	4/13/2012	<1.0	<1.0	<1.0	1.1J	<5.0	<1.0	<1.0	<0.02	NS	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	WSW-3
	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
WSW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	WSW-4
	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
WSW-5	4/13/2012	No Access																		4/13/2012	WSW-5
	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.019	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
WSW-6	4/13/2012	Not Functioning																		4/13/2012	WSW-6
WSW-7	4/13/2012	No Access																		4/13/2012	WSW-7
WSW-8	4/13/2012	Not Functioning / No Access																		4/13/2012	WSW-8
WSW-9	4/13/2012	No Access																		4/13/2012	WSW-9
Surface Water Samples																					
SW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	SW-1
	11/18/2011	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.019	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11/18/2011	
SW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	SW-2
SW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	SW-3
Quality Control																					
DUP 1 MW-1	4/13/2012	240	2000	1000	9000	650	7.5	<1.0	0.13	15.5	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	DUP 1 MW-1
DUP 2 MW-2	4/13/2012	280	1800	430	4100	47	7.6	<1.0	1.45	19.5	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	DUP 2 MW-2
Field Blank	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.707J	<100	<100	<100	<10	<100	<10	<100	<100	<100	4/13/2012	Field Blank

Table 3

Facility Name:
Address:

Steady Simmons
16661 Grays Highway, Early Branch, SC 29916

UST Permit ID:
CES Project Number:

18856
15.102

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	Naphthalene	MTBE	1,2 DCA	EDB	Pb	ETBA	Ethanol	ETBE	DIPE	TAA	TAME	TBA	TBF	Date:	Well ID:
RBSL	ug/L	5	1000	700	10000	25	40	5	0.05	15	NE	10000	47	150	240	128	1400	NE	ug/L	RBSL
Field Blank 2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.364J	<100	<100	<100	<10	<100	<10	<100	<100	4/13/2012	Field Blank 2
Trip Blank	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	NS	NS	<100	<100	<100	<10	<100	<10	<100	<100	4/13/2012	Trip Blank
Trip Blank	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	NS	NS	<100	<100	<100	<10	<100	<10	<100	<100	4/13/2012	Trip Blank

BDL= Below Detectable Limit
RBSL= Risk Based Screening Levels
NE= Not Established
EDB= 1,2 Dibromoethane

Totals
8260B 35
8011 33
5030 27



1,2 DCA = 1,2 Dichloroethane
Shaded values are above the detection limit
Italized values are above the RBSL
ND = Not Detect
NS=Not Sampled

Facility Name:		Steady Simmons		Address:		16661 Grays Highway Early Branch, SC 29916		Table 4		UST Permit ID:		18856								
Sampling Date (s)		4/13/2012		pH Meter: Calibration		4.0 = 4		Specific Conductance Meter: Calibration		590 = 595		Meters calibrated on								
Field Personnel		J. Reynolds, T. Alfred, and B. Scott		General Weather Conditions		Clear and Sunny		Ambient Air Temperature (°C)		24		April 13, 2012 @ 6:45								
#	Sample ID	Sampled	Date	Total Depth	Depth to water	Depth to product	Gal	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	6th Vol	Total Purged (gall)	D.O.	Color	Remarks	Notes	No Purge
1	MW-1R	Yes	4/13/2012	16.59	11.12	n/a	Gal	Initial	0.74	1.48	2.22									
							Time	1350	1351	1354	1364									
							pH	6.67	6.78	6.8	6.8									
							Con	70	76	76	81									
							Temp	20.8	21.0	21.0	22.0									
							Turbidity	11	96	337	41									
2	MW-2	Yes	4/13/2012	16.57	11.13	n/a	Gal	Initial	0.74	1.48	2.22									
							Time	1334	1335	1337	1339									
							pH	7.86	7.07	6.03	6.12									
							Con	104	96	91	90									
							Temp	20.8	21.6	22.6	23.5									
							Turbidity	27	62	116	73									
3	MW-3	Yes	4/13/2012	16.77	11.32	n/a	Gal	Initial	0.74	1.48	2.22									
							Time	1318	1319	1321	1324									
							pH	6.19	6.34	6.25	6.23									
							Con	82	86	93	96									
							Temp	20.4	21.0	21.5	21.5									
							Turbidity	29	93	330	26									
4	MW-4	Yes	4/13/2012	16.03	9.32	n/a	Gal	Initial	1.02	2.04	3.06									
							Time	1311	1313	1314	1316									
							pH	7.66	7.67	7.66	7.39									
							Con	65	71	71	69									
							Temp	19.5	19.5	20.1	20.2									
							Turbidity	13	84	244	17									
5	MW-5	Yes	4/13/2012	15.11	12.51	n/a	Gal	Initial	0.35	0.71	1.07									
							Time	1034	1035	1036										
							pH	8.22	8.12	8.13										
							Con	70	67	69										
							Temp	19.9	20.2	21.1										
							Turbidity	31	104	194										
6	MW-6	Yes	4/13/2012	15.28	12.88	n/a	Gal	Initial	0.32	0.64	0.96									
							Time	1041	1048	1050										
							pH	6.78	6.56	6.6										
							Con	98	96	104										
							Temp	19.8	20.2	20.6										
							Turbidity	31	36	202										
7	MW-7	Yes	4/13/2012	15.17	12.46	n/a	Gal	Initial	0.37	0.74	1.11									
							Time	1054	1056	1057										
							pH	8.32	8.30	8.32										
							Con	78	92	101										
							Temp	19.8	20.0	20.9										
							Turbidity	19	87	320										
8	MW-8	Yes	4/13/2012	15.06	12.05	n/a	Gal	Initial	0.41	0.82	1.23									
							Time	1110	1111	1113	1115									
							pH	6.3	6.24	6.27	6.24									
							Con	61	48	52	59									
							Temp	19.9	20.3	20.3	21.1									
							Turbidity	31	88	293	63									
9	MW-9	Yes	4/13/2012	15.33	12	n/a	Gal	Initial	0.45	0.91	1.36									
							Time	1153	1156	1157	1159									
							pH	7.06	6.6	6.96	6.92									
							Con	69	40	39	42									
							Temp	21.0	21.6	22.0	22.8									
							Turbidity	25	73	158	41									
10	MW-10	Yes	4/13/2012	15.14	7.35	n/a	Gal	Initial	1.06	2.12	3.18									
							Time	1118	1118	1121	1124									
							pH	6.33	6.24	6.26	6.2									
							Con	67	73	66	61									
							Temp	20.4	21.0	21.9	21.6									
							Turbidity	11	108	299	30									
11	MW-11	Yes	4/13/2012	15.47	8.38	n/a	Gal	Initial	0.98	1.93	2.89									
							Time	1138	1138	1137	1139									
							pH	8.47	8.65	8.56	8.66									
							Con	101	112	121	127									
							Temp	19.0	20.3	20.6	21.2									
							Turbidity	35	61	160	40									
12	MW-12	Yes	4/13/2012	15.03	8.29	n/a	Gal	Initial	0.92	1.83	2.75									
							Time	1159	1201	1203										
							pH	6.36	6.27	6.34										
							Con	86	104	101										
							Temp	20.2	20.5	21.1										
							Turbidity	33	91	328										
13	MW-13	Yes	4/13/2012	15.21	9.82	n/a	Gal	Initial	0.73	1.47	2.20									
							Time	1214	1217	1220	1223									
							pH	8.17	8.21	8.20	8.2									
							Con	85	111	116	109									
							Temp	22.2	20.6	20.8	21.9									
							Turbidity	20	55	240	53									
14	MW-14	Yes	4/13/2012	15.17	11.12	n/a	Gal	Initial	0.65	1.10	1.65									
							Time	1241	1244	1247										
							pH	6.68	6.74	6.8										
							Con	80	65	62										
							Temp	21.3	21.9	22.0										
							Turbidity	2	50	336										
15	MW-15	Yes	4/13/2012	19.78	11	n/a	Gal	Initial	1.19	2.38	3.57									
							Time	1267	1300	1301										
							pH	7.7	7.75	7.84										
							Con													

Facility Name:		Steady Simmons 16661 Grays Highway Eary Branch, SC 29916		Table 4B		UST Permit ID: CES Number:		18556 15 103										
Groundwater Sampling Field Activity Summary																		
Sampling Date (s)			4/13/2012			pH Meter: Calibration			Specific Conductance Meter: Calibration									
Field Personnel			J. Reynolds, T. Alford, and B. Scott			4.0 = 4			500 = 505									
General Weather Conditions			Clear and Sunny			7.0 = 7			Meters calibrated on									
Ambient Air Temperature (°C)			24			10.0 =			April 13, 2012 @ 6:45									
#	Sample ID	Sampled	Date	Total Depth	Depth to water	Depth to product	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Total Purged (Gal)	D.O.	Notes	Remarks	Purge	Per Pump
1	DW-1	Yes	4/13/2012	40.12	12.5	n/a	Gal Initial 3.76	7.51	11.27				11.3	2.7	None			
							Time 7.65	7.56	8.05	8.15								
							pH 6.84	6.92	6.97	7.04								
							Con. 75	90	87	84								
							Temp. 21.2	22.2	22.5	22.7								
							Turbidity 9	48	143	9								
2	DW-2	Yes	4/13/2012	40.16	13.34	n/a	Gal Initial 3.85	7.30	10.94				10.0	1.1	None			
							Time 8.34	8.42	8.49	8.56								
							pH 6.46	6.36	6.39	6.34								
							Con. 46	70	83	62								
							Temp. 19.9	20.1	21	22								
							Turbidity 18	63	170	49								
3	DW-3	Yes	4/13/2012	39.67	13.29	n/a	Gal Initial 3.59	7.19	10.76				10.8	2.2	None			
							Time 9.01	9.06	9.14	9.23								
							pH 8.04	7.86	7.78	7.71								
							Con. 91	39	33	36								
							Temp. 19.9	20.1	20.6	21.3								
							Turbidity 8	92	314	83								
4	DW-4	Yes	4/13/2012	37.88	19.21	n/a	Gal Initial 2.34	5.08	7.62				7.6	1.7	None			
							Time 6.94	9.62	9.51	9.28								
							pH 6.07	6.05	6.14	6.19								
							Con. 59	34	35	33								
							Temp. 21.1	22	22.4	22.9								
							Turbidity 6	77	201	68								
5	DW-5	Yes	4/13/2012	38.14	12.32	n/a	Gal Initial 3.51	7.02	10.53				10.5	2.6	None			
							Time 10.25	10.33	10.38	10.46								
							pH 6.05	6	6.08	6.04								
							Con. 61	49	53	55								
							Temp. 20.4	21.4	22.3	23								
							Turbidity 5	73	204	36								
6	DW-6	Yes	4/13/2012	35.94	12.29	n/a	Gal Initial 3.22	6.43	6.65				9.6	0.9	None			
							Time 11.11	11.19	11.24	11.31								
							pH 7.39	7.39	7.44	7.43								
							Con. 89	94	92	87								
							Temp. 19.4	19.4	20.3	21.3								
							Turbidity 27	71	205	47								
7	DW-7	Yes	4/13/2012	36.11	11.13	n/a	Gal Initial 3.40	6.79	10.19				10.2	2.5	None			
							Time 12.19	12.24	12.34	12.39								
							pH 6.68	6.66	6.62	6.71								
							Con. 63	85	98	79								
							Temp. 20.3	20.8	21.6	21.8								
							Turbidity 31	61	345	107								
Con = Specific Conductance Temp = Temperature (°C) Gal = Gallons Volume equals one well volume Turbidity Values in = Nephelometric Turbidity Unit (NTU)														Total Purged Amount	71	Gallons		
														Total Wells	7			
														Total Wells Purged	7			
														Total Wells No Purge	0			

Facility Name:		Steady Simmons		Table 5		UST Permit ID:		18856			
Address:		16661 Grays Highway, Early Branch, SC 29916		CES Project #:		15.102					
Soil Laboratory Analytical Results Summary											
#	Location	RBSL/MCLs (ug/kg)	Date	Depth	Benzene	Toluene	Ethylbenzene	Xylenes (total)	Naphthalene	TOC	Comments
1	SB 1	11/18/2011	8 to 10	<4.8	7	1450	1150	14500	36	n/a	Tier 1
2	SB 2	11/18/2011	8 to 10	<4.8	2.2J	12.0	12.0	120.0	12.0	NS	Tier 1
3	SB 3	11/18/2011	8 to 10	<4.6	3.0J	7.6	46.0	46.0	7.3	NS	Tier 1
4	SB 4	11/18/2011	8 to 10	<6.0	<6.0	11.0	150.0	150.0	200.0	NS	Tier 1
5	SB 5	11/18/2011	8 to 10	<5.6	<5.6	<5.6	<5.6	13.0	22.0	NS	Tier 1
6	SB 6	11/18/2011	8 to 10	<7.4	9.9	21.0	180.0	180.0	21.0	NS	Tier 1
7	SB 7	11/18/2011	8 to 10	<4.3	6.2	3.1J	24	26.0	8.3	NS	Tier 1
8	SB 8	11/18/2011	8 to 10	<5.7	NS	4.6J	NS	26.0	2.9J	NS	Tier 1
9	MW 3	11/18/2011	5 to 10	2.8J	15.0	13.0	84.0	84.0	16.0	420.0	Tier 1

values are in ug/kg

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Soil Samples Collected

0

RBSLs/MCLs taken from UST QAPP Table C2 for Sandy Soil
TOC= Total Organic Carbon

Figures

Figure 1: Topographic Map

Figure 2: Site Facility Base Map

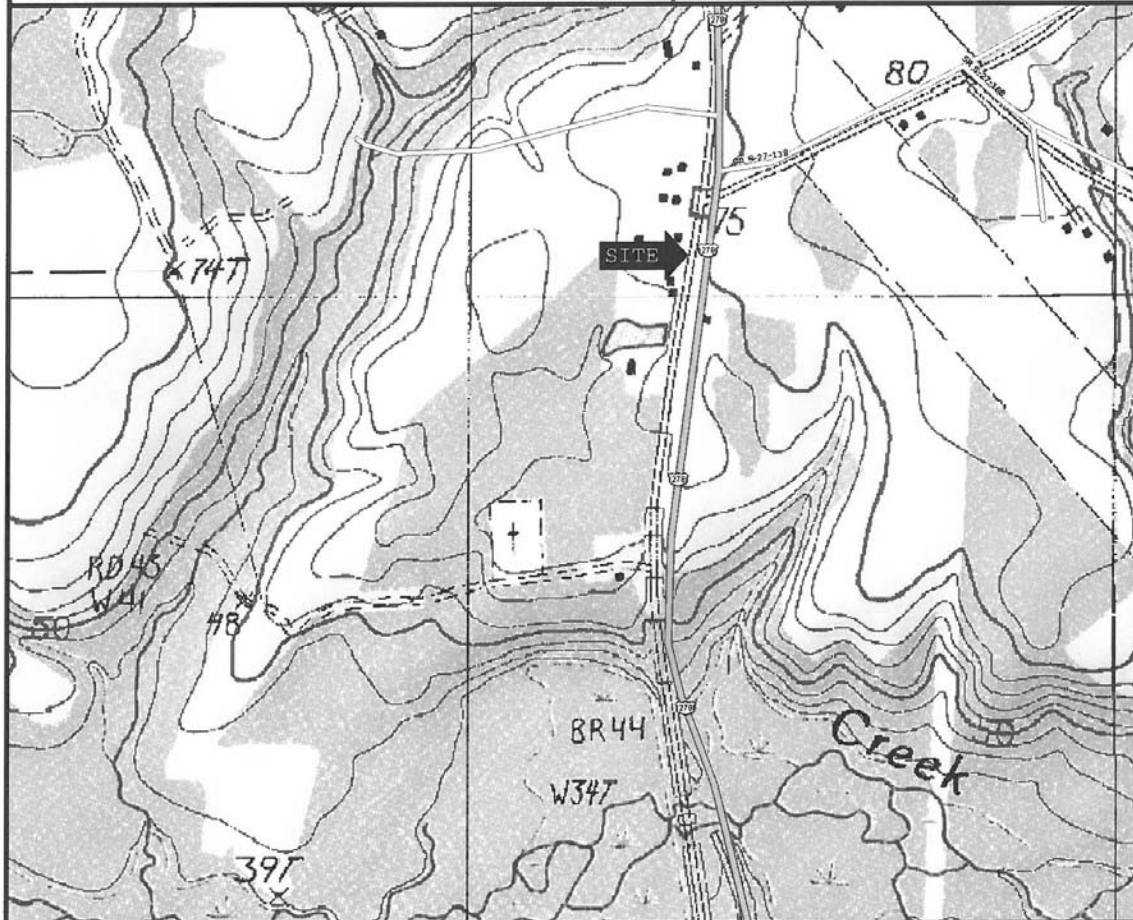
Figure 3: Field Screening and Soil Map

Figure 4(A-E): Groundwater Chemicals of Concern Maps

Figure 5(A-B) Potentiometric Diagrams

Figure 6 (A-C) Cross-sections and Cross-section Reference

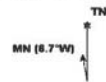
FIGURE 1
Site Location Map



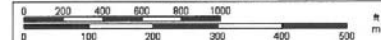
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Scale 1 : 12,000



1" = 1,000.0 ft Data Zoom 15-0

CRAWFORD
ENVIRONMENTAL
SERVICES
Division of C.F. Crawford, Inc.

104 Corporate Blvd..
West Columbia, SC 29169

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GRAYS, SOUTH CAROLINA

Source: DeLorme Topo USA 7.0
Scale: 1:12,000 Contour Interval: 10 Feet

Steady Simmons
16661 Grays Highway
Early Branch, SC 29916-08016
UST Permit: 18856

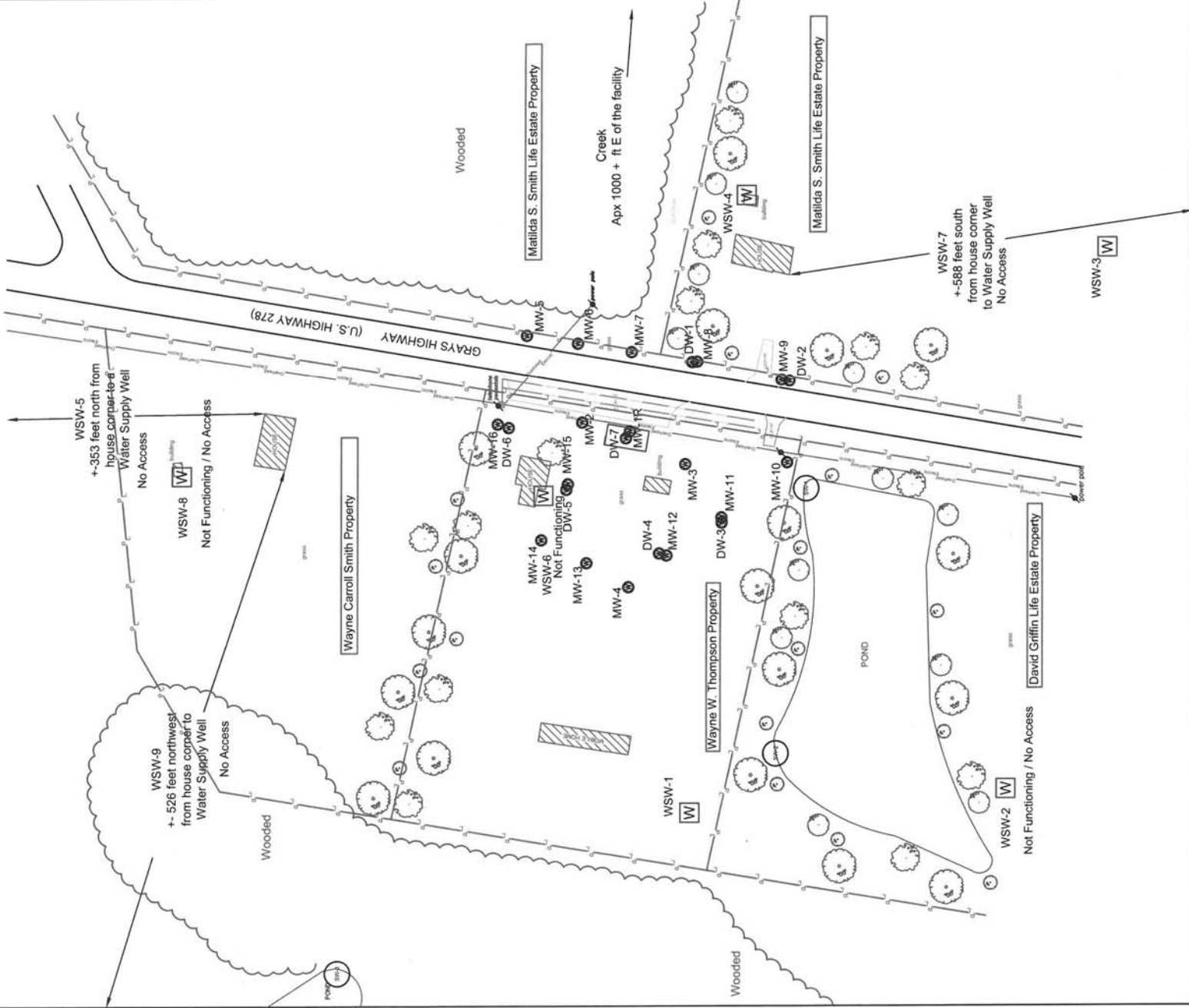
Project: Tier II Assessment

Client: SCDHEC

CES Job #: 15.102

Date: January 2012





Notes
 1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes

Legend

[Empty Box]	UST Basin
[Hatched Box]	Building
[Circle with dot]	Monitoring Well
[Square with W]	Water Supply Well
[Square with W]	Property Line
[Circle with dot]	Surface Water Sample

GRAPHIC SCALE

0 40 80 160

(In Feet)

Figure 2
Site Facility Base Map
 Steady Simmons
 16661 Grays Highway
 Early Branch, SC 29916

Project Mgr:	JSR
Drawn by:	JSR
Checked by:	HDO

Project No:	15.103
Date:	5/4/12
Revision:	0
USF Permit ID:	18856

CRAWFORD ENVIRONMENTAL SERVICES
 104 Corporate Blvd, Suite 412
 West Columbia, SC 29201
 803-708-0079 (ph)
 803-708-4139 (fax)

Groundwater Laboratory Analytical Result Summary

Well ID	Date	Benzene	Toluene	Ethylbenz.	Xylenes	Naphthalene	MTBE	1,2-DCA	EDB	Pb
MW-1	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-2	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-3	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-4	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-5	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-6	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-7	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-8	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-9	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-10	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-11	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-12	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-13	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-14	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-15	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	15
MW-16	4/13/2012	0.460	<1.0	0.460	<1.0	<1.0	<1.0	<1.0	<0.02	22.6

WSW-5
+353 feet north from house corner to a Water Supply Well
No Access

WSW-9
+526 feet northwest from house corner to Water Supply Well
No Access

WSW-8
Not Functioning / No Access

Deep Wells

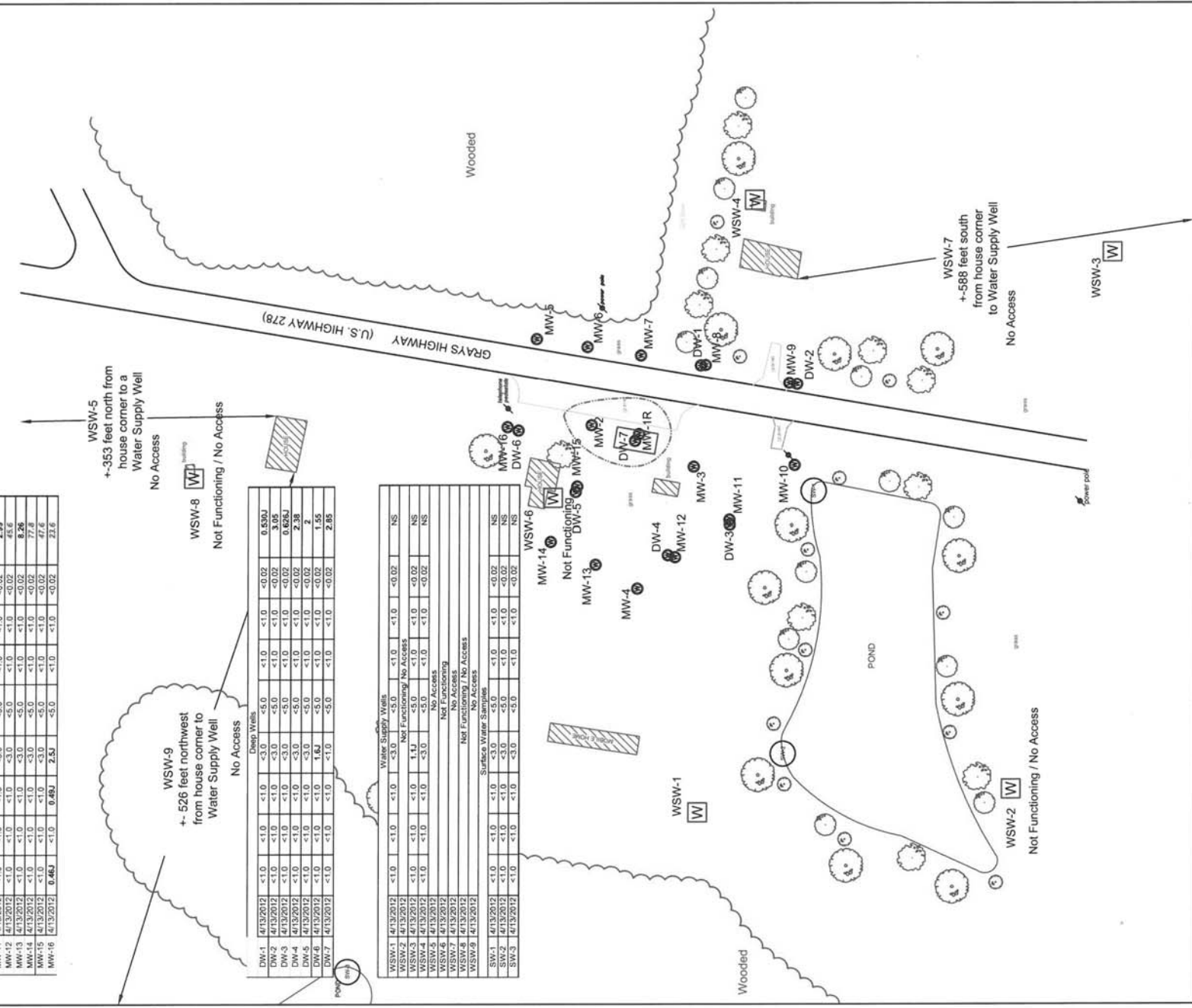
Well ID	Date	Benzene	Toluene	Ethylbenz.	Xylenes	Naphthalene	MTBE	1,2-DCA	EDB	Pb
DW-1	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	0.530J
DW-2	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	3.05
DW-3	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	0.626J
DW-4	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.38
DW-5	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	1.55
DW-6	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	1.55
DW-7	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.85

Water Supply Wells

Well ID	Date	Benzene	Toluene	Ethylbenz.	Xylenes	Naphthalene	MTBE	1,2-DCA	EDB	Pb
WSW-1	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	NS
WSW-2	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	NS
WSW-3	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	NS
WSW-4	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	NS
WSW-5	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	NS
WSW-6	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	NS
WSW-7	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	NS
WSW-8	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	NS
WSW-9	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	NS

Surface Water Samples

Well ID	Date	Benzene	Toluene	Ethylbenz.	Xylenes	Naphthalene	MTBE	1,2-DCA	EDB	Pb
SW-1	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	NS
SW-2	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	NS
SW-3	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	NS



Notes
1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes

Legend

- UST Basin
- Building
- Monitoring Well
- Water Supply Well
- Below RBSL
- Surface Water Sample

GRAPHIC SCALE
0 40 80 160
(In Feet)

Figure 4A
Groundwater Chemicals of Concern : Benzene
Steady Simmons
16661 Grays Highway
Early Branch, SC 29916

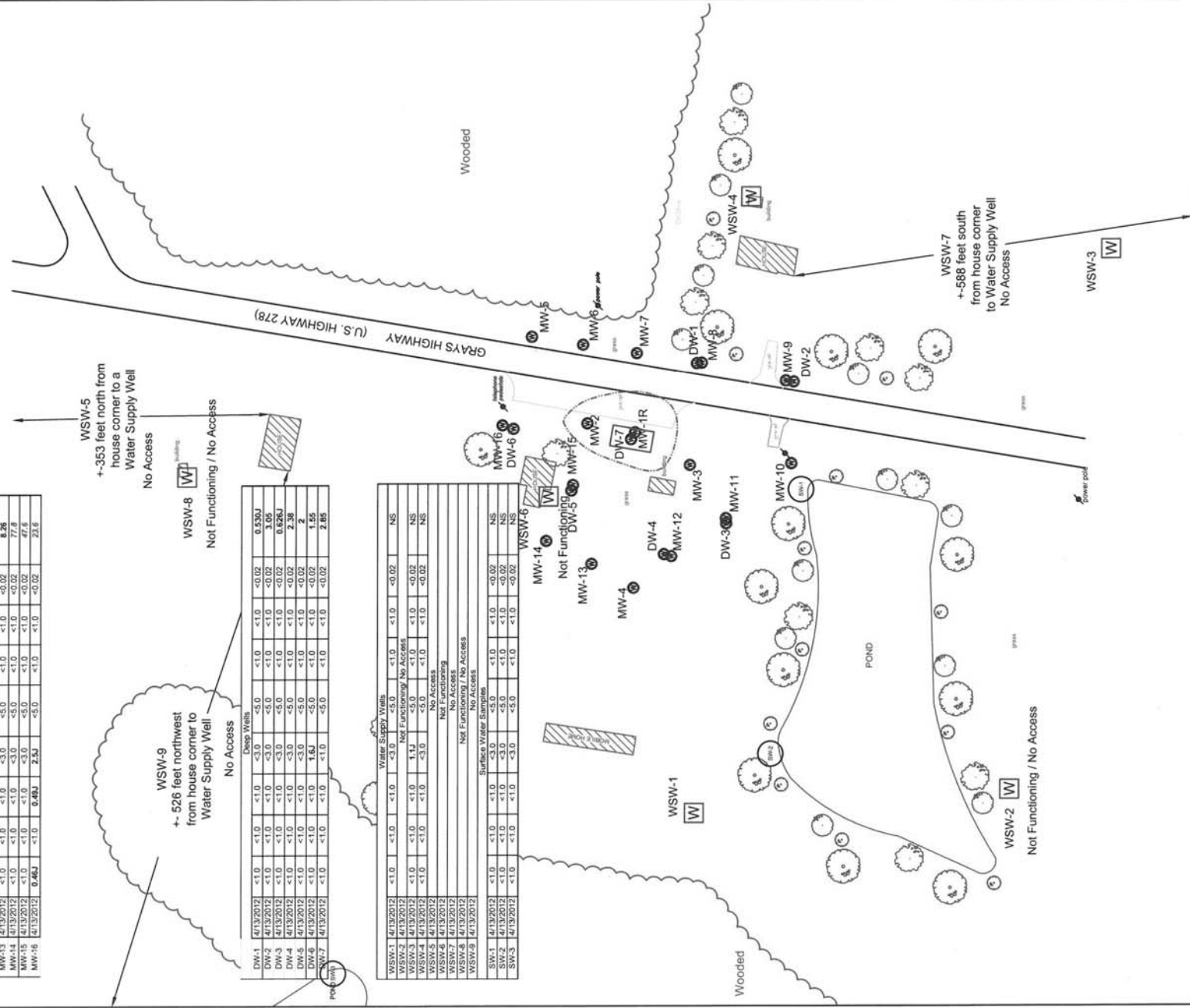
Project No: 15.103
Date: 5/4/12
Revision: 0
USF Permit ID: 18856

Project Mgr: JSR
Drawn by: JSR
Checked by: HDO

CRAWFORD ENVIRONMENTAL SERVICES
101 Corporate Blvd. Suite 412
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803-708-8195 (fax)

Groundwater Laboratory Analytical Result Summary

Well ID	Date	Benzene	Toluene	Ethylbenz	Xylenes	Naphthalene	MTBE	1,2-DCA	EDB	Pb
MW-1R	4/13/2012	25	100	25	40	5	40	<1.0	0.05	15
MW-2	4/13/2012	269	2160	100	3000	100	3000	<1.0	0.07	10.9
MW-3	4/13/2012	269	1600	269	1600	41	7.3	<1.0	2.64	2.1
MW-4	4/13/2012	<1.0	3	0.083J	6.1	<5.0	<1.0	<1.0	<0.02	9.29
MW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	7.32
MW-6	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	30.9
MW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	55.4
MW-8	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	32.1
MW-9	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	6.92
MW-10	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	46.8
MW-11	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2.99
MW-12	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	45.6
MW-13	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	8.26
MW-14	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	77.8
MW-15	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	47.6
MW-16	4/13/2012	0.464	<1.0	0.464	2.54	<5.0	<1.0	<1.0	<0.02	23.9



Deep Wells

Well ID	Date	Benzene	Toluene	Ethylbenz	Xylenes	Naphthalene	MTBE	1,2-DCA	EDB	Pb
DW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.636J
DW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	3.05
DW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.626J
DW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2.38
DW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2
DW-6	4/13/2012	<1.0	<1.0	<1.0	1.6J	<5.0	<1.0	<1.0	<0.02	1.55
DW-7	4/13/2012	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<0.02	2.85

Water Supply Wells

Well ID	Date	Benzene	Toluene	Ethylbenz	Xylenes	Naphthalene	MTBE	1,2-DCA	EDB	Pb
WSW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-2	4/13/2012	<1.0	<1.0	<1.0	1.1J	<5.0	<1.0	<1.0	<0.02	NS
WSW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-6	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-8	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-9	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS

Surface Water Samples

Well ID	Date	Benzene	Toluene	Ethylbenz	Xylenes	Naphthalene	MTBE	1,2-DCA	EDB	Pb
SW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
SW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
SW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS

Notes
 1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes

Legend

- UST Basin
- Building
- Monitoring Well
- Water Supply Well
- Below RBSL Surface Water Sample

GRAPHIC SCALE
 0 40 80 160
 (In Feet)

Groundwater Chemicals of Concern : Toluene
 Steady Simmons
 16661 Grays Highway
 Early Branch, SC 29916

Project No: 15.103
Date: 5/4/12
Revision: 0

Project Mgr: JSR
Drawn By: JSR
Checked By: HDO

CRAWFORD ENVIRONMENTAL SERVICES
 104 Corporate Blvd, Suite 412
 Wadley, GA 30201
 803-708-8079 (ph)
 803-708-8139 (fx)

UST Permit ID: 18856

Groundwater Laboratory Analytical Result Summary

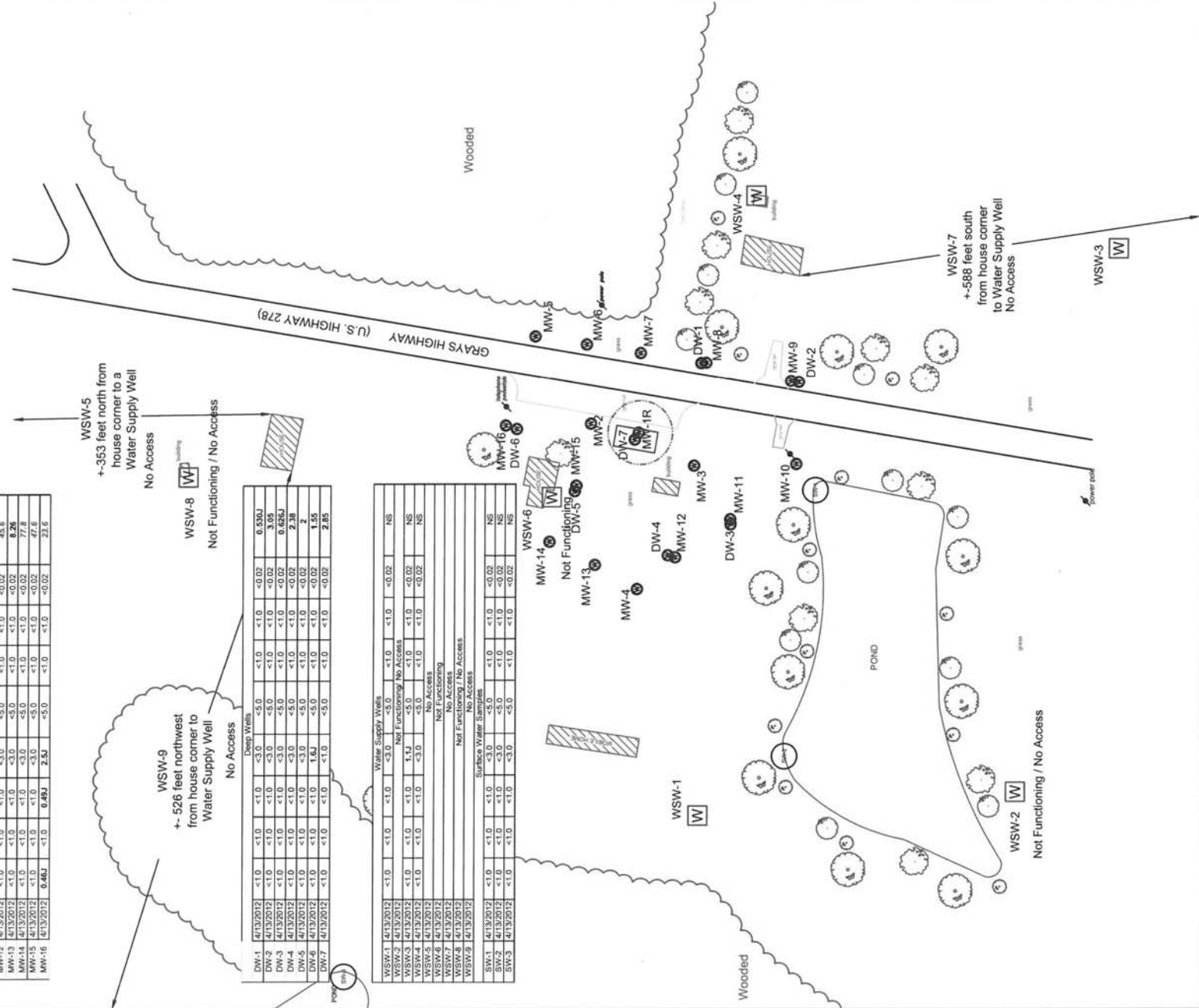
Well ID	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	MTBE	1,2 DCA	EDB	Po
WSW-1R	4/13/2012	230	2100	1100	3000	47	81	<1.0	0.53J	15
MW-2	4/13/2012	200	1400	280	3000	47	7.3	<1.0	2.64	21
MW-3	4/13/2012	<1.0	3	0.083J	6.1	<5.0	<1.0	<1.0	<0.02	9.29
MW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	7.32
MW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	39.8
MW-6	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	55.4
MW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	27.1
MW-8	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	6.62
MW-9	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	46.3
MW-10	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2.99
MW-11	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	45.6
MW-12	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	8.26
MW-13	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	77.8
MW-14	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	47.8
MW-15	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	47.8
MW-16	4/13/2012	0.86J	<1.0	0.86J	2.5J	<3.0	<1.0	<1.0	<0.02	22.6

Deep Wells

Well ID	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	MTBE	1,2 DCA	EDB	Po
DW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.530J
DW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	3.05
DW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.866J
DW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2.38
DW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	1.56
DW-6	4/13/2012	<1.0	<1.0	<1.0	1.6J	<5.0	<1.0	<1.0	<0.02	1.55
DW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2.85

Water Supply Wells

Well ID	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	MTBE	1,2 DCA	EDB	Po
WSW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-2	4/13/2012	<1.0	<1.0	<1.0	1.1J	<5.0	<1.0	<1.0	<0.02	NS
WSW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-6	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-8	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-9	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-10	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-11	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-12	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-13	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-14	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-15	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-16	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS



Notes
1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes

Legend

- UST Basin
- Building
- Monitoring Well
- Water Supply Well
- Below RBSL
- Surface Water Sample

GRAPHIC SCALE
0 40 80 160
(In Feet)

Groundwater Chemicals of Concern : Ethylbenzene
Steady Simmons
16661 Grays Highway
Early Branch, SC 29916

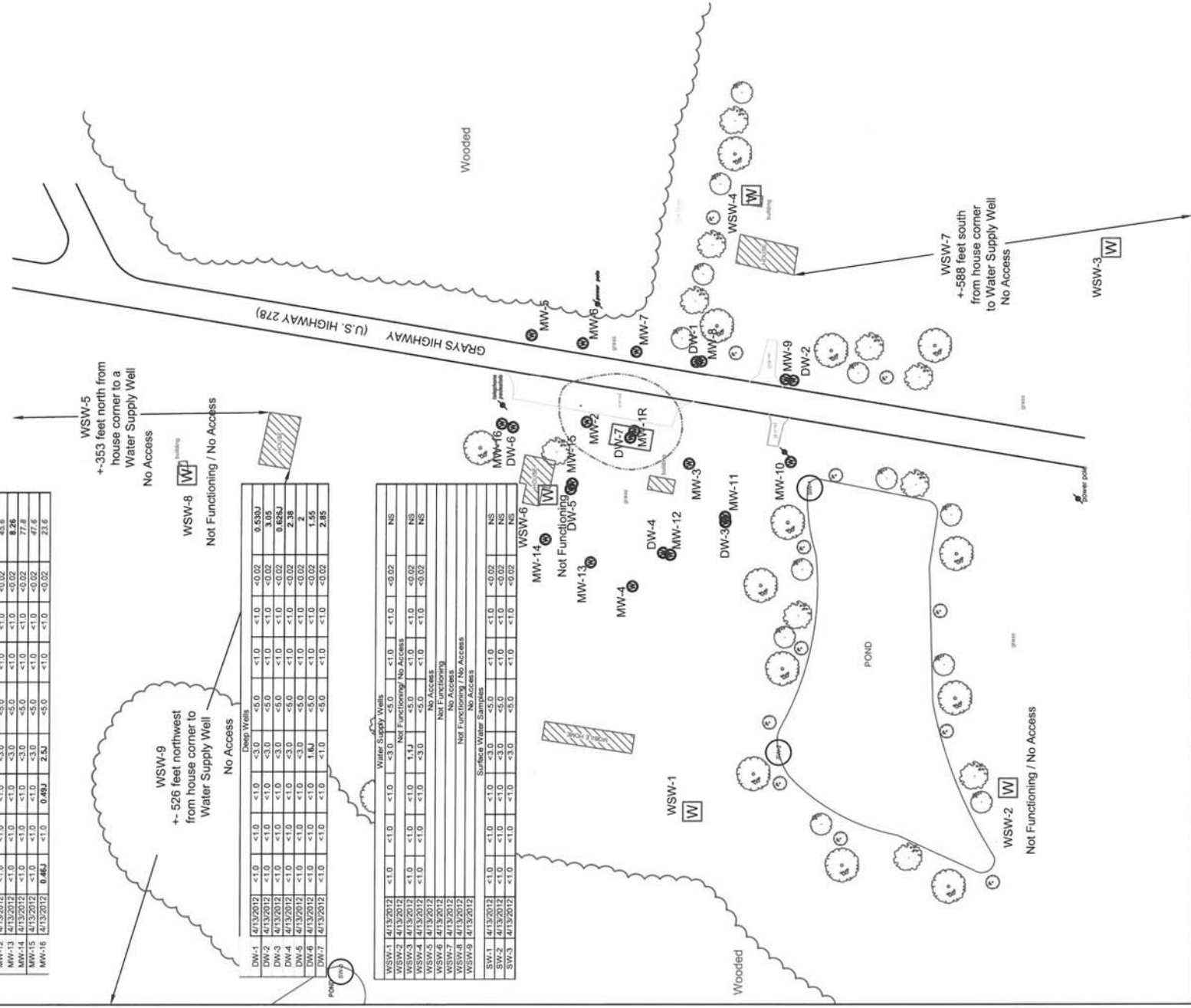
Project No: **15.103**
Date: **5/4/12**
Revision: **0**
USF Permit ID: **18856**

Project Mgr: **JSR**
Drawn by: **JSR**
Checked by: **HDO**

CRAWFORD ENVIRONMENTAL SERVICES
104 Corporate Blvd. Suite 412
Wesley Chapel, FL 32789
803-708-0079 (ph)
803-708-8139 (fx)

Groundwater Laboratory Analytical Result Summary

Well ID	Date	Benzene	Trichloroethylene	Acetone	Perchloroethylene	MIBE	1,2-DCA	EDB	Pb
WSW-1R	4/13/2012	200	2100	1100	3000	47	7.3	<1.0	0.57
MW-2	4/13/2012	200	1400	280	3000	47	7.3	<1.0	2.74
MW-3	4/13/2012	<1.0	3	0.083J	6.1	<5.0	<1.0	<1.0	<0.02
MW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
MW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
MW-6	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
MW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
MW-8	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
MW-9	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
MW-10	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
MW-11	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
MW-12	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
MW-13	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
MW-14	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
MW-15	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
MW-16	4/13/2012	0.46J	<1.0	0.48J	2.5J	<3.0	<1.0	<1.0	<0.02



Deep Wells

Well ID	Date	Benzene	Trichloroethylene	Acetone	Perchloroethylene	MIBE	1,2-DCA	EDB	Pb
DW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
DW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
DW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
DW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
DW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
DW-6	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
DW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02

Water Supply Wells

Well ID	Date	Benzene	Trichloroethylene	Acetone	Perchloroethylene	MIBE	1,2-DCA	EDB	Pb
WSW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
WSW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
WSW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
WSW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
WSW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
WSW-6	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
WSW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
WSW-8	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
WSW-9	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02

Surface Water Samples

Well ID	Date	Benzene	Trichloroethylene	Acetone	Perchloroethylene	MIBE	1,2-DCA	EDB	Pb
SW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
SW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02
SW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02

Notes
 1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes

LEGEND

	UST Basin
	Building
	Monitoring Well
	Water Supply Well
	Below RBSL
	Surface Water Sample

GRAPHIC SCALE

0 40 80 160
 (In Feet)

Figure 4D
Groundwater Chemicals of Concern : Naphthalene
 Steady Simmons
 16661 Grays Highway
 Early Branch, SC 29916
 Project Mgr: JSR
 Drawn by: JSR
 Checked by: HDO
 Project No: 15.103
 Date: 5/4/12
 Revision: 0
 UST Permit ID: 18856
CRAWFORD ENVIRONMENTAL SERVICES
 154 Corporate Blvd., Suite 412
 West Columbia, SC 29381
 803-708-0079 (ph)
 803-708-8138 (fx)

Groundwater Laboratory Analytical Result Summary

Well ID	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	MTBE	1,2 DCA	EDB	Pp
WSW-1	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	0.530J
WSW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	3.05
WSW-3	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	0.696J
WSW-4	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.38
WSW-5	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	1.56
WSW-6	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.85
WSW-7	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.85
WSW-8	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.85
WSW-9	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.85
WSW-10	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.85
WSW-11	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.85
WSW-12	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.85
WSW-13	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.85
WSW-14	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.85
WSW-15	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	2.85
WSW-16	4/13/2012	0.463	<1.0	0.69J	2.5J	<5.0	<1.0	<1.0	<0.02	2.85

WSW-9
+526 feet northwest from house corner to Water Supply Well
No Access

WSW-5
+353 feet north from house corner to a Water Supply Well
No Access

WSW-8
Not Functioning / No Access

Deep Wells

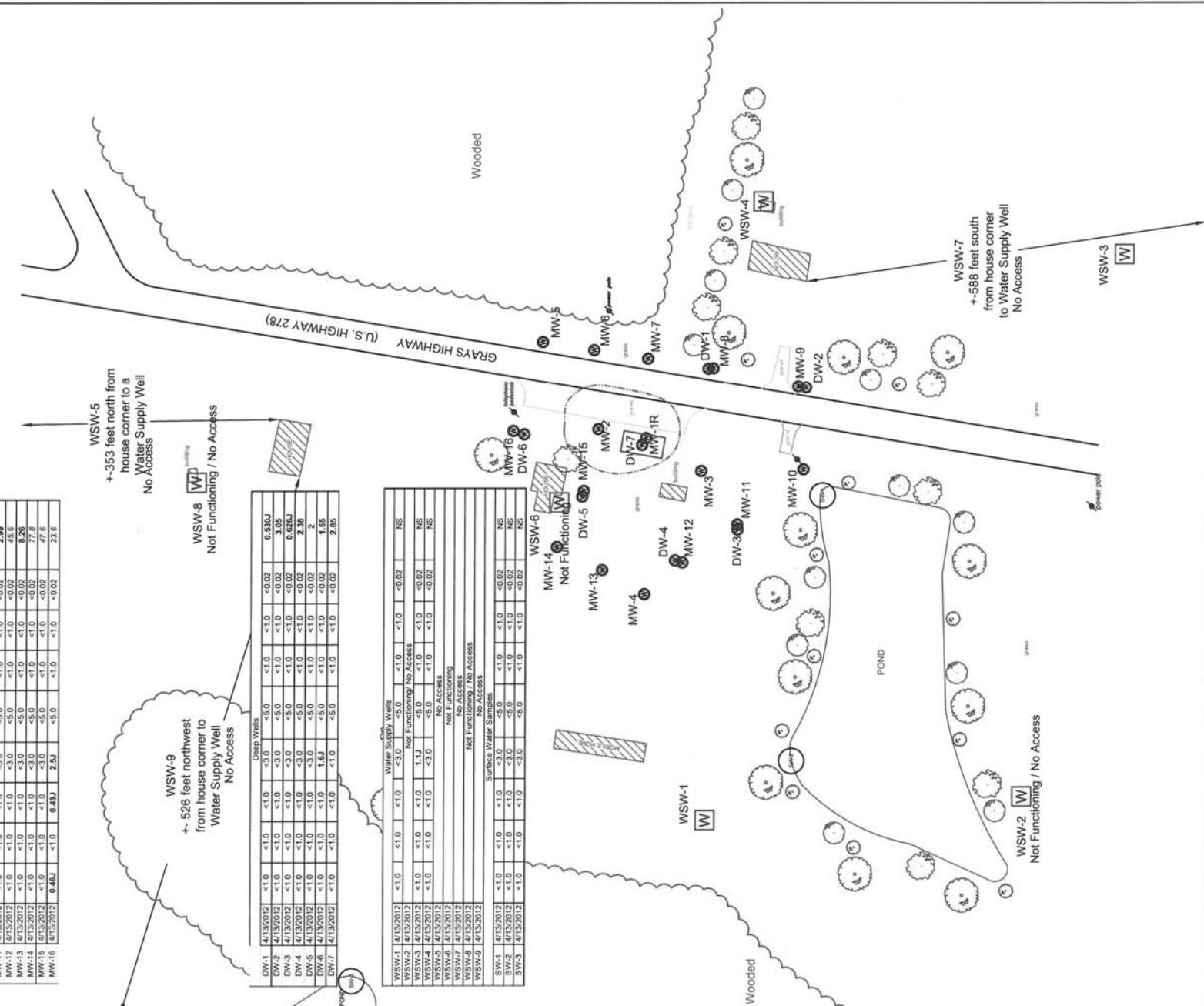
DW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.530J
DW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	3.05
DW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	0.696J
DW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2.38
DW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	1.56
DW-6	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2.85
DW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	2.85

Water Supply Wells

WSW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-3	4/13/2012	<1.0	<1.0	<1.0	1.1J	<5.0	<1.0	<1.0	<0.02	NS
WSW-4	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-5	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-6	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-7	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-8	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
WSW-9	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS

Surface Water Samples

SW-1	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
SW-2	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS
SW-3	4/13/2012	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<1.0	<0.02	NS



Notes
1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes

Legend

[Symbol]	UST Basin
[Symbol]	Building
[Symbol]	Monitoring Well
[Symbol]	Water Supply Well
[Symbol]	Below RBSL
[Symbol]	Surface Water Sample

GRAPHIC SCALE
0 40 80 160
(In Feet)

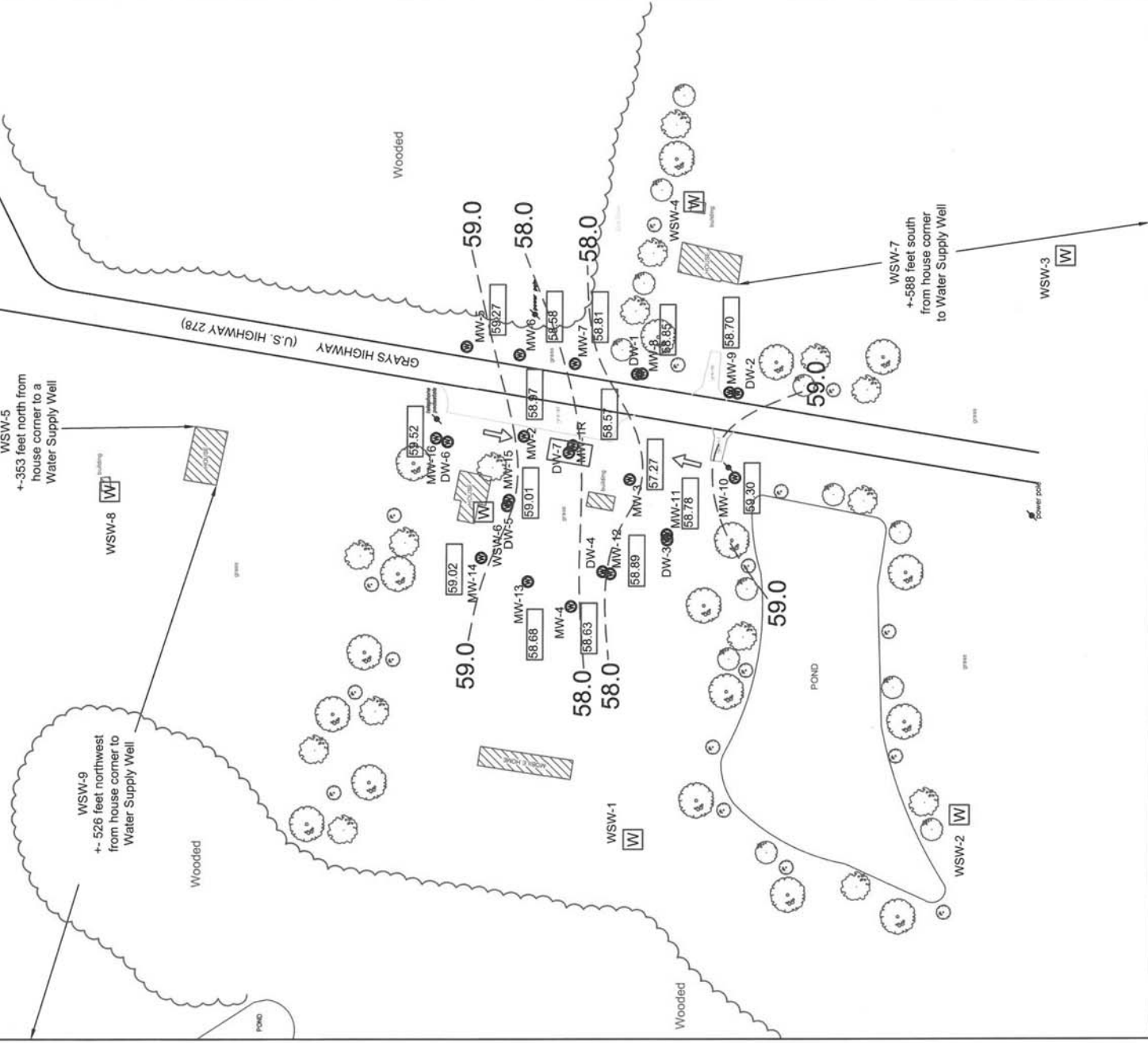
Figure 4E
Groundwater Chemicals of Concern : EDB
Steady Simmons
16661 Grays Highway
Early Branch, SC 29916

Project No: 15.103
Date: 5/4/12
Revision: 0

Project Mgr: JSR
Drawn by: JSR
Checked by: HDO

CRAWFORD ENVIRONMENTAL SERVICES
104 Corporate Blvd. Suite 412
Wenatchee, WA 98801
803-708-3139 (fx)
UST Permit ID: 18856

Groundwater Summary											
Monitor Well	Well Depth (ft)	Screened Interval	Top of Casing (ft)	Date Installed	Date Developed	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-1R	17	7	17	11/18/2011	11/18/2011	4/13/2012	0	11.12	0	0	58.97
MW-2	17	7	17	11/18/2011	11/18/2011	4/13/2012	0	11.15	0	0	58.77
MW-3	17	7	17	11/18/2011	11/18/2011	4/13/2012	0	11.32	0	0	58.27
MW-4	17	7	17	11/18/2011	11/18/2011	4/13/2012	0	9.32	0	0	58.23
MW-5	15	5	15	4/10/2012	4/11/2012	4/13/2012	0	12.51	0	0	58.23
MW-6	15	5	15	4/10/2012	4/11/2012	4/13/2012	0	12.89	0	0	58.58
MW-7	15	5	15	4/10/2012	4/11/2012	4/13/2012	0	12.46	0	0	58.81
MW-8	15	5	15	4/10/2012	4/11/2012	4/13/2012	0	12.05	0	0	58.81
MW-9	15	5	15	4/10/2012	4/11/2012	4/13/2012	0	12.00	0	0	58.70
MW-10	15	5	15	4/10/2012	4/11/2012	4/13/2012	0	7.35	0	0	59.30
MW-11	15	5	15	4/10/2012	4/11/2012	4/13/2012	0	8.38	0	0	58.78
MW-12	15	5	15	4/10/2012	4/11/2012	4/13/2012	0	8.29	0	0	58.89
MW-13	15	5	15	4/10/2012	4/11/2012	4/13/2012	0	9.62	0	0	58.68
MW-14	15	5	15	4/10/2012	4/11/2012	4/13/2012	0	11.12	0	0	58.02
MW-15	20	10	20	4/10/2012	4/11/2012	4/13/2012	0	11.00	0	0	58.01
MW-16	20	10	20	4/10/2012	4/11/2012	4/13/2012	0	12.13	0	0	58.52



Notes
 1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes

Legend

- UST Basin
- Building
- Monitoring Well
- Water Supply Well
- Potentiometric Surface (Est)
- Groundwater Flow Direction

GRAPHIC SCALE
 0 40 80 160
 (In Feet)

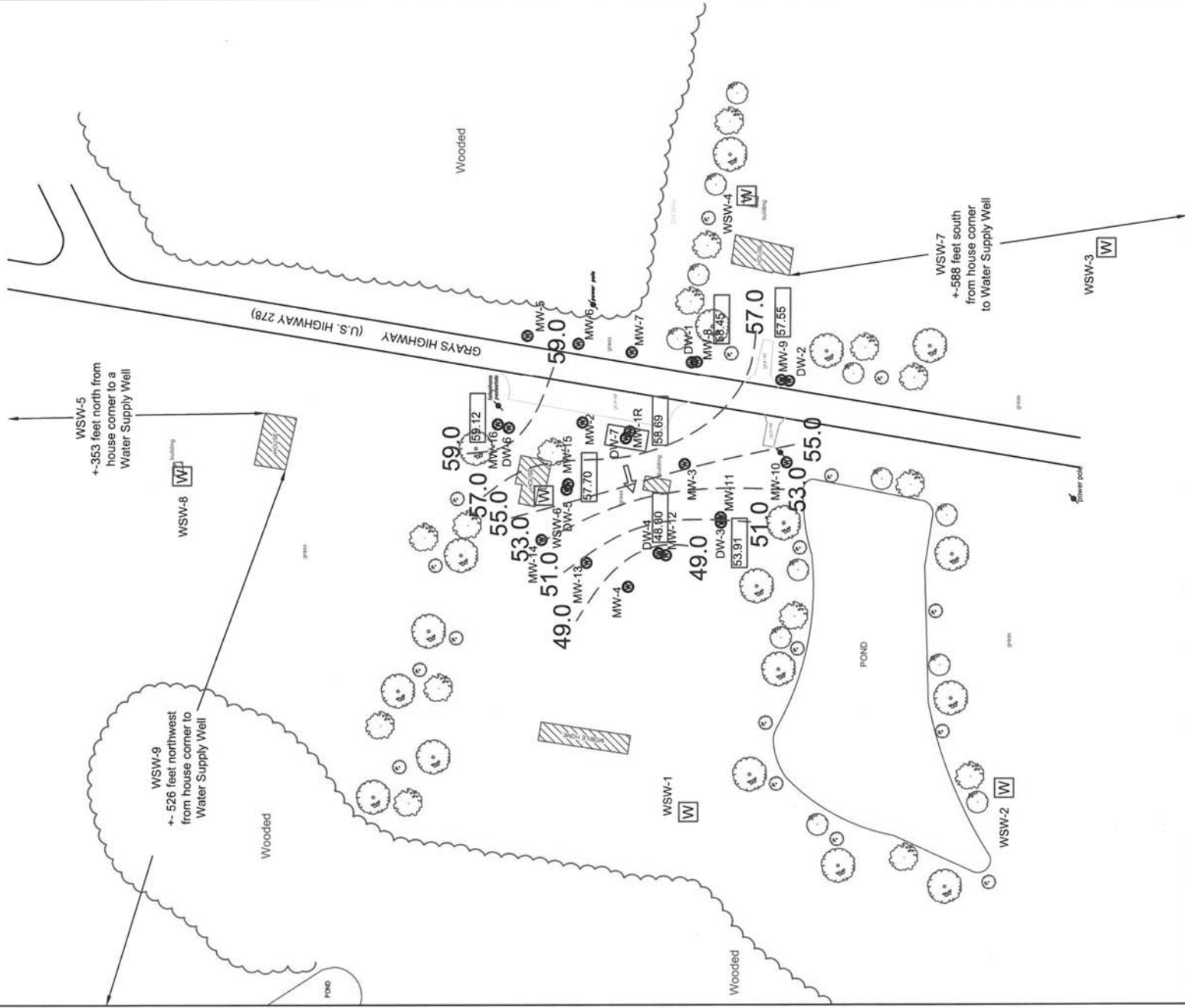
Figure 5A
Potentiometric Surface : Shallow
 Steady Simmons
 16661 Grays Highway
 Early Branch, SC 29916

Project No: 15.103
Date: 5/4/12
Revision: 0
 USF Permit ID: 18856

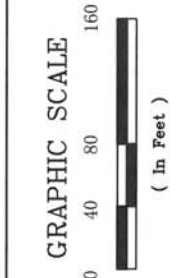
CRAWFORD ENVIRONMENTAL SERVICES
 104 Corporate Blvd. Suite 412
 Wadley, GA 30201
 803-708-0078 (ph)
 803-708-8139 (fax)

Project Mgr: JSR
Drawn by: JSR
Checked by: HDO

Deep Wells											
Monitor Well	Well Depth (ft)	Screened Interval	Top of Casing (ft)	Date Installed	Date Developed	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
DW-1	40	35 - 40	70.95	4/10/2012	4/11/2012	4/13/2012	0	12.50	0	0	58.45
DW-2	40	35 - 40	70.89	4/10/2012	4/11/2012	4/13/2012	0	13.34	0	0	57.55
DW-3	40	35 - 40	67.2	4/10/2012	4/11/2012	4/13/2012	0	13.29	0	0	53.91
DW-4	38	33 - 38	67.51	4/10/2012	4/11/2012	4/13/2012	0	19.21	0	0	48.30
DW-5	38	33 - 38	70.02	4/10/2012	4/11/2012	4/13/2012	0	12.32	0	0	57.70
DW-6	36	31 - 36	71.41	4/10/2012	4/11/2012	4/13/2012	0	12.29	0	0	56.12
DW-7	36	31 - 36	69.82	4/10/2012	4/11/2012	4/13/2012	0	11.13	0	0	58.69



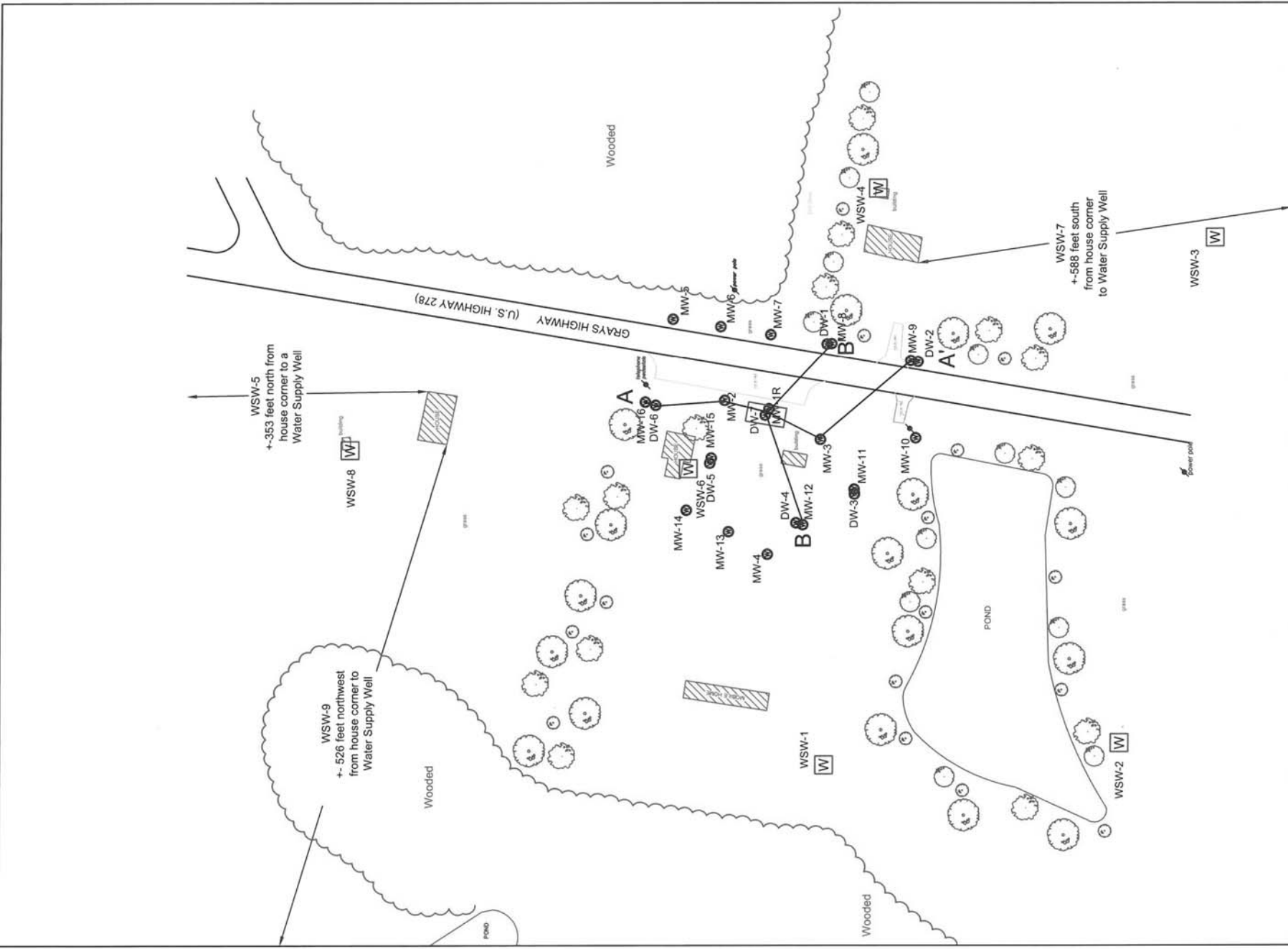
NOTES
1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes



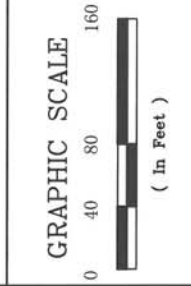
Legend	
	UST Basin
	Building
	Monitoring Well
	Water Supply Well
	Potentiometric Surface (Est)
	Groundwater Flow Direction

Figure 5B
Potentiometric Surface : Deep
Steady Simmons
16661 Grays Highway
Early Branch, SC 29916

Project No:	15.103
Date:	5/4/12
Revision:	0
Project Mgr:	JSR
Drawn by:	JSR
Checked by:	HDO
Company:	CRAWFORD ENVIRONMENTAL SERVICES 104 Corporate Blvd., Suite 412 Wesley Chapel, FL 32091 803-708-0070 (o) 803-708-8139 (f)
USR Permit ID:	18856



Notes
 1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes



Legend

	UST Basin
	Building
	Monitoring Well
	Water Supply Well
	Below RBSL

Figure 6A
Cross-section Reference Map
 Steady Simmons
 16661 Grays Highway
 Early Branch, SC 29916

Project Mgr:	JSR	Project No:	15.103
Drawn by:	JSR	Date:	5/4/12
Checked by:	HDO	Revision:	0
		UST Permit ID:	18856

CRAWFORD ENVIRONMENTAL SERVICES
 104 Corporate Blvd, Suite 412
 West Columbia, SC 29001
 (803) 708-0700
 (803) 708-8139 (fx)

N

S

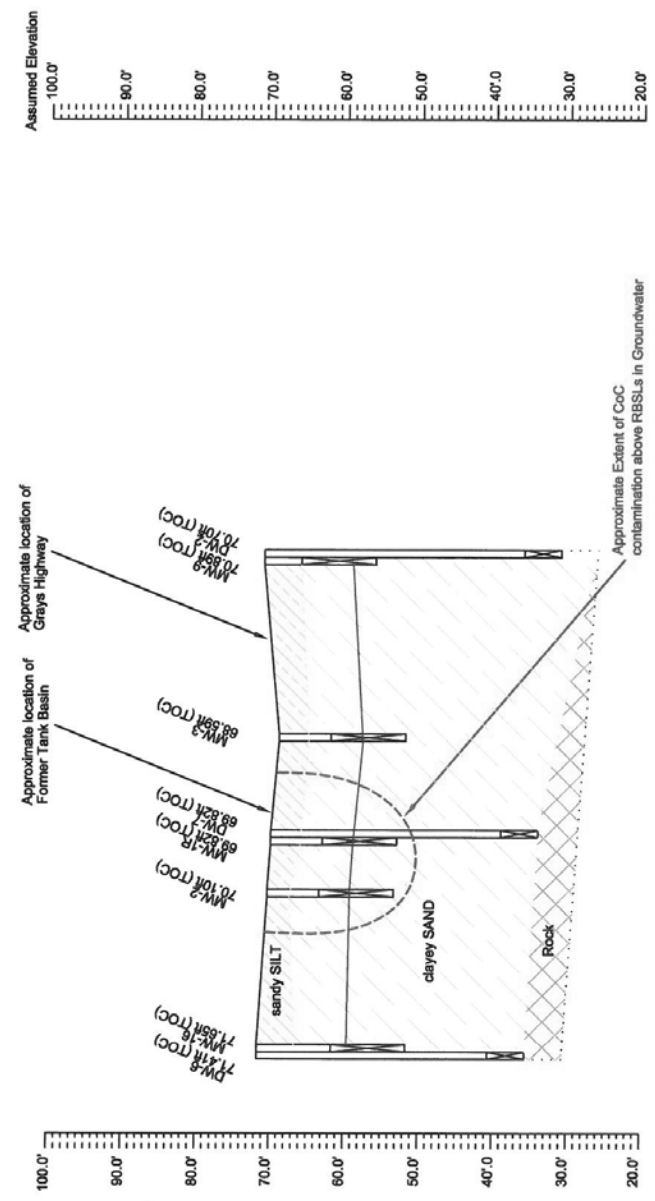
A

A'

Characteristics

5-10 feet
clayey SAND (sandy loam)
73.5% SAND, 20.4% CLAY
k=0.069 ft/day
i=0.015 ft/ft
n=0.45
V= 0.839 ft/yr

35-40 feet
clayey SAND (loamy sand)
75.7% SAND, 17.5 % CLAY
k=0.168 ft/day
i=0.08 ft/ft
n=0.45
V= 7.68 ft/yr



RBSSL = Risk Based Screening Level

EXPLANATION	
—	Groundwater Elevation
DR: JSR	
DK: HOO	
SCALE: AS SHOWN	
CEE PROJ. NO. 15.102	
REV	DATE

CRAWFORD ENVIRONMENTAL SERVICES

Tier II Assessment Report

104 Corporate Blvd
Suite 412
West Columbia, SC 29210
803-788-0079 (p)
803-788-8137 (fax)

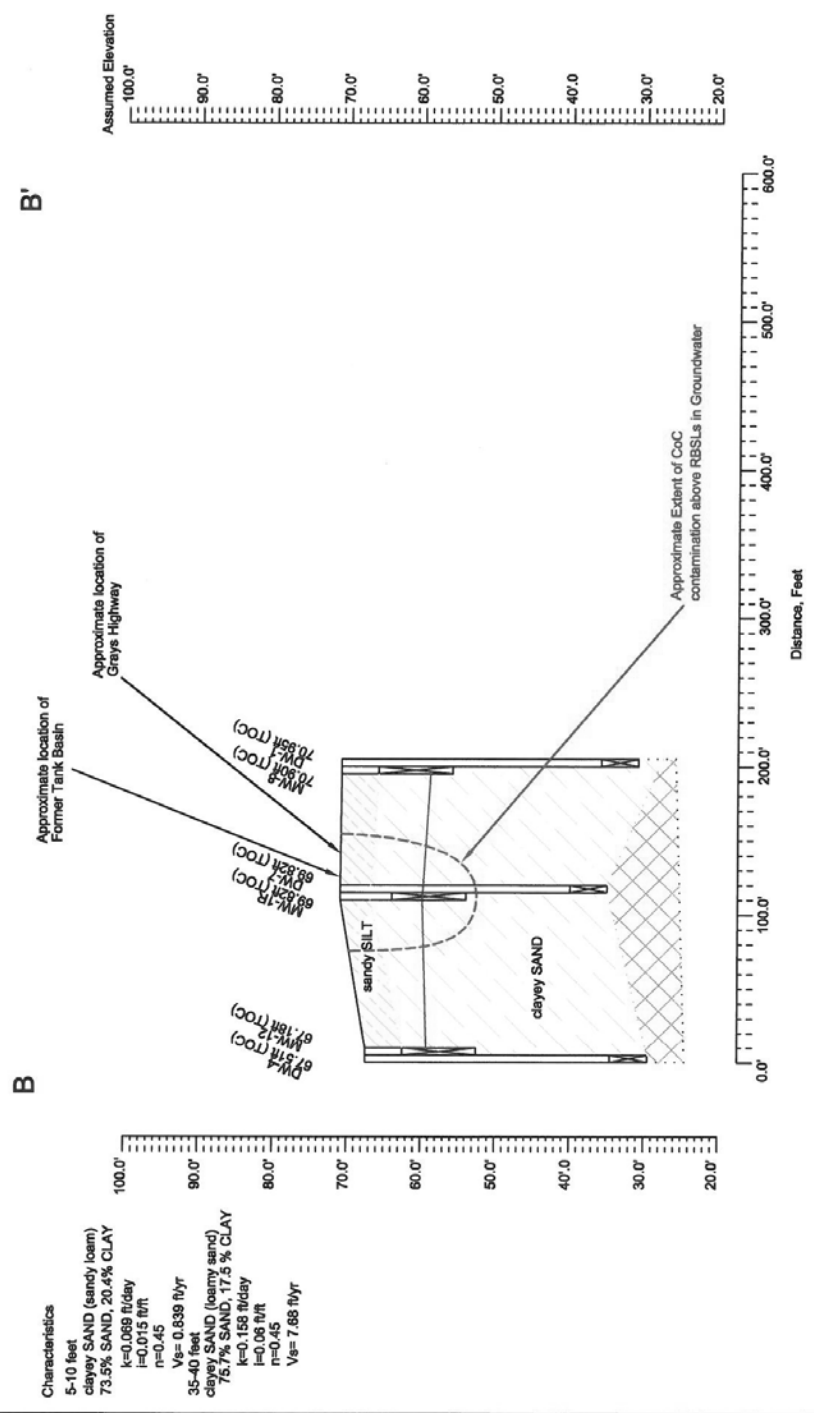
Cross-Section A - A'
Steady State
180 Days
Early Break
Site ID: 18856

Figure 6B

REV: 0
4/27/2008

W

E



RBSL = Risk Based Screening Level

EXPLANATION	
—	Groundwater Elevation

DR: JSR	
CK: HOO	
SCALE: AS SHOWN	
GES PROJ. NO. 15.102	
REV	BY DATE

Tier II Assessment Report

CRAWFORD ENVIRONMENTAL SERVICES

104 Corporate Blvd.
Suite 412
West Columbia, SC 29210
803-708-0079 (ph)
803-708-8137 (fax)

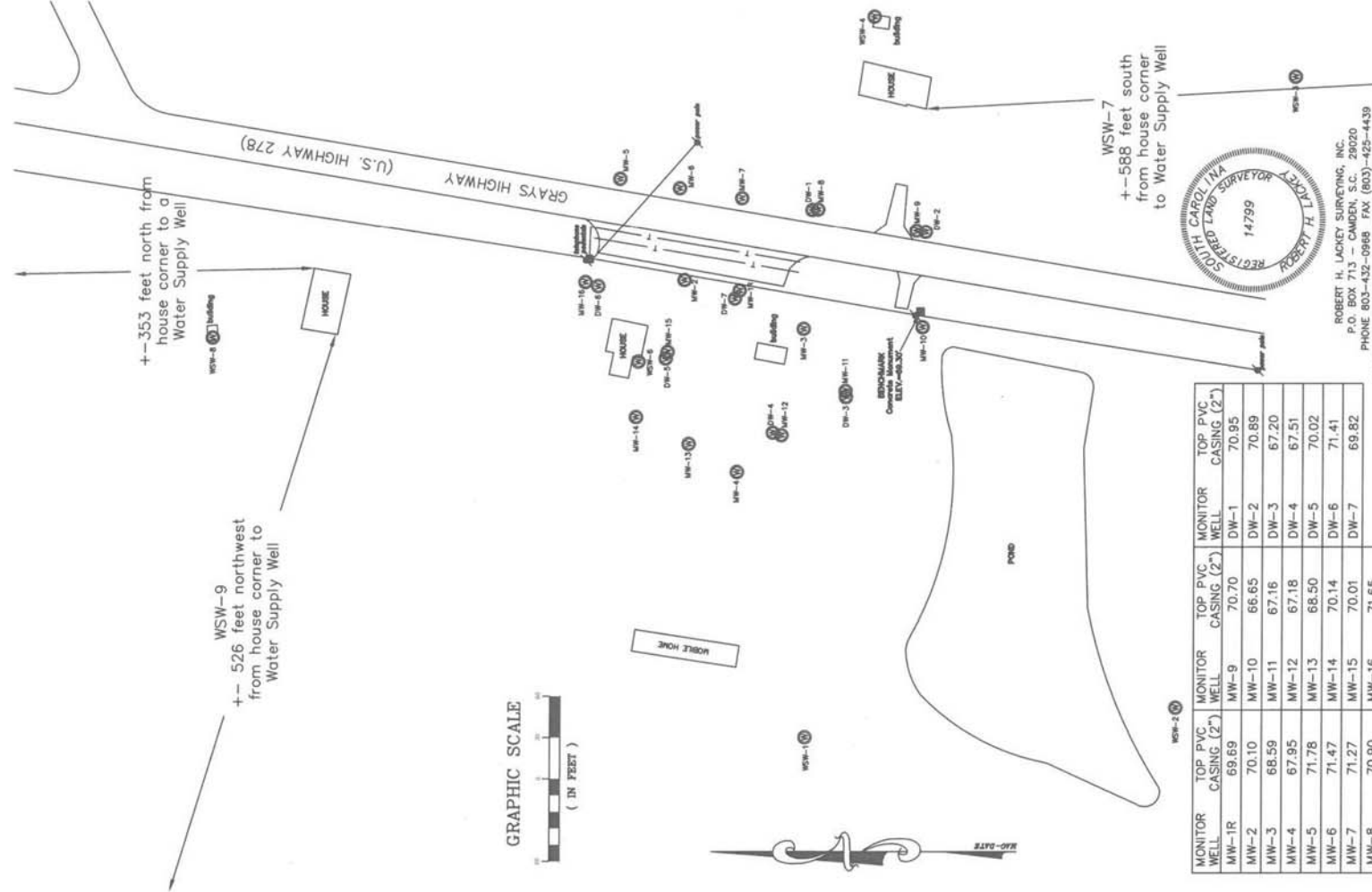
Cross-Section B-B'
Steady, Simmons
1866 Grays Highway
Folly Branch, SC 29916
Site ID: 18656

FIGURE NUMBER
Figure 6C
REV
4/27/2023

APPENDIX A
Site Facility Base Map

STEADY SIMMONS
16661 GRAYS HIGHWAY
EARLY BRANCH, SC

SITE MAP
prepared for
CRAWFORD
ENVIRONMENTAL
SERVICES
May 2, 2012



MONITOR WELL	TOP PVC CASING (2')	MONITOR WELL	TOP PVC CASING (2')	TOP PVC CASING (2')	
MW-1R	69.69	MW-9	70.70	DW-1	70.95
MW-2	70.10	MW-10	66.65	DW-2	70.89
MW-3	68.59	MW-11	67.16	DW-3	67.20
MW-4	67.95	MW-12	67.18	DW-4	67.51
MW-5	71.78	MW-13	68.50	DW-5	70.02
MW-6	71.47	MW-14	70.14	DW-6	71.41
MW-7	71.27	MW-15	70.01	DW-7	69.82
MW-8	70.90	MW-16	71.65		

ROBERT H. LACKEY SURVEYING, INC.
P.O. BOX 713 - CANNON, S.C. - 29020
PHONE 803-432-0968 FAX (803)-425-4439
CE EARLY BRANCH-STEADY SIMMONS.DWG R22009-2012

Notes
1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes

Legend

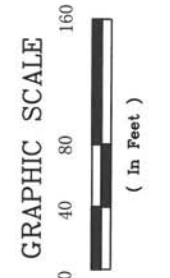
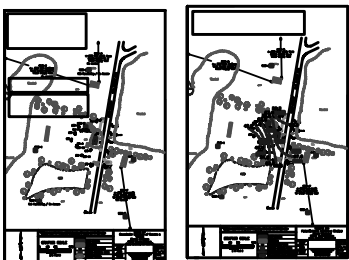
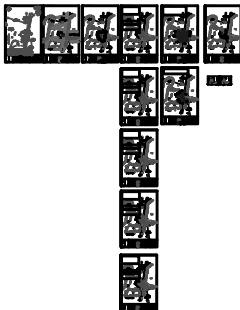


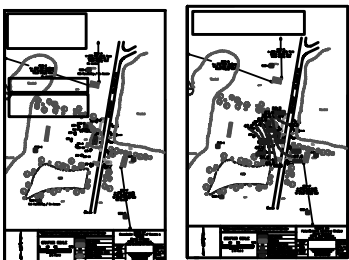
Figure A
Comprehensive Survey
Steady Simmons
16661 Grays Highway
Early Branch, SC 29916

Project Mgr:	JSR	Project No:	15.103
Drawn by:	JSR	Date:	5/4/12
Checked by:	HDO	Revision:	0
		101 Carolina Blvd., Suite 412 Wendell, NC 27581 803-708-0079 (ph) 803-708-8138 (fx)	UST Permit ID: 18856

CRAWFORD ENVIRONMENTAL SERVICES







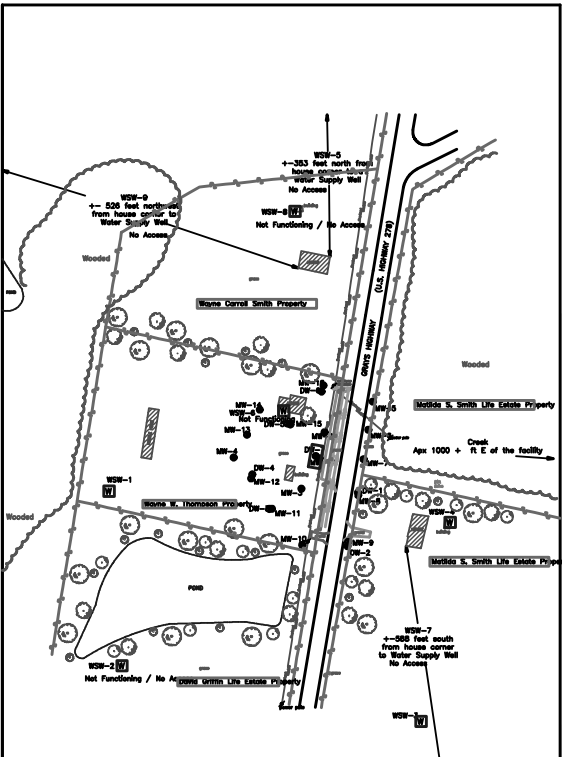


Figure 2
Site Facility Base Map
Steady Simons
10681 Gray Highway
Early Branch, SC 29916

Legend	UST Basin	15,103
Building	Monitoring Well	5/4/12
Water Supply Well	Soil boring Location	18856
Property Line	Field Sampling Location	

GRAPHIC SCALE
0 40 80 160
(In Feet)

Figure A
Comprehensive Survey
Steady Simons
10681 Gray Highway
Early Branch, SC 29916

15,103	5/4/12	18856
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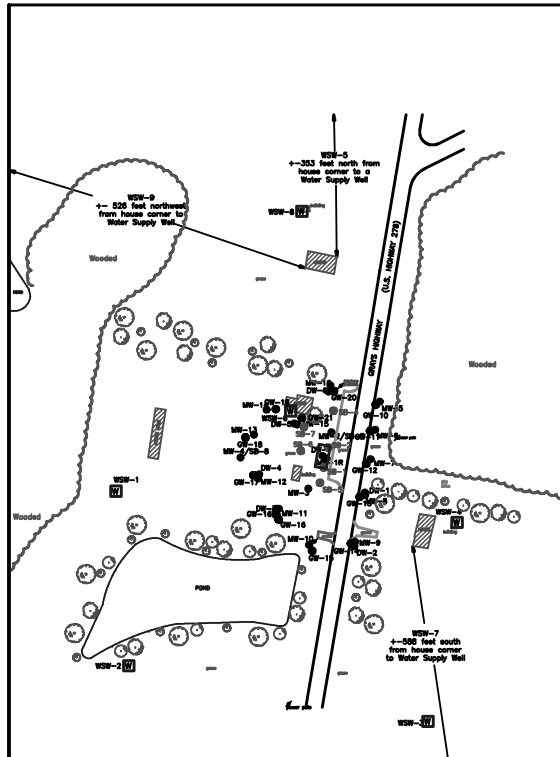


Figure 3
Soil / Field Screening Summary Map
Steady Simons
10681 Gray Highway
Early Branch, SC 29916

Legend	UST Basin	15,103
Building	Monitoring Well	5/4/12
Water Supply Well	Soil boring Location	18856
Property Line	Field Sampling Location	

GRAPHIC SCALE
0 40 80 160
(In Feet)

Figure A
Comprehensive Survey
Steady Simons
10681 Gray Highway
Early Branch, SC 29916

15,103	5/4/12	18856
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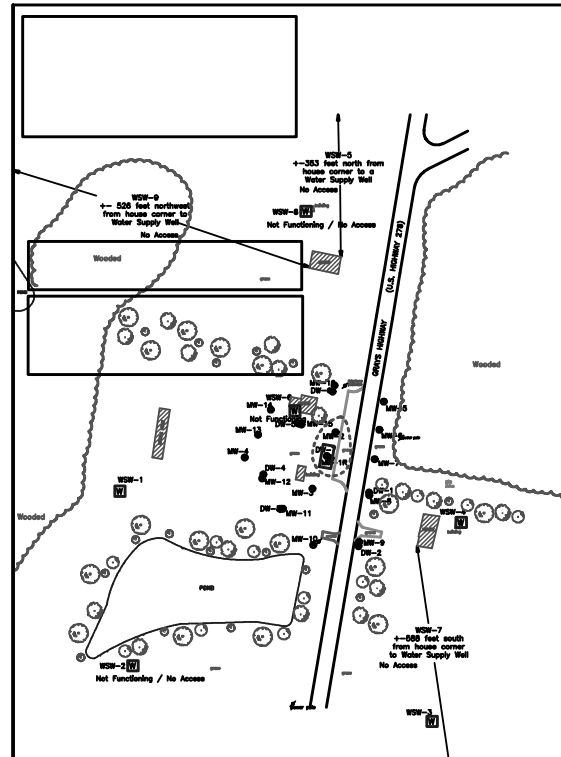


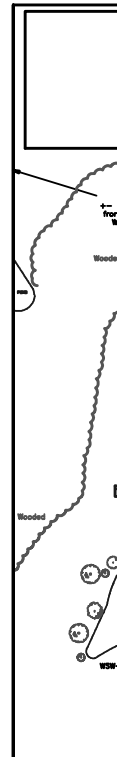
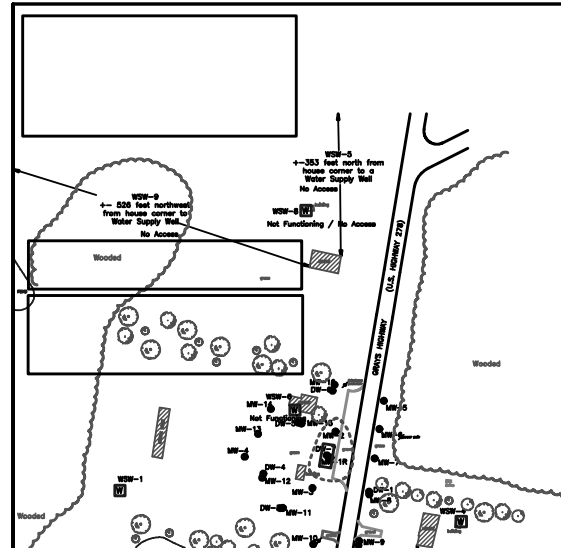
Figure 4
Groundwater Contour of Concern
Steady Simons
10681 Gray Highway
Early Branch, SC 29916

Legend	UST Basin	15,103
Building	Monitoring Well	5/4/12
Water Supply Well	Soil boring Location	18856
Property Line	Field Sampling Location	

GRAPHIC SCALE
0 40 80 160
(In Feet)

Figure A
Comprehensive Survey
Steady Simons
10681 Gray Highway
Early Branch, SC 29916

15,103	5/4/12	18856
--------	--------	-------



Partial view of Figure 2 legend and scale.



Partial view of Figure 3 legend and scale.



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MAY 08 2012

DEE OBRIEN PG
DIVISION MANAGER
CRAWFORD ENVIRONMENTAL SERVICES INC
104 CORPORATE BLVD STE 412
WEST COLUMBIA SC 29169-4600



Re: Required Revision of Report
Steady Simmons, 16661 Gray's Highway, Early Branch, SC
UST Permit # 18856
Solicitation Number IFB-5400002721-3/3/2011-EMW, Purchase Order # 4600089989
Tier II Report received May 7, 2012
Jasper County

Dear Mr. O'Brien:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report. Revisions are necessary to include the location and top of casing elevation for monitoring well MW-5, plus figures for accuracy and ease of use. The following specific revisions are required:

- There appears to be a discrepancy in groundwater gauging dates. Table 2 Well Construction and Historical Groundwater Elevation Summary indicates depth to groundwater data on 4/13/12, 1/31/12, and 4/13/12. Table 3 Groundwater Laboratory Analytical Results Summary indicates groundwater analytical dates of 1/18/11 and 4/13/12.
- Section 3.7.1.3. of the referenced solicitation states: "The contractor must locate and depict on a 1-inch equals 50 feet scaled site map, to the nearest one-foot, all underground utilities (electrical, water, storm sewer, sanitary sewer, natural gas, telephone, cable TV, etc.) within a 500 foot radius of the facility." Please recheck the utilities and septic tanks for accuracy. It would be helpful to include the land use (agricultural field, pasture, etc.) on the map for adjacent properties.
- Please also increase the size of the geological cross sections so they are more easily read.

A revised Tier II Table 2, Table 3, and Figure(s) for Steady Simmons is due on or before Friday, June 1, 2012.
On all correspondence please reference UST Permit number 18856. If you have questions concerning this correspondence, or would like to submit additional information, please contact me at (803) 896-6669, fax me at (803) 896-6245, or e-mail me at shradeaa@dhec.sc.gov.

Sincerely,

Arthur Shrader, Project Manager
Assessment Section
Underground Storage Tank Management Division
Bureau of Land & Waste Management

Cc: Crawford Environmental Services Contractor Certification File
Technical File

CRAWFORD
ENVIRONMENTAL
SERVICES



May 11, 2012

Art Shrader, Hydrogeologist
Assessment Section
UST Management Division
Bureau of Land and Waste Management
SCDHEC
2600 Bull Street
Columbia, SC 29201



Re: Tier II Assessment Report Revisions
Steady Simmons
16661 Grays Highway, Early Branch, SC 29916
UST Permit: 18856
Cost Agreement: 43095
Jasper County

Dear Mr. Shrader

Please find the following revisions requested May 8, 2012 to the Tier II Assessment Report, submitted on May 7, 2012.

- Table 2 was corrected for the issues noted in the May 8, 2012 requested revisions
- Known underground utilities were noted on the Figure 2 included in the Tier II Assessment. A former septic tank to the west of DW-5 was identified by Wayne Thompson, but was indicated as being filled in before any of the assessment work was completed and therefore was not included on the map. No septic tanks were identified during the Tier II Assessment. Adjacent property use was identified in section 1.3 of the narrative. Cultivated fields, pasture and other land descriptions will be used on all future for areas that may pose an issue with property access.
- Cross-section diagram size has been increased and will be depicted on an 11 x 17 size plot for all future reports.

If you have any questions or comments regarding these revisions please feel free to contact me at 803-708-0079, or by email at jreynolds@crawfordenvironmental.com.

Best Regards


Justin Reynolds
Project Manager
SC Rehabilitation Contractor Number: 0388

Attachments: Table 2
Figure 6B and 6C

MID-ATLANTIC REGION
15 CHURCH AVENUE
ROANOKE, VIRGINIA 24011
OFFICE 540 343.6256
FAX 540 343.6259
ccrawford@crawfordenvironmental.com

SOUTHEAST REGION
810 DUTCH SQUARE BLVD, SUITE 210
COLUMBIA, SOUTH CAROLINA 29210
OFFICE 803 772.6881
FAX 803 772.0913
dobrien@crawfordenvironmental.com

SOUTHEAST REGION
103 LOGAN STREET, SUITE B
CHARLESTON, SOUTH CAROLINA 29401
OFFICE 888 842.1101
FAX 803 753.9181
jcox@crawfordenvironmental.com

Facility Name:
Address:

Steady Simmons
16661 Grays Highway, Early Branch, SC 29916

UST Permit ID:
CES Project Number:

18856
15.102

Table 2

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Installed	Date Developed	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-1R	17	7	17	69.69	11/1/2011	11/18/2011	4/13/2012	0	11.12	0	0	58.57
							1/31/2012	0	11.64	0	0	58.05
							11/18/2011	0	12.37	0	0	57.32
MW-2	17	7	17	70.1	11/1/2011	11/18/2011	4/13/2012	0	11.13	0	0	58.97
							1/31/2012	0	11.54	0	0	58.56
							11/18/2011	0	12.67	0	0	57.43
MW-3	17	7	17	68.59	11/1/2011	11/18/2011	4/13/2012	0	11.32	0	0	57.27
							1/31/2012	0	11.16	0	0	57.43
							11/18/2011	0	11.33	0	0	57.26
MW-4	17	7	17	67.95	11/1/2011	11/18/2011	4/13/2012	0	9.32	0	0	58.63
							1/31/2012	0	9.78	0	0	58.17
							11/18/2011	0	10.99	0	0	56.96
MW-5	15	5	15	71.78	4/10/2012	4/11/2012	4/13/2012	0	12.51	0	0	59.27
MW-6	15	5	15	71.47	4/10/2012	4/11/2012	4/13/2012	0	12.89	0	0	58.58
MW-7	15	5	15	71.27	4/10/2012	4/11/2012	4/13/2012	0	12.46	0	0	58.81
MW-8	15	5	15	70.90	4/10/2012	4/11/2012	4/13/2012	0	12.05	0	0	58.85
MW-9	15	5	15	70.70	4/10/2012	4/11/2012	4/13/2012	0	12.00	0	0	58.70
MW-10	15	5	15	66.65	4/10/2012	4/11/2012	4/13/2012	0	7.35	0	0	59.30
MW-11	15	5	15	67.16	4/10/2012	4/11/2012	4/13/2012	0	8.38	0	0	58.78
MW-12	15	5	15	67.18	4/10/2012	4/11/2012	4/13/2012	0	8.29	0	0	58.89
MW-13	15	5	15	68.50	4/10/2012	4/11/2012	4/13/2012	0	9.82	0	0	58.68
MW-14	15	5	15	70.14	4/10/2012	4/11/2012	4/13/2012	0	11.12	0	0	59.02
MW-15	20	10	20	70.01	4/10/2012	4/11/2012	4/13/2012	0	11.00	0	0	59.01
MW-16	20	10	20	71.65	4/10/2012	4/11/2012	4/13/2012	0	12.13	0	0	59.52
Deep Wells												
DW-1	40	35	40	70.95	4/10/2012	4/11/2012	4/13/2012	0	12.50	0	0	58.45
DW-2	40	35	40	70.89	4/10/2012	4/11/2012	4/13/2012	0	13.34	0	0	57.55
DW-3	40	35	40	67.20	4/10/2012	4/11/2012	4/13/2012	0	13.29	0	0	53.91
DW-4	38	33	38	67.51	4/10/2012	4/11/2012	4/13/2012	0	19.21	0	0	48.30
DW-5	38	33	38	70.02	4/10/2012	4/11/2012	4/13/2012	0	12.32	0	0	57.70
DW-6	36	31	36	71.41	4/10/2012	4/11/2012	4/13/2012	0	12.29	0	0	59.12
DW-7	36	31	36	69.82	4/10/2012	4/11/2012	4/13/2012	0	11.13	0	0	58.69

Wells developed using bail / surge method

Shallow monitoring wells installed

Telescoping wells installed

Recovery Wells Installed

12

7

0

Footage

Footage

Footage

190

268

0

CRAWFORD
ENVIRONMENTAL
SERVICES

Bolded Values corrected for presence of free product

n/a = not applicable

INA = Information not available

CORRECTIVE ACTION PLAN FOR NATURAL ATTENUATION

UST Permit Name: Steady Simmons UST Permit #: 18856
Date Release Reported: 9/9/2002 Project Manager: Stephanie Briney
Priority Class: 2BB

CoC Concentrations (ug/L)

Benzene: 220
Toluene: 2100
Ethylbenzene: 1100
Xylenes: 9900
MTBE: 9.1
Naphthalene: 570
EDB: 2.04
1,2 DCA:

SSTL Concentration (ug/L)

Benzene: 1176
Toluene: 26540
Ethylbenzene: 3700
Xylenes: 21680
MTBE: 1041
Naphthalene: 740
EDB: 2.22
1,2, DCA:

Date of Last Sampling: 4/13/2012 Contractor: Crawford Environmental Services
Assessment Activities Completed: 5/7/2012
of Sampling Events Completed: 2
Groundwater Velocity (ft/yr): 7.68 Groundwater Flow Direction: West
Depth to Groundwater: 7ft to 14ft Soil Lithology: sand
Distance to the Nearest Receptor? 90
Type of Receptor? water supply well
Is the CoC Plume Defined (Yes/No)? Yes
Is the CoC Plume Stable (Yes/No)? Yes

Additional Comments:

Plume is stable or decreasing and below SSTLs.



Project Manager: Stephanie Briney Date: 5/18/2012



South Carolina Department of Health
and Environmental Control

PUBLIC NOTICE

Notice #: 18856-1 Permit #: 18856

Date: May 25, 2012

This notice is to inform the public that the S. C. Department of Health and Environmental Control (Agency) is taking public comments on a Corrective Action Plan (CAP). This CAP addresses the cleanup of soil and groundwater contamination at the facility listed below. The contamination was caused by gasoline that was released from the underground storage tank system at this facility. Based on current data, the release does not pose a threat to human health or the environment.

FACILITY: Steady Simmons, 16661 Grays Hwy., Early Branch, SC 29916

APPLICANT: Orphan – Steady Simmons

SUMMARY OF CAP: Petroleum and petroleum byproducts naturally break down over time through chemical, physical, and biological processes. These processes are called natural attenuation. Periodic monitoring has been conducted to ensure that the contamination has decreased and remains below levels of concern.

PUBLIC COMMENT PERIOD DEADLINE: The **deadline** for submitting written comments is **June 8, 2012**. Any interested person(s) may submit written comments concerning the cleanup to Agency's Project Manager listed below. Please bring this notice to the attention of persons whom you know will be interested in this matter. Where there is a significant degree of public interest, the Agency will hold a public hearing.

Stephanie Briney, Hydrogeologist
SCDHEC- UST Management Division
2600 Bull Street
Columbia SC 29201
803-896-6323

CONTACT INFORMATION: For additional information, please call the Project Manager listed above. To view a copy of the CAP, contact the Agency's Freedom of Information Office at 803-898-3882.

Section 280.67 of the S.C. Underground Storage Tank Control Regulations (R.61-92) requires that any CAP prepared to meet the requirements of 280.66 be placed on notice for public comment.



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MR WAYNE THOMPSON
16657 GRAYS HWY
EARLY BRANCH SC 29916

MAY 23 2012



Re: Public notice for MNA
Steady Simmons, 16661 Grays Hwy., Early Branch, SC
UST Permit # 18856
Release Reported September 9, 2002
Tier II Report received May 7, 2012
Jasper County

Dear Mr. Thompson:

The Underground Storage Tank (UST) Management Division is implementing a corrective action plan for monitored natural attenuation (MNA) at the referenced site. As you are aware, petroleum constituents have been confirmed at concentrations exceeding risk-based screening levels (RBSLs) in groundwater at the referenced site. Based on assessment data and known receptors identified in the area, the Division has determined that the referenced release does not pose a significant risk to human health or the environment. The data further indicate that the petroleum constituents will degrade over time by natural physical and chemical processes.

Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the Division to provide notice to those members of the public that may be affected by the proposed corrective action. A copy of the public notice is enclosed for your information.

If you have any questions or comments regarding the proposed corrective action, feel free to contact me by telephone at (803) 896-6323, by fax at (803) 896-6245, or by e-mail at brineysm@dhec.sc.gov. All comments should be submitted by June 8, 2012.

Sincerely,

Stephanie Briney, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Public notice (PN)
Information sheet on MNA

cc: Technical file (w/o enc)



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MR CARROLL WAYNE SMITH
16589 GRAYS HWY
EARLY BRANCH SC 29916

MAY 23 2012

Re: Public notice for MNA
Steady Simmons, 16661 Grays Hwy., Early Branch, SC
UST Permit # 18856
Release Reported September 9, 2002
Tier II Report received May 7, 2012
Jasper County

Dear Mr. Smith:

The Underground Storage Tank (UST) Management Division is implementing a corrective action plan for monitored natural attenuation (MNA) at the referenced site near your property (tax map# 052-00-05-028). As you are aware, petroleum constituents have been confirmed at concentrations exceeding risk-based screening levels (RBSLs) in groundwater at the referenced site. Based on assessment data and known receptors identified in the area, the Division has determined that the referenced release does not pose a significant risk to human health or the environment. The data further indicate that the petroleum constituents will degrade over time by natural physical and chemical processes.

Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the Division to provide notice to those members of the public that may be affected by the proposed corrective action. A copy of the public notice is enclosed for your information.

If you have any questions or comments regarding the proposed corrective action, feel free to contact me by telephone at (803) 896-6323, by fax at (803) 896-6245, or by e-mail at brineysm@dhec.sc.gov. All comments should be submitted by June 8, 2012.

Sincerely,

Stephanie Briney, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Public notice (PN)
Information sheet on MNA

cc: Technical file (w/o enc)



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MS LILLY GRIFFIN
16589 GRAYS HWY
EARLY BRANCH SC 29916

MAY 23 2012

Re: Public notice for MNA
Steady Simmons, 16661 Grays Hwy., Early Branch, SC
UST Permit # 18856
Release Reported September 9, 2002
Tier II Report received May 7, 2012
Jasper County

Dear Ms. Griffin:

The Underground Storage Tank (UST) Management Division is implementing a corrective action plan for monitored natural attenuation (MNA) at the referenced site near your property (tax map# 052-00-05-026). As you may be aware, petroleum constituents have been confirmed at concentrations exceeding risk-based screening levels (RBSLs) in groundwater at the referenced site. Based on assessment data and known receptors identified in the area, the Division has determined that the referenced release does not pose a significant risk to human health or the environment. The data further indicate that the petroleum constituents will degrade over time by natural physical and chemical processes.

Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the Division to provide notice to those members of the public that may be affected by the proposed corrective action. A copy of the public notice is enclosed for your information.

If you have any questions or comments regarding the proposed corrective action, feel free to contact me by telephone at (803) 896-6323, by fax at (803) 896-6245, or by e-mail at brineysm@dhec.sc.gov. All comments should be submitted by June 8, 2012.

Sincerely,

Stephanie Briney, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Public notice (PN)
Information sheet on MNA

cc: Technical file (w/o enc)



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MS BETTY MEARS
16427 GRAYS HWY
EARLY BRANCH SC 29916

MAY 23 2012

Re: Public notice for MNA
Steady Simmons, 16661 Grays Hwy., Early Branch, SC
UST Permit # 18856
Release Reported September 9, 2002
Tier II Report received May 7, 2012
Jasper County

Dear Ms. Mears:

The Underground Storage Tank (UST) Management Division is implementing a corrective action plan for monitored natural attenuation (MNA) at the referenced site near your property (tax map# 052-00-05-056). As you may be aware, petroleum constituents have been confirmed at concentrations exceeding risk-based screening levels (RBSLs) in groundwater at the referenced site. Based on assessment data and known receptors identified in the area, the Division has determined that the referenced release does not pose a significant risk to human health or the environment. The data further indicate that the petroleum constituents will degrade over time by natural physical and chemical processes.

Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the Division to provide notice to those members of the public that may be affected by the proposed corrective action. A copy of the public notice is enclosed for your information.

If you have any questions or comments regarding the proposed corrective action, feel free to contact me by telephone at (803) 896-6323, by fax at (803) 896-6245, or by e-mail at brineysm@dhec.sc.gov. All comments should be submitted by June 8, 2012.

Sincerely,

Stephanie Briney, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Public notice (PN)
Information sheet on MNA

cc: Technical file (w/o enc)



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MR WALLACE WILLIG
29 MONGIN WAY
BLUFFTON SC 29909

MAY 23 2012

Re: Public notice for MNA
Steady Simmons, 16661 Grays Hwy., Early Branch, SC
UST Permit # 18856
Release Reported September 9, 2002
Tier II Report received May 7, 2012
Jasper County

Dear Mr. Willig:

The Underground Storage Tank (UST) Management Division is implementing a corrective action plan for monitored natural attenuation (MNA) at the referenced site near your property (tax map# 052-00-10-014). As you may be aware, petroleum constituents have been confirmed at concentrations exceeding risk-based screening levels (RBSLs) in groundwater at the referenced site. Based on assessment data and known receptors identified in the area, the Division has determined that the referenced release does not pose a significant risk to human health or the environment. The data further indicate that the petroleum constituents will degrade over time by natural physical and chemical processes.

Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the Division to provide notice to those members of the public that may be affected by the proposed corrective action. A copy of the public notice is enclosed for your information.

If you have any questions or comments regarding the proposed corrective action, feel free to contact me by telephone at (803) 896-6323, by fax at (803) 896-6245, or by e-mail at brineysm@dhec.sc.gov. All comments should be submitted by June 8, 2012.

Sincerely,

Stephanie Briney, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Public notice (PN)
Information sheet on MNA

cc: Technical file (w/o enc)



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MATILDA SMITH LIFE ESTATE
110 GARDNER DRIVE
APT 325
HILTON HEAD ISLAND SC 29926

MAY 23 2012

Re: Public notice for MNA
Steady Simmons, 16661 Grays Hwy., Early Branch, SC
UST Permit # 18856
Release Reported September 9, 2002
Tier II Report received May 7, 2012
Jasper County

To Whom It May Concern:

The Underground Storage Tank (UST) Management Division is implementing a corrective action plan for monitored natural attenuation (MNA) at the referenced site near your property (tax map# 052-00-10-001). As you may be aware, petroleum constituents have been confirmed at concentrations exceeding risk-based screening levels (RBSLs) in groundwater at the referenced site. Based on assessment data and known receptors identified in the area, the Division has determined that the referenced release does not pose a significant risk to human health or the environment. The data further indicate that the petroleum constituents will degrade over time by natural physical and chemical processes.

Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the Division to provide notice to those members of the public that may be affected by the proposed corrective action. A copy of the public notice is enclosed for your information.

If you have any questions or comments regarding the proposed corrective action, feel free to contact me by telephone at (803) 896-6323, by fax at (803) 896-6245, or by e-mail at brineysm@dhec.sc.gov. All comments should be submitted by June 8, 2012.

Sincerely,

Stephanie Briney, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Public notice (PN)
Information sheet on MNA

cc: Technical file (w/o enc)



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MR WILLIAM PHILLIPS
16586 GRAYS HWY
EARLY BRANCH SC 29916

MAY 23 2012

Re: Public notice for MNA
Steady Simmons, 16661 Grays Hwy., Early Branch, SC
UST Permit # 18856
Release Reported September 9, 2002
Tier II Report received May 7, 2012
Jasper County

Dear Mr. Phillips:

The Underground Storage Tank (UST) Management Division is implementing a corrective action plan for monitored natural attenuation (MNA) at the referenced site near your property (tax map# 052-00-10-002). As you may be aware, petroleum constituents have been confirmed at concentrations exceeding risk-based screening levels (RBSLs) in groundwater at the referenced site. Based on assessment data and known receptors identified in the area, the Division has determined that the referenced release does not pose a significant risk to human health or the environment. The data further indicate that the petroleum constituents will degrade over time by natural physical and chemical processes.

Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the Division to provide notice to those members of the public that may be affected by the proposed corrective action. A copy of the public notice is enclosed for your information.

If you have any questions or comments regarding the proposed corrective action, feel free to contact me by telephone at (803) 896-6323, by fax at (803) 896-6245, or by e-mail at brineysm@dhec.sc.gov. All comments should be submitted by June 8, 2012.

Sincerely,

Stephanie Briney, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Public notice (PN)
Information sheet on MNA

cc: Technical file (w/o enc)



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

JUL 27 2012



Re: **QAPP Contractor Addendum Request**
Groundwater Sampling Contract
Solicitation # IFB-5400002759, PO#4600088529

Dear Mr. Shane:

In accordance with bid solicitation # IFB-5400002759 and the UST Management Division Quality Assurance Program Plan (QAPP), it is requested that you submit a Contractor Addendum for each site listed below. The Addendums must be submitted within 15 business days in my attention. The project manager for each site will issue a notice to proceed once the Addendum has been reviewed and approved. Please note, site reconnaissance should be conducted during the Addendum review so that any issues that arise may be addressed prior to commencing work at the site.

UST Permit #	Site Name	County	# samples and requested analysis*	Project Manager
05273	Clelands One Stop	Jasper	26-BTEXMN, DCA, Oxygenates, & EDB	S. Briney
12264	Sunset Park Grocery	York	25-BTEXMN, DCA, Oxygenates, & EDB	S. Briney
12999	Fats Pockets	Greenwood	15-BTEXMN, DCA, Oxygenates, & EDB	S. Briney
18856	Steady Simmons	Jasper	40-BTEXMN, DCA, Oxygenates, & EDB	S. Briney
19560	Former Gulf Station	Richland	23-BTEXMN, DCA, Oxygenates, & EDB	S. Briney
12613	Lee Mart	Bamberg	42-BTEXMN, DCA, Oxygenates, & EDB	S. Briney

* The number of samples does not include trip blanks, field blanks, or field duplicates.

Please contact me with the sampling schedule before commencing work at these facilities. In addition, a weekly update for each site is required to be submitted via e-mail to the site's project manager and myself. If you have any questions or need further assistance, please contact me at (803) 896-6397 or thomadi@dhec.sc.gov.

Sincerely,

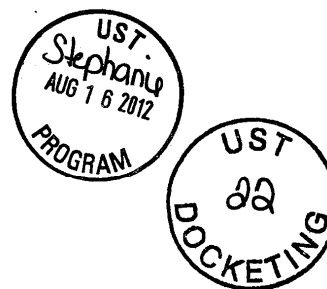
Debra L. Thoma, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

Enc: Site Information Packets

cc: Technical Files



August 16, 2012



Ms. Debra Thoma, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Subject: QAPP Contractor Addendum – Revision 0
Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID Number 18856
MECI Project Number 12-4112
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Thoma,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached QAPP Contractor Addendum for the referenced site.

On July 30, 2012, MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
Midlands Environmental Consultants, Inc.

Courtney M. Sanders
Staff Biologist

Jeff L. Coleman
Senior Scientist

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For

Steady Simmons, SCDHEC Site ID# 18856

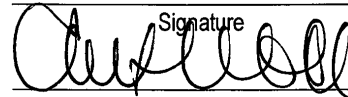
16661 Grays Highway, Early Branch, South Carolina

Prepared by:
Courtney M. Sanders
Staff Biologist
Midlands Environmental Consultants, Inc.
(Certified Site Rehabilitation Contractor UCC-0009)
235-B Dooley Road
Lexington, SC 29073
(803)808-2043

Date: August 16, 2012

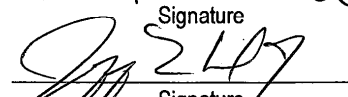
Approvals

Stephanie Briney
SC DHEC Project Manager

Signature 

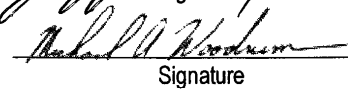
Date _____

Courtney M. Sanders
Contractor QA Manager

Signature 

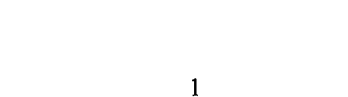
Date 8/16/12

Jeff L. Coleman
Site Rehabilitation Contractor

Signature 

Date 8/16/12

Michael Woodrum
Laboratory Director

Signature 

Date 8/16/2012

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A3 Distribution List

Name	Title	Organization/Address	Telephone Number	Fax Number	Email Address
Stephanie Briney	SC DHEC Technical Project Manager	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6323	803-896-6245	brineysm@dhec.sc.gov
Jeff L. Coleman	Site Rehabilitation Contractor	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	jlc@meci.net
Courtney M. Sanders	Quality Assurance Officer	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	cms@meci.net
Courtney M. Sanders	Field Manager	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	cms@meci.net
Michael Woodrum	Laboratory Director	Shealy Environmental Services, Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791-9700	803-791-9111	mwoodrum@shealylab.com
	Well Services/Driller				

Table 1A Addendum Distribution List

A4 Project Organization

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephone Number	Fax Number	Email Address
Project Manager	Stephanie Briney	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6323	803-896-6245	brineysm@dhec.sc.gov
Site Rehabilitation Contractor	Jeff L. Coleman	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	jlc@meci.net
Quality Assurance Officer	Courtney M. Sanders	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	cms@meci.net
Field Manager	Courtney M.	Midlands Environmental Consultants, Inc.	803-808-2043	803-808-2048	cms@meci.net

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephone Number	Fax Number	Email Address
	Sanders	235-B Dooley Road Lexington, SC 29073			
Analytical Laboratory Director	Michael Woodrum	Shealy Environmental Services, Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791-9700	803-791-9111	mwoodrum@shealylab.com
Project Verifier	Courtney M. Sanders or John C. Bryant	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	cms@meci.net

Table 2A Addendum Role Identification and Contact Information

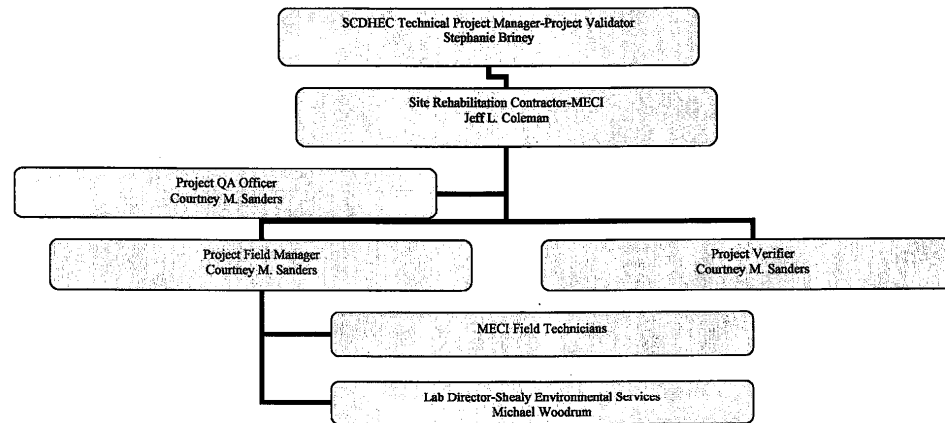


Figure 1A Organizational Chart

Project Manager (Stephanie Briney) – The project manager is responsible for direct oversight of contractors conducting assessment and site rehabilitation of releases at UST sites.

Site Rehabilitation Contractor (Jeff L. Coleman.) – The Site Rehabilitation Contractor is an independent contractor responsible for managing and coordinating field and office activities needed for assessments or cleanup.

- Final Review of all work produced for a scope of work.
- Final say on technical interpretation of data.

Quality Assurance Officer (Courtney M. Sanders) – The Quality Assurance Officer is responsible for the oversight of all quality assurance activities associated with projects performed by the Site Rehabilitation Contractor.

- In charge of producing and maintaining the QAPPA for MECI.
- Reviews (and Audits, if necessary) all work produced in conjunction with a scope of work.
- Quality control of data entry and report preparation.

Field Manager (Courtney M. Sanders) –The field manager will oversee all work done on any given project.

- Assign, direct and oversee all field personnel working on each project.
- Responsible for coordinating with the SCDHEC project manager, should any problems or clarifications arise.
- Responsible for all reporting done in conjunction with field work.

Analytical Laboratory Director (Michael Woodrum)– The Laboratory Director is directly responsible for the Analytical Laboratory used during a scope of work. The Analytical Laboratory receives the soil and water samples from the site rehabilitation contractor, performs the requested analyses, and provides analytical reports.

Project Verifier (Courtney M. Sanders) – The project verifier is responsible for verifying the quality of data produced during a scope of work. This includes review of field work and laboratory reports for potential quality issues.

Field Technicians (various employees) – Responsible for all field activities for a given scope of work.

- Conduct all initial site visit, and record findings
- Conduct all field activities associated with a scope of work. All work will be conducted according to the MECI SOP. Will be responsible for reporting any potential problems or inconsistencies found during assessment activities.
- Completes the chain of custody upon completion of sampling event and delivers samples to lab or office for later lab pick-up.

A5 Problem Definition/Background

Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed.

The subject site (Steady Simmons) is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The subject site formerly maintained one 550 gallon gasoline underground storage tank (UST) and one 1,000 gallon gasoline UST. The subject tanks were abandoned by removal from ground in July of 2002. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product from the subject tanks in September of 2002 and confirmed the release in October of 2002. The subject site is currently rated a Class 2BB.

The site is being sampled in conjunction with the SCDHEC Groundwater Sampling Contract (Solicitation # IFB-5400002759, PO# 4600088529).

Please answer the following: Does this project fall under UST or Brownfields area?

Underground Storage Tank Division

A6 Project/Task Description

1. Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).

The subject site (Steady Simmons) will be sampled in conjunction with the SCDHEC Groundwater Sampling Contract (Solicitation # IFB-5400002759, PO# 4600088529). During assessment activities monitoring wells will be sampled for petroleum constituents.

2. The work will begin within fourteen (14) days of receipt of approved QAPP contractors addendum after cost approval and sampling should be complete by twenty-one (21) days of receipt of approved QAPP contractors addendum.

3. Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.

Factors that may prevent schedule work will be, but not limited to, inclement weather, equipment malfunction, and machine failure.

A7 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

The subject site is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The site is currently occupied by a vacant lot surrounded by residential properties.

A8 Training and Certificates

Required training and licenses:

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Principal Geologist	Bryan T. Shane, P.G.	Professional Geologist	10/30/1993	State of South Carolina	1102
Senior Scientist	Jeff Coleman	OSHA 40 hr HAZWOPER	7/27/2007	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	7/27/2011	N/A	N/A
Staff Geologist	John Bryant	OSHA 40 hr HAZWOPER	4/17/2009	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	3/5/2012	N/A	N/A
Field Technician	Brian Owen	OSHA 40 hr HAZWOPER	8/21/2009	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	12/15/11	N/A	N/A
Staff	Courtney Sanders	OSHA 40 hr	12/10/2010	N/A	N/A

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Biologist		HAZWOPER			
		OSHA 8 hr HAZWOPER refresher	12/15/11	N/A	N/A
Staff Biologist	Kyle Pudney	OSHA 40 hr HAZWOPER	12/10/2010	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	12/15/11	N/A	N/A
Staff Biologist	Chris Lashley	OSHA 40 hr HAZWOPER	12/10/2010	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	12/15/11	N/A	N/A
Staff Biologist	Gavin Globensky	OSHA 40 hr HAZWOPER	7/29/2011	N/A	N/A
Staff Biologist	Ryan Ariail	OSHA 40 hr HAZWOPER	9/23/2011	N/A	N/A
Staff Geologist	Joey Scherpenberg	OSHA 40 hr HAZWOPER	07/20/2012	N/A	N/A
Staff Geologist	Patrick Boylan	OSHA 40 hr HAZWOPER	07/20/2012	N/A	N/A
Staff Geologist	Darcie Odom	OSHA 40 hr HAZWOPER	07/20/2012	N/A	N/A
Lab Manager	Michael Woodrum	***	***	Lab Certification	SC 32010

Table 3A Required Training and Licenses

Courtney M. Sanders of Midlands Environmental Consultants, Inc. is responsible to ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location: 235-B Dooley Road, Lexington, SC 29073.

It is understood that training records will be produced if requested by SC DHEC.

The Following Laboratory(ies) will be used for this Project:

Commercial Lab(s)

Full Name of the Laboratory Shealy Environmental Services, Inc.

Name of Lab Director Michael Woodrum

SC DHEC Certification Number 32010

Parameters this Lab will analyze for this project:

All samples will be analyzed for BTEX, Napth, MTBE, 1,2 DCA, 8-Oxygenates (EPA Method 8260-B), and EDB (EPA Method 8011).

Please note: SC DHEC may require that the contractor submit some or all of the Laboratory's SOPs as part of this QAPP.

A9 Documents and Records

Personnel will receive the most current version of the QAPP Addendum via:
 (Check all that apply)

US Mail Courier Hand delivered

Other (please specify): E-mailed electronic copies

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Instrument Raw Data	Target, Thermospec, or Iteva software	Hardcopy and Electronic	Hardcopy: Offsite storage for 7 yrs Electronic: Two external storage device backups – one offsite, one onsite storage for 10 yrs	Yes
Final Reports	LIMS	Electronic	Electronic: Two external storage device backups – one offsite, one onsite storage for 10 years	Yes
Field Work	Field Staff	Hardcopy	MECI office: 235/B Dooley Road / Min. 5 years	Yes
Chain of Custody	Field Staff	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
QAPP Addendum	Brendon Kelly	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes
Internal QC record	Brendon Kelly	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
Sampling Report	Brendon Kelly	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes

Table 4A Record Identification, Storage, and Disposal

Section B Measurement/Data Acquisition

B1 Sampling Process/Experimental Design

Item	Start Date	End Date	Comments
Site Reconnaissance	7/30/12	7/30/12	Already Completed
QAPP preparation	8/16/12	8/16/12	In progress
QAPP approval	8/17/12	9/7/12	Assuming three week turnaround
Monitoring well Sampling	9/8/12	9/22/12	Sampled within 2 weeks of QAPP approval

Item	Start Date	End Date	Comments
Report Preparation	9/23/12	10/14/12	Three weeks to prepare/submit report

Table 5A Sampling Activities

B2 Sampling Methods

Please note: The contractor must follow sampling protocols as given in the UST QAPP.

Estimate the number of samples of each matrix that are expected to be collected:

Soil	_____
Ground Water from monitoring wells	_____ 23 _____
From Drinking/Irrigation water wells	_____ 9 _____
Field Duplicate Collection	_____ 2 _____
Field Blank Collection	_____ 1 _____
Trip Blank	_____ 1 _____
From surface water features	_____ 3 _____
Total number of Water samples	_____ 39 _____

Notes:

During the July 30, 2012 site visit, twenty three (23) monitoring wells, nine (9) water supply wells, and three (3) surface water features were located.

During the initial site visit it was noted that all located monitoring wells were in good condition.

All monitoring well samples will be analyzed by Shealy Environmental Services, Inc. for BTEX, Naphthalene, MTBE, 1,2 DCA, 8-Oxygenates (8260B), and EDB (8011).

For the sample matrices indicated above, please describe how samples will be collected and the equipment needed.

Please see MECI Monitoring Well Sampling SOP for sampling procedures and type of materials used for sampling

Will Sampling Equipment have to be cleaned and decontaminated or is everything disposable?

All equipment, excluding electronic water level indicators, field probes and turbidity tubes, is disposable.

If sampling equipment must be cleaned please give a detailed description of how this is done and the disposal of by-products from the cleaning and decontamination.

Please see MECI Monitoring Well Sampling SOP for decontamination procedures.

Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.

All samples will be shipped to the lab via courier or overnight shipping company. Please see MECI Monitoring Well Sampling SOP for sample shipping procedures.

Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.

Failure	Response	Documentation	Individual Responsible
Water level indicator not working properly	Attempt to clean probe, change battery, use back-up indicator if need be.	Record on field sheets, notify office staff. Take indicator out of rotation until problem identified and corrected.	Field Staff, Field Manager
Field meters not working	Attempt to clean probes, recalibrate in the field.	Record on field sheets, notify office staff. Take meters out of rotation until problem identified and corrected.	Field Staff, Field Manager
Wells not located	Use metal detector, measure from known points, contact project manager for additional information.	Record method used to attempt to locate the well on field sheets, and possibly reasoning for the well to be missing	Field Staff

Table 6A Field Corrective Action

B3 Sample Handling and Custody

1. How will the samples get from the Site to the Lab to ensure holding requirements are met?

Following sample collection, the samples are immediately place in a laboratory provided cooler, pre-filled with wet ice obtained from the MECI office. Samples are transported to the MECI office once a sampling event is complete. A Chain of Custody (CoC) is filled out following the sampling event by the field staff. See attached CoC. If a lab provided courier is scheduled to visit the MECI offices the day following a sampling event, sampling coolers are repacked with wet ice, and left at the office for pick-up the following morning. If no courier is schedule to visit the MECI office the day following a sampling event, all sampling coolers are repacked with ice and are dropped off at a lab approved shipping company for overnight delivery to the lab.

2. How will the contactors cool the samples and keep the samples cool?

All samples are kept on wet ice, obtained from MECI office.

3. How will the lab determine the temperature of the samples upon receipt? Will they be using a temperature blank?

A calibrated thermometer and temperature blank will be used to document sample temperature. The temperature blank is immediately checked by the sample receiving technician upon arrival at the laboratory.

4. Where will the samples be stored in the Lab once they are received?

All samples are stored in clean refrigeration units monitored and maintained at 4 degrees C + or - 2 degrees. Volatile organic samples are stored separately from all other samples.

5. Describe the chain of custody procedure and attach a copy of each chain of custody that will be used. If a Chain of Custody SOP exists from the Lab and the Contractor is willing to adhere to it, then this may be attached.

A chain of custody (COC) will be filled out for each sampling event at each project site. COC to be signed by MECI and Shealy Environmental technician at time physical transfer of samples occurs to courier. Shealy uses the following COC procedures to protect sample integrity following pickup by their courier: A full time Sample Receiving Technician receives all samples and completes a Sample Receipt Checklist (SRC), which will identify any anomalies, if any exist the Sample Receiving Technician or Project Manager must resolve the deviation internally and/or notify the client to resolve the anomaly

B4 Analytical Methods

1. Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:

Parameter	SOP ID*	Method Referenced	Equipment	Comments
BTEX+Naph+MTBE+Oxygentaes	S-VO-002	8260B	GC/MS	
PAH's	S-SV-021	8270D	GC/MS	
EDB	S-SV-012	8011	GC	
Lead,T.	S-IM-022	6010C	ICP	
Ferrous Iron	S-IN-009	SM 3500-FED	Spectrophotometer	
Nitrate	S-IN-042	353.2	Auto-analyzer/Lachate	
Sulfate	S-IN-010	300.0	Ion Chromatograph	
Methane	S-VO-004	RSK-175	GC	
TOC	S-IN-030	Walkley-Black	N/A	
DRO - TPH	S-SV-001	8015C	GC	
pH	MECI SOP 4.3.6	*	YSI 63	
Conductivity	MECI SOP 4.3.6	*	YSI 63	
Dissolved Oxygen	MECI SOP 4.3.6	*	YSI 550A	

Temperature	MECI SOP 4.3.6	*	YSI 550A	
Turbidity	MECI SOP 4.3.6	*	60 cm Turbidity Tube	

Table 7A Analytical SOPs and Referenced Methods

- This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

Abbreviation	Lab Identification of this SOP	Full Name of the SOP
S-VO-002	S-VO-002	GC/MS VOLATILES ANALYSIS BASED ON EPA METHODS 8260B AND 624 PREPARED BY EPA METHODS 5030B, 5035 AND 3585
S-SV-021	S-SV-021	GC/MS ANALYSIS BASED ON EPA METHOD 8270D PREPARED BY EPA METHODS 3520C, 3550C AND 3580A
S-SV-012	S-SV-012	GC/ECD ANALYSIS OF EDB AND DBCP BASED ON METHOD 8011 & 504.1
S-IM-022	S-IM-022	INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPECTROSCOPY-PECTROMETRIC METHOD for TRACE ELEMENT ANALYSES METHOD 6010C
S-IN-009	S-IN-009	FERROUS IRON (PHENANTHROLINE METHOD) STANDARD METHOD 3500-Fe D
S-IN-042	S-IN-042	NITRATE+NITRITE NITROGEN BY EPA METHOD 353.2, NITRATE NITROGEN BY 353.2 SUBTRACTION, AND NITRITE NITROGEN BY EPA METHOD 353.2
S-IN-010	S-IN-010	INORGANIC ANIONS BY ION CHROMATOGRAPHY EPA METHOD 300.0 and SW-846 9056 and 9056A
S-VO-004	S-VO-004	STANDARD OPERATING PROCEDURE GC ANALYSIS BASED ON METHOD RSKSOP-175
S-IN-030	S-IN-030	TOTAL ORGANIC CARBON (TOC) WALKLEY-BLACK PROCEDURE
S-SV-001	S-SV-001	GC/FID DIESEL RANGE ORGANICS ANALYSIS BASED ON METHOD 8015B and/or 8015C PREPARED BY EPA METHODS 3520C, 3550C and 3580A
MECI SOP 4.3.6	MECI SOP 4.3.6	Sampling Standard operating procedures

Table 8A SOP Abbreviation Key

- Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Failure	Response	Documented Where?	Individual Responsible
Field meters not working	Attempt to clean probes, recalibrate in the field.	Record on field sheets, notify office staff. Take meters out of rotation until problem identified and corrected.	Field Staff, Field Manager
COC or	Call Client	Sample Receiving Checklist	PM – Kelly Maberry

Sample Receiving issues		(SRC)	kmaberry@shealylab.com
Analytical errors	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.com
QA/QC Failure	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.com QA/QC Officer – Jami Savje Jsavje@shealylab.com
On time delivery	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.com QA/QC Officer – Jami Savje Jsavje@shealylab.com

Table 9A Corrective Action Procedures

3. Identify sample disposal procedures.

Analysis	Matrix	Schedule for disposal	Method for disposal	Comments
BTEX+Naph+MTBE+Oxygenates	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
PAH's	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
EDB	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
Lead	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as	

			Hazardous or non-Hazardous waste.	
Ferrous Iron	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
Nitrate,Sulfate	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
Methane	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
All	Water	On-Site	Portable Granulated Activated Carbon (GAC) Unit	All waste water produced from sampling and decontamination activities will be run through a GAC unit

Table 10A Sample Disposal Procedures

4. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. Identify all field and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Note the availability and location of spare parts.

Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible
Volatiles Mass Spec	Shealy SOP S-SV-021 Page 7	Change traps, clean ion source, replace filaments	Periodic	Laboratory	MSV Analyst
Semivolatile Mass Specc	Shealy SOP S-SV-021 Page 7	Injection port maintenance, ion source maintenance, column replacement	Periodic	Laboratory	MSSV Analyst
ECD GC	Shealy SOP S-SV-012 Page 5	Injection port maintenance, column replacement	Periodic	Laboratory	GC Analyst
Dionex IC	Shealy SOP S-IN-010 Page 6	Replace auto sampler filter, tubing, line filter, sample Line and Waste Line, as needed. Check Reagent levels, flow rate, waste line.	Periodic	Laboratory	IC Analyst
ICP	Shealy SOP S-IM-005 Page 6 & 7	Clean Sample introduction system , auto sampler, torch, Change spray chamber, torch tubing, tubing	Periodic	Laboratory	ICP Analyst
Leeman Mercury Analyzer	Shealy SOP S-IM-006 Page 5	Clean GLS, Change Pump tubing, Nafion Dryer, Lamp	Periodic	Laboratory	Mercury Analyst
Flow Injection Analysis – Lachat 8000	Shealy SOP S-IN-042 Page 5	Replace sample and reagent lines, replace light source, re-wrap heating coil, replace column	Periodic/As Needed	Laboratory	Nitrate Analyst
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace probe tip	Yearly	Order from YSI	C. Sanders
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace batteries	As Needed	In stock at office	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	General inspection for wear and tear on equipment	Daily	Major fixes will be done out of office	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	Check buffer solutions for expiration	Weekly	In stock at office	C. Sanders
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace membrane	4 to 8 weeks	In stock at office	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace batteries	As Needed	In stock at office	Field Staff

YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	General inspection for wear and tear on equipment	Daily	Major fixes will be done out of office	Field Staff
Turbidity Tube	#1, #2, #3	General inspection for wear and tear on equipment, clarity of Secchi Disk	Daily	Tubes will be cleaned/fixed in office	Field Staff

Table 11A Instrument and Equipment Maintenance

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this

Instrument/Equipment & Serial Number	Type of Inspection	Requirement	Individual Responsible	Resolution of Deficiencies
Volatiles Mass Spec Shealy SOP S-SV-021 Page 7	Daily calibration check	Method Requirements	MSV Analyst	Recalibration or instrument maintenance
Semi-volatiles Mass Spec Shealy SOP S-SV-021 Page 7	Daily calibration check	Method Requirements	MSSV Analyst	Recalibration or instrument maintenance
ECD GC Shealy SOP S-SV-012 Page 5	Daily calibration check	Method Requirements	GC Analyst	Recalibration or instrument maintenance
Dionex IC Shealy SOP S-IN-010 Page 6	Daily calibration check	Method Requirements	IC Analyst	Recalibration or instrument maintenance
ICP Shealy SOP S-IM-005 Page 6 & 7	Daily calibration check	Method Requirements	ICP Analyst	Recalibration or instrument maintenance
Leeman Mercury Analyzer Shealy SOP S-IM-006 Page 5	Daily calibration check	Method Requirements	Mercury Analyst	Recalibration or instrument maintenance
Flow Injection Analysis – Lachat 8000 Shealy SOP S-IN-042 Page 5	Daily and continuing calibration check	See calibration criteria	Nitrate Analyst	Recalibration or instrument maintenance
YSI 63 - 09C 101302, 10K 101895, 07M 100905	Daily calibration check	See calibration criteria	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer
YSI 550A - 04L 2026AK, 08B 101407, 04A 0912AI	Daily calibration check	See calibration criteria	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer

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Table 12A Instrument and Equipment Inspection

B7 Instrument Calibration and Frequency

1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
Volatiles Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by continuous calibration verification standard	Method Criteria	Detailed in SOP	MSV Analyst	S-VO-002
Semi-volatile Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	MSSV Analyst	S-SV-021
GC ECD	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	GC Analyst	S-SV-012
Dionex IC	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	IC Analyst	S-IN-010
ICP	Minimum of 3 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	ICP Analyst	S-IM-022
Cetac Mercury Analyzer	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	Mercury Analyst	S-IM-006
Lacaht QuickChem 8000	Minimum of 5 calibration standards	Daily or when indicated by calibration verification standard	Method Criteria	Detailed in SOP	Nitrate Analyst	S-IN-042
YSI 63	pH Calibration	Daily	+/- 0.2 pH units	clean/replace probe tip, recalibrate	Field Staff	4.3.6
YSI 63	Conductivity	As directed by	+/- 10 uS	clean/replace	Field Staff	4.3.6

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
	Calibration	manufacturer		probe tip, recalibrate		
YSI 550A	DO calibration	Daily	+/- 0.25 mg/l	clean/replace probe tip, recalibrate	Field Staff	4.3.6
YSI 550A	Temperature Calibration	Daily	+/- 1 °C	clean/replace probe tip, recalibrate	Field Staff	4.3.6
Electronic Water Level Indicator	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff	***
Oil/Water Interface probe	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff	***

Table 13A Instrument Calibration Criteria and Corrective Action

* This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

B8 Inspection/Acceptance Requirements for Supplies and Consumables

1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
2. Identify the individual(s) responsible for this.

Item	Vendor	Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.
Laboratory Chemicals	Fisher, VWR	Certificates of analysis and laboratory testing	Laboratory storage	Receiving and laboratory personnel
Laboratory standards	O2Si, Restek, High Purity, VHG, Supelco	Certificates of analysis and laboratory verifications	Vendor specific storage conditions	Laboratory Analysts
Sample Containers	Daniels Scientific, QEC	Certificates of analysis and laboratory testing	Bottle storage area	Sample receiving personnel
Clear, Disposable polyethylene Bailers	Preferred Pump	Individual sleeves intact, ball valve operational	Stored in Vehicle Bay, Off of the ground	C. Sanders, Field Staff
Nylon Rope	Preferred Pump	Covered with plastic	Stored in Vehicle Bay, Off of the ground	C. Sanders, Field Staff
Nitrile Gloves	Preferred Pump	Unopened box, no holes	Stored in Vehicle Bay, Off of the ground	C. Sanders, Field Staff
40 mL HCL preserved amber vials	Shealy Environmental Services	Custody seal intact	Stored in Vehicle Bay, Off of the ground	C. Sanders, Field Staff
250 mL HNO3 preserved metals vials	Shealy Environmental Services	Custody seal intact	Stored in Vehicle Bay, Off of the ground	C. Sanders, Field Staff

Coolers	Shealy Environmental Services	Intact	Stored in Vehicle Bay, Off of the ground	C. Sanders, Field Staff
pH Buffer	TRS Environmental, Enviroequipment	Within expiration date	Stored in calibration room	C. Sanders, Field Staff
Conductivity Standard	TRS Environmental, Enviroequipment	Within expiration date	Stored in calibration room	C. Sanders, Field Staff
DO Membranes	YSI, Enviroequipment	Clean, in box	Stored in calibration room	C. Sanders, Field Staff
Batteries	Any Store	Not previously used	Stored in calibration room	C. Sanders, Field Staff

Table 14A List of Consumables and Acceptance Criteria

B9 Data Acquisition Requirements (Non-Direct Measurements)

1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
3. Indicate the acceptance criteria for these data sources and/or models.

Data Source	Used for	Justification for use in this project	Comments
Historical Data	Site Maps and Well Construction Information	Well Location and Detail	

Table 15A Non-Direct Measurements

4. Identify key resources/support facilities needed.

There are no non-direct measurements in this project

B10 Data Management

1. Describe the data management scheme from field to final use and storage.

Following sample collection and chain of custody production, samples are shipped to the lab. Field work from the field staff is reviewed by the MECI project manager, and converted into digital form. All data entry is subsequently checked to validate the data entry. The original copies of the field work are stored in MECI files for a minimum of 5 years. Digital copies of the work are stored on the MECI server, which is backed up weekly, and stored for a minimum of 5 years. The digital copy of the field work is presented to SCDHEC with the final report.

2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?

The laboratory maintains comprehensive Quality Control and Training Programs. All sample receipt data, sample log-in, and analytical data is peer reviewed, including review for inappropriate changes. Data management, review procedures and the Quality Systems Program are documented in the laboratory's Quality Manual and Standard Operating Procedures. The Quality Assurance Department oversees adherence to and review of these programs.

All MECI field work is produced using ink-pens. Any attempt to alter field data, after sampling is complete, can be readily identified. MECI keeps a carbon copy of the chain of custody after it is shipped to the lab. This copy is kept with the field work. If any change to the CoC are suspected, this original carbon copy can be use to identify potential changes.

3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted?

Sample data acquisition software is reviewed periodically. The LIMS database is backed up daily and is able to be restored in the event of a system failure. These procedures are documented in laboratory SOP S-AD-003, LIMS. The IT Manager is responsible for these systems and procedures."

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Laboratory Hardcopy data stored off site is logged, maintained and archived by the Quality Assurance Department. Laboratory Electronic Data Reports are maintained through IT back up under the responsibility of the IT Systems Manager.

MECI keeps all field work and paper copies of reports in its in-house filing system. All paper copies are stored for a minimum of 5 years. Any file can be retrieved easily by going to the correct filing cabinet/box.

All electronic copies of reports generated are kept on the MECI server. This server is backed-up on a weekly basis. Any file stored on the MECI server can be retrieved instantly, by accessing the server. All electronic files are stored for a minimum of 5 years on the server.

Section C Assessment and Oversight

C1 Assessment and Response Actions

1. *The Contractor is supposed to observe field personnel daily during sampling activities to ensure samples are collected and handled properly and report problems to DHEC within 24 hours. . Please state who is responsible for doing this and what observations will be made. Will this person have the authority to stop work if severe problems are seen?*

Field audits can be conducted on any field personnel at any time. MECI field audits can be conducted by the Field Manger, who will be responsible for ensuring that field personnel adhere to the QAPP. If during a random field audit, severe problems are found, work will be stopped by the field manager and the QA officer contacted to determine corrective action. All problems must be corrected prior to any additional work being performed. Should it be requested, an On-site Field Audit can be scheduled with the SCDHEC project manager. If severe problems are identified by the SCDHEC project manager, the project manager can stop the work until the problems are corrected.

2. *The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done on the Commercial Lab(s) that are being used—other than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?*

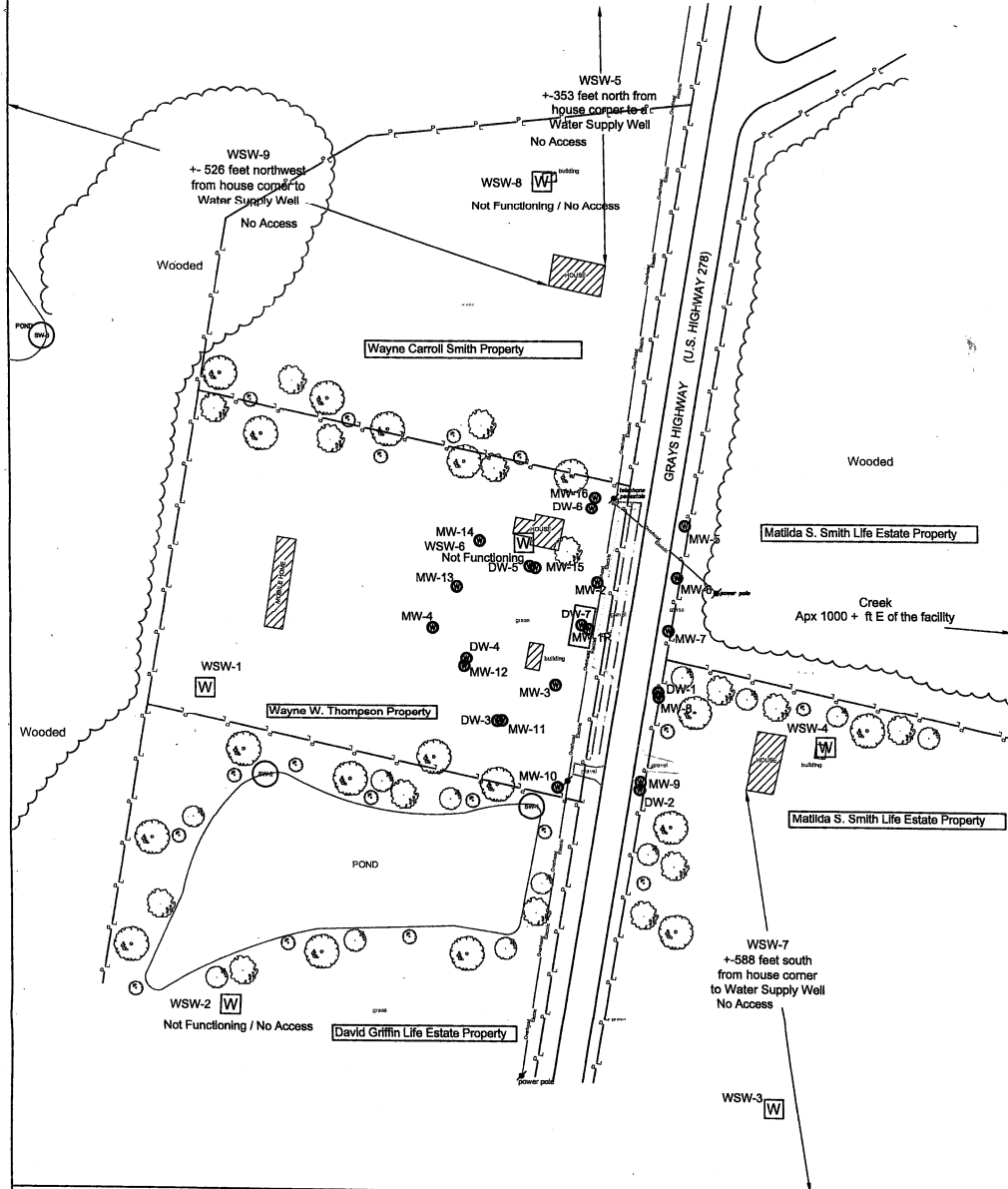
The laboratory participates in annual Proficiency Testing through an approved vendor, Wibby Environmental. If during a random audit, severe problems are found, work will be stopped by the according Wibby Environmental representative and the QA officer contacted to determine corrective action. Proficiency Testing results are provided to the Office of Environmental Laboratory Certification.

C2 Reports to Management

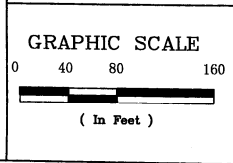
See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Section D Data Validation and Usability

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).



Notes
 1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes



Legend	
	UST Basin
	Building
	Monitoring Well
	Water Supply Well
	Property Line
	Surface Water Sample

Figure 2
 Site Facility Base Map
 Steady Simmons
 16661 Grays Highway
 Early Branch, SC 29916

Project Mgr: JSR
 Drawn by: JSR
 Checked by: HDO

CRAWFORD ENVIRONMENTAL SERVICES
 104 Corporate Blvd, Suite 412
 West Columbia, SC 29201
 803-708-0079 (ph)
 803-708-8136 (fx)

Project No: 15.103
 Date: 5/4/12
 Revision: 0
 USF Permit ID: 18856



Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 11725

Form with sections for Client, Report to Contact, Sampler, Quote No., Address, Telephone No., Waybill No., City, State, Zip Code, Preservative, Project Name, Project Number, P.O. Number, Matrix, Analysis, Sample ID / Description, Date, Time, G-Grab, C-Composite, GW, DW, WW, S, Other, Remarks / Cooler ID, Turn Around Time Required, Sample Disposal, QC Requirements, Possible Hazard Identification, and a table for Relinquished/Received by.

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY

Received on Ice (Check) Yes No Ice Pack

Receipt Temp. °C

Temp. Blank Y / N



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment



BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

AUG 21 2012

Re: **Notice to Proceed-Groundwater Sampling/QAPP Contractor Addendum Approval**
Groundwater Sampling Contract
Solicitation # IFB-5400002759, PO#4600088529
Steady Simmons, 16661 Grays Hwy., Early Branch, SC
UST Permit #18856; Shealy CA #44228; Midlands CA #44227
Jasper County

Dear Mr. Shane:

In accordance with bid solicitation # IFB-5400002759 and the UST Management Division Quality Assurance Program Plan (QAPP), the Site-Specific Contractor Addendum has been reviewed and approved. In accordance with the QAPP, a status report of the project should be provided on a weekly basis via e-mail. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered, including quality assurance problems, the actions taken, and the results must be included in the final report submitted to the UST Management Division.

MECI will perform services at the site on behalf of the site's responsible party (RP); however, payment will be made using American Recovery and Reinvestment Act (ARRA) funds. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the final report. The ARRA Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs. **Please note, the final report is due within 3 weeks from the date the site is sampled. If the site is not sampled by the specified due date or the report is not received in the specified time period, a late fee may be imposed.**

The final report should contain the requirements of Section III.2.15 of the bid solicitation. The final report should be submitted to Debra Thoma, the contract manager.

Page 2

If you have any site-specific questions, please contact me at (803) 896-6584 or via e-mail at minerrs@dhec.sc.gov. If you have any contract specific questions, please contact Debra Thoma at (803) 896-6397 or via e-mail at thomadl@dhec.sc.gov.

Sincerely,



Read S. Miner, P.G., Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Approved QAPP Contractor Addendum Signature Page
Approved Cost Agreement

cc: Debra Thoma, Corrective Action Section, UST Management Division
Kelly Maberry, Shealy Environmental, 106 Vantage Point Dr., West Columbia, SC, 29172 (w/ approved CA)
Technical Files (w/ Finalized & Approved QAPP)

Approved Cost Agreement 44228

Facility: 18856 STEADY SIMMONS

SMITHA2

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
11 ANALYSES					
	GW GROUNDWATER	A1 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	40.0000	35.00	1,400.00
		F EDB	40.0000	20.00	800.00
			Total Amount		2,200.00

Approved Cost Agreement 44227

Facility: 18856 STEADY SIMMONS

SMITHA2

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
04 MOB/DEMOB		B PERSONNEL	3.0000	100.00	300.00
10 SAMPLE COLLECTION		A GROUND WATER	7.0000	4.50	31.50
		C WATER SUPPLY	13.0000	2.00	26.00
		D GROUNDWATER NO-PURGE	18.0000	4.50	81.00
		H FIELD BLANK	1.0000	2.00	2.00
17 DISPOSAL		A WASTEWATER	50.0000	0.10	5.00
18 MISCELLANEOUS		QAPP PREP	1.0000	0.00	0.00
Total Amount					445.50

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For

Steady Simmons, SCDHEC Site ID# 18856

16661 Grays Highway, Early Branch, South Carolina

Prepared by:
Courtney M. Sanders
Staff Biologist
Midlands Environmental Consultants, Inc.
(Certified Site Rehabilitation Contractor UCC-0009)
235-B Dooley Road
Lexington, SC 29073
(803)808-2043

Date: August 16, 2012

Approvals

Stephanie Briney
SC DHEC Project Manager

Read & Minors for Date 8-20-12
Signature

Courtney M. Sanders
Contractor QA Manager

[Signature] Date 8/16/12
Signature

Jeff L. Coleman
Site Rehabilitation Contractor

[Signature] Date 8/16/12
Signature

Michael Woodrum
Laboratory Director

[Signature] Date 8/16/2012
Signature



September 11, 2012

Ms. Debra Thoma, Hydrogeologist
Corrective Action Section
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: Report of Groundwater Sampling
Steady Simmons
16661 Grays Highway
Early Branch, South Carolina
SCDHEC Site ID Number 18856; CA # 44227
MECI Project Number 12-4112
Certified Site Rehabilitation Contractor UCC-0009



Dear Ms. Thoma,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Groundwater Sampling for the referenced site. This report describes site activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control's (SCDHEC) Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP).

PROJECT INFORMATION

The subject site (Steady Simmons) is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The subject site formerly maintained one 550 gallon gasoline underground storage tank (UST) and one 1,000 gallon gasoline UST. The subject tanks were abandoned by removal from ground in July of 2002. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product from the subject tanks in September of 2002 and confirmed the release in October of 2002. The subject site is currently rated a Class 2BB.

The above information is based on reports and correspondence obtained from MECI field notes and SCDHEC files.

MONITORING WELL SAMPLING AND CHEMICAL ANALYSIS

On September 6, 2012, MECI personnel collected groundwater samples from twenty-three (23) monitoring wells, five (5) water supply wells and three (3) surface waters at the subject site. One monitoring well (MW-1) was not located during field activities. Three (3) water supply wells were found to be not functioning and we were unable to obtain access to one water supply well (WSW-5).

MECI personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase petroleum product level measurements. Based on a request by SCDHEC personnel, not all of the wells were to be purged prior to sampling. Ten (10) monitoring wells were purged prior to sampling. Purging was completed by bailing at least three well volumes of water from the wells, until pH, conductivity, dissolved oxygen stabilized to within 10%, or all water was evacuated from the well, whichever occurred first. Sampling/purging was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. A new set of nitrile gloves were worn at each monitoring well, and at all time samples were handled. Field measurements of pH, conductivity, dissolved oxygen, water temperature, and turbidity were obtained before well sampling process. MECI utilized YSI550A meter for DO (mg/L) and temperature readings (°C), YSI63 meters for pH and conductivity (uS) readings and a 60 cm turbidity tube for turbidity readings. The attached Field Data Information Sheets presents the results of the field measurements obtained. The wells were sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP, Dated June 2011) and MECI's Standard Operating Procedures (MECI SOP, Dated August, 2011).

Groundwater samples obtained were sent to Shealy Environmental Services, Inc. of West Columbia, SC (SCDHEC Laboratory Certification #32010) for analysis.

The following sampling matrix contains well development and requested analyses for each well:

Monitoring Well	Purge	No Purge	Gauge Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.3)	Nitrate (EPA Method 353.3)	Methane (MSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
Analyte Sampled														
MW-1				X										
MW-1R		X			X	X	X	X						
MW-2		X			X	X	X	X						
MW-3	X				X	X	X	X						
MW-4		X			X	X	X	X						
MW-5		X			X	X	X	X						
MW-6		X			X	X	X	X						
MW-7		X			X	X	X	X						
MW-8		X			X	X	X	X						
MW-9		X			X	X	X	X						
MW-10		X			X	X	X	X						
MW-11		X			X	X	X	X						
MW-12	X				X	X	X	X						
MW-13		X			X	X	X	X						
MW-14		X			X	X	X	X						
MW-15	X				X	X	X	X						
MW-16		X			X	X	X	X						
DW-1	X				X	X	X	X						
DW-2	X				X	X	X	X						

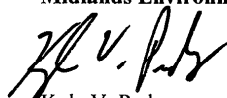
Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dichloroethane
PAH = polycyclic aromatic hydrocarbons
Trip Blank provided by Shealy Environmental, temperature obtained upon receipt at Laboratory

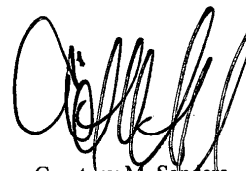
Monitoring Well	Purge	No Purge	Gauge Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Analyte Sampled						
									Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)	
DW-3	X				X	X	X	X							
DW-4	X				X	X	X	X							
DW-5	X				X	X	X	X							
DW-6	X				X	X	X	X							
DW-7	X				X	X	X	X							
WSW-1		X			X	X	X	X							
WSW-2				X											
WSW-3		X			X	X	X	X							
WSW-4		X			X	X	X	X							
WSW-5				X											
WSW-6				X											
WSW-7		X			X	X	X	X							
WSW-8				X											
WSW-9		X			X	X	X	X							
SW-1		X			X	X	X	X							
SW-2		X			X	X	X	X							
SW-3		X			X	X	X	X							
MW-2 Dup.		X			X	X	X	X							
MW-1R Dup.		X			X	X	X	X							
Field Blank		X			X	X	X	X							
Trip Blank		X			X		X	X							

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 85.0 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is attached at the end of this report.

Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.


Kyle V. Pudney
Staff Biologist


Courtney M. Sanders
Staff Biologist

Attachments:

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	X		
2	Is UST Owner/Operator name, address, & phone number provided?			X
3	Is name, address, & phone number of current property owner provided?			X
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	X		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?			X
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	X		
7	Has the facility history been summarized?	X		
8	Has the regional geology and hydrogeology been described?			X
9	Are the receptor survey results provided as required?			X
10	Has current use of the site and adjacent land been described?			X
11	Has the site-specific geology and hydrogeology been described?			X
12	Has the primary soil type been described?			X
13	Have field screening results been described?			X
14	Has a description of the soil sample collection and preservation been detailed?			X
15	Has the field screening methodology and procedure been detailed?			X
16	Has the monitoring well installation and development dates been provided?			X
17	Has the method of well development been detailed?			X
18	Has justification been provided for the locations of the monitoring wells?			X
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?			X
20	Has the groundwater sampling methodology been detailed? See MECI SOP	X		
21	Have the groundwater sampling dates and groundwater measurements been provided? See attached Site Activity Summary Sheet	X		
22	Has the purging methodology been detailed? See MECI SOP	X		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? See attached Field Data Information Sheets	X		
24	If free-product is present, has the thickness been provided? See attached Site Activity Summary Sheets	X		
25	Does the report include a brief discussion of the assessment done and the results?			X
26	Does the report include a brief discussion of the aquifer evaluation and results?			X
27	Does the report include a brief discussion of the fate & transport models used?			X

Item#	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			X
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			X
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			X
31	Have recommendations for further action been provided and explained?			X
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			X
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)			X
34	Has the current and historical laboratory data been provided in tabular format?			X
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			X
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			X
37	Has the topographic map been provided with all required elements? (Figure 1)	X		
38	Has the site base map been provided with all required elements? (Figure 2)	X		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)			X
40	Has the site potentiometric map been provided? (Figure 5)			X
41	Have the geologic cross-sections been provided? (Figure 6)			X
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			X
43	Has the site survey been provided and include all necessary elements? (Appendix A)			X
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	X		
45	Is the laboratory performing the analyses properly certified?	X		
46	Has the tax map been included with all necessary elements? (Appendix C)			X
47	Have the soil boring/field screening logs been provided? (Appendix D)			X
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)			X
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			X
50	Have the disposal manifests been provided? See attached	X		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			X
52	Has all fate and transport modeling been provided? (Appendix I)			X
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			X
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	X		

Site Activity Summary

UST Permit #: 18856
Facility Name: Steady Simmons
County: Jasper
Field Personnel: Brian Owen, Darcie Odom


 Midlands
 Environmental
 Consultants, Inc.
 235-B Dooley Road, Lexington, SC 29073
 (803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-1	N	9/6/12	***	2-12	***	***	***	***	***	Not Located
MW-1R	Y	9/6/12	13:29	7-17	***	7.70	***	Sheen	***	Odor / Sheen
MW-2	Y	9/6/12	12:48	7-17	***	8.21	***	1.06	***	No Odor
MW-3	Y	9/6/12	13:42	7-17	***	5.61	***	0.97	3.0	Odor
MW-4	Y	9/6/12	12:09	7-17	***	8.25	***	1.75	***	No Odor
MW-5	Y	9/6/12	10:23	5-15	***	9.63	***	2.46	***	No Odor
MW-6	Y	9/6/12	10:24	5-15	***	9.69	***	2.06	***	No Odor
MW-7	Y	9/6/12	10:30	5-15	***	9.71	***	1.16	***	No Odor
MW-8	Y	9/6/12	10:44	5-15	***	9.41	***	1.47	***	No Odor
MW-9	Y	9/6/12	11:05	5-15	***	9.23	***	1.17	***	No Odor
MW-10	Y	9/6/12	11:14	5-15	***	5.80	***	1.26	***	No Odor
MW-11	Y	9/6/12	11:45	5-15	***	5.01	***	1.24	***	No Odor
MW-12	Y	9/6/12	12:00	5-15	***	4.11	***	1.03	5.5	No Odor
MW-13	Y	9/6/12	12:14	5-15	***	6.37	***	1.30	***	No Odor
MW-14	Y	9/6/12	12:27	5-15	***	7.70	***	1.06	***	No Odor
									8.5	TOTAL GALLONS PURGED

Site Activity Summary

UST Permit #: 18856
Facility Name: Steady Simmons
County: Jasper
Field Personnel: Brian Owen, Darcie Odom


**Midlands
Environmental
Consultants, Inc.**
 235-B Dooley Road, Lexington, SC 29013
 (803) 808-2043 Fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-15	Y	9/6/12	12:43	10-20	***	7.90	***	1.36	4.0	No Odor
MW-16	Y	9/6/12	13:03	10-20	***	10.06	***	1.29	***	No Odor
DW-1	Y	9/6/12	10:42	35-40	***	10.85	***	1.70	14.0	No Odor
DW-2	Y	9/6/12	11:02	35-40	***	12.86	***	1.42	13.0	No Odor
DW-3	Y	9/6/12	11:43	35-40	***	10.49	***	1.44	14.5	No Odor
DW-4	Y	9/6/12	11:51	33-38	***	19.22	***	1.39	2.5	No Odor
DW-5	Y	9/6/12	12:47	33-38	***	9.96	***	1.40	14.0	No Odor
DW-6	Y	9/6/12	13:05	31-36	***	11.87	***	1.34	12.0	No Odor
DW-7	Y	9/6/12	13:25	31-36	***	10.71	***	1.14	2.5	No Odor
WSW-1	Y	9/6/12	13:48	***	***	***	***	***	***	No Odor
WSW-2	N	9/6/12	***	***	***	***	***	***	***	Not Functioning
WSW-3	Y	9/6/12	14:00	***	***	***	***	***	***	No Odor
WSW-4	Y	9/6/12	13:55	***	***	***	***	***	***	No Odor
WSW-5	N	9/6/12	***	***	***	***	***	***	***	No Access
WSW-6	N	9/6/12	***	***	***	***	***	***	***	Not Functioning
									85.0	TOTAL GALLONS PURGED

**South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling**

Date (mm/dd/yy): 9/6/2012

Field Personnel: Brian Owen, Darcie Odom

General Weather Conditions: Partly Cloudy

Ambient Air Temperature: 30.0 °C

Quality Assurance

<u>pH/Conductivity Meter</u>		<u>DO Meter</u>	
<u>YSI 63</u>		<u>YSI 550A</u>	
09C 101302	<u>X</u>	04L 2026AK	<u>X</u>
10K 101895	<u> </u>	08B 101895	<u> </u>
07M 100905	<u> </u>	04A 0912AI	<u> </u>
Calibration Buffer:	<u>4, 7, & 10</u>		

Chain of Custody

<u>Relinquished by</u>	<u>Date/Time</u>	<u>Received by</u>	<u>Date/Time</u>
------------------------	------------------	--------------------	------------------

Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # DW-7

Water Supply Well Public Private

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: feet

Depth to Free Product (DFP) feet

Depth to Ground Water (DGW) 10.71 feet

Total Well Depth (TWD) 36 feet

Length of the water column (LWC=TWD-DGW) 25.29 feet

1 casing volume (CV=LWC X C)= X 0.163 4.12 gallons

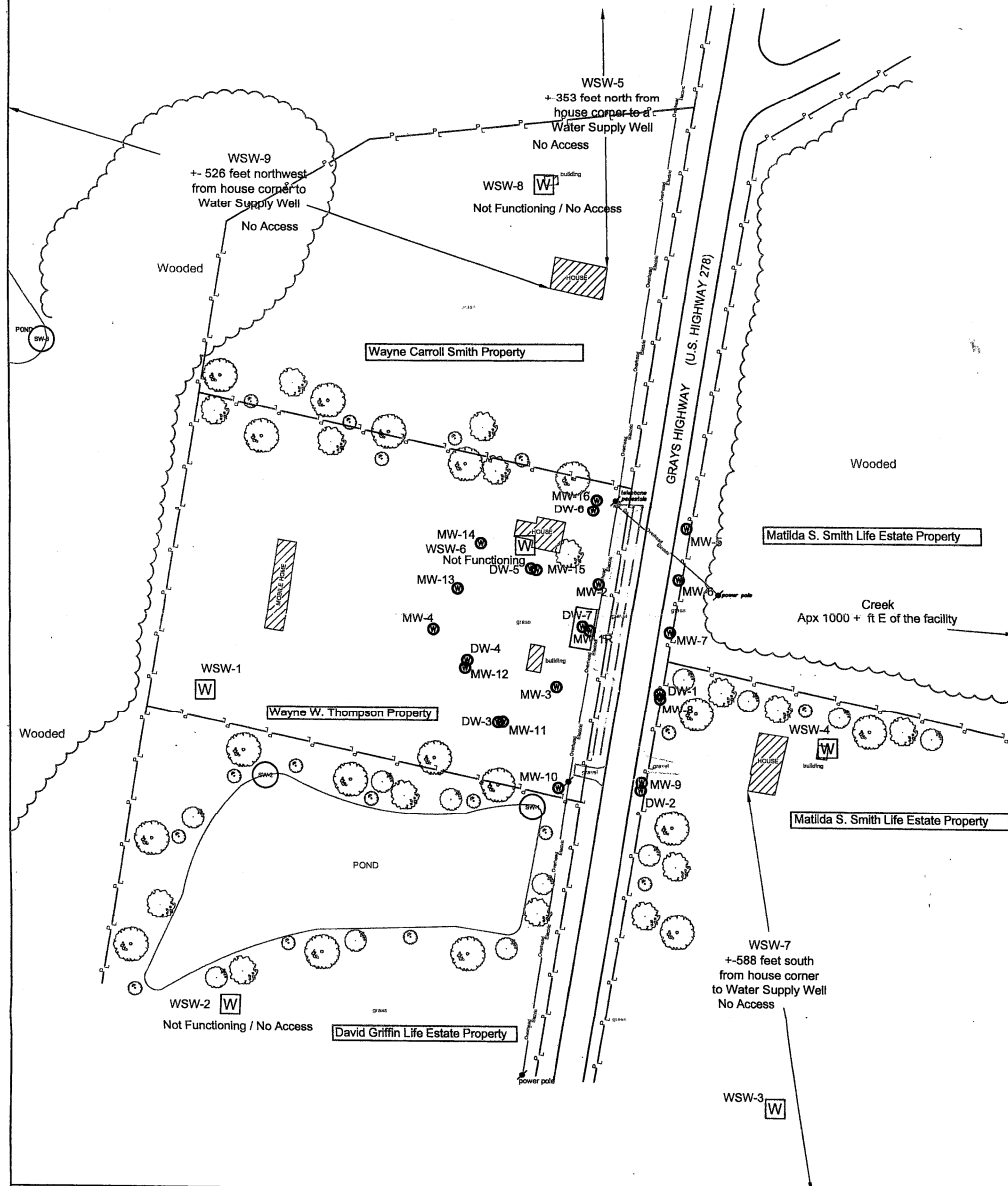
3 casing volume (3 X CV)= 3 12.37 gallons

Total Volume of Water Purged Before Sampling 2.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	13:20	13:25					
pH (s.u.)	7.56	7.44					
Specific Conductivity (µmhos/cm)	205.8	188.6					
Water Temperature (°C)	25.7	23.3					
Dissolved Oxygen	1.14	1.75					
Turbidity (NTU)	>240	>240					
PID readings, if required							

Remarks: Sample Time: 13:25 **Dry at 2.5 Gallons**



Notes
 1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes

GRAPHIC SCALE

0 40 80 160



(In Feet)

Legend	
	UST Basin
	Building
	Monitoring Well
	Water Supply Well
	Property Line
	Surface Water Sample

Figure 2
Site Facility Base Map
 Steady Simmons
 16661 Grays Highway
 Early Branch, SC 29916

Project Mgr:
 JSR
 Drawn by:
 JSR
 Checked by:
 HDO

CRAWFORD ENVIRONMENTAL SERVICES

104 Corporate Blvd, Suite 412
 West Columbia, SC 29201
 803-728-0078 (ph)
 803-728-6138 (fx)

Project No:
 15.103
 Date:
 5/4/12
 Revision:
 0
 UST Permit ID:
 18856



Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 22683

Client SCDHEC			Report to Contact D. Thelma				Sampler (Printed Name) Brian Owen				Quote No.				
Address 2600 Fall St			Telephone No. / Fax No. / Email 803-791-9700				Waybill No.				Page 1 of 4				
City Columbia	State SC	Zip Code 29201	Preservative 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.								Number of Containers				
Project Name 2007/5/20/18			Project Number 44561-122								Bottle (See instructions on back)				
Sample ID / Description (Containers for each sample may be combined on one line)			Date	Time	G=Grab C=Composite	Matrix GW DW WW S Other				Analysis				Preservative	
														Lot No.	
														Remarks / Cooler ID	
1. 1															
2. 15															
3. 5															
4. 3															
5. 4															
6. 5															
7. 6															
8. 7															
9. 2															
10. 9															
Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)			Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab				QC Requirements (Specify)				Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown				
1. Relinquished by / Sampler			Date	Time	1. Received by				Date	Time					
2. Relinquished by			Date	Time	2. Received by				Date	Time					
3. Relinquished by			Date	Time	3. Received by				Date	Time					
4. Relinquished by			Date	Time	4. Laboratory Received by				Date	Time					
Note: All samples are retained for six weeks from receipt unless other arrangements are made.						LAB USE ONLY Received on Ice (Check) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack				Receipt Temp. _____ °C		Temp. Blank <input type="checkbox"/> Y / <input type="checkbox"/> N			



Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 22685

Client SCDCC			Report to Contact D. TH...				Sampler (Printed Name) F. ...				Quote No.				
Address 7000 Falls...			Telephone No. / Fax No. / Email ...				Waybill No.				Page 3 of 4				
City Columbia	State SC	Zip Code 29201	Preservative 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.								Number of Containers				
Project Name ...											Bottle (See Instructions on back)				
Project Number ...			P.O Number ...		Matrix C=Grab C=Composite		Analysis				Preservative				
Sample ID / Description (Containers for each sample may be combined on one line)			Date	Time	GW	DW					WW	S	Other	Lot No.	
D-4			9-10	10											
D-5															
D-10				15											
D-7				15											
D-1			*	15											
D-2															
D-3			9-11												
D-4			9-11												
D-5															
D-6															
Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)			Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab				QC Requirements (Specify)				Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown				
1. Relinquished by / Sampler D. Owen			Date 9-10-17	Time 1700	1. Received by <i>[Signature]</i>				Date 9-10-17	Time 1700					
2. Relinquished by <i>[Signature]</i>			Date 9-7-17	Time 1030	2. Received by <i>[Signature]</i>				Date 9-7-17	Time 1050					
3. Relinquished by			Date	Time	3. Received by				Date	Time					
4. Relinquished by			Date	Time	4. Laboratory Received by				Date	Time					
Note: All samples are retained for six weeks from receipt unless other arrangements are made.						LAB USE ONLY Received on Ice (Check) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack		Receipt Temp. _____ °C		Temp. Blank <input type="checkbox"/> Y / <input type="checkbox"/> N					



Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 22686

Client: Report to Contact: Sampler (Printed Name): Quote No.
Address: Telephone No. / Fax No. / Email: Waybill No.: Page 1 of 4
City: State: Zip Code: Preservative: 1. Unpres. 4. HNO3 7. NaOH
Project Name: 2. NaOH/ZnA 5. HCL
Project Number: P.O Number: 3. H2SO4 6. Na Thio.
Sample ID / Description: Date: Time: G=Grab C=Composite Matrix: GW DW WW S Other Analysis
Remarks / Cooler ID
Turn Around Time Required (Prior lab approval required for expedited TAT)
Sample Disposal: QC Requirements (Specify) Possible Hazard Identification
1. Relinquished by / Sampler Date: Time: 1700 1. Received by Date: Time: 1700
2. Relinquished by Date: Time: 9-7-12 1030 2. Received by Date: Time: 9-7-12 1050
3. Relinquished by Date: Time: 3. Received by Date: Time:
4. Relinquished by Date: Time: 4. Laboratory Received by Date: Time:
Note: All samples are retained for six weeks from receipt unless other arrangements are made.
LAB USE ONLY
Received on Ice (Check) Yes No Ice Pack Receipt Temp. °C Temp. Blank Y / N



September 11, 2012

Re: Treatment of Purge Water
Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID Number 18856
MECI Project Number 12-4112

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

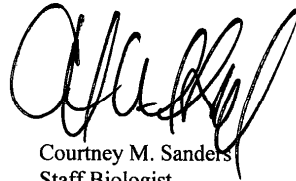
September 11, 2012

A total of 85.0 gallons were treated on September 6, 2012 at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

A handwritten signature in black ink, appearing to read 'C. Sanders', written over the printed name.

Courtney M. Sanders
Staff Biologist

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

SC DHEC - UST Management
2600 Bull Street
Columbia, SC 29201
Attention: Debra Thoma

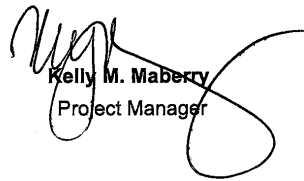


Project Name: **Steady Simmons**

Project Number: **UST Permit #18856/CA #44228**

Lot Number: **NI07029**

Date Completed: **09/18/2012**


Kelly M. Maberry
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.



SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

Case Narrative SC DHEC - UST Management Lot Number: NI07029

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample Receiving

Samples -011, -019 and -030 for volatiles analysis contained vials with air bubbles greater than ¼" or 6mm in diameter. The laboratory uses these vials for screening and the vials without bubbles for analysis whenever possible. Condition of samples is documented on the Sample Receipt Checklist (SRC).

GC/MS Volatiles

The LCS associated with batch 93273 had ethanol recovered above the acceptance limits. This demonstrates a high bias on analytical results. There were no detections for this compound in the samples associated with this batch; therefore, data quality is not impacted.

The RPD for tert-butyl alcohol exceeded method control limits in batch 93352; however, all other QA/QC criteria for this compound in the LCS/LCSD were within acceptance criteria and method control limits. The associated sample results were reported and no corrective action was required.

Samples -009, -010, -011, -013, -014, -015, -016, -017, -018, -019, -020, -021, -022, -023, -024, -026 and -027 had the surrogate 1,2-dichloroethane-d4 recovered above the acceptance limits. This reflects a high bias for compounds associated with this surrogate. There were no detections for these compounds in the samples; therefore, there is no impact on data quality and no corrective action is required.

Sample -020 was diluted 10x due to sediment in the sample vial. The reporting limits have been raised accordingly.

Sample -023 was diluted 5x due to sediment in the sample vial. The reporting limits have been raised accordingly.

EDB/DBCP

Samples -012, -017, -018, -020, -021, -022 and -023 had sediment in the sample vials that altered the final volume.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary SC DHEC - UST Management Lot Number: NI07029

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-1R	Aqueous	09/06/2012 1329	09/07/2012
002	MW-2	Aqueous	09/06/2012 1248	09/07/2012
003	MW-3	Aqueous	09/06/2012 1342	09/07/2012
004	MW-4	Aqueous	09/06/2012 1209	09/07/2012
005	MW-5	Aqueous	09/06/2012 1023	09/07/2012
006	MW-6	Aqueous	09/06/2012 1024	09/07/2012
007	MW-7	Aqueous	09/06/2012 1030	09/07/2012
008	MW-8	Aqueous	09/06/2012 1044	09/07/2012
009	MW-9	Aqueous	09/06/2012 1105	09/07/2012
010	MW-10	Aqueous	09/06/2012 1114	09/07/2012
011	MW-11	Aqueous	09/06/2012 1145	09/07/2012
012	MW-12	Aqueous	09/06/2012 1200	09/07/2012
013	MW-13	Aqueous	09/06/2012 1214	09/07/2012
014	MW-14	Aqueous	09/06/2012 1227	09/07/2012
015	MW-15	Aqueous	09/06/2012 1243	09/07/2012
016	MW-16	Aqueous	09/06/2012 1303	09/07/2012
017	DW-1	Aqueous	09/06/2012 1042	09/07/2012
018	DW-2	Aqueous	09/06/2012 1102	09/07/2012
019	DW-3	Aqueous	09/06/2012 1143	09/07/2012
020	DW-4	Aqueous	09/06/2012 1151	09/07/2012
021	DW-5	Aqueous	09/06/2012 1247	09/07/2012
022	DW-6	Aqueous	09/06/2012 1305	09/07/2012
023	DW-7	Aqueous	09/06/2012 1325	09/07/2012
024	WSW-1	Aqueous	09/06/2012 1348	09/07/2012
025	WSW-3	Aqueous	09/06/2012 1400	09/07/2012
026	WSW-4	Aqueous	09/06/2012 1355	09/07/2012
027	WSW-7	Aqueous	09/06/2012 1405	09/07/2012
028	WSW-9	Aqueous	09/06/2012 1425	09/07/2012
029	SW-1	Aqueous	09/06/2012 1120	09/07/2012
030	SW-2	Aqueous	09/06/2012 1120	09/07/2012
031	SW-3	Aqueous	09/06/2012 1418	09/07/2012
032	MW-2 Duplicate	Aqueous	09/06/2012 1248	09/07/2012
033	MW-1R Duplicate	Aqueous	09/06/2012 1329	09/07/2012
034	Field Blank	Aqueous	09/06/2012 1430	09/07/2012
035	Trip Blank	Aqueous	09/06/2012 1030	09/07/2012

(35 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary SC DHEC - UST Management Lot Number: NI07029

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-1R	Aqueous	Benzene	8260B	34	J	ug/L	5
001	MW-1R	Aqueous	Ethylbenzene	8260B	250		ug/L	5
001	MW-1R	Aqueous	Naphthalene	8260B	150		ug/L	5
001	MW-1R	Aqueous	Toluene	8260B	410		ug/L	5
001	MW-1R	Aqueous	Xylenes (total)	8260B	1800		ug/L	5
002	MW-2	Aqueous	Benzene	8260B	240		ug/L	7
002	MW-2	Aqueous	Ethylbenzene	8260B	160		ug/L	7
002	MW-2	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	21	J	ug/L	7
002	MW-2	Aqueous	Naphthalene	8260B	100		ug/L	7
002	MW-2	Aqueous	Toluene	8260B	1300		ug/L	7
002	MW-2	Aqueous	Xylenes (total)	8260B	3900		ug/L	7
002	MW-2	Aqueous	tert-Amyl alcohol (TAA)	8260B	600	J	ug/L	7
002	MW-2	Aqueous	1,2-Dibromoethane (EDB)	8011	3.5		ug/L	8
012	MW-12	Aqueous	Benzene	8260B	69		ug/L	27
012	MW-12	Aqueous	1,2-Dichloroethane	8260B	4.0	J	ug/L	27
012	MW-12	Aqueous	Ethylbenzene	8260B	4.1	J	ug/L	27
012	MW-12	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	24		ug/L	27
012	MW-12	Aqueous	Naphthalene	8260B	7.1		ug/L	27
012	MW-12	Aqueous	Xylenes (total)	8260B	58		ug/L	27
012	MW-12	Aqueous	tert-Amyl alcohol (TAA)	8260B	98	J	ug/L	27
012	MW-12	Aqueous	tert-butyl alcohol (TBA)	8260B	7.3	J	ug/L	27
012	MW-12	Aqueous	1,2-Dibromoethane (EDB)	8011	0.16		ug/L	28
032	MW-2 Duplicate	Aqueous	Benzene	8260B	340		ug/L	67
032	MW-2 Duplicate	Aqueous	Ethylbenzene	8260B	200		ug/L	67
032	MW-2 Duplicate	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	28	J	ug/L	67
032	MW-2 Duplicate	Aqueous	Naphthalene	8260B	80	J	ug/L	67
032	MW-2 Duplicate	Aqueous	Toluene	8260B	2200		ug/L	67
032	MW-2 Duplicate	Aqueous	Xylenes (total)	8260B	4300		ug/L	67
032	MW-2 Duplicate	Aqueous	tert-Amyl alcohol (TAA)	8260B	630	J	ug/L	67
032	MW-2 Duplicate	Aqueous	1,2-Dibromoethane (EDB)	8011	4.0		ug/L	68
033	MW-1R Duplicate	Aqueous	Benzene	8260B	25	J	ug/L	69
033	MW-1R Duplicate	Aqueous	Ethylbenzene	8260B	220		ug/L	69
033	MW-1R Duplicate	Aqueous	Naphthalene	8260B	110		ug/L	69
033	MW-1R Duplicate	Aqueous	Toluene	8260B	320		ug/L	69
033	MW-1R Duplicate	Aqueous	Xylenes (total)	8260B	1600		ug/L	69

(35 detections)

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	10	09/14/2012 0035	DD		93270			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	34	J	50	2.0	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND		50	3.0	ug/L	1	
Ethylbenzene	100-41-4		8260B	250		50	17	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND		50	4.0	ug/L	1	
Naphthalene	91-20-3		8260B	150		50	17	ug/L	1	
Toluene	108-88-3		8260B	410		50	17	ug/L	1	
Xylenes (total)	1330-20-7		8260B	1800		50	17	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		106	70-130							
Bromofluorobenzene		104	70-130							
Toluene-d8		100	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	10	09/14/2012 0035	DD		93270			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND		100	4.0	ug/L	1	
Ethanol	64-17-5		8260B	ND		10000	330	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND		1000	10	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND		1000	2.0	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND		1000	67	ug/L	1	
tert-Amyl methyl ether (TAME)	994-06-8		8260B	ND		100	2.0	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND		1000	67	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND		1000	10	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		104	70-130							
1,2-Dichloroethane-d4		106	70-130							
Toluene-d8		100	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/10/2012 2153	MPM	09/10/2012 0948	92960			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-001
Description: MW-1R	Matrix: Aqueous
Date Sampled: 09/06/2012 1329	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/10/2012 2153	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		99	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-002
Description: MW-2	Matrix: Aqueous
Date Sampled: 09/06/2012 1248	
Date Received: 09/07/2012	

Volatiles Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	20	09/14/2012 0058	DD		93270				
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run		
		Number	Method								
Benzene		71-43-2	8260B	240		100	4.0	ug/L	1		
1,2-Dichloroethane		107-06-2	8260B	ND		100	6.0	ug/L	1		
Ethylbenzene		100-41-4	8260B	160		100	34	ug/L	1		
Methyl tertiary butyl ether (MTBE)		1634-04-4	8260B	21	J	100	8.0	ug/L	1		
Naphthalene		91-20-3	8260B	100		100	34	ug/L	1		
Toluene		108-88-3	8260B	1300		100	34	ug/L	1		
Xylenes (total)		1330-20-7	8260B	3900		100	34	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		104	70-130								
Bromofluorobenzene		104	70-130								
Toluene-d8		100	70-130								

Volatiles Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	20	09/14/2012 0058	DD		93270				
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run		
		Number	Method								
Diisopropyl ether (IPE)		108-20-3	8260B	ND		200	8.0	ug/L	1		
Ethanol		64-17-5	8260B	ND		20000	660	ug/L	1		
3,3-Dimethyl-1-butanol		624-95-3	8260B	ND		2000	20	ug/L	1		
Ethyl-tert-butyl ether (ETBE)		637-92-3	8260B	ND		2000	4.0	ug/L	1		
tert-Amyl alcohol (TAA)		75-85-4	8260B	600	J	2000	130	ug/L	1		
tert-Amyl methyl ether (TAME)		994-06-8	8260B	ND		200	4.0	ug/L	1		
tert-butyl alcohol (TBA)		75-65-0	8260B	ND		2000	130	ug/L	1		
tert-Butyl formate (TBF)		782-75-4	8260B	ND		2000	20	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
Bromofluorobenzene		104	70-130								
1,2-Dichloroethane-d4		104	70-130								
Toluene-d8		100	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
2	8011	8011	5	09/11/2012 1128	MPM	09/10/2012 0948	92960				
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run		
		Number	Method								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	5	09/11/2012 1128	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	3.5		0.098	0.098	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		117	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-003
Description: MW-3	Matrix: Aqueous
Date Sampled: 09/06/2012 1342	
Date Received: 09/07/2012	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0122	DD		93270

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1	Acceptance
		% Recovery	Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		97	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0122	DD		93270

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1	Acceptance
		% Recovery	Limits
Bromofluorobenzene		103	70-130
1,2-Dichloroethane-d4		103	70-130
Toluene-d8		97	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/10/2012 2317	MPM	09/10/2012 0948	92960

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-003
Description: MW-3	Matrix: Aqueous
Date Sampled: 09/06/2012 1342	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/10/2012 2317	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		91	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-004
Description: MW-4	Matrix: Aqueous
Date Sampled: 09/06/2012 1209	
Date Received: 09/07/2012	

Volatiles Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0147	DD		93270			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	ND		5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND		5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4		8260B	ND		5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3		8260B	ND		5.0	1.7	ug/L	1	
Toluene	108-88-3		8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7		8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		103	70-130							
Bromofluorobenzene		103	70-130							
Toluene-d8		97	70-130							

Volatiles Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0147	DD		93270			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND		10	0.40	ug/L	1	
Ethanol	64-17-5		8260B	ND		1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND		100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND		100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8		8260B	ND		10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND		100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND		100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		103	70-130							
1,2-Dichloroethane-d4		103	70-130							
Toluene-d8		97	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/10/2012 2338	MPM	09/10/2012 0948	92960			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-004
Description: MW-4	Matrix: Aqueous
Date Sampled: 09/06/2012 1209	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/10/2012 2338	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		90	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Description: MW-5

Matrix: Aqueous

Date Sampled: 09/06/2012 1023

Date Received: 09/07/2012

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0211	DD		93270			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	ND		5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND		5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4		8260B	ND		5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3		8260B	ND		5.0	1.7	ug/L	1	
Toluene	108-88-3		8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7		8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		104	70-130							
Bromofluorobenzene		105	70-130							
Toluene-d8		100	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0211	DD		93270			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND		10	0.40	ug/L	1	
Ethanol	64-17-5		8260B	ND		1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND		100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND		100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8		8260B	ND		10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND		100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND		100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		105	70-130							
1,2-Dichloroethane-d4		104	70-130							
Toluene-d8		100	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/10/2012 2359	MPM	09/10/2012 0948	92960			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-005
Description: MW-5	Matrix: Aqueous
Date Sampled: 09/06/2012 1023	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/10/2012 2359	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		90	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0236	DD		93270			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	ND		5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND		5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4		8260B	ND		5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3		8260B	ND		5.0	1.7	ug/L	1	
Toluene	108-88-3		8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7		8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		105	70-130							
Bromofluorobenzene		104	70-130							
Toluene-d8		99	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0236	DD		93270			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND		10	0.40	ug/L	1	
Ethanol	64-17-5		8260B	ND		1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND		100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND		100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8		8260B	ND		10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND		100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND		100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		104	70-130							
1,2-Dichloroethane-d4		105	70-130							
Toluene-d8		99	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/11/2012 0019	MPM	09/10/2012 0948	92960			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-006
Description: MW-6	Matrix: Aqueous
Date Sampled: 09/06/2012 1024	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0019	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		90	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0259	DD		93270

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1	Acceptance
		% Recovery	Limits
1,2-Dichloroethane-d4		107	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		99	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0259	DD		93270

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1	Acceptance
		% Recovery	Limits
Bromofluorobenzene		105	70-130
1,2-Dichloroethane-d4		107	70-130
Toluene-d8		99	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0040	MPM	09/10/2012 0948	92960

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-007
Description: MW-7	Matrix: Aqueous
Date Sampled: 09/06/2012 1030	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0040	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		92	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0131	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	ND		5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND		5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4		8260B	ND		5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3		8260B	ND		5.0	1.7	ug/L	1	
Toluene	108-88-3		8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7		8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		126	70-130							
Bromofluorobenzene		98	70-130							
Toluene-d8		93	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0131	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND		10	0.40	ug/L	1	
Ethanol	64-17-5		8260B	ND	L	1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND		100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND		100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-06-8		8260B	ND		10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND		100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND		100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		98	70-130							
1,2-Dichloroethane-d4		126	70-130							
Toluene-d8		93	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/11/2012 0101	MPM	09/10/2012 0948	92960			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-008
Description: MW-8	Matrix: Aqueous
Date Sampled: 09/06/2012 1044	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0101	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		90	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-009
Description: MW-9	Matrix: Aqueous
Date Sampled: 09/06/2012 1105	
Date Received: 09/07/2012	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0155	DD		93273

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dichloroethane	107-06-2	8260B	ND	Q	5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND	Q	5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND	Q	5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND	Q	5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND	Q	5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND	Q	5.0	1.7	ug/L	1

Surrogate	Q	Run 1 Acceptance	
		% Recovery	Limits
1,2-Dichloroethane-d4	N	131	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		91	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0155	DD		93273

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Ethanol	64-17-5	8260B	ND	QL	1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND	Q	100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND	Q	100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND	Q	100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND	Q	10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND	Q	100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND	Q	100	1.0	ug/L	1

Surrogate	Q	Run 1 Acceptance	
		% Recovery	Limits
Bromofluorobenzene		101	70-130
1,2-Dichloroethane-d4	N	131	70-130
Toluene-d8		91	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0122	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-009
Description: MW-9	Matrix: Aqueous
Date Sampled: 09/06/2012 1105	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0122	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		91	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0219	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	ND	Q	5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND	Q	5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4		8260B	ND	Q	5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND	Q	5.0	0.40	ug/L	1	
Naphthalene	91-20-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Toluene	108-88-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7		8260B	ND	Q	5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4	N	131	70-130							
Bromofluorobenzene		101	70-130							
Toluene-d8		96	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0219	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND	Q	10	0.40	ug/L	1	
Ethanol	64-17-5		8260B	ND	QL	1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND	Q	100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND	Q	100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND	Q	100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8		8260B	ND	Q	10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND	Q	100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND	Q	100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		101	70-130							
1,2-Dichloroethane-d4	N	131	70-130							
Toluene-d8		96	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/11/2012 0143	MPM	09/10/2012 0948	92960			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-010
Description: MW-10	Matrix: Aqueous
Date Sampled: 09/06/2012 1114	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0143	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		92	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0244	DD		93273			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							
Benzene		71-43-2	8260B	ND	Q	5.0	0.20	ug/L	1	
1,2-Dichloroethane		107-06-2	8260B	ND	Q	5.0	0.30	ug/L	1	
Ethylbenzene		100-41-4	8260B	ND	Q	5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)		1634-04-4	8260B	ND	Q	5.0	0.40	ug/L	1	
Naphthalene		91-20-3	8260B	ND	Q	5.0	1.7	ug/L	1	
Toluene		108-88-3	8260B	ND	Q	5.0	1.7	ug/L	1	
Xylenes (total)		1330-20-7	8260B	ND	Q	5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4	N	132	70-130							
Bromofluorobenzene		101	70-130							
Toluene-d8		95	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0244	DD		93273			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							
Diisopropyl ether (IPE)		108-20-3	8260B	ND	Q	10	0.40	ug/L	1	
Ethanol		64-17-5	8260B	ND	QL	1000	33	ug/L	1	
3,3-Dimethyl-1-butanol		624-95-3	8260B	ND	Q	100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)		637-92-3	8260B	ND	Q	100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)		75-85-4	8260B	ND	Q	100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)		994-05-8	8260B	ND	Q	10	0.20	ug/L	1	
tert-butyl alcohol (TBA)		75-65-0	8260B	ND	Q	100	6.7	ug/L	1	
tert-Butyl formate (TBF)		762-75-4	8260B	ND	Q	100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		101	70-130							
1,2-Dichloroethane-d4	N	132	70-130							
Toluene-d8		95	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/11/2012 0204	MPM	09/10/2012 0948	92960			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-011
Description: MW-11	Matrix: Aqueous
Date Sampled: 09/06/2012 1145	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0204	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		88	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0308	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	69		5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	4.0	J	5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4		8260B	4.1	J	5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	24		5.0	0.40	ug/L	1	
Naphthalene	91-20-3		8260B	7.1		5.0	1.7	ug/L	1	
Toluene	108-88-3		8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7		8260B	58		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		128	70-130							
Bromofluorobenzene		100	70-130							
Toluene-d8		95	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0308	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND		10	0.40	ug/L	1	
Ethanol	64-17-5		8260B	ND	L	1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND		100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND		100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	98	J	100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-06-8		8260B	ND		10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	7.3	J	100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND		100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		100	70-130							
1,2-Dichloroethane-d4		128	70-130							
Toluene-d8		95	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/11/2012 0225	MPM	09/10/2012 0948	92960			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-012
Description: MW-12	Matrix: Aqueous
Date Sampled: 09/06/2012 1200	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0225	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	0.16		0.024	0.024	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		89	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-013
Description: MW-13	Matrix: Aqueous
Date Sampled: 09/06/2012 1214	
Date Received: 09/07/2012	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0333	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	ND	Q	5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND	Q	5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4		8260B	ND	Q	5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND	Q	5.0	0.40	ug/L	1	
Naphthalene	91-20-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Toluene	108-88-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7		8260B	ND	Q	5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4	N	135	70-130							
Bromofluorobenzene		103	70-130							
Toluene-d8		97	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0333	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND	Q	10	0.40	ug/L	1	
Ethanol	64-17-5		8260B	ND	QL	1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND	Q	100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND	Q	100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND	Q	100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8		8260B	ND	Q	10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND	Q	100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND	Q	100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		103	70-130							
1,2-Dichloroethane-d4	N	135	70-130							
Toluene-d8		97	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/11/2012 0246	MPM	09/10/2012 0948	92960			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-013
Description: MW-13	Matrix: Aqueous
Date Sampled: 09/06/2012 1214	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0246	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		90	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-014
Description: MW-14	Matrix: Aqueous
Date Sampled: 09/06/2012 1227	
Date Received: 09/07/2012	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0357	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	ND	Q	5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND	Q	5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4		8260B	ND	Q	5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND	Q	5.0	0.40	ug/L	1	
Naphthalene	91-20-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Toluene	108-88-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7		8260B	ND	Q	5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4	N	135	70-130							
Bromofluorobenzene		101	70-130							
Toluene-d8		97	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0357	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND	Q	10	0.40	ug/L	1	
Ethanol	64-17-5		8260B	ND	QL	1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND	Q	100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND	Q	100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND	Q	100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8		8260B	ND	Q	10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND	Q	100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND	Q	100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		101	70-130							
1,2-Dichloroethane-d4	N	135	70-130							
Toluene-d8		97	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/11/2012 0306	MPM	09/10/2012 0948	92960			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-014
Description: MW-14	Matrix: Aqueous
Date Sampled: 09/06/2012 1227	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0306	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		91	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0421	DD		93273

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Benzene	71-43-2	8260B	ND	Q	5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND	Q	5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND	Q	5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND	Q	5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND	Q	5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND	Q	5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND	Q	5.0	1.7	ug/L	1

Surrogate	Q	Run 1	Acceptance
		% Recovery	Limits
1,2-Dichloroethane-d4	N	135	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		97	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0421	DD		93273

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Diisopropyl ether (IPE)	108-20-3	8260B	ND	Q	10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND	QL	1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND	Q	100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND	Q	100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND	Q	100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND	Q	10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND	Q	100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND	Q	100	1.0	ug/L	1

Surrogate	Q	Run 1	Acceptance
		% Recovery	Limits
Bromofluorobenzene		102	70-130
1,2-Dichloroethane-d4	N	135	70-130
Toluene-d8		97	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0327	MPM	09/10/2012 0948	92960

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-015
Description: MW-15	Matrix: Aqueous
Date Sampled: 09/06/2012 1243	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0327	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		90	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0446	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	ND	Q	5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND	Q	5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4		8260B	ND	Q	5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND	Q	5.0	0.40	ug/L	1	
Naphthalene	91-20-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Toluene	108-88-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7		8260B	ND	Q	5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4	N	140	70-130							
Bromofluorobenzene		103	70-130							
Toluene-d8		99	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0446	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND	Q	10	0.40	ug/L	1	
Ethanol	64-17-5		8260B	ND	QL	1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND	Q	100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND	Q	100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND	Q	100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8		8260B	ND	Q	10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND	Q	100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND	Q	100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		103	70-130							
1,2-Dichloroethane-d4	N	140	70-130							
Toluene-d8		99	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/11/2012 0348	MPM	09/10/2012 0948	92960			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-016
Description: MW-16	Matrix: Aqueous
Date Sampled: 09/06/2012 1303	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0348	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		93	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-017
Description: DW-1	Matrix: Aqueous
Date Sampled: 09/06/2012 1042	
Date Received: 09/07/2012	

Volatiles Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0510	DD		93273

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND	Q	5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND	Q	5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND	Q	5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND	Q	5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND	Q	5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND	Q	5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND	Q	5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4	N	140	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		97	70-130

Volatiles Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0510	DD		93273

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND	Q	10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND	QL	1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND	Q	100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND	Q	100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND	Q	100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND	Q	10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND	Q	100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND	Q	100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		102	70-130
1,2-Dichloroethane-d4	N	140	70-130
Toluene-d8		97	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0409	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-017
Description: DW-1	Matrix: Aqueous
Date Sampled: 09/06/2012 1042	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0409	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		87	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-018
Description: DW-2	Matrix: Aqueous
Date Sampled: 09/06/2012 1102	
Date Received: 09/07/2012	

Volatiles Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0535	DD		93273			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							
Benzene		71-43-2	8260B	ND	Q	5.0	0.20	ug/L	1	
1,2-Dichloroethane		107-06-2	8260B	ND	Q	5.0	0.30	ug/L	1	
Ethylbenzene		100-41-4	8260B	ND	Q	5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)		1634-04-4	8260B	ND	Q	5.0	0.40	ug/L	1	
Naphthalene		91-20-3	8260B	ND	Q	5.0	1.7	ug/L	1	
Toluene		108-88-3	8260B	ND	Q	5.0	1.7	ug/L	1	
Xylenes (total)		1330-20-7	8260B	ND	Q	5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4	N	138	70-130							
Bromofluorobenzene		103	70-130							
Toluene-d8		98	70-130							

Volatiles Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0535	DD		93273			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							
Diisopropyl ether (IPE)		108-20-3	8260B	ND	Q	10	0.40	ug/L	1	
Ethanol		64-17-5	8260B	ND	QL	1000	33	ug/L	1	
3,3-Dimethyl-1-butanol		624-95-3	8260B	ND	Q	100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)		637-92-3	8260B	ND	Q	100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)		75-85-4	8260B	ND	Q	100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)		994-05-8	8260B	ND	Q	10	0.20	ug/L	1	
tert-butyl alcohol (TBA)		75-65-0	8260B	ND	Q	100	6.7	ug/L	1	
tert-Butyl formate (TBF)		762-75-4	8260B	ND	Q	100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		103	70-130							
1,2-Dichloroethane-d4	N	138	70-130							
Toluene-d8		98	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/11/2012 0430	MPM	09/10/2012 0948	92960			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-018
Description: DW-2	Matrix: Aqueous
Date Sampled: 09/06/2012 1102	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0430	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.021	0.021	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		94	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-019
Description: DW-3	Matrix: Aqueous
Date Sampled: 09/06/2012 1143	
Date Received: 09/07/2012	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0559	DD		93273

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND	Q	5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND	Q	5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND	Q	5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND	Q	5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND	Q	5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND	Q	5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND	Q	5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4	N	139	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		96	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0559	DD		93273

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND	Q	10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND	QL	1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND	Q	100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND	Q	100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND	Q	100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND	Q	10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND	Q	100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND	Q	100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		103	70-130
1,2-Dichloroethane-d4	N	139	70-130
Toluene-d8		96	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0450	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-019
Description: DW-3	Matrix: Aqueous
Date Sampled: 09/06/2012 1143	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0450	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		92	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-020
Description: DW-4	Matrix: Aqueous
Date Sampled: 09/06/2012 1151	
Date Received: 09/07/2012	

Volatiles Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	09/14/2012 0623	DD		93273

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND	Q	50	2.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND	Q	50	3.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND	Q	50	17	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND	Q	50	4.0	ug/L	1
Naphthalene	91-20-3	8260B	ND	Q	50	17	ug/L	1
Toluene	108-88-3	8260B	ND	Q	50	17	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND	Q	50	17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4	N	141	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		95	70-130

Volatiles Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	09/14/2012 0623	DD		93273

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND	Q	100	4.0	ug/L	1
Ethanol	64-17-5	8260B	ND	QL	10000	330	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND	Q	1000	10	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND	Q	1000	2.0	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND	Q	1000	67	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND	Q	100	2.0	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND	Q	1000	67	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND	Q	1000	10	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		102	70-130
1,2-Dichloroethane-d4	N	141	70-130
Toluene-d8		95	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0511	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-020
Description: DW-4	Matrix: Aqueous
Date Sampled: 09/06/2012 1151	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 0511	MPM	09/10/2012 0948	92960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.022	0.022	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		86	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0648	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	ND	Q	5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND	Q	5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4		8260B	ND	Q	5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND	Q	5.0	0.40	ug/L	1	
Naphthalene	91-20-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Toluene	108-88-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7		8260B	ND	Q	5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4	N	139	70-130							
Bromofluorobenzene		104	70-130							
Toluene-d8		96	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0648	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND	Q	10	0.40	ug/L	1	
Ethanol	64-17-5		8260B	ND	QL	1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND	Q	100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND	Q	100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND	Q	100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-06-8		8260B	ND	Q	10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND	Q	100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND	Q	100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		104	70-130							
1,2-Dichloroethane-d4	N	139	70-130							
Toluene-d8		96	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/11/2012 2326	MPM	09/10/2012 0948	93006			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-021
Description: DW-5	Matrix: Aqueous
Date Sampled: 09/06/2012 1247	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 2326	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.021	0.021	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		90	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0712	DD		93273			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							
Benzene		71-43-2	8260B	ND	Q	5.0	0.20	ug/L	1	
1,2-Dichloroethane		107-06-2	8260B	ND	Q	5.0	0.30	ug/L	1	
Ethylbenzene		100-41-4	8260B	ND	Q	5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)		1634-04-4	8260B	ND	Q	5.0	0.40	ug/L	1	
Naphthalene		91-20-3	8260B	ND	Q	5.0	1.7	ug/L	1	
Toluene		108-88-3	8260B	ND	Q	5.0	1.7	ug/L	1	
Xylenes (total)		1330-20-7	8260B	ND	Q	5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4	N	141	70-130							
Bromofluorobenzene		101	70-130							
Toluene-d8		98	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0712	DD		93273			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							
Diisopropyl ether (IPE)		108-20-3	8260B	ND	Q	10	0.40	ug/L	1	
Ethanol		64-17-5	8260B	ND	QL	1000	33	ug/L	1	
3,3-Dimethyl-1-butanol		624-95-3	8260B	ND	Q	100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)		637-92-3	8260B	ND	Q	100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)		75-85-4	8260B	ND	Q	100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)		994-05-8	8260B	ND	Q	10	0.20	ug/L	1	
tert-butyl alcohol (TBA)		75-65-0	8260B	ND	Q	100	6.7	ug/L	1	
tert-Butyl formate (TBF)		762-75-4	8260B	ND	Q	100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		101	70-130							
1,2-Dichloroethane-d4	N	141	70-130							
Toluene-d8		98	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/11/2012 2347	MPM	09/10/2012 0948	93006			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-022
Description: DW-6	Matrix: Aqueous
Date Sampled: 09/06/2012 1305	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/11/2012 2347	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.021	0.021	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		91	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-023
Description: DW-7	Matrix: Aqueous
Date Sampled: 09/06/2012 1325	
Date Received: 09/07/2012	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	09/14/2012 0737	DD		93273

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Benzene	71-43-2	8260B	ND	Q	25	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND	Q	25	1.5	ug/L	1
Ethylbenzene	100-41-4	8260B	ND	Q	25	8.5	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND	Q	25	2.0	ug/L	1
Naphthalene	91-20-3	8260B	ND	Q	25	8.5	ug/L	1
Toluene	108-88-3	8260B	ND	Q	25	8.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND	Q	25	8.5	ug/L	1

Surrogate	Q	Run 1	Acceptance
		% Recovery	Limits
1,2-Dichloroethane-d4	N	144	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		96	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	09/14/2012 0737	DD		93273

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Diisopropyl ether (IPE)	108-20-3	8260B	ND	Q	50	2.0	ug/L	1
Ethanol	64-17-5	8260B	ND	QL	5000	170	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND	Q	500	5.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND	Q	500	1.0	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND	Q	500	34	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND	Q	50	1.0	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND	Q	500	34	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND	Q	500	5.0	ug/L	1

Surrogate	Q	Run 1	Acceptance
		% Recovery	Limits
Bromofluorobenzene		103	70-130
1,2-Dichloroethane-d4	N	144	70-130
Toluene-d8		96	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0008	MPM	09/10/2012 0948	93006

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-023
Description: DW-7	Matrix: Aqueous
Date Sampled: 09/06/2012 1325	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0008	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.037	0.037	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		83	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0801	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	ND	Q	5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND	Q	5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4		8260B	ND	Q	5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND	Q	5.0	0.40	ug/L	1	
Naphthalene	91-20-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Toluene	108-88-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7		8260B	ND	Q	5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4	N	141	70-130							
Bromofluorobenzene		103	70-130							
Toluene-d8		94	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0801	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND	Q	10	0.40	ug/L	1	
Ethanol	64-17-5		8260B	ND	QL	1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND	Q	100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND	Q	100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND	Q	100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8		8260B	ND	Q	10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND	Q	100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND	Q	100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		103	70-130							
1,2-Dichloroethane-d4	N	141	70-130							
Toluene-d8		94	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/12/2012 0029	MPM	09/10/2012 0948	93006			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-024
Description: WSW-1	Matrix: Aqueous
Date Sampled: 09/06/2012 1348	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0029	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		91	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	09/14/2012 2156	DD		93352

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	2
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	2
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	2

Surrogate	Run 2		Acceptance Limits
	Q	% Recovery	
1,2-Dichloroethane-d4	100	70-130	
Bromofluorobenzene	97	70-130	
Toluene-d8	99	70-130	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	09/14/2012 2156	DD		93352

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	2
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	2
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	2
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	2
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	2
tert-Amyl methyl ether (TAME)	994-06-8	8260B	ND		10	0.20	ug/L	2
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	2
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	2

Surrogate	Run 2		Acceptance Limits
	Q	% Recovery	
Bromofluorobenzene	97	70-130	
1,2-Dichloroethane-d4	100	70-130	
Toluene-d8	99	70-130	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0132	MPM	09/10/2012 0948	93006

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-025
Description: WSW-3	Matrix: Aqueous
Date Sampled: 09/06/2012 1400	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0132	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		88	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0850	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	ND	Q	5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND	Q	5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4		8260B	ND	Q	5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND	Q	5.0	0.40	ug/L	1	
Naphthalene	91-20-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Toluene	108-88-3		8260B	ND	Q	5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7		8260B	ND	Q	5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4	N	141	70-130							
Bromofluorobenzene		104	70-130							
Toluene-d8		94	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	09/14/2012 0850	DD		93273			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND	Q	10	0.40	ug/L	1	
Ethanol	64-17-5		8260B	ND	QL	1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND	Q	100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND	Q	100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND	Q	100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-06-8		8260B	ND	Q	10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND	Q	100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND	Q	100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		104	70-130							
1,2-Dichloroethane-d4	N	141	70-130							
Toluene-d8		94	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	09/12/2012 0153	MPM	09/10/2012 0948	93006			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-026
Description: WSW-4	Matrix: Aqueous
Date Sampled: 09/06/2012 1355	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0153	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		90	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0914	DD		93273

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND	Q	5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND	Q	5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND	Q	5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND	Q	5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND	Q	5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND	Q	5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND	Q	5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4	N	144	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		96	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 0914	DD		93273

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND	Q	10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND	QL	1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND	Q	100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND	Q	100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND	Q	100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND	Q	10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND	Q	100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND	Q	100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		105	70-130
1,2-Dichloroethane-d4	N	144	70-130
Toluene-d8		96	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0214	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-027
Description: WSW-7	Matrix: Aqueous
Date Sampled: 09/06/2012 1405	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0214	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		86	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-028
Description: WSW-9	Matrix: Aqueous
Date Sampled: 09/06/2012 1425	
Date Received: 09/07/2012	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 1136	AAC		93323

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		98	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 1136	AAC		93323

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		104	70-130
1,2-Dichloroethane-d4		103	70-130
Toluene-d8		98	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0235	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-028
Description: WSW-9	Matrix: Aqueous
Date Sampled: 09/06/2012 1425	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0235	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		92	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-029
Description: SW-1	Matrix: Aqueous
Date Sampled: 09/06/2012 1120	
Date Received: 09/07/2012	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 1215	AAC		93323

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		86	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		96	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 1215	AAC		93323

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		101	70-130
1,2-Dichloroethane-d4		86	70-130
Toluene-d8		96	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0255	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-029
Description: SW-1	Matrix: Aqueous
Date Sampled: 09/06/2012 1120	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0255	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		93	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 1238	AAC		93323

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Run 1	Acceptance
	Q	% Recovery Limits
1,2-Dichloroethane-d4	104	70-130
Bromofluorobenzene	104	70-130
Toluene-d8	97	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 1238	AAC		93323

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Run 1	Acceptance
	Q	% Recovery Limits
Bromofluorobenzene	104	70-130
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	97	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0316	MPM	09/10/2012 0948	93006

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-030
Description: SW-2	Matrix: Aqueous
Date Sampled: 09/06/2012 1120	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0316	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		99	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 1302	AAC		93323

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1	Acceptance
		% Recovery	Limits
1,2-Dichloroethane-d4		106	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		96	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 1302	AAC		93323

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1	Acceptance
		% Recovery	Limits
Bromofluorobenzene		105	70-130
1,2-Dichloroethane-d4		106	70-130
Toluene-d8		96	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0337	MPM	09/10/2012 0948	93006

Parameter	CAS	Analytical	Result	Q	PQL	MDL	Units	Run
	Number	Method						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-031
Description: SW-3	Matrix: Aqueous
Date Sampled: 09/06/2012 1418	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0337	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		91	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-032
Description: MW-2 Duplicate	Matrix: Aqueous
Date Sampled: 09/06/2012 1248	
Date Received: 09/07/2012	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	20	09/14/2012 1722	AAC		93323			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2		8260B	340		100	4.0	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND		100	6.0	ug/L	1	
Ethylbenzene	100-41-4		8260B	200		100	34	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	28	J	100	8.0	ug/L	1	
Naphthalene	91-20-3		8260B	80	J	100	34	ug/L	1	
Toluene	108-88-3		8260B	2200		100	34	ug/L	1	
Xylenes (total)	1330-20-7		8260B	4300		100	34	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		111	70-130							
Bromofluorobenzene		105	70-130							
Toluene-d8		101	70-130							

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	20	09/14/2012 1722	AAC		93323			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3		8260B	ND		200	8.0	ug/L	1	
Ethanol	64-17-5		8260B	ND		20000	660	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND		2000	20	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND		2000	4.0	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4		8260B	630	J	2000	130	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8		8260B	ND		200	4.0	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND		2000	130	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND		2000	20	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		105	70-130							
1,2-Dichloroethane-d4		111	70-130							
Toluene-d8		101	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
2	8011	8011	5	09/12/2012 1316	MPM	09/10/2012 0948	93006			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-032
Description: MW-2 Duplicate	Matrix: Aqueous
Date Sampled: 09/06/2012 1248	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	5	09/12/2012 1316	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	4.0		0.097	0.097	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		94	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	09/14/2012 1746	AAC		93323

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	25	J	50	2.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		50	3.0	ug/L	1
Ethylbenzene	100-41-4	8260B	220		50	17	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		50	4.0	ug/L	1
Naphthalene	91-20-3	8260B	110		50	17	ug/L	1
Toluene	108-88-3	8260B	320		50	17	ug/L	1
Xylenes (total)	1330-20-7	8260B	1600		50	17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		107	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		98	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	09/14/2012 1746	AAC		93323

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		100	4.0	ug/L	1
Ethanol	64-17-5	8260B	ND		10000	330	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		1000	10	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		1000	2.0	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		1000	67	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		100	2.0	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		1000	67	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		1000	10	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		104	70-130
1,2-Dichloroethane-d4		107	70-130
Toluene-d8		98	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0419	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-033
Description: MW-1R Duplicate	Matrix: Aqueous
Date Sampled: 09/06/2012 1329	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0419	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		110	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-034
Description: Field Blank	Matrix: Aqueous
Date Sampled: 09/06/2012 1430	
Date Received: 09/07/2012	

Volatiles Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 1002	AAC		93323

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		97	70-130

Volatiles Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 1002	AAC		93323

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		103	70-130
1,2-Dichloroethane-d4		99	70-130
Toluene-d8		97	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	09/12/2012 0439	MPM	09/10/2012 0948	93006

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-034
Description: Field Blank	Matrix: Aqueous
Date Sampled: 09/06/2012 1430	
Date Received: 09/07/2012	

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	09/12/2012 0439	MPM	09/10/2012 0948	93006				
Parameter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)			106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		92	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: NI07029-035
Description: Trip Blank	Matrix: Aqueous
Date Sampled: 09/06/2012 1030	
Date Received: 09/07/2012	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 1025	AAC		93323

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		98	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/14/2012 1025	AAC		93323

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		102	70-130
1,2-Dichloroethane-d4		99	70-130
Toluene-d8		98	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" * = Reportable result (only when report all runs) S = MS/MSD failure

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ93270-001	Matrix: Aqueous
Batch: 93270	Prep Method: 5030B
Analytical Method: 8260B	

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	09/13/2012 2125
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	09/13/2012 2125
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	09/13/2012 2125
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	09/13/2012 2125
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	09/13/2012 2125
Ethanol	ND		1	1000	33	ug/L	09/13/2012 2125
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	09/13/2012 2125
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	09/13/2012 2125
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		103	70-130				
1,2-Dichloroethane-d4		102	70-130				
Toluene-d8		98	70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ93270-002	Matrix: Aqueous
Batch: 93270	Prep Method: 5030B
Analytical Method: 8260B	

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1000		1	103	70-130	09/13/2012 1953
tert-Amyl methyl ether (TAME)	50	53		1	105	70-130	09/13/2012 1953
tert-Butyl formate (TBF)	250	260		1	104	70-130	09/13/2012 1953
Diisopropyl ether (IPE)	50	50		1	101	70-130	09/13/2012 1953
3,3-Dimethyl-1-butanol	1000	1000		1	100	70-130	09/13/2012 1953
Ethanol	5000	6300		1	126	70-130	09/13/2012 1953
Ethyl-tert-butyl ether (ETBE)	50	49		1	99	70-130	09/13/2012 1953
tert-butyl alcohol (TBA)	1000	1000		1	104	70-130	09/13/2012 1953
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		101	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit
 ND = Not detected at or above the MDL
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

P = The RPD between two GC columns exceeds 40%
 J = Estimated result < PQL and ≥ MDL
 N = Recovery is out of criteria
 + = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ93270-003
Batch: 93270

Matrix: Aqueous
Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1100		1	108	4.3	70-130	20	09/13/2012 2016
tert-Amyl methyl ether (TAME)	50	55		1	110	4.2	70-130	20	09/13/2012 2016
tert-Butyl formate (TBF)	250	270		1	108	4.5	70-130	20	09/13/2012 2016
Diisopropyl ether (IPE)	50	53		1	106	5.1	70-130	20	09/13/2012 2016
3,3-Dimethyl-1-butanol	1000	1000		1	102	1.8	70-130	20	09/13/2012 2016
Ethanol	5000	6200		1	124	0.96	70-130	20	09/13/2012 2016
Ethyl-tert-butyl ether (ETBE)	50	52		1	104	5.1	70-130	20	09/13/2012 2016
tert-butyl alcohol (TBA)	1000	1100		1	107	2.8	70-130	20	09/13/2012 2016
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		102	70-130						
1,2-Dichloroethane-d4		100	70-130						
Toluene-d8		99	70-130						

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ93270-001
Batch: 93270

Matrix: Aqueous
Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	09/13/2012 2125
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	09/13/2012 2125
Ethylbenzene	ND		1	5.0	1.7	ug/L	09/13/2012 2125
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	09/13/2012 2125
Naphthalene	ND		1	5.0	1.7	ug/L	09/13/2012 2125
Toluene	ND		1	5.0	1.7	ug/L	09/13/2012 2125
Xylenes (total)	ND		1	5.0	1.7	ug/L	09/13/2012 2125
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		103	70-130				
1,2-Dichloroethane-d4		102	70-130				
Toluene-d8		98	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ93273-001
Batch: 93273
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	09/14/2012 0106
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	09/14/2012 0106
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	09/14/2012 0106
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	09/14/2012 0106
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	09/14/2012 0106
Ethanol	ND		1	1000	33	ug/L	09/14/2012 0106
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	09/14/2012 0106
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	09/14/2012 0106
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		122	70-130				
Toluene-d8		92	70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ93273-002
Batch: 93273
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1200		1	115	70-130	09/13/2012 2328
tert-Amyl methyl ether (TAME)	50	53		1	106	70-130	09/13/2012 2328
tert-Butyl formate (TBF)	250	250		1	98	70-130	09/13/2012 2328
Diisopropyl ether (IPE)	50	48		1	96	70-130	09/13/2012 2328
3,3-Dimethyl-1-butanol	1000	1200		1	118	70-130	09/13/2012 2328
Ethanol	5000	6900	N	1	138	70-130	09/13/2012 2328
Ethyl-tert-butyl ether (ETBE)	50	51		1	103	70-130	09/13/2012 2328
tert-butyl alcohol (TBA)	1000	1200		1	122	70-130	09/13/2012 2328
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		106	70-130				
1,2-Dichloroethane-d4		118	70-130				
Toluene-d8		97	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ93273-003 **Matrix:** Aqueous
Batch: 93273 **Prep Method:** 5030B
Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1100	1		112	3.1	70-130	20	09/13/2012 2353
tert-Amyl methyl ether (TAME)	50	52	1		104	1.8	70-130	20	09/13/2012 2353
tert-Butyl formate (TBF)	250	280	1		112	13	70-130	20	09/13/2012 2353
Diisopropyl ether (IPE)	50	46	1		92	4.3	70-130	20	09/13/2012 2353
3,3-Dimethyl-1-butanol	1000	1200	1		116	1.5	70-130	20	09/13/2012 2353
Ethanol	5000	6500	1		129	6.6	70-130	20	09/13/2012 2353
Ethyl-tert-butyl ether (ETBE)	50	51	1		101	1.5	70-130	20	09/13/2012 2353
tert-butyl alcohol (TBA)	1000	1200	1		117	4.2	70-130	20	09/13/2012 2353
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene	94		70-130						
1,2-Dichloroethane-d4	118		70-130						
Toluene-d8	97		70-130						

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ93273-001 **Matrix:** Aqueous
Batch: 93273 **Prep Method:** 5030B
Analytical Method: 8260B

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	09/14/2012 0106
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	09/14/2012 0106
Ethylbenzene	ND		1	5.0	1.7	ug/L	09/14/2012 0106
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	09/14/2012 0106
Naphthalene	ND		1	5.0	1.7	ug/L	09/14/2012 0106
Toluene	ND		1	5.0	1.7	ug/L	09/14/2012 0106
Xylenes (total)	ND		1	5.0	1.7	ug/L	09/14/2012 0106
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene	100		70-130				
1,2-Dichloroethane-d4	122		70-130				
Toluene-d8	92		70-130				

PQL = Practical quantitation limit P = The RPD between two GC columns exceeds 40% N - Recovery is out of criteria
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL + - RPD is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ93323-001
 Batch: 93323
 Analytical Method: 8260B

Matrix: Aqueous
 Prep Method: 5030B

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	09/14/2012 0922
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	09/14/2012 0922
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	09/14/2012 0922
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	09/14/2012 0922
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	09/14/2012 0922
Ethanol	ND		1	1000	33	ug/L	09/14/2012 0922
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	09/14/2012 0922
tert-butyl alcohol (TBA)	.ND		1	100	6.7	ug/L	09/14/2012 0922
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		99	70-130				
Toluene-d8		96	70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ93323-002
 Batch: 93323
 Analytical Method: 8260B

Matrix: Aqueous
 Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	860		1	86	70-130	09/14/2012 0747
tert-Amyl methyl ether (TAME)	50	54		1	108	70-130	09/14/2012 0747
tert-Butyl formate (TBF)	250	270		1	106	70-130	09/14/2012 0747
Diisopropyl ether (IPE)	50	53		1	105	70-130	09/14/2012 0747
3,3-Dimethyl-1-butanol	1000	840		1	84	70-130	09/14/2012 0747
Ethanol	5000	4900		1	99	70-130	09/14/2012 0747
Ethyl-tert-butyl ether (ETBE)	50	51		1	102	70-130	09/14/2012 0747
tert-butyl alcohol (TBA)	1000	820		1	82	70-130	09/14/2012 0747
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		96	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ93323-003

Matrix: Aqueous

Batch: 93323

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	880		1	88	2.6	70-130	20	09/14/2012 0811
tert-Amyl methyl ether (TAME)	50	55		1	110	1.8	70-130	20	09/14/2012 0811
tert-Butyl formate (TBF)	250	270		1	108	1.0	70-130	20	09/14/2012 0811
Diisopropyl ether (IPE)	50	54		1	108	2.9	70-130	20	09/14/2012 0811
3,3-Dimethyl-1-butanol	1000	860		1	86	2.6	70-130	20	09/14/2012 0811
Ethanol	5000	5100		1	102	3.0	70-130	20	09/14/2012 0811
Ethyl-tert-butyl ether (ETBE)	50	52		1	104	1.6	70-130	20	09/14/2012 0811
tert-butyl alcohol (TBA)	1000	850		1	85	3.3	70-130	20	09/14/2012 0811
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		100	70-130						
1,2-Dichloroethane-d4		95	70-130						
Toluene-d8		101	70-130						

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ93323-001

Matrix: Aqueous

Batch: 93323

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	09/14/2012 0922
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	09/14/2012 0922
Ethylbenzene	ND		1	5.0	1.7	ug/L	09/14/2012 0922
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	09/14/2012 0922
Naphthalene	ND		1	5.0	1.7	ug/L	09/14/2012 0922
Toluene	ND		1	5.0	1.7	ug/L	09/14/2012 0922
Xylenes (total)	ND		1	5.0	1.7	ug/L	09/14/2012 0922
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		99	70-130				
Toluene-d8		96	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ93323-002	Matrix: Aqueous
Batch: 93323	Prep Method: 5030B
Analytical Method: 8260B	

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
Benzene	50	50	1		100	70-130	09/14/2012 0747
1,2-Dichloroethane	50	48	1		97	70-130	09/14/2012 0747
Ethylbenzene	50	51	1		102	70-130	09/14/2012 0747
Methyl tertiary butyl ether (MTBE)	50	52	1		104	70-130	09/14/2012 0747
Naphthalene	50	45	1		89	70-130	09/14/2012 0747
Toluene	50	49	1		98	70-130	09/14/2012 0747
Xylenes (total)	100	100	1		103	70-130	09/14/2012 0747
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene	100		70-130				
1,2-Dichloroethane-d4	96		70-130				
Toluene-d8	100		70-130				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ93323-003	Matrix: Aqueous
Batch: 93323	Prep Method: 5030B
Analytical Method: 8260B	

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	50	1		100	0.040	70-130	20	09/14/2012 0811
1,2-Dichloroethane	50	49	1		98	1.2	70-130	20	09/14/2012 0811
Ethylbenzene	50	51	1		102	0.45	70-130	20	09/14/2012 0811
Methyl tertiary butyl ether (MTBE)	50	53	1		107	2.7	70-130	20	09/14/2012 0811
Naphthalene	50	44	1		88	2.0	70-130	20	09/14/2012 0811
Toluene	50	49	1		98	0.27	70-130	20	09/14/2012 0811
Xylenes (total)	100	100	1		102	0.61	70-130	20	09/14/2012 0811
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene	100		70-130						
1,2-Dichloroethane-d4	95		70-130						
Toluene-d8	101		70-130						

PQL = Practical quantitation limit P = The RPD between two GC columns exceeds 40% N - Recovery is out of criteria
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL + - RPD is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ93352-001
 Batch: 93352
 Analytical Method: 8260B

Matrix: Aqueous
 Prep Method: 5030B

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	09/14/2012 2107
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	09/14/2012 2107
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	09/14/2012 2107
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	09/14/2012 2107
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	09/14/2012 2107
Ethanol	ND		1	1000	33	ug/L	09/14/2012 2107
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	09/14/2012 2107
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	09/14/2012 2107
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		94	70-130				
1,2-Dichloroethane-d4		95	70-130				
Toluene-d8		99	70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ93352-002
 Batch: 93352
 Analytical Method: 8260B

Matrix: Aqueous
 Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	980		1	98	70-130	09/14/2012 1938
tert-Amyl methyl ether (TAME)	50	48		1	95	70-130	09/14/2012 1938
tert-Butyl formate (TBF)	250	250		1	101	70-130	09/14/2012 1938
Diisopropyl ether (IPE)	50	50		1	101	70-130	09/14/2012 1938
3,3-Dimethyl-1-butanol	1000	990		1	99	70-130	09/14/2012 1938
Ethanol	5000	4800		1	97	70-130	09/14/2012 1938
Ethyl-tert-butyl ether (ETBE)	50	47		1	95	70-130	09/14/2012 1938
tert-butyl alcohol (TBA)	1000	1100		1	110	70-130	09/14/2012 1938
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		96	70-130				
1,2-Dichloroethane-d4		90	70-130				
Toluene-d8		99	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ93352-002

Matrix: Aqueous

Batch: 93352

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
Benzene	50	46	1		93	70-130	09/14/2012 1938
1,2-Dichloroethane	50	42	1		84	70-130	09/14/2012 1938
Ethylbenzene	50	48	1		96	70-130	09/14/2012 1938
Methyl tertiary butyl ether (MTBE)	50	48	1		96	70-130	09/14/2012 1938
Naphthalene	50	54	1		107	70-130	09/14/2012 1938
Toluene	50	44	1		89	70-130	09/14/2012 1938
Xylenes (total)	100	93	1		93	70-130	09/14/2012 1938
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		96	70-130				
1,2-Dichloroethane-d4		90	70-130				
Toluene-d8		99	70-130				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ93352-003

Matrix: Aqueous

Batch: 93352

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	47	1		94	1.0	70-130	20	09/14/2012 2000
1,2-Dichloroethane	50	42	1		84	0.70	70-130	20	09/14/2012 2000
Ethylbenzene	50	48	1		95	0.55	70-130	20	09/14/2012 2000
Methyl tertiary butyl ether (MTBE)	50	49	1		98	1.2	70-130	20	09/14/2012 2000
Naphthalene	50	53	1		106	1.2	70-130	20	09/14/2012 2000
Toluene	50	45	1		90	0.91	70-130	20	09/14/2012 2000
Xylenes (total)	100	95	1		95	2.0	70-130	20	09/14/2012 2000
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		96	70-130						
1,2-Dichloroethane-d4		88	70-130						
Toluene-d8		97	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MB

Sample ID: NQ92960-001	Matrix: Aqueous
Batch: 92960	Prep Method: 8011
Analytical Method: 8011	Prep Date: 09/10/2012 948

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	09/10/2012 2050
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		88	57-137				

EDB & DBCP by Microextraction - LCS

Sample ID: NQ92960-002	Matrix: Aqueous
Batch: 92960	Prep Method: 8011
Analytical Method: 8011	Prep Date: 09/10/2012 948

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.22		1	88	60-140	09/10/2012 2111
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		90	57-137				

EDB & DBCP by Microextraction - MS

Sample ID: NI07029-002MS	Matrix: Aqueous
Batch: 92960	Prep Method: 8011
Analytical Method: 8011	Prep Date: 09/10/2012 948

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	3.5	0.25	3.0		1	63	60-140	09/10/2012 2235
Surrogate	Q	% Rec	Acceptance Limit					
1,1,1,2-Tetrachloroethane		109	57-137					

PQL = Practical quantitation limit P = The RPD between two GC columns exceeds 40% N - Recovery is out of criteria
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL + - RPD is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MSD

Sample ID: NI07029-002MD	Matrix: Aqueous
Batch: 92960	Prep Method: 8011
Analytical Method: 8011	Prep Date: 09/10/2012 948

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
1,2-Dibromoethane (EDB)	3.5	0.24	3.0	1		79	1.3	60-140	20	09/10/2012 2256
Surrogate	Q	% Rec	Acceptance Limit							
1,1,1,2-Tetrachloroethane		96	57-137							

EDB & DBCP by Microextraction - MB

Sample ID: NQ93006-001	Matrix: Aqueous
Batch: 93006	Prep Method: 8011
Analytical Method: 8011	Prep Date: 09/10/2012 948

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	09/11/2012 2244
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		94	57-137				

EDB & DBCP by Microextraction - LCS

Sample ID: NQ93006-002	Matrix: Aqueous
Batch: 93006	Prep Method: 8011
Analytical Method: 8011	Prep Date: 09/10/2012 948

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.23	1		92	60-140	09/11/2012 2305
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		92	57-137				

PQL = Practical quantitation limit P = The RPD between two GC columns exceeds 40% N - Recovery is out of criteria
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL + - RPD is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MS

Sample ID: NI07029-024MS	Matrix: Aqueous
Batch: 93006	Prep Method: 8011
Analytical Method: 8011	Prep Date: 09/10/2012 948

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.23		1	94	60-140	09/12/2012 0050
Surrogate	Q	% Rec	Acceptance Limit					
1,1,1,2-Tetrachloroethane		89	57-137					

EDB & DBCP by Microextraction - MSD

Sample ID: NI07029-024MD	Matrix: Aqueous
Batch: 93006	Prep Method: 8011
Analytical Method: 8011	Prep Date: 09/10/2012 948

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.22		1	92	3.2	60-140	20	09/12/2012 0111
Surrogate	Q	% Rec	Acceptance Limit							
1,1,1,2-Tetrachloroethane		87	57-137							

PQL = Practical quantitation limit P = The RPD between two GC columns exceeds 40% N - Recovery is out of criteria
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL + - RPD is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 22683

Client SCDHEC		Report to Contact D. Thomas				Sampler (Printed Name) BRIAN OWEN				Quote No.					
Address 2600 Bull St.		Telephone No. / Fax No. / Email 803-896-1241				Waybill No.				Page 1 of 4					
City Columbia	State SC	Zip Code 29201	Preservative 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.								Bottle (See Instructions on back) Preservative Lot No. NK07029				
Project Name STEADY SIMMONS		Project Number 18856/44228		P.O Number 4100088529		Analysis				Remarks / Cooler ID					
Sample ID / Description (Containers for each sample may be combined on one line)		Date	Time	G-Grab C-Composite	Matrix GW DW WW S Other	Analysis BTEX, depth, mthc 8-oxf, 12-oxf, EOX EDS									
MW-1										NOT LOCATED					
MW-1R		9-6	1329	G		X	X	X					ODOR / SHEEN		
MW-2			1248										No ODOR		
MW-3			1342										ODOR		
MW-4			1209										No ODOR		
MW-5			1023												
MW-6			1024												
MW-7			1030												
MW-8			1044												
MW-9		X	1105	X		X	X	X					X		
Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)				Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab				QC Requirements (Specify)				Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown			
1. Relinquished by / Sampler Brian Owen		Date 9-6-12	Time 1700	2. Received by [Signature]		Date 9-6-12	Time 1700	3. Received by [Signature]		Date 9-7-12	Time 1030	4. Laboratory Received by [Signature]		Date 9/7/12	Time 1325
2. Relinquished by [Signature]		Date 9-7-12	Time 1030	3. Received by [Signature]		Date 9-7-12	Time 1030	4. Laboratory Received by [Signature]		Date 9/7/12	Time 1325	5. Received by [Signature]		Date 9/7/12	Time 1325
3. Relinquished by		Date	Time	4. Laboratory Received by		Date	Time	5. Received by		Date	Time	6. Received by		Date	Time
4. Relinquished by [Signature]		Date 9/7/12	Time 1325	5. Received by		Date 9/7/12	Time 1325	6. Received by		Date 9/7/12	Time 1325	7. Received by		Date 9/7/12	Time 1325
Note: All samples are retained for six weeks from receipt unless other arrangements are made.								LAB USE ONLY Received on Ice (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack				Receipt Temp. 1.0 °C		Temp. Blank <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	



Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 22684

Client SCDHEC		Report to Contact D. Thomas				Sampler (Printed Name) BRIAN OWEN				Quote No.							
Address 2600 Bull St		Telephone No. / Fax No. / Email 803-896-0291				Waybill No.				Page 2 of 4							
City COLUMBIA	State SC	Zip Code 29201	Preservative 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thlo.								Number of Containers Bottle (See Instructions on back) Preservative Lot No. NE07029						
Project Name STEADY Summers		Project Number 18956/44728		P.O Number 4600088529		Matrix G=Grab C=Composite GW DW WW S Other				Analysis BTEX, m/m, n/l, m/l, n/l Pb, Cu, Zn, Cd, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, K, Ca, Mg, Na, Cl, SO4, NO3, NH4, PO4, F, Br, I, Se, Hg, As, Sb, Bi, Sn, Mo, W, V, Cr, Ni, Mn, Fe, Al, Si, G				Remarks / Cooler ID No Odor			
Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)		Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab				QC Requirements (Specify)				Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown							
1. Relinquished by / Sampler [Signature]		Date 9-6-12	Time 1700	1. Received by [Signature]				Date 9-6-12	Time 1700								
2. Relinquished by [Signature]		Date 9-7-12	Time 1030	2. Received by [Signature]				Date 9-7-12	Time 1030								
3. Relinquished by		Date	Time	3. Received by				Date	Time								
4. Relinquished by [Signature]		Date 9/7/12	Time 1325	4. Laboratory Received by [Signature]				Date 9/7/12	Time 1325								
Note: All samples are retained for six weeks from receipt unless other arrangements are made.						LAB USE ONLY Received on Ice (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack				Receipt Temp. 1.0 °C		Temp. Blank <input type="checkbox"/> Y <input type="checkbox"/> N					



Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 22685

Client SCDHEC		Report to Contact D. Thomas				Sampler (Printed Name) BELOW OWEN			Quote No.					
Address 7400 Bull St.		Telephone No. / Fax No. / Email 803-891-6241				Waybill No.			Page 3 of 4					
City COLUMBIA	State SC	Zip Code 29201	Preservative				Number of Containers			Bottle (See Instructions on back)				
Project Name STEADY SIMMONS			1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.				Preservative			Lot No.				
Project Number 189510/44228		P.O Number 41000088529		Matrix		Analysis			Remarks / Cooler ID					
Sample ID / Description (Containers for each sample may be combined on one line)		Date	Time	G-Grab C-Composite	GW	DW	WW	S	Other					
DN-4		9-4	11⁵¹	G						X	X	X	No odor	
DN-5			12⁴⁷											
DN-6			13⁰⁵											
DN-7			13²⁵										X	
NSN-1		X	13⁴⁸	X		X				X	X	X	No odor	
NSN-2													Not functioning	
NSN-3		9-4	14⁰⁰	G		X				X	X	X	No odor	
NSN-4		9-4	13⁵⁵	G		X				X	X	X		
NSN-5													No Access	
NSN-6													Not functioning	
Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)			Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab			QC Requirements (Specify)			Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown					
1. Relinquished by / Sampler B. Owen		Date 9-6-12	Time 1700	2. Received by [Signature]		Date 9-6-12	Time 1700	3. Received by [Signature]		Date 9-7-12	Time 1030			
2. Relinquished By [Signature]		Date 9-7-12	Time 1030	3. Received by [Signature]		Date 9-7-12	Time 1030	4. Laboratory Received by [Signature]		Date 9/7/12	Time 1325			
3. Relinquished by [Signature]		Date	Time	4. Laboratory Received by [Signature]		Date	Time	Receipt Temp. 10 °C		Temp. Blank <input checked="" type="checkbox"/> Y <input type="checkbox"/> N				
Note: All samples are retained for six weeks from receipt unless other arrangements are made.						LAB USE ONLY Received on Ice (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack								



Chain of Custody Record

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106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 22686

Client SCDHEC		Report to Contact D. Thomas			Sampler (Printed Name) BRIAN OLSEN			Quote No.		
Address 2000 Bull St.		Telephone No. / Fax No. / Email 803-896-6241			Waybill No.			Page 4 of 4		
City COLUMBIA	State SC	Zip Code 29201	Preservative 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.			Number of Containers			Bottle (See Instructions on back)	
Project Name STEADY SUMMERS		Project Number 18856/44228			P.O Number 4600089529			Preservative		
Sample ID / Description (Containers for each sample may be combined on one line)		Date	Time	G-Grab C-Composite	Matrix GW DW WW S Other			Lot No. M07029		
					Analysis Bref, depth, iniba 12 Dec, 8 oxy, Etc EDS			Remarks / Cooler ID		
NSW-7			14⁰⁵	G				No Odor		
NSW-8								NOT FUNCTIONING		
NSW-9			14²⁵	G				No Odor		
SN-1			11²⁰							
SN-2			11²⁰							
SN-3			14¹⁸							
MIN-2 DUPLICATE			12⁴⁸					X		
MIN-1R DUPLICATE			13²⁹					Odor/Sheen		
FIELD BLANK			14³⁰					-		
TRIP BLANK			10³⁰	X				-		
Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)		Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab			QC Requirements (Specify)			Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		
1. Relinquished by / Sampler [Signature]		Date 9-6-12	Time 1700	1. Received by [Signature]			Date 9-6-12	Time 1700		
2. Relinquished by [Signature]		Date 9-7-12	Time 1030	2. Received by [Signature]			Date 9-7-12	Time 1030		
3. Relinquished by		Date	Time	3. Received by			Date	Time		
4. Relinquished by [Signature]		Date 9/7/12	Time 1325	4. Laboratory Received by [Signature]			Date 9-7-12	Time 1325		
Note: All samples are retained for six weeks from receipt unless other arrangements are made.				LAB USE ONLY Received on Ice (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack			Receipt Temp. 1.0 °C		Temp. Blank <input type="checkbox"/> Y / <input type="checkbox"/> N	

Sample Receipt Checklist (SRC)

Client: SCORPAC Cooler Inspected by/date: W 9/17/12 Lot #: 150029

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/temperature upon receipt / <u>2</u> °C / °C / °C / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
4. Is the commercial courier's packing slip attached to this form?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
5. Were proper custody procedures (relinquished/received) followed?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
5a Were samples relinquished by client to commercial courier?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
6. Were sample IDs listed?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
7. Was collection date & time listed?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
8. Were tests to be performed listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
9. Did all samples arrive in the proper containers for each test?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
10. Did all container label information (ID, date, time) agree with COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
11. Did all containers arrive in good condition (unbroken, lids on, etc.)?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
12. Was adequate sample volume available?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
13. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
14. Were any samples containers missing?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
15. Were there any excess samples not listed on COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
16. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
18. Were all cyanide and/or sulfide samples received at a pH >12?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) samples free of residual chlorine?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
20. Were collection temperatures documented on the COC for NC samples?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?		
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) with the SR # (number)		
Sample(s) <u>201(L) - 0190 - 30(L)</u> were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/BNA/pest/PCB/herb.		

Corrective Action taken, if necessary:

Was client notified: Yes No

Did client respond: Yes No

SESI employee: _____

Date of response: _____

Comments: _____

Handwritten notes:
 For
 16
 17
 18



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment



BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

MAR 05 2013

Re: QAPP Contractor Addendum Request
Groundwater Sampling Contract
Solicitation # IFB-5400002759, PO#4600088529

Dear Mr. Shane:

In accordance with bid solicitation # IFB-5400002759 and the UST Management Division Quality Assurance Program Plan (QAPP), it is requested that you submit a Contractor Addendum for each site listed below. The Addendums must be submitted within 15 business days in my attention. The project manager for each site will issue a notice to proceed once the Addendum has been reviewed and approved. Please note, site reconnaissance should be conducted during the Addendum review so that any issues that arise may be addressed prior to commencing work at the site.

UST Permit #	Site Name	County	# samples and requested analysis*	Project Manager
18856	Steady Simmons	Jasper	40-BTEXMN, DCA, Oxygenates, & EDB	M. Hornosky
05273	Clelands One Stop	Jasper	25-BTEXMN, DCA, & Oxygenates	M. Hornosky
15735	Walterboro Marine	Colleton	20-BTEXMN & DCA	A. Shrader
05435	Cassatt Country Store	Kershaw	16-BTEXMN, DCA, Oxygenates, & EDB	D. Thoma
15771	Sugar Shack	Dorchester	48-BTEXMN, DCA, & Oxygenates	J. Padgett
12097	Greenwave Amoco	Dorchester	61-BTEXMN, DCA, Oxygenates, & EDB	J. Padgett
00870	Daniels Grocery	Barnwell	16-BTEXMN, DCA, Oxygenates, & EDB	S. Burson

* The number of samples may not include trip blanks, field blanks, or field duplicates.

Please contact me with the sampling schedule before commencing work at these facilities. In addition, a weekly update for each site is required to be submitted via e-mail to the site's project manager and myself. If you have any questions or need further assistance, please contact me at (803) 896-6397 or thomadl@dhec.sc.gov.

Sincerely,

Debra L. Thoma, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

Enc: Site Information Packets

cc: Technical Files



March 13, 2013

Ms. Debra Thoma, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: QAPP Contractor Addendum – Revision 0
Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID Number 18856
MECI Project Number 13-4372
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Thoma,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached QAPP Contractor Addendum for the referenced site.

On March 12, 2013, MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
Midlands Environmental Consultants, Inc.

Courtney M. Sanders
Staff Biologist

Jeff L. Coleman
Senior Scientist

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For

Steady Simmons, SCDHEC Site ID# 18856

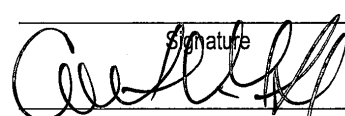
16661 Grays Highway, Early Branch, South Carolina

Prepared by:
Courtney M. Sanders
Staff Biologist
Midlands Environmental Consultants, Inc.
(Certified Site Rehabilitation Contractor UCC-0009)
235-B Dooley Road
Lexington, SC 29073
(803)808-2043

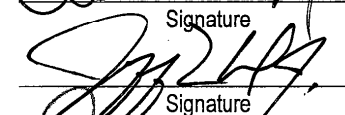
Date: March 13, 2013

Approvals

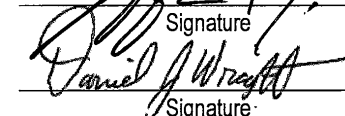
Minda Hornosky
SC DHEC Project Manager

Signature _____ Date _____


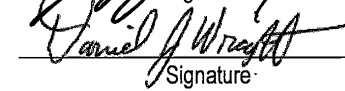
Courtney M. Sanders
Contractor QA Manager

Signature _____ Date 3/15/13


Jeff L. Coleman
Site Rehabilitation Contractor

Signature _____ Date 3/15/13


Daniel J. Wright
Laboratory Director

Signature _____ Date 03/13/2013


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A3 Distribution List

Name	Title	Organization/Address	Telephone Number	Fax Number	Email Address
Minda Hornosky	SC DHEC Technical Project Manager	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6395	803-896-6245	hornosms@dhec.sc.gov
Jeff L. Coleman	Site Rehabilitation Contractor	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	jlc@meci.net
Courtney M. Sanders	Quality Assurance Officer	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	cms@meci.net
Kyle V. Pudney	Field Manager	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	kvp@meci.net
Daniel J. Wright	Laboratory Director	Shealy Environmental Services, Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791-9700	803-791-9111	dwright@shealylab.com
	Well Services/Driller				

Table 1A Addendum Distribution List

A4 Project Organization

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephone Number	Fax Number	Email Address
Project Manager	Minda Hornosky	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6395	803-896-6245	hornosms@dhec.sc.gov
Site Rehabilitation Contractor	Jeff L. Coleman	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	jlc@meci.net
Quality Assurance Officer	Courtney M. Sanders	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	cms@meci.net
Field Manager	Kyle V. Pudney	Midlands Environmental Consultants, Inc. 235-B Dooley Road	803-808-2043	803-808-2048	kvp@meci.net

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephone Number	Fax Number	Email Address
		Lexington, SC 29073			
Analytical Laboratory Director	Daniel J. Wright	Shealy Environmental Services, Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791-9700	803-791-9111	dwright@shealylab.com
Project Verifier	Courtney M. Sanders or Kyle V. Pudney	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	cms@meci.net

Table 2A Addendum Role Identification and Contact Information

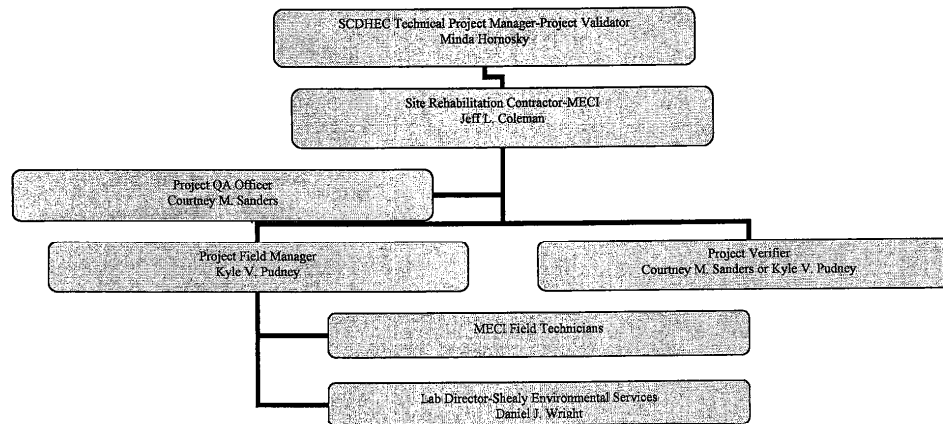


Figure 1A Organizational Chart

Project Manager (Minda Homosky) – The project manager is responsible for direct oversight of contractors conducting assessment and site rehabilitation of releases at UST sites.

Site Rehabilitation Contractor (Jeff L. Coleman) – The Site Rehabilitation Contractor is an independent contractor responsible for managing and coordinating field and office activities needed for assessments or cleanup.

- Final Review of all work produced for a scope of work.
- Final say on technical interpretation of data.

Quality Assurance Officer (Courtney M. Sanders) – The Quality Assurance Officer is responsible for the oversight of all quality assurance activities associated with projects performed by the Site Rehabilitation Contractor.

- In charge of producing and maintaining the QAPPA for MECI.
- Reviews (and Audits, if necessary) all work produced in conjunction with a scope of work.
- Quality control of data entry and report preparation.

Field Manager (Kyle Pudney) –The field manager will oversee all work done on any given project.

- Assign, direct and oversee all field personnel working on each project.
- Responsible for coordinating with the SCDHEC project manager, should any problems or clarifications arise.
- Responsible for all reporting done in conjunction with field work.

Analytical Laboratory Director (Daniel J. Wright) – The Laboratory Director is directly responsible for the Analytical Laboratory used during a scope of work. The Analytical Laboratory receives the soil and water samples from the site rehabilitation contractor, performs the requested analyses, and provides analytical reports.

Project Verifier (Courtney M. Sanders) – The project verifier is responsible for verifying the quality of data produced during a scope of work. This includes review of field work and laboratory reports for potential quality issues.

Field Technicians (various employees) – Responsible for all field activities for a given scope of work.

- Conduct all initial site visit, and record findings
- Conduct all field activities associated with a scope of work. All work will be conducted according to the MECI SOP. Will be responsible for reporting any potential problems or inconsistencies found during assessment activities.
- Completes the chain of custody upon completion of sampling event and delivers samples to lab or office for later lab pick-up.

A5 Problem Definition/Background

Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed.

The subject site (Steady Simmons) is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The subject site formerly maintained one 550 gallon gasoline underground storage tank (UST) and one 1,000 gallon gasoline UST. The subject tanks were abandoned by removal from ground in July of 2002. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product from the subject tanks in September of 2002 and confirmed the release in October of 2002. The subject site is currently rated a Class 2BB.

The site is being sampled in conjunction with the SCDHEC Groundwater Sampling Contract (Solicitation # IFB-5400002759, PO# 4600088529).

Please answer the following: Does this project fall under UST or Brownfields area?

Underground Storage Tank Division

A6 Project/Task Description

- 1. Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).**

The subject site (Steady Simmons) will be sampled in conjunction with the SCDHEC Groundwater Sampling Contract (Solicitation # IFB-5400002759, PO# 4600088529). During assessment activities monitoring wells will be sampled for petroleum constituents.

- 2. The work will begin within fourteen (14) days of receipt of approved QAPP contractors addendum after cost approval and sampling should be complete by twenty-one (21) days of receipt of approved QAPP contractors addendum.**
- 3. Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.**

Factors that may prevent schedule work will be, but not limited to, inclement weather, equipment malfunction, and machine failure.

A7 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

The subject site is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The site is currently occupied by a vacant lot surrounded by residential properties.

A8 Training and Certificates

Required training and licenses:

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Principal Geologist	Bryan T. Shane, P.G.	Professional Geologist	10/30/1993	State of South Carolina	1102
Senior Scientist	Jeff Coleman	OSHA 40 hr HAZWOPER	7/27/2007	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	12/10/2012	N/A	N/A
Staff Geologist	John Bryant	OSHA 40 hr HAZWOPER	4/17/2009	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	12/10/2012	N/A	N/A
Staff Biologist	Courtney Sanders	OSHA 40 hr HAZWOPER	12/10/2010	N/A	N/A

Title/Job	Name	Training Required	Date training received	Type of License	License Number
		OSHA 8 hr HAZWOPER refresher	12/10/2012	N/A	N/A
Staff Biologist	Kyle Pudney	OSHA 40 hr HAZWOPER	12/10/2010	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	12/10/2012	N/A	N/A
Staff Biologist	Chris Lashley	OSHA 40 hr HAZWOPER	12/10/2010	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	12/10/2012	N/A	N/A
Staff Biologist	Gavin Globensky	OSHA 40 hr HAZWOPER	7/29/2011	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	12/10/2012	N/A	N/A
Staff Biologist	Ryan Ariail	OSHA 40 hr HAZWOPER	9/23/2011	N/A	N/A
		OSHA 8 hr HAZWOPER refresher	12/10/2012	N/A	N/A
Staff Geologist	Patrick Boylan	OSHA 40 hr HAZWOPER	07/20/2012	N/A	N/A
Lab Manager	Daniel J. Wright	***	***	Lab Certification	SC 32010

Table 3A Required Training and Licenses

Courtney M. Sanders of Midlands Environmental Consultants, Inc. is responsible for ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location: 235-B Dooley Road, Lexington, SC 29073.

It is understood that training records will be produced if requested by SC DHEC.

The Following Laboratory(ies) will be used for this Project:

Commercial Lab(s)

Full Name of the Laboratory Shealy Environmental Services, Inc.
 Name of Lab Director Daniel J. Wright
 SC DHEC Certification Number 32010
 Parameters this Lab will analyze for this project:

All samples will be analyzed for BTEX, Naphthalene, MTBE, 1,2 DCA, 8-Oxygenates (EPA Method 8260-B), and EDB (EPA Method 8011)..

Please note: SC DHEC may require that the contractor submit some or all of the Laboratory's SOPs as part of this QAPP.

A9 Documents and Records

Personnel will receive the most current version of the QAPP Addendum via:
 (Check all that apply)

US Mail Courier Hand delivered

Other (please specify): E-mailed electronic copies

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Instrument Raw Data	Target, Thermospec, or Iteva software	Hardcopy and Electronic	Hardcopy: Offsite storage for 7 yrs Electronic: Two external storage device backups – one offsite, one onsite storage for 10 yrs	Yes
Final Reports	LIMS	Electronic	Electronic: Two external storage device backups – one offsite, one onsite storage for 10 years	Yes
Field Work	Field Staff	Hardcopy	MECI office: 235/B Dooley Road / Min. 5 years	Yes
Chain of Custody	Field Staff	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
QAPP Addendum	Courtney Sanders	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes
Internal QC record	Courtney Sanders	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
Sampling Report	Courtney Sanders	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes

Table 4A Record Identification, Storage, and Disposal

Section B Measurement/Data Acquisition

B1 Sampling Process/Experimental Design

Item	Start Date	End Date	Comments
Site Reconnaissance	3/12/13	3/12/13	Already Completed
QAPP preparation	3/13/13	3/13/13	In progress
QAPP approval	3/14/13	4/5/13	Assuming three week turnaround
Monitoring well Sampling	4/6/13	4/20/13	Sampled within 2 weeks of QAPP approval
Report Preparation	4/21/13	5/12/13	Three weeks to prepare/submit report

Item	Start Date	End Date	Comments

Table 5A Sampling Activities

B2 Sampling Methods

Please note: The contractor must follow sampling protocols as given in the UST QAPP.

Estimate the number of samples of each matrix that are expected to be collected:

Soil	_____
Ground Water from monitoring wells	_____24_____
From Drinking/Irrigation water wells	_____6_____
Field Duplicate Collection	_____2_____
Field Blank Collection	_____1_____
Trip Blank	_____1_____
From surface water features	_____3_____
Total number of Water samples	_____37_____

Notes:

During the March 12, 2013 site visit, twenty four (24) monitoring wells, six (6) water supply wells, and three (3) surface water features were located. During the site visit water supply wells WSW-2, WSW-6, and WSW-8 were located, but found to be non operational.

During the site visit it was noted that all located monitoring wells were in good condition.

All monitoring well samples will be analyzed by BTEX, Naphthalene, MTBE, 1,2 DCA, 8-Oxygenates (EPA Method 8260-B), and EDB (EPA Method 8011).

For the sample matrices indicated above, please describe how samples will be collected and the equipment needed.

Please see MECI Monitoring Well Sampling SOP for sampling procedures and type of materials used for sampling.

Will Sampling Equipment have to be cleaned and decontaminated or is everything disposable?

All equipment, excluding electronic water level indicators, field probes and turbidity tubes, is disposable.

If sampling equipment must be cleaned please give a detailed description of how this is done and the disposal of by-products from the cleaning and decontamination.

Please see MECI Monitoring Well Sampling SOP for decontamination procedures.

Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.

All samples will be shipped to the lab via courier or overnight shipping company. Please see MECI Monitoring Well Sampling SOP for sample shipping procedures.

Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.

Failure	Response	Documentation	Individual Responsible
Water level indicator not working properly	Attempt to clean probe, change battery, use back-up indicator if need be.	Record on field sheets, notify office staff. Take indicator out of rotation until problem identified and corrected.	Field Staff, Field Manager
Field meters not working	Attempt to clean probes, recalibrate in the field.	Record on field sheets, notify office staff. Take meters out of rotation until problem identified and corrected.	Field Staff, Field Manager
Wells not located	Use metal detector, measure from known points, contact project manager for additional information.	Record method used to attempt to locate the well on field sheets, and possibly reasoning for the well to be missing	Field Staff

Table 6A Field Corrective Action

B3 Sample Handling and Custody

1. How will the samples get from the Site to the Lab to ensure holding requirements are met?

Following sample collection, the samples are immediately place in a laboratory provided cooler, pre-filled with wet ice obtained from the MECI office. Samples are transported to the MECI office once a sampling event is complete. A Chain of Custody (CoC) is filled out following the sampling event by the field staff. See attached CoC. If a lab provided courier is scheduled to visit the MECI offices the day following a sampling event, sampling coolers are repacked with wet ice, and left at the office for pick-up the following morning. If no courier is schedule to visit the MECI office the day following a sampling event, all sampling coolers are repacked with ice and are dropped off at a lab approved shipping company for overnight delivery to the lab.

2. How will the contactors cool the samples and keep the samples cool?

All samples are kept on wet ice, obtained from MECI office.

3. How will the lab determine the temperature of the samples upon receipt? Will they be using a temperature blank?

A calibrated thermometer and temperature blank will be used to document sample temperature. The temperature blank is immediately checked by the sample receiving technician upon arrival at the laboratory.

4. Where will the samples be stored in the Lab once they are received?

All samples are stored in clean refrigeration units monitored and maintained at 4 degrees C + or - 2 degrees. Volatile organic samples are stored separately from all other samples.

5. Describe the chain of custody procedure and attach a copy of each chain of custody that will be used. If a Chain of Custody SOP exists from the Lab and the Contractor is willing to adhere to it, then this may be attached.

A chain of custody (COC) will be filled out for each sampling event at each project site. COC to be signed by MECI and Shealy Environmental technician at time physical transfer of samples occurs to courier. Shealy uses the following COC procedures to protect sample integrity following pickup by their courier: A full time Sample Receiving Technician receives all samples and completes a Sample Receipt Checklist (SRC), which will identify any anomalies, if any exist the Sample Receiving Technician or Project Manager must resolve the deviation internally and/or notify the client to resolve the anomaly

B4 Analytical Methods

1. Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:

Parameter	SOP ID*	Method Referenced	Equipment	Comments
BTEX+Naph+MTBE+Oxygentaes	S-VO-002	8260B	GC/MS	
PAH's	S-SV-021	8270D	GC/MS	
EDB	S-SV-012	8011	GC	
Lead, T.	S-IM-022	6010C	ICP	
Ferrous Iron	S-IN-009	SM 3500-FED	Spectrophotometer	
Nitrate	S-IN-042	353.2	Auto-analyzer/Lachate	
Sulfate	S-IN-010	300.0	Ion Chromatograph	
Methane	S-VO-004	RSK-175	GC	
TOC	S-IN-030	Walkley-Black	N/A	
DRO - TPH	S-SV-001	8015C	GC	
pH	MECI SOP 4.3.6	*	YSI 63	
Conductivity	MECI SOP 4.3.6	*	YSI 63	

Dissolved Oxygen	MECI SOP 4.3.6	*	YSI 550A
Temperature	MECI SOP 4.3.6	*	YSI 550A
Turbidity	MECI SOP 4.3.6	*	60 cm Turbidity Tube

Table 7A Analytical SOPs and Referenced Methods

- This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

Abbreviation	Lab Identification of this SOP	Full Name of the SOP
S-VO-002	S-VO-002	GC/MS VOLATILES ANALYSIS BASED ON EPA METHODS 8260B AND 624 PREPARED BY EPA METHODS 5030B, 5035 AND 3585
S-SV-021	S-SV-021	GC/MS ANALYSIS BASED ON EPA METHOD 8270D PREPARED BY EPA METHODS 3520C, 3550C AND 3580A
S-SV-012	S-SV-012	GC/ECD ANALYSIS OF EDB AND DBCP BASED ON METHOD 8011 & 504.1
S-IM-022	S-IM-022	INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPECTROSCOPY-PECTROMETRIC METHOD for TRACE ELEMENT ANALYSES METHOD 6010C
S-IN-009	S-IN-009	FERROUS IRON (PHENANTHROLINE METHOD) STANDARD METHOD 3500-Fe D
S-IN-042	S-IN-042	NITRATE+NITRITE NITROGEN BY EPA METHOD 353.2, NITRATE NITROGEN BY 353.2 SUBTRACTION, AND NITRITE NITROGEN BY EPA METHOD 353.2
S-IN-010	S-IN-010	INORGANIC ANIONS BY ION CHROMATOGRAPHY EPA METHOD 300.0 and SW-846 9056 and 9056A
S-VO-004	S-VO-004	STANDARD OPERATING PROCEDURE GC ANALYSIS BASED ON METHOD RSKSOP-175
S-IN-030	S-IN-030	TOTAL ORGANIC CARBON (TOC) WALKLEY-BLACK PROCEDURE
S-SV-001	S-SV-001	GC/FID DIESEL RANGE ORGANICS ANALYSIS BASED ON METHOD 8015B and/or 8015C PREPARED BY EPA METHODS 3520C, 3550C and 3580A
MECI SOP 4.3.6	MECI SOP 4.3.6	Sampling Standard operating procedures

Table 8A SOP Abbreviation Key

- Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Failure	Response	Documented Where?	Individual Responsible
Field meters not working	Attempt to clean probes, recalibrate in the field.	Record on field sheets, notify office staff. Take meters out of rotation until problem identified and corrected.	Field Staff, Field Manager

COC or Sample Receiving issues	Call Client	Sample Receiving Checklist (SRC)	PM – Kelly Maberry kmaberry@shealylab.com
Analytical errors	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director – Daniel J. Wright dwright@shealylab.com
QA/QC Failure	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director – Daniel J. Wright dwright@shealylab.com QA/QC Officer – Jami Savje Jsavje@shealylab.com
On time delivery	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director – Daniel J. Wright dwright@shealylab.com QA/QC Officer – Jami Savje Jsavje@shealylab.com

Table 9A Corrective Action Procedures

3. Identify sample disposal procedures.

Analysis	Matrix	Schedule for disposal	Method for disposal	Comments
BTEX+Naph+MTBE+Oxygenates	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
PAH's	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
EDB	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
Lead	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or	

			non-Hazardous waste.	
Ferrous Iron	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
Nitrate,Sulfate	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
Methane	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
All	Water	On-Site	Portable Granulated Activated Carbon (GAC) Unit	All waste water produced from sampling and decontamination activities will be run through a GAC unit

Table 10A Sample Disposal Procedures

4. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. Identify all field and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Note the availability and location of spare parts.

Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible
Volatiles Mass Spec	Shealy SOP S-SV-021 Page 7	Change traps, clean ion source, replace	Periodic	Laboratory	MSV Analyst

		filaments			
Semivolatle Mass Specc	Shealy SOP S-SV-021 Page 7	Injection port maintenance, ion source maintenance, column replacement	Periodic	Laboratory	MSSV Analyst
ECD GC	Shealy SOP S-SV-012 Page 5	Injection port maintenance, column replacement	Periodic	Laboratory	GC Analyst
Dionex IC	Shealy SOP S-IN-010 Page 6	Replace auto sampler filter, tubing, line filter, sample Line and Waste Line, as needed. Check Reagent levels, flow rate, waste line.	Periodic	Laboratory	IC Analyst
ICP	Shealy SOP S-IM-005 Page 6 & 7	Clean Sample introduction system , auto sampler, torch, Change spray chamber, torch tubing, tubing	Periodic	Laboratory	ICP Analyst
Leeman Mercury Analyzer	Shealy SOP S-IM-006 Page 5	Clean GLS, Change Pump tubing, Nafion Dryer, Lamp	Periodic	Laboratory	Mercury Analyst
Flow Injection Analysis – Lachat 8000	Shealy SOP S-IN-042 Page 5	Replace sample and reagent lines, replace light source, re-wrap heating coil, replace column	Periodic/As Needed	Laboratory	Nitrate Analyst
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace probe tip	Yearly	Order from YSI	C. Sanders
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace batteries	As Needed	In stock at office	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	General inspection for wear and tear on equipment	Daily	Major fixes will be done out of office	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	Check buffer solutions for expiration	Weekly	In stock at office	C. Sanders
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace membrane	4 to 8 weeks	In stock at office	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace batteries	As Needed	In stock at office	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	General inspection for wear and tear on equipment	Daily	Major fixes will be done out of office	Field Staff
Turbidity Tube	#1, #2, #3	General inspection for wear and tear on	Daily	Tubes will be cleaned/fixd in	Field Staff

		equipment, clarity of Secchi Disk		office	

Table 11A Instrument and Equipment Maintenance

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this

Instrument/Equipment & Serial Number	Type of Inspection	Requirement	Individual Responsible	Resolution of Deficiencies
Volatiles Mass Spec Shealy SOP S-SV-021 Page 7	Daily calibration check	Method Requirements	MSV Analyst	Recalibration or instrument maintenance
Semi-volatiles Mass Spec Shealy SOP S-SV-021 Page 7	Daily calibration check	Method Requirements	MSSV Analyst	Recalibration or instrument maintenance
ECD GC Shealy SOP S-SV-012 Page 5	Daily calibration check	Method Requirements	GC Analyst	Recalibration or instrument maintenance
Dionex IC Shealy SOP S-IN-010 Page 6	Daily calibration check	Method Requirements	IC Analyst	Recalibration or instrument maintenance
ICP Shealy SOP S-IM-005 Page 6 & 7	Daily calibration check	Method Requirements	ICP Analyst	Recalibration or instrument maintenance
Leeman Mercury Analyzer Shealy SOP S-IM-006 Page 5	Daily calibration check	Method Requirements	Mercury Analyst	Recalibration or instrument maintenance
Flow Injection Analysis – Lachat 8000 Shealy SOP S-IN-042 Page 5	Daily and continuing calibration check	See calibration criteria	Nitrate Analyst	Recalibration or instrument maintenance
YSI 63 - 09C 101302, 10K 101895, 07M 100905	Daily calibration check	See calibration criteria	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer
YSI 550A - 04L 2026AK, 08B 101407, 04A 0912AI	Daily calibration check	See calibration criteria	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer

Table 12A Instrument and Equipment Inspection

B7 Instrument Calibration and Frequency

1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
Volatiles Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by continuous calibration verification standard	Method Criteria	Detailed in SOP	MSV Analyst	S-VO-002
Semi-volatile Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	MSSV Analyst	S-SV-021
GC ECD	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	GC Analyst	S-SV-012
Dionex IC	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	IC Analyst	S-IN-010
ICP	Minimum of 3 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	ICP Analyst	S-IM-022
Cetac Mercury Analyzer	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	Mercury Analyst	S-IM-006
Lacaht QuickChem 8000	Minimum of 5 calibration standards	Daily or when indicated by calibration verification standard	Method Criteria	Detailed in SOP	Nitrate Analyst	S-IN-042
YSI 63	pH Calibration	Daily	+/- 0.2 pH units	clean/replace probe tip, recalibrate	Field Staff	4.3.6
YSI 63	Conductivity Calibration	As directed by manufacturer	+/- 10 uS	clean/replace probe tip, recalibrate	Field Staff	4.3.6
YSI 550A	DO calibration	Daily	+/- 0.25 mg/l	clean/replace probe tip,	Field Staff	4.3.6

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
				recalibrate		
YSI 550A	Temperature Calibration	Daily	+/- 1 °C	clean/replace probe tip, recalibrate	Field Staff	4.3.6
Electronic Water Level Indicator	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff	***
Oil/Water Interface probe	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff	***

Table 13A Instrument Calibration Criteria and Corrective Action

* This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

B8 Inspection/Acceptance Requirements for Supplies and Consumables

1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
2. Identify the individual(s) responsible for this.

Item	Vendor	Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.
Laboratory Chemicals	Fisher, VWR	Certificates of analysis and laboratory testing	Laboratory storage	Receiving and laboratory personnel
Laboratory standards	O2Si, Restek, High Purity, VHG, Supelco	Certificates of analysis and laboratory verifications	Vendor specific storage conditions	Laboratory Analysts
Sample Containers	Daniels Scientific, QEC	Certificates of analysis and laboratory testing	Bottle storage area	Sample receiving personnel
Clear, Disposable polyethylene Bailers	Preferred Pump	Individual sleeves intact, ball valve operational	Stored in Vehicle Bay, Off of the ground	C. Sanders, Field Staff
Nylon Rope	Preferred Pump	Covered with plastic	Stored in Vehicle Bay, Off of the ground	C. Sanders, Field Staff
Nitrile Gloves	Preferred Pump	Unopened box, no holes	Stored in Vehicle Bay, Off of the ground	C. Sanders, Field Staff
40 mL HCL preserved amber vials	Shealy Environmental Services	Custody seal intact	Stored in Vehicle Bay, Off of the ground	C. Sanders, Field Staff
250 mL HNO3 preserved metals vials	Shealy Environmental Services	Custody seal intact	Stored in Vehicle Bay, Off of the ground	C. Sanders, Field Staff
Coolers	Shealy Environmental Services	Intact	Stored in Vehicle Bay, Off of the ground	C. Sanders, Field Staff
pH Buffer	TRS	Within expiration date	Stored in	C. Sanders, Field Staff

	Environmental, Enviroequipment		calibration room	
Conductivity Standard	TRS Environmental, Enviroequipment	Within expiration date	Stored in calibration room	C. Sanders, Field Staff
DO Membranes	YSI, Enviroequipment	Clean, in box	Stored in calibration room	C. Sanders, Field Staff
Batteries	Any Store	Not previously used	Stored in calibration room	C. Sanders, Field Staff

Table 14A List of Consumables and Acceptance Criteria

B9 Data Acquisition Requirements (Non-Direct Measurements)

1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
3. Indicate the acceptance criteria for these data sources and/or models.

Data Source	Used for	Justification for use in this project	Comments
Historical Data	Site Maps and Well Construction Information	Well Location and Detail	

Table 15A Non-Direct Measurements

4. Identify key resources/support facilities needed.

There are no non-direct measurements in this project

B10 Data Management

1. Describe the data management scheme from field to final use and storage.

Following sample collection and chain of custody production, samples are shipped to the lab. Field work from the field staff is reviewed by the MECI project manager, and converted into digital form. All data entry is subsequently checked to validate the data entry. The original copies of the field work are stored in MECI files for a minimum of 5 years. Digital copies of the work are stored on the MECI server, which is backed up weekly, and stored for a minimum of 5 years. The digital copy of the field work is presented to SCDHEC with the final report.

2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?

The laboratory maintains comprehensive Quality Control and Training Programs. All sample receipt data, sample log-in, and analytical data is peer reviewed, including review for inappropriate changes. Data management, review procedures and the Quality Systems Program are documented in the laboratory's Quality Manual and Standard Operating Procedures. The Quality Assurance Department oversees adherence to and review of these programs.

All MECI field work is produced using ink-pens. Any attempt to alter field data, after sampling is complete, can be readily identified. MECI keeps a carbon copy of the chain of custody after it is shipped to the lab. This copy is kept with the field work. If any change to the CoC are suspected, this original carbon copy can be use to identify potential changes.

3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted?

Sample data acquisition software is reviewed periodically. The LIMS database is backed up daily and is able to be restored in the event of a system failure. These procedures are documented in laboratory SOP S-AD-003, LIMS. The IT Manager is responsible for these systems and procedures."

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Laboratory Hardcopy data stored off site is logged, maintained and archived by the Quality Assurance Department. Laboratory Electronic Data Reports are maintained through IT back up under the responsibility of the IT Systems Manager.

MECI keeps all field work and paper copies of reports in its in-house filing system. All paper copies are stored for a minimum of 5 years. Any file can be retrieved easily by going to the correct filing cabinet/box.

All electronic copies of reports generated are kept on the MECI server. This server is backed-up on a weekly basis. Any file stored on the MECI server can be retrieved instantly, by accessing the server. All electronic files are stored for a minimum of 5 years on the server.

Section C Assessment and Oversight

C1 Assessment and Response Actions

1. *The Contractor is supposed to observe field personnel daily during sampling activities to ensure samples are collected and handled properly and report problems to DHEC within 24 hours. . Please state who is responsible for doing this and what observations will be made. Will this person have the authority to stop work if severe problems are seen?*

Field audits can be conducted on any field personnel at any time. MECI field audits can be conducted by the Field Manger, who will be responsible for ensuring that field personnel adhere to the QAPP. If during a random field audit, severe problems are found, work will be stopped by the field manager and the QA

officer contacted to determine corrective action. All problems must be corrected prior to any additional work being performed. Should it be requested, an On-site Field Audit can be scheduled with the SCDHEC project manager. If severe problems are identified by the SCDHEC project manager, the project manager can stop the work until the problems are corrected.

2. *The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done on the Commercial Lab(s) that are being used—other than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?*

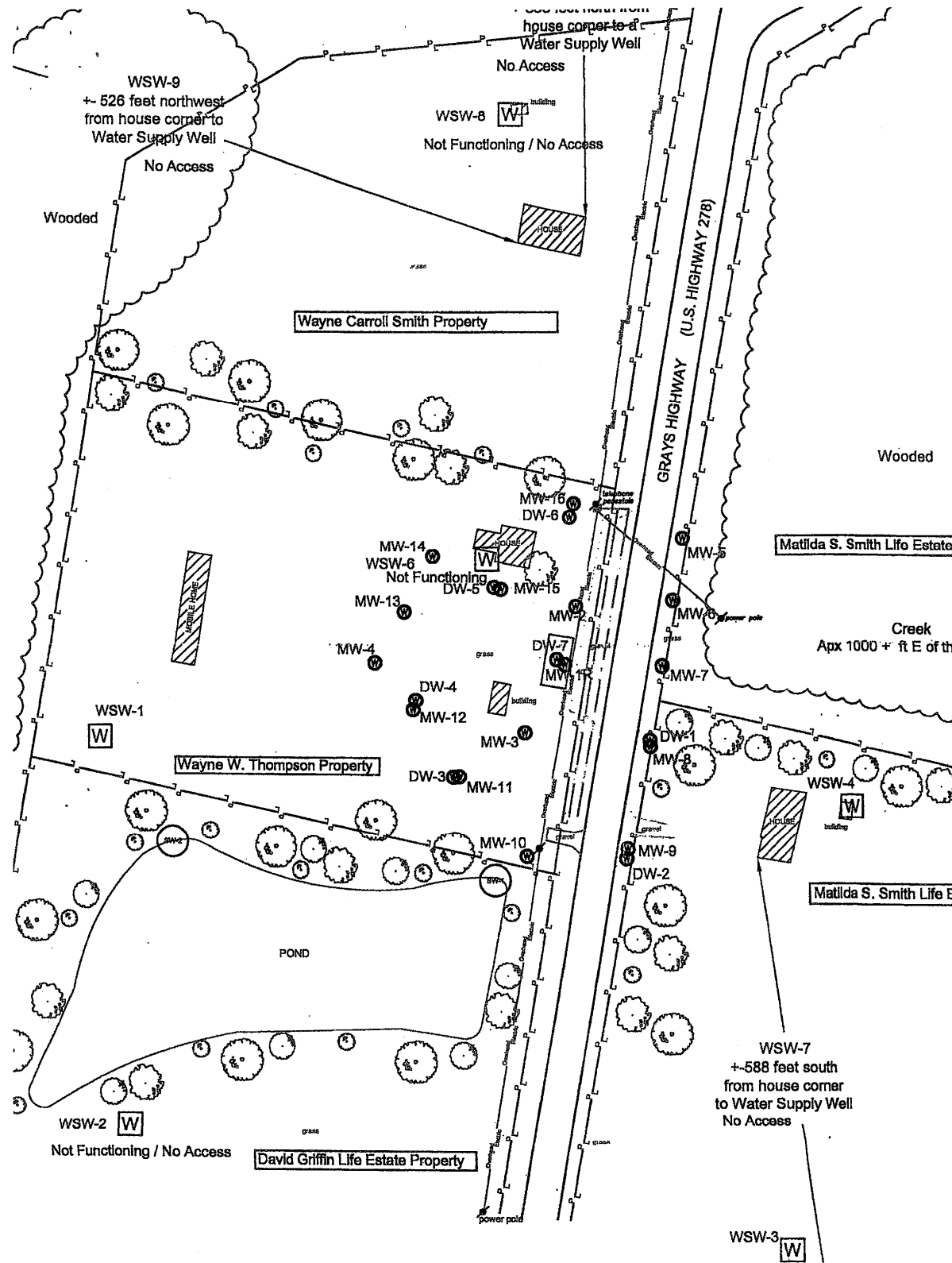
The laboratory participates in annual Proficiency Testing through an approved vendor, Wibby Environmental. If during a random audit, severe problems are found, work will be stopped by the according Wibby Environmental representative and the QA officer contacted to determine corrective action. Proficiency Testing results are provided to the Office of Environmental Laboratory Certification.

C2 Reports to Management

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Section D Data Validation and Usability

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).





Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number

Form with sections for Client, Address, City, Project Name, Project Number, Sample ID/Description, Matrix, Analysis, QC Requirements, and Possible Hazard Identification.



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

**BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071**

APR 15 2013



Re: **Notice to Proceed-Groundwater Sampling/QAPP Contractor Addendum Approval**
Groundwater Sampling Contract
Solicitation # IFB-5400002759, PO#4600088529
Steady Simmons, 16661 Grays Hwy, Early Branch, SC
UST Permit #18856, CA#45340
Jasper County

Dear Mr. Shane:

In accordance with bid solicitation # IFB-5400002759 and the UST Management Division Quality Assurance Program Plan (QAPP), the Site-Specific Contractor Addendum has been reviewed and approved. In accordance with the QAPP, a weekly status report of the project should be provided on a weekly basis via e-mail. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered, including quality assurance problems, the actions taken, and the results must be included in the final report submitted to the UST Management Division.

MECI will perform services at the site on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. The Department grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the final report. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs. **Please note, the final report is due within 3 weeks from the date the site is sampled. If the site is not sampled by the specified due date or the report is not received in the specified time period, a late fee may be imposed.**

The final report should contain the requirements of Section III.2.15 of the bid solicitation. The final report should be submitted to Debra Thoma, the contract manager.

Page 2

If you have any site-specific questions, please contact Minda Hornosky at (803) 896-6633 or via e-mail at hornosmi@dhec.sc.gov. If you have any contract specific questions, please contact me at (803) 896-6397 or via e-mail at thomadl@dhec.sc.gov.

Sincerely,

A handwritten signature in black ink that reads "Debra L. Thoma". The signature is written in a cursive style with a large, stylized "D" and "T".

Debra L. Thoma, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Approved QAPP Contractor Addendum Signature Page
Approved Cost Agreement

cc: Kelly Maberry, Shealy Environmental, 106 Vantage Point Dr., West Columbia, SC, 29172 (w/ approved CA)
Technical Files (w/ encs.)

Approved Cost Agreement 45339

Facility: 18856 STEADY SIMMONS

HORNOSMS

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Per</u>	<u>Unit Price</u>	<u>Amount</u>
11 ANALYSES					
	GW GROUNDWATER	A1 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	38.0000	35.00	1,330.00
		F EDB	36.0000	20.00	720.00
		Total Amount			2,050.00

Approved Cost Agreement 45340

Facility: 18856 STEADY SIMMONS

HORNOSMS

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
04 MOB/DEMOB		B PERSONNEL	3.0000	100.00	300.00
10 SAMPLE COLLECTION		C WATER SUPPLY	9.0000	2.00	18.00
		D GROUNDWATER NO-PURGE	24.0000	4.50	108.00
		H FIELD BLANK	1.0000	2.00	2.00
17 DISPOSAL		A WASTEWATER	10.0000	0.10	1.00
18 MISCELLANEOUS		QAPP PREP	1.0000	0.00	0.00
Total Amount					429.00

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For

Steady Simmons, SCDHEC Site ID# 18856


16661 Grays Highway, Early Branch, South Carolina

Prepared by:
Courtney M. Sanders
Staff Biologist
Midlands Environmental Consultants, Inc.
(Certified Site Rehabilitation Contractor UCC-0009)
235-B Dooley Road
Lexington, SC 29073
(803)808-2043

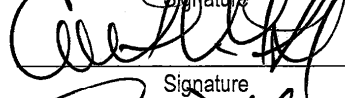
Date: March 13, 2013

Approvals


Minda Hornosky
SC DHEC Project Manager

 Date 3/13/13
Signature


Courtney M. Sanders
Contractor QA Manager

 Date 3-15-13
Signature

Jeff L. Coleman
Site Rehabilitation Contractor

 Date 3/15/13
Signature

Daniel J. Wright
Laboratory Director

 Date 03/13/2013
Signature



May 20, 2013



Ms. Debra Thoma, Hydrogeologist
Corrective Action Section
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: Report of Groundwater Sampling
Steady Simmons
16661 Grays Highway
Early Branch, South Carolina
SCDHEC Site ID Number 18856; CA # 45340
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Thoma,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Groundwater Sampling for the referenced site. This report describes site activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control's (SCDHEC) Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP).

PROJECT INFORMATION

The subject site (Steady Simmons) is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The subject site formerly maintained one 550 gallon gasoline underground storage tank (UST) and one 1,000 gallon gasoline UST. The subject tanks were abandoned by removal from ground in July of 2002. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product from the subject tanks in September of 2002 and confirmed the release in October of 2002. The subject site is currently rated a Class 2BB.

The above information is based on reports and correspondence obtained from MECI field notes and SCDHEC files.

MONITORING WELL SAMPLING AND CHEMICAL ANALYSIS

On May 13, 2013, MECI personnel collected samples from twenty-three (23) monitoring wells, seven (7) water supply wells, and three (3) surface water locations at the subject site. MECI personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase petroleum product level measurements. Based on a request by SCDHEC personnel, only wells which did not bracket the watertable were to be purged prior to sample

collection. Nineteen (19) monitoring wells were purged prior to sample collection. Where applicable, purging was completed by bailing at least five well volumes of water from the well, until pH, conductivity, dissolved oxygen stabilized to within 10%, or all water was evacuated from the well, whichever occurred first. Sampling/purging was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. A new set of nitrile gloves were worn at each monitoring well, and at all time samples were handled. Field measurements of pH, conductivity, dissolved oxygen, water temperature, and turbidity were obtained before well sampling process. MECI utilized YSI550A meter for DO (mg/L) and temperature readings (°C), YSI63 meters for pH and conductivity (uS) readings and a MicroTPI/TPW turbidimeter for turbidity readings (NTU). The attached Field Data Information Sheets presents the results of the field measurements obtained. The wells were sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP, Dated June 2011) and MECI's Standard Operating Procedures (MECI SOP, Dated August, 2011).

Groundwater samples obtained were sent to Shealy Environmental Services, Inc. of West Columbia, SC (SCDHEC Laboratory Certification #32010) for analysis.

The following sampling matrix contains well development and requested analyses for each well:

Monitoring Well	Purge	No Purge	Not Sampled	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 385.2)	Methane (RSC Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
Analyte Sampled														
MW-1R	X				X	X	X	X						
MW-2	X				X	X	X	X						
MW-3	X				X	X	X	X						
MW-4	X				X	X	X	X						
MW-5		X			X	X	X	X						
MW-6		X			X	X	X	X						
MW-7		X			X	X	X	X						
MW-8	X				X	X	X	X						
MW-9	X				X	X	X	X						
MW-10	X				X	X	X	X						
MW-11	X				X	X	X	X						
MW-12	X				X	X	X	X						
MW-13	X				X	X	X	X						
MW-14	X				X	X	X	X						
MW-15	X				X	X	X	X						
MW-16		X			X	X	X	X						
DW-1	X				X	X	X	X						
DW-2	X				X	X	X	X						
DW-3	X				X	X	X	X						
DW-4	X				X	X	X	X						
DW-5	X				X	X	X	X						
DW-6	X				X	X	X	X						
DW-7	X				X	X	X	X						

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dichloroethane
 PAH = polycyclic aromatic hydrocarbons
 Trip Blank provided by Shealy Environmental, temperature obtained upon receipt at Laboratory

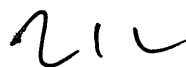
Monitoring Well	Purge	No Purge	Not Sampled	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 385.2)	Methane (rsk Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
Analyte Sampled														
WSW-1					X	X	X	X						
WSW-2			X											
WSW-3					X	X	X	X						
WSW-4					X	X	X	X						
WSW-5					X	X	X	X						
WSW-6			X											
WSW-7					X	X	X	X						
WSW-8					X	X	X	X						
WSW-9					X	X	X	X						
SW-1					X	X	X	X						
SW-2					X	X	X	X						
SW-3					X	X	X	X						
MW-1R Dup.					X	X	X	X						
MW-2 Dup.					X	X	X	X						
Field Blank					X	X	X	X						
Trip Blank					X		X	X						


Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dichloroethane
PAH = polycyclic aromatic hydrocarbons
Trip Blank provided by Shealy Environmental, temperature obtained upon receipt at Laboratory

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 160.5 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is attached at the end of this report.

Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.


Patrick G. Boylan
Staff Geologist


Courtney M. Sanders
Project Biologist

Attachments:

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	X		
2	Is UST Owner/Operator name, address, & phone number provided?			X
3	Is name, address, & phone number of current property owner provided?			X
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	X		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?			X
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	X		
7	Has the facility history been summarized?	X		
8	Has the regional geology and hydrogeology been described?			X
9	Are the receptor survey results provided as required?			X
10	Has current use of the site and adjacent land been described?			X
11	Has the site-specific geology and hydrogeology been described?			X
12	Has the primary soil type been described?			X
13	Have field screening results been described?			X
14	Has a description of the soil sample collection and preservation been detailed?			X
15	Has the field screening methodology and procedure been detailed?			X
16	Has the monitoring well installation and development dates been provided?			X
17	Has the method of well development been detailed?			X
18	Has justification been provided for the locations of the monitoring wells?			X
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?			X
20	Has the groundwater sampling methodology been detailed? See MECI SOP	X		
21	Have the groundwater sampling dates and groundwater measurements been provided? See attached Site Activity Summary Sheet	X		
22	Has the purging methodology been detailed? See MECI SOP	X		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? See attached Field Data Information Sheets	X		
24	If free-product is present, has the thickness been provided? See attached Site Activity Summary Sheets	X		
25	Does the report include a brief discussion of the assessment done and the results?			X
26	Does the report include a brief discussion of the aquifer evaluation and results?			X
27	Does the report include a brief discussion of the fate & transport models used?			X

Item#	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			X
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			X
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			X
31	Have recommendations for further action been provided and explained?			X
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			X
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)			X
34	Has the current and historical laboratory data been provided in tabular format?			X
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			X
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			X
37	Has the topographic map been provided with all required elements? (Figure 1)	X		
38	Has the site base map been provided with all required elements? (Figure 2)	X		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)			X
40	Has the site potentiometric map been provided? (Figure 5)			X
41	Have the geologic cross-sections been provided? (Figure 6)			X
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			X
43	Has the site survey been provided and include all necessary elements? (Appendix A)			X
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	X		
45	Is the laboratory performing the analyses properly certified?	X		
46	Has the tax map been included with all necessary elements? (Appendix C)			X
47	Have the soil boring/field screening logs been provided? (Appendix D)			X
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)			X
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			X
50	Have the disposal manifests been provided? See attached	X		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			X
52	Has all fate and transport modeling been provided? (Appendix I)			X
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			X
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	X		

Site Activity Summary

UST Permit #: 18856
 Facility Name: Steady Simmons
 County: Jasper
 Field Personnel: Patrick Boylan, Chris Lashley, Gavin Globensky


 Midlands Environmental Consultants, Inc.
 235-B Dooley Road, Lexington, SC 29013
 (803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	DO (mg/l)	# Gals. Purged	Comments
MW-1R	Y	5/13/13	11:57	7-17	***	2.70	***	0.95	5.0	Slight Odor
MW-2	Y	5/13/13	11:51	7-17	***	3.79	***	0.97	11.0	Odor
MW-3	Y	5/13/13	13:28	7-17	***	2.00	***	1.00	7.5	No Odor
MW-4	Y	5/13/13	12:27	7-17	***	1.90	***	4.01	5.0	No Odor
MW-5	Y	5/13/13	11:18	5-15	***	5.01	***	5.87	***	No Odor
MW-6	Y	5/13/13	11:14	5-15	***	5.10	***	4.75	***	No Odor
MW-7	Y	5/13/13	11:16	5-15	***	5.07	***	2.99	***	No Odor
MW-8	Y	5/13/13	10:55	5-15	***	3.70	***	1.29	3.0	No Odor
MW-9	Y	5/13/13	10:44	5-15	***	3.85	***	1.07	9.0	No Odor
MW-10	Y	5/13/13	13:39	5-15	***	1.12	***	1.25	7.0	No Odor
MW-11	Y	5/13/13	13:22	5-15	***	1.10	***	1.07	7.0	No Odor
MW-12	Y	5/13/13	12:01	5-15	***	1.52	***	2.23	6.0	No Odor
MW-13	Y	5/13/13	12:38	5-15	***	2.20	***	1.27	6.0	No Odor
MW-14	Y	5/13/13	12:31	5-15	***	3.10	***	1.63	6.0	No Odor
MW-15	Y	5/13/13	12:18	10-20	***	3.80	***	3.74	8.0	No Odor
									80.5	TOTAL GALLONS PURGED

Site Activity Summary

UST Permit #: 18856
Facility Name: Steady Simmons
County: Jasper
Field Personnel: Patrick Boylan, Chris Lashley, Gavin Globensky


**Midlands
Environmental
Consultants, Inc.**
 235-B Dooley Road, Lexington, SC 29013
 (803) 808-2043 Fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	DO (mg/l)	# Gals. Purged	Comments
MW-16	Y	5/13/13	11:37	5-20	***	5.09	***	2.72	***	No Odor
DW-1	Y	5/13/13	11:14	35-40	***	6.65	***	3.11	27.0	No Odor
DW-2	Y	5/13/13	10:33	35-40	***	6.05	***	2.50	6.0	No Odor
DW-3	Y	5/13/13	13:11	35-40	***	4.45	***	2.19	7.0	No Odor
DW-4	Y	5/13/13	12:50	35-40	***	13.20	***	2.52	3.0	No Odor
DW-5	Y	5/13/13	12:17	33-38	***	3.79	***	3.90	28.0	No Odor
DW-6	Y	5/13/13	11:32	31-36	***	5.29	***	4.21	6.0	No Odor
DW-7	Y	5/13/13	11:43	31-36	***	3.80	***	4.17	3.0	No Odor
WSW-1	Y	5/13/13	13:01	***	***	***	***	***	***	No Odor
WSW-2	N	5/13/13	NS	NS	NS	NS	NS	NS	NS	Not Sampled, WSW Not Functioning
WSW-3	Y	5/13/13	13:09	***	***	***	***	***	***	No Odor
WSW-4	Y	5/13/13	13:24	***	***	***	***	***	***	No Odor
WSW-5	Y	5/13/13	13:18	***	***	***	***	***	***	No Odor
WSW-6	N	5/13/13	NS	NS	NS	NS	NS	NS	NS	Not Sampled, WSW Not Functioning
WSW-7	Y	5/13/13	13:34	***	***	***	***	***	***	No Odor
									80.0	TOTAL GALLONS PURGED

Site Activity Summary

UST Permit #: 18856
 Facility Name: Steady Simmons
 County: Jasper
 Field Personnel: Patrick Boylan, Chris Lashley, Gavin Globensky


 Midlands Environmental Consultants, Inc.
 235-B Dooley Road, Lexington, SC 29073
 (803) 808-2043 Fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	DO (mg/l)	# Gals. Purged	Comments
WSW-8	Y	5/13/13	13:29	***	***	***	***	***	***	No Odor
WSW-9	Y	5/13/13	13:13	***	***	***	***	***	***	No Odor
SW-1	Y	5/13/13	13:29	***	***	***	***	***	***	No Odor
SW-2	Y	5/13/13	13:33	***	***	***	***	***	***	No Odor
SW-3	Y	5/13/13	13:37	***	***	***	***	***	***	No Odor
MW-1R Dup.	Y	5/13/13	11:57	7-17	***	2.70	***	0.95	***	Duplicate Sample
MW-2 Dup.	Y	5/13/13	11:51	7-17	***	3.79	***	0.97	***	Duplicate Sample
Field Blank	Y	5/13/13	13:40	***	***	***	***	***	***	Field Blank
Trip Blank	Y	5/13/13	13:40	***	***	***	***	***	***	Laboratory Prepared Trip Blank
									0.0	TOTAL GALLONS PURGED

South Carolina Department of Health and Environmental Control
 Bureau of Land and Waste Management Underground Storage Tank Program
 Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 5/13/2013

Field Personnel: C. Lashley, G. Globensky, & P. Boylan

General Weather Conditions: Clear

Ambient Air Temperature: 22.1 °C

Quality Assurance

pH/Conductivity Meter	DO Meter
YSI 63	YSI 550A
09C 101302	04L 2026AK
10K 101895	08B 101895
07M 100905	04A 0912AI
Calibration Buffer: <u>4, 7, & 10</u>	<u>X</u>

Chain of Custody

<u>Relinquished by</u>	<u>Date/Time</u>	<u>Received by</u>	<u>Date/Time</u>
------------------------	------------------	--------------------	------------------

Facility Name: Steady Simmons

Site ID#: 04676 **Monitoring Well #** MW-3

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
 for a 4 inch well C=0.652

*** Free Product Thickness:** _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 2.00 feet

Total Well Depth (TWD) 17 feet

Length of the water column (LWC=TWD-DGW) 15 feet

1 casing volume (CV=LWC X C)= _____ X 0.163 2.45 gallons

5 casing volume (5 X CV)= 5 12.23 gallons

Total Volume of Water Purged Before Sampling 7.5 gals.

**If free product is present over 1/8 inch, sampling will not be required.*

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	13:23	13:24	13:26	13:28			
pH (s.u.)	5.05	4.62	4.42	4.39			
Specific Conductivity (µmhos/cm)	23.6	31.2	30.9	29.8			
Water Temperature (°C)	20.3	18.3	18.4	18.4			
Dissolved Oxygen	1.00	1.63	1.13	1.11			
Turbidity (NTU)	74.53	603.8	773.4	750.5			
PID readings, if required							

Remarks: _____ **Sample Time:** 13:28 **Parameters Stabilized**

**South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program**

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 5/13/2013

Field Personnel: C. Lashley, G. Globensky, & P. Boylan

General Weather Conditions: Clear

Ambient Air Temperature: 22.1 °C

Quality Assurance

pH/Conductivity Meter	DO Meter
YSI 63	YSI 550A
09C 101302	04L 2026AK
10K 101895	08B 101895
07M 100905	04A 0912AI
Calibration Buffer: <u>4, 7, & 10</u>	

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time
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Facility Name: Steady Simmons

Site ID#: 04676 **Monitoring Well #** MW-9

Water Supply Well **Public** **Private**

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

*** Free Product Thickness:** _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 3.85 feet

Total Well Depth (TWD) 15 feet

Length of the water column (LWC=TWD-DGW) 11.15 feet

1 casing volume (CV=LWC X C)= _____ X 0.163 1.82 gallons

5 casing volume (5 X CV)= 5 9.09 gallons

Total Volume of Water Purged Before Sampling 9 gals.

**If free product is present over 1/8 inch, sampling will not be required.*

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:39	10:40	10:41	10:42	10:43	10:44		
pH (s.u.)	4.63	4.50	4.40	4.41	4.38	4.33		
Specific Conductivity (µmhos/cm)	48.4	30.4	48.3	47.0	47.2	36.3		
Water Temperature (°C)	18.4	18.0	18.0	17.9	17.9	17.8		
Dissolved Oxygen	1.07	1.49	1.82	2.22	2.59	1.82		
Turbidity (NTU)	271.8	422.6	534.8	548.0	599.3	667.0		
PID readings, if required								

Remarks: _____ **Sample Time:** 10:44

**South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling**

Date (mm/dd/yy): 5/13/2013

Field Personnel: C. Lashley, G. Globensky, & P. Boylan

General Weather Conditions: Clear

Ambient Air Temperature: 22.1 °C

Quality Assurance

<u>pH/Conductivity Meter</u>	<u>DO Meter</u>
YSI 63	YSI 550A
09C 101302	04L 2026AK
10K 101895	08B 101895
07M 100905	04A 0912AI
Calibration Buffer: <u>4, 7, & 10</u>	

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time
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Facility Name: Steady Simmons

Site ID#: 04676 **Monitoring Well #** MW-15

Water Supply Well **Public** **Private**

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 3.80 feet

Total Well Depth (TWD) 20 feet

Length of the water column (LWC=TWD-DGW) 16.2 feet

1 casing volume (CV=LWC X C)= _____ X 0.163 2.64 gallons

5 casing volume (5 X CV)= 5 13.20 gallons

Total Volume of Water Purged Before Sampling 8 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	12:11	12:14	12:16	12:18			
pH (s.u.)	5.33	5.20	5.03	4.99			
Specific Conductivity (µmhos/cm)	493.0	553.0	503.0	519.0			
Water Temperature (°C)	20.1	19.1	18.7	18.6			
Dissolved Oxygen	3.74	3.77	4.13	3.63			
Turbidity (NTU)	27.84	363.5	1,100+	1,100+			
PID readings, if required							

Remarks: _____ Sample Time: 12:18 **Dry @ 8.0 Gallons**

**South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling**

Date (mm/dd/yy): 5/13/2013
 Field Personnel: C. Lashley, G. Globensky, & P. Boylan
 General Weather Conditions: Clear

Ambient Air Temperature: 22.1 °C

		<u>Quality Assurance</u>	
<u>pH/Conductivity Meter</u>		<u>DO Meter</u>	
<u>YSI 63</u>		<u>YSI 550A</u>	
09C 101302		04L 2026AK	
10K 101895	<u>X</u>	08B 101895	<u>X</u>
07M 100905		04A 0912AI	
Calibration Buffer:	<u>4, 7, & 10</u>		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time
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Facility Name: Steady Simmons
 Site ID#: 04676 Monitoring Well # DW-4
 Water Supply Well Public Private

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
 for a 4 inch well C=0.652

* Free Product Thickness:		feet
Depth to Free Product (DFP)		feet
Depth to Ground Water (DGW)	<u>4.45</u>	feet
Total Well Depth (TWD)	<u>40</u>	feet
Length of the water column (LWC=TWD-DGW)		<u>35.55</u> feet
1 casing volume (CV=LWC X C)=	<u>X</u>	<u>0.163</u> <u>5.79</u> gallons
5 casing volume (5 X CV)=		<u>5</u> <u>28.97</u> gallons

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	12:46	12:50					
pH (s.u.)	5.61	6.20					
Specific Conductivity (µmhos/cm)	122.5	127.9					
Water Temperature (°C)	19.0	19.7					
Dissolved Oxygen	2.52	3.18					
Turbidity (NTU)	37.26	396.4					
PID readings, if required							

Remarks: Sample Time: 12:50 Dry @ 3.0 Gallons

**South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling**

Date (mm/dd/yy): 5/13/2013

Field Personnel: C. Lashley, G. Globensky, & P. Boylan

General Weather Conditions: Clear

Ambient Air Temperature: 22.1 °C

Quality Assurance

pH/Conductivity Meter	DO Meter
YSI 63	YSI 550A
09C 101302	04L 2026AK
10K 101895	08B 101895
07M 100905	04A 0912AI
Calibration Buffer: <u>4, 7, & 10</u>	

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time
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Facility Name: Steady Simmons

Site ID#: 04676 **Monitoring Well #** DW-6

Water Supply Well **Public** **Private**

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

*** Free Product Thickness:** _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 5.29 feet

Total Well Depth (TWD) 36 feet

Length of the water column (LWC=TWD-DGW) 30.71 feet

1 casing volume (CV=LWC X C)= _____ X 0.163 5.01 gallons

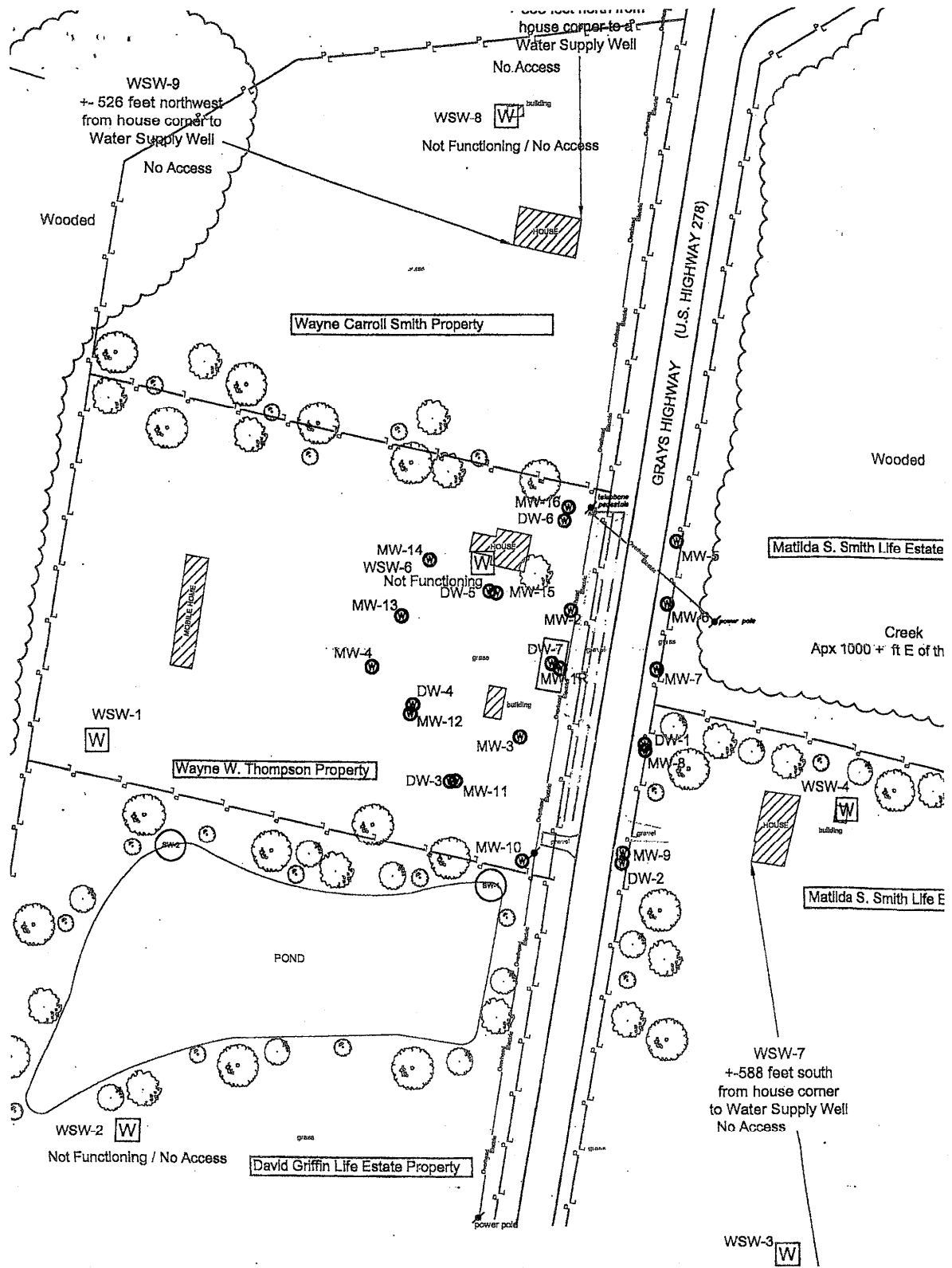
5 casing volume (5 X CV)= 5 25.03 gallons

Total Volume of Water Purged Before Sampling 6 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	11:27	11:32					
pH (s.u.)	4.51	4.72					
Specific Conductivity (µmhos/cm)	37.6	45.7					
Water Temperature (°C)	18.2	17.9					
Dissolved Oxygen	4.21	4.89					
Turbidity (NTU)	52.81	749.3					
PID readings, if required							

Remarks: _____ Sample Time: 11:32 **Dry @ 6.0 Gallons**



WSW-9
+- 526 feet northwest
from house corner to
Water Supply Well
No Access

WSW-8
Not Functioning / No Access

Wayne Carroll Smith Property

Matilda S. Smith Life Estate

Wayne W. Thompson Property

Matilda S. Smith Life E

David Griffin Life Estate Property

WSW-7
+- 588 feet south
from house corner
to Water Supply Well
No Access

WSW-3

GRAYS HIGHWAY (U.S. HIGHWAY 278)

Creek
Apx 1000+ ft E of th

Wooded

Wooded

POND

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Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 23654

Client SCDHEC - UST	Report to Contact D. THOMA	Sampler (Printed Name) GAVIN GLOBENSKY	Quote No.
Address 2600 Bull St.	Telephone No. / Fax No. / Email	Waybill No.	Page 1 of 4

City COLUMBIA	State SC	Zip Code 29201	Preservative 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.	Number of Containers
Project Name STEADY SIMMONS				Bottle (See Instructions on back)
Project Number 18856/45339				Preservative
P.O Number 460088529				Lot No.

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G-Grab C-Composite	Matrix					Analysis	Remarks / Cooler ID
				GW	DW	WW	S	Other		
MW-1R	5/13	11:57	G	X					X	Slight Odor
MW-2		11:51							X	Odor
MW-3		13:28							X	No Odor
MW-4		12:27							X	No Odor
MW-5		11:18							X	
MW-6		11:14							X	
MW-7		11:16							X	
MW-8		10:55							X	
MW-9		10:41							X	
MW-10	5/13	13:39	G	X					X	No Odor

Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)	Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab	QC Requirements (Specify)	Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown
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1. Relinquished by / Sampler <i>[Signature]</i>	Date 5/13/13	Time 14:00	1. Received by <i>[Signature]</i>	Date 5-13-13	Time 1700
2. Relinquished by <i>[Signature]</i>	Date 5/14/13	Time 1500	2. Received by <i>[Signature]</i>	Date 5/14/13	Time 1500
3. Relinquished by	Date	Time	3. Received by	Date	Time
4. Relinquished by	Date	Time	4. Laboratory Received by	Date	Time

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
 Received on Ice (Check) Yes No Ice Pack Receipt Temp. _____ °C Temp. Blank Y / N



Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 23653

Client SCDHEC - UST	Report to Contact D. THOMA	Sampler (Printed Name) GAVIN GLOBENSKY	Quote No.
Address 2600 BULL ST.	Telephone No. / Fax No. / Email	Waybill No.	Page 2 of 4

City COLUMBIA	State SC	Zip Code 29201	Preservative 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.	Number of Containers
Project Name STEADY SIMMONS				Bottle (See Instructions on back)
Project Number 18856/45339	P.O Number 4600078529			Preservative

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix					Analysis	Remarks / Cooler ID				
				GW	DW	WW	S	Other						
MW-11	5/13	13:22	G X						X	X	X	X		
MW-12		12:01												No odor
MW-13		12:38												
MW-14		12:31												
MW-15		12:18												
MW-16		11:37												
DW-1		11:14												
DW-2		10:33												
DW-3		13:11												
DW-4	5/13	12:50	G X						X	X	X	X		No odor

Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)	Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab	QC Requirements (Specify)	Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown
1. Relinquished by / Sampler <i>[Signature]</i>	Date 5/13/13	Time 17:00	1. Received by <i>[Signature]</i>
2. Relinquished by <i>[Signature]</i>	Date 5/14/13	Time 15:00	2. Received by <i>[Signature]</i>
3. Relinquished by	Date	Time	3. Received by
4. Relinquished by	Date	Time	4. Laboratory Received by

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY	Received on Ice (Check) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack	Receipt Temp. _____ °C	Temp. Blank <input type="checkbox"/> Y / <input type="checkbox"/> N
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Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 23652

Client SCDHEC - WST		Report to Contact D. THOMA		Sampler (Printed Name) GAVIN GURENSKY		Quote No.		
Address 2600 BULL ST.		Telephone No. / Fax No. / Email		Waybill No.		Page 3 of 4		
City COLUMBIA	State SC	Zip Code 29201	Preservative 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.		Number of Containers		Bottle (See instructions on back)	
Project Name STEADY SIMMONS			Matrix		Preservative		Lot No.	
Project Number 18856/45339	P.O Number 460088529		Analysis		Remarks / Cooler ID			
Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	GW DW WW S Other	Analysis PEX-NAPL MATE 17-LCA 8-DYMENTIC EDB			
DW-5	5/13	12:17	G	X	X X X X			
DW-6		11:32		X				
DW-7		11:45		X				
WSW-1		13:01		X	X X X X	1 ppb; LDLs		
WSW-2						NOT SAMPLED		
WSW-3		13:09			X X X X	1 ppb; LDLs		
WSW-4		13:24			X X X X	1 ppb; LDLs		
WSW-5		13:18			X X X X	1 ppb; LDLs		
WSW-6						NOT SAMPLED		
WSW-7	5/13	13:44	G	X	X X X X	1 ppb; LDLs		
Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)			Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab		QC Requirements (Specify)		Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
1. Relinquished by / Sampler [Signature]			Date 5/13/13	Time 17:00	1. Received by [Signature]		Date 5-13-13	Time 1700
2. Relinquished by [Signature]			Date 5-14-13	Time 1500	2. Received by [Signature]		Date 5-14-13	Time 1500
3. Relinquished by			Date	Time	3. Received by		Date	Time
4. Relinquished by			Date	Time	4. Laboratory Received by		Date	Time
Note: All samples are retained for six weeks from receipt unless other arrangements are made.					LAB USE ONLY Received on Ice (Check) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack		Receipt Temp. _____ °C Temp. Blank <input type="checkbox"/> Y / <input type="checkbox"/> N	



May 20, 2013

Re: Treatment of Purge Water
Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID Number 18856
MECI Project Number 13-4372

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

May 20, 2013

A total of 160.5 gallons were treated on May 13, 2013 at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

A handwritten signature in black ink, appearing to read 'CMS', written over a faint horizontal line.

Courtney M. Sanders
Project Biologist

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

SC DHEC - UST Management
2600 Bull Street
Columbia, SC 29201
Attention: Debra Thoma



Project Name: **Steady Simmons**

Project Number: **UST Permit #18856/CA #45339**

Lot Number: **OE14032**

Date Completed: **05/28/2013**


Kelly M. Maberry
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.



SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

Case Narrative SC DHEC - UST Management Lot Number: OE14032

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample Receiving

Sample -029 ("WSW-8") was not received. Per MECI, sample was not collected.

Samples -001, -021, -027, -028, -030, -031, -032 and -034 for volatiles analysis contained vials with air bubbles greater than ¼" or 6mm in diameter. The laboratory uses these vials for screening and the vials without bubbles for analysis whenever possible. Condition of samples is documented on the Sample Receipt Checklist (SRC).

Volatiles

The MS/MSD associated with sample -002 had TBF recovered outside of the acceptance limits. This demonstrates a matrix effect and data quality is not impacted.

Sample -023 was analyzed at a 10X dilutions due to the high level of sediment in the sample. The reporting limits have been raised accordingly.

EDB

Samples -004,-008 and 010 through -013 and -020 had sediment in the sample vial that altered the final volume.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary SC DHEC - UST Management Lot Number: OE14032

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-1R	Aqueous	05/13/2013 1157	05/14/2013
002	MW-2	Aqueous	05/13/2013 1151	05/14/2013
003	MW-3	Aqueous	05/13/2013 1328	05/14/2013
004	MW-4	Aqueous	05/13/2013 1227	05/14/2013
005	MW-5	Aqueous	05/13/2013 1118	05/14/2013
006	MW-6	Aqueous	05/13/2013 1114	05/14/2013
007	MW-7	Aqueous	05/13/2013 1116	05/14/2013
008	MW-8	Aqueous	05/13/2013 1055	05/14/2013
009	MW-9	Aqueous	05/13/2013 1044	05/14/2013
010	MW-10	Aqueous	05/13/2013 1339	05/14/2013
011	MW-11	Aqueous	05/13/2013 1322	05/14/2013
012	MW-12	Aqueous	05/13/2013 1201	05/14/2013
013	MW-13	Aqueous	05/13/2013 1238	05/14/2013
014	MW-14	Aqueous	05/13/2013 1231	05/14/2013
015	MW-15	Aqueous	05/13/2013 1218	05/14/2013
016	MW-16	Aqueous	05/13/2013 1137	05/14/2013
017	DW-1	Aqueous	05/13/2013 1114	05/14/2013
018	DW-2	Aqueous	05/13/2013 1033	05/14/2013
019	DW-3	Aqueous	05/13/2013 1311	05/14/2013
020	DW-4	Aqueous	05/13/2013 1250	05/14/2013
021	DW-5	Aqueous	05/13/2013 1217	05/14/2013
022	DW-6	Aqueous	05/13/2013 1132	05/14/2013
023	DW-7	Aqueous	05/13/2013 1143	05/14/2013
024	WSW-1	Aqueous	05/13/2013 1301	05/14/2013
025	WSW-3	Aqueous	05/13/2013 1309	05/14/2013
026	WSW-4	Aqueous	05/13/2013 1324	05/14/2013
027	WSW-5	Aqueous	05/13/2013 1318	05/14/2013
028	WSW-7	Aqueous	05/13/2013 1334	05/14/2013
029	WSW-8	Aqueous	05/13/2013 1329	
030	WSW-9	Aqueous	05/13/2013 1313	05/14/2013
031	SW-1	Aqueous	05/13/2013 1329	05/14/2013
032	SW-2	Aqueous	05/13/2013 1333	05/14/2013
033	SW-3	Aqueous	05/13/2013 1337	05/14/2013
034	MW-1R Dup	Aqueous	05/13/2013 1157	05/14/2013
035	MW-2 Dup	Aqueous	05/13/2013 1151	05/14/2013
036	Field Blank	Aqueous	05/13/2013 1340	05/14/2013
037	Trip Blank	Aqueous	05/13/2013 1340	05/14/2013

(37 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary SC DHEC - UST Management Lot Number: OE14032

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-1R	Aqueous	Benzene	8260B	2.0	J	ug/L	5
001	MW-1R	Aqueous	Ethylbenzene	8260B	17		ug/L	5
001	MW-1R	Aqueous	Naphthalene	8260B	17		ug/L	5
001	MW-1R	Aqueous	Toluene	8260B	2.3	J	ug/L	5
001	MW-1R	Aqueous	Xylenes (total)	8260B	80		ug/L	5
002	MW-2	Aqueous	Benzene	8260B	300		ug/L	6
002	MW-2	Aqueous	Ethylbenzene	8260B	320		ug/L	6
002	MW-2	Aqueous	Naphthalene	8260B	99	J	ug/L	6
002	MW-2	Aqueous	Toluene	8260B	2200		ug/L	6
002	MW-2	Aqueous	Xylenes (total)	8260B	2700		ug/L	6
002	MW-2	Aqueous	1,2-Dibromoethane (EDB)	8011	2.2		ug/L	6
011	MW-11	Aqueous	tert-Amyl alcohol (TAA)	8260B	120		ug/L	15
011	MW-11	Aqueous	Benzene	8260B	120		ug/L	15
011	MW-11	Aqueous	Diisopropyl ether (IPE)	8260B	0.40	J	ug/L	15
011	MW-11	Aqueous	Ethylbenzene	8260B	3.2	J	ug/L	15
011	MW-11	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	23		ug/L	15
011	MW-11	Aqueous	Naphthalene	8260B	10		ug/L	15
011	MW-11	Aqueous	tert-butyl alcohol (TBA)	8260B	11	J	ug/L	15
012	MW-12	Aqueous	tert-Amyl alcohol (TAA)	8260B	19	J	ug/L	16
012	MW-12	Aqueous	Benzene	8260B	19		ug/L	16
012	MW-12	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	4.6	J	ug/L	16
012	MW-12	Aqueous	Xylenes (total)	8260B	6.8		ug/L	16
034	MW-1R Dup	Aqueous	Benzene	8260B	1.6	J	ug/L	37
034	MW-1R Dup	Aqueous	Ethylbenzene	8260B	16		ug/L	37
034	MW-1R Dup	Aqueous	Naphthalene	8260B	16		ug/L	37
034	MW-1R Dup	Aqueous	Toluene	8260B	3.5	J	ug/L	37
034	MW-1R Dup	Aqueous	Xylenes (total)	8260B	85		ug/L	37
035	MW-2 Dup	Aqueous	Benzene	8260B	350		ug/L	38
035	MW-2 Dup	Aqueous	Ethylbenzene	8260B	390		ug/L	38
035	MW-2 Dup	Aqueous	Naphthalene	8260B	120	J	ug/L	38
035	MW-2 Dup	Aqueous	Toluene	8260B	2600		ug/L	38
035	MW-2 Dup	Aqueous	Xylenes (total)	8260B	3200		ug/L	38
035	MW-2 Dup	Aqueous	1,2-Dibromoethane (EDB)	8011	2.2		ug/L	38

(33 detections)

Description: MW-1R

Matrix: Aqueous

Date Sampled: 05/13/2013 1157

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 0248	JAC		21126				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	2.0	J	5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	17		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	17		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-85-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	2.3	J	5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	80		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		101	70-130								
Bromofluorobenzene		105	70-130								
Toluene-d8		108	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/22/2013 1819	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		134	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: MW-2

Matrix: Aqueous

Date Sampled: 05/13/2013 1151

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	50	05/23/2013 2022	JJG		21178				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		5000	340	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		500	10	ug/L	1			
Benzene	71-43-2	8260B	300		250	10	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND	S	5000	50	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		250	15	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		500	20	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		5000	50	ug/L	1			
Ethanol	64-17-5	8260B	ND		50000	1700	ug/L	1			
Ethylbenzene	100-41-4	8260B	320		250	85	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		5000	10	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		250	20	ug/L	1			
Naphthalene	91-20-3	8260B	99	J	250	85	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		5000	340	ug/L	1			
Toluene	108-88-3	8260B	2200		250	85	ug/L	1			
Xylenes (total)	1330-20-7	8260B	2700		250	85	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		93	70-130								
Bromofluorobenzene		102	70-130								
Toluene-d8		106	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
2	8011	8011	5	05/23/2013 1241	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	2.2		0.098	0.098	ug/L	2			
Surrogate	Q	Run 2 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		130	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: OE14032-003
Description: MW-3	Matrix: Aqueous
Date Sampled: 05/13/2013 1328	
Date Received: 05/14/2013	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	05/23/2013 0311	JAC		21126			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		103	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	05/22/2013 1903	AMY	05/16/2013 1532	20616			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		103	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: MW-4

Matrix: Aqueous

Date Sampled: 05/13/2013 1227

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 0333	JAC		21126				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		100	70-130								
Bromofluorobenzene		99	70-130								
Toluene-d8		103	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/22/2013 1924	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.022	0.022	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		109	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: MW-5

Matrix: Aqueous

Date Sampled: 05/13/2013 1118

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 0355	JAC		21126				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-85-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		102	70-130								
Bromofluorobenzene		97	70-130								
Toluene-d8		106	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/22/2013 1946	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		115	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: OE14032-006
Description: MW-6	Matrix: Aqueous
Date Sampled: 05/13/2013 1114	
Date Received: 05/14/2013	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 0418	JAC		21126				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		104	70-130								
Bromofluorobenzene		97	70-130								
Toluene-d8		105	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/22/2013 2008	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		115	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: MW-7

Matrix: Aqueous

Date Sampled: 05/13/2013 1116

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 0441	JAC		21126				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		105	70-130								
Bromofluorobenzene		98	70-130								
Toluene-d8		104	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/22/2013 2113	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		109	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: OE14032-008
Description: MW-8	Matrix: Aqueous
Date Sampled: 05/13/2013 1055	
Date Received: 05/14/2013	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	05/23/2013 0504	JAC		21126			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1		
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1		
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1		
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1		
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1		
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1		
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1		
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1		
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1		
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1		
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1		
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		102	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	05/22/2013 2135	AMY	05/16/2013 1532	20616			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.021	0.021	ug/L	1		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		106	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: MW-9

Matrix: Aqueous

Date Sampled: 05/13/2013 1044

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 0527	JAC		21126				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		104	70-130								
Bromofluorobenzene		99	70-130								
Toluene-d8		103	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/22/2013 2157	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		105	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: MW-10

Matrix: Aqueous

Date Sampled: 05/13/2013 1339

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 0550	JAC		21126				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		107	70-130								
Bromofluorobenzene		100	70-130								
Toluene-d8		102	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/22/2013 2218	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.021	0.021	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		101	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: MW-11

Matrix: Aqueous

Date Sampled: 05/13/2013 1322

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 1419	JJG		21176				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	120		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	120		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	0.40	J	10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	3.2	J	5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	23		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	10		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	11	J	100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		101	70-130								
Bromofluorobenzene		102	70-130								
Toluene-d8		105	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/22/2013 2240	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.023	0.023	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		97	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	05/23/2013 1442	JJG		21176			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	19	J	100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	19		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	4.6	J	5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	6.8		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		102	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	05/22/2013 2302	AMY	05/16/2013 1532	20616			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.022	0.022	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		85	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: MW-13

Matrix: Aqueous

Date Sampled: 05/13/2013 1238

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 1440	JJG		21178				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		98	70-130								
Bromofluorobenzene		105	70-130								
Toluene-d8		109	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/22/2013 2324	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.027	0.027	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		108	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: MW-14

Matrix: Aqueous

Date Sampled: 05/13/2013 1231

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 1503	JJG		21178				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		6.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		82	70-130								
Bromofluorobenzene		87	70-130								
Toluene-d8		92	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/22/2013 2345	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		104	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: MW-15

Matrix: Aqueous

Date Sampled: 05/13/2013 1218

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 1526	JJG		21178				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		83	70-130								
Bromofluorobenzene		88	70-130								
Toluene-d8		93	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/23/2013 0007	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		105	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: OE14032-016
Description: MW-16	Matrix: Aqueous
Date Sampled: 05/13/2013 1137	
Date Received: 05/14/2013	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 1549	JJG		21178				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		94	70-130								
Bromofluorobenzene		98	70-130								
Toluene-d8		107	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/23/2013 0029	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		113	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: DW-1

Matrix: Aqueous

Date Sampled: 05/13/2013 1114

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
2	5030B	8260B	1	05/24/2013 0346	JAC		21215				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	2			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	2			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	2			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	2			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	2			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	2			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	2			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	2			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	2			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	2			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	2			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	2			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	2			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	2			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	2			
Surrogate	Q	Run 2 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		108	70-130								
Bromofluorobenzene		99	70-130								
Toluene-d8		104	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/23/2013 0050	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		100	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: DW-2

Matrix: Aqueous

Date Sampled: 05/13/2013 1033

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
2	5030B	8260B	1	05/24/2013 0408	JAC		21215		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	2	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	2	
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	2	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	2	
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	2	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	2	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	2	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	2	
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	2	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	2	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	2	
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	2	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	2	
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	2	
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	2	
Surrogate	Q	Run 2 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		108	70-130						
Bromofluorobenzene		99	70-130						
Toluene-d8		104	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	05/23/2013 0112	AMY	05/16/2013 1532	20616		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		105	57-137						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: DW-3

Matrix: Aqueous

Date Sampled: 05/13/2013 1311

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
2	5030B	8260B	1	05/24/2013 0431	JAC		21215				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	2			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	2			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	2			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	2			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	2			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	2			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	2			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	2			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	2			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	2			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	2			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	2			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	2			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	2			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	2			
Surrogate	Q	Run 2 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		111	70-130								
Bromofluorobenzene		101	70-130								
Toluene-d8		104	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/23/2013 0134	AMY	05/16/2013 1532	20616				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		111	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: DW-4

Matrix: Aqueous

Date Sampled: 05/13/2013 1250

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	10	05/23/2013 1333	JJG		21176			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4		8260B	ND		1000	67	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8		8260B	ND		100	2.0	ug/L	1	
Benzene	71-43-2		8260B	ND		50	2.0	ug/L	1	
tert-Butyl formate (TBF)	762-75-4		8260B	ND		1000	10	ug/L	1	
1,2-Dichloroethane	107-06-2		8260B	ND		50	3.0	ug/L	1	
Diisopropyl ether (IPE)	108-20-3		8260B	ND		100	4.0	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3		8260B	ND		1000	10	ug/L	1	
Ethanol	64-17-5		8260B	ND		10000	330	ug/L	1	
Ethylbenzene	100-41-4		8260B	ND		50	17	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3		8260B	ND		1000	2.0	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4		8260B	ND		50	4.0	ug/L	1	
Naphthalene	91-20-3		8260B	ND		50	17	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0		8260B	ND		1000	67	ug/L	1	
Toluene	108-88-3		8260B	ND		50	17	ug/L	1	
Xylenes (total)	1330-20-7		8260B	ND		50	17	ug/L	1	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		106	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		102	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	05/23/2013 0156	AMY	05/16/2013 1532	20616			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4		8011	ND		0.033	0.033	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,1,1,2-Tetrachloroethane		105	57-137							

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	05/23/2013 1612	JJG		21178			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							
tert-Amyl alcohol (TAA)		75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)		994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene		71-43-2	8260B	ND		5.0	0.20	ug/L	1	
tert-Butyl formate (TBF)		762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane		107-06-2	8260B	ND		5.0	0.30	ug/L	1	
Diisopropyl ether (IPE)		108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol		624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol		64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene		100-41-4	8260B	ND		5.0	1.7	ug/L	1	
Ethyl-tert-butyl ether (ETBE)		637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)		1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
Naphthalene		91-20-3	8260B	ND		5.0	1.7	ug/L	1	
tert-butyl alcohol (TBA)		75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene		108-88-3	8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)		1330-20-7	8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		99	70-130							
Bromofluorobenzene		100	70-130							
Toluene-d8		105	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	05/23/2013 0323	AMY	05/16/2013 2025	20659			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							
1,2-Dibromoethane (EDB)		106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,1,1,2-Tetrachloroethane		93	57-137							

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: DW-6

Matrix: Aqueous

Date Sampled: 05/13/2013 1132

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	05/23/2013 1634	JJG		21178			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1		
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1		
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1		
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1		
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1		
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1		
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1		
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1		
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1		
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1		
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1		
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		103	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	05/23/2013 0345	AMY	05/16/2013 2025	20659			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,1,1,2-Tetrachloroethane		104	57-137							

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: DW-7

Matrix: Aqueous

Date Sampled: 05/13/2013 1143

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	10	05/23/2013 1356	JJG		21176				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		1000	67	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		100	2.0	ug/L	1			
Benzene	71-43-2	8260B	ND		50	2.0	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		1000	10	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		50	3.0	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		100	4.0	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		1000	10	ug/L	1			
Ethanol	64-17-5	8260B	ND		10000	330	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		50	17	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		1000	2.0	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		50	4.0	ug/L	1			
Naphthalene	91-20-3	8260B	ND		50	17	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		1000	67	ug/L	1			
Toluene	108-88-3	8260B	ND		50	17	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		50	17	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		105	70-130								
Bromofluorobenzene		97	70-130								
Toluene-d8		103	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/23/2013 0407	AMY	05/16/2013 2025	20659				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.024	0.024	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		90	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: WSW-1

Matrix: Aqueous

Date Sampled: 05/13/2013 1301

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	05/23/2013 1657	JJG		21178			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							
tert-Amyl alcohol (TAA)		75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)		994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene		71-43-2	8260B	ND		1.0	0.13	ug/L	1	
tert-Butyl formate (TBF)		762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane		107-06-2	8260B	ND		1.0	0.15	ug/L	1	
Diisopropyl ether (IPE)		108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol		624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol		64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene		100-41-4	8260B	ND		1.0	0.33	ug/L	1	
Ethyl-tert-butyl ether (ETBE)		637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)		1634-04-4	8260B	ND		1.0	0.40	ug/L	1	
Naphthalene		91-20-3	8260B	ND		1.0	0.40	ug/L	1	
tert-butyl alcohol (TBA)		75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene		108-88-3	8260B	ND		1.0	0.33	ug/L	1	
Xylenes (total)		1330-20-7	8260B	ND		1.0	0.33	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		86	70-130							
Bromofluorobenzene		88	70-130							
Toluene-d8		96	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	05/23/2013 0429	AMY	05/16/2013 2025	20659			
Parameter	CAS		Analytical	Result	Q	PQL	MDL	Units	Run	
		Number	Method							
1,2-Dibromoethane (EDB)		106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,1,1,2-Tetrachloroethane		92	57-137							

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: WSW-3

Matrix: Aqueous

Date Sampled: 05/13/2013 1309

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 1719	JJG		21178				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		94	70-130								
Bromofluorobenzene		99	70-130								
Toluene-d8		107	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/23/2013 0534	AMY	05/16/2013 2025	20659				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		100	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: WSW-4

Matrix: Aqueous

Date Sampled: 05/13/2013 1324

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
2	5030B	8260B	1	05/24/2013 0454	JAC		21215				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	2			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	2			
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	2			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	2			
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	2			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	2			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	2			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	2			
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	2			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	2			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	2			
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	2			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	2			
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	2			
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	2			
Surrogate	Q	Run 2 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		110	70-130								
Bromofluorobenzene		99	70-130								
Toluene-d8		104	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/23/2013 0556	AMY	05/16/2013 2025	20659				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		103	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: WSW-5

Matrix: Aqueous

Date Sampled: 05/13/2013 1318

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	05/23/2013 1742	JJG		21178			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1		
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1		
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1		
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1		
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1		
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1		
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1		
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1		
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1		
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1		
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1		
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	05/23/2013 0618	AMY	05/16/2013 2025	20659			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,1,1,2-Tetrachloroethane		113	57-137							

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: OE14032-028
Description: WSW-7	Matrix: Aqueous
Date Sampled: 05/13/2013 1334	
Date Received: 05/14/2013	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 1805	JJG		21178				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		84	70-130								
Bromofluorobenzene		88	70-130								
Toluene-d8		92	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/23/2013 0640	AMY	05/16/2013 2025	20659				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		96	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: WSW-9

Matrix: Aqueous

Date Sampled: 05/13/2013 1313

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 1828	JJG		21178				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		93	70-130								
Bromofluorobenzene		96	70-130								
Toluene-d8		105	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/23/2013 0702	AMY	05/16/2013 2025	20659				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		108	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/23/2013 1851	JJG		21178

Parameter	CAS		Analytical Method	Result	Q	PQL	MDL	Units	Run
	Number	Number							
tert-Amyl alcohol (TAA)	75-85-4	8260B	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	8260B	ND		1.0	0.13	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	8260B	ND		1.0	0.15	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	8260B	ND		1.0	0.33	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	8260B	ND		1.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	8260B	ND		1.0	0.40	ug/L	1
tert-butyl alcohol (TBA)	75-85-0	8260B	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	8260B	ND		1.0	0.33	ug/L	1
Xylenes (total)	1330-20-7	8260B	8260B	ND		1.0	0.33	ug/L	1

Surrogate	Q	Run 1 Acceptance	
		% Recovery	Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		106	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	05/23/2013 0724	AMY	05/16/2013 2025	20659

Parameter	CAS		Analytical Method	Result	Q	PQL	MDL	Units	Run
	Number	Number							
1,2-Dibromoethane (EDB)	106-93-4	8011	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 Acceptance	
		% Recovery	Limits
1,1,1,2-Tetrachloroethane		109	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: SW-2

Matrix: Aqueous

Date Sampled: 05/13/2013 1333

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 1913	JJG		21178				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		83	70-130								
Bromofluorobenzene		88	70-130								
Toluene-d8		93	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/23/2013 0745	AMY	05/16/2013 2025	20659				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		104	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: SW-3

Matrix: Aqueous

Date Sampled: 05/13/2013 1337

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 1936	JJG		21178				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		81	70-130								
Bromofluorobenzene		83	70-130								
Toluene-d8		89	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	05/23/2013 0807	AMY	05/16/2013 2025	20659				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		94	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: MW-1R Dup

Matrix: Aqueous

Date Sampled: 05/13/2013 1157

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	05/23/2013 1959	JJG		21178			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1		
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1		
Benzene	71-43-2	8260B	1.6	J	5.0	0.20	ug/L	1		
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1		
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1		
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1		
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1		
Ethylbenzene	100-41-4	8260B	16		5.0	1.7	ug/L	1		
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1		
Naphthalene	91-20-3	8260B	16		5.0	1.7	ug/L	1		
tert-butyl alcohol (TBA)	75-85-0	8260B	ND		100	6.7	ug/L	1		
Toluene	108-88-3	8260B	3.5	J	5.0	1.7	ug/L	1		
Xylenes (total)	1330-20-7	8260B	85		5.0	1.7	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		82	70-130							
Bromofluorobenzene		93	70-130							
Toluene-d8		93	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	05/23/2013 0829	AMY	05/16/2013 2025	20659			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,1,1,2-Tetrachloroethane		117	57-137							

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Client: SC DHEC - UST Management	Laboratory ID: OE14032-035
Description: MW-2 Dup	Matrix: Aqueous
Date Sampled: 05/13/2013 1151	
Date Received: 05/14/2013	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	50	05/23/2013 1612	JJG		21176				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		5000	340	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		500	10	ug/L	1			
Benzene	71-43-2	8260B	350		250	10	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		5000	50	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		250	15	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		500	20	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		5000	50	ug/L	1			
Ethanol	64-17-5	8260B	ND		50000	1700	ug/L	1			
Ethylbenzene	100-41-4	8260B	390		250	85	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		5000	10	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		250	20	ug/L	1			
Naphthalene	91-20-3	8260B	120	J	250	85	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		5000	340	ug/L	1			
Toluene	108-88-3	8260B	2600		250	85	ug/L	1			
Xylenes (total)	1330-20-7	8260B	3200		250	85	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		101	70-130								
Bromofluorobenzene		103	70-130								
Toluene-d8		104	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
2	8011	8011	5	05/23/2013 1303	AMY	05/16/2013 2025	20659				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	2.2		0.10	0.10	ug/L	2			
Surrogate	Q	Run 2 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		109	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/23/2013 1309	JJG		21178

Parameter	CAS		Analytical Method	Result	Q	PQL	MDL	Units	Run
	Number	Number							
tert-Amyl alcohol (TAA)	75-85-4	8260B	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 Acceptance	
		% Recovery	Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		106	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	05/23/2013 0913	AMY	05/16/2013 2025	20659

Parameter	CAS		Analytical Method	Result	Q	PQL	MDL	Units	Run
	Number	Number							
1,2-Dibromoethane (EDB)	106-93-4	8011	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 Acceptance	
		% Recovery	Limits
1,1,1,2-Tetrachloroethane		100	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

Description: Trip Blank

Matrix: Aqueous

Date Sampled: 05/13/2013 1340

Date Received: 05/14/2013

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	05/23/2013 1332	JJG		21178				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		86	70-130								
Bromofluorobenzene		90	70-130								
Toluene-d8		95	70-130								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" S = MS/MSD failure

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: OQ21126-001

Matrix: Aqueous

Batch: 21126

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	05/23/2013 0032
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	05/23/2013 0032
Benzene	ND		1	1.0	0.20	ug/L	05/23/2013 0032
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	05/23/2013 0032
1,2-Dichloroethane	ND		1	1.0	0.30	ug/L	05/23/2013 0032
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	05/23/2013 0032
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	05/23/2013 0032
Ethanol	ND		1	1000	33	ug/L	05/23/2013 0032
Ethylbenzene	ND		1	1.0	1.7	ug/L	05/23/2013 0032
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	05/23/2013 0032
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	05/23/2013 0032
Naphthalene	ND		1	1.0	1.7	ug/L	05/23/2013 0032
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	05/23/2013 0032
Toluene	ND		1	1.0	1.7	ug/L	05/23/2013 0032
Xylenes (total)	ND		1	1.0	1.7	ug/L	05/23/2013 0032
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	70-130				
1,2-Dichloroethane-d4		101	70-130				
Toluene-d8		104	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: OQ21126-002

Matrix: Aqueous

Batch: 21126

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	930		1	93	70-130	05/22/2013 2304
tert-Amyl methyl ether (TAME)	50	50		1	100	70-130	05/22/2013 2304
Benzene	50	50		1	100	70-130	05/22/2013 2304
tert-Butyl formate (TBF)	250	260		1	104	70-130	05/22/2013 2304
1,2-Dichloroethane	50	50		1	100	70-130	05/22/2013 2304
Diisopropyl ether (IPE)	50	47		1	94	70-130	05/22/2013 2304
3,3-Dimethyl-1-butanol	1000	1100		1	105	70-130	05/22/2013 2304
Ethanol	5000	4400		1	88	70-130	05/22/2013 2304
Ethylbenzene	50	49		1	99	70-130	05/22/2013 2304
Ethyl-tert-butyl ether (ETBE)	50	50		1	99	70-130	05/22/2013 2304
Methyl tertiary butyl ether (MTBE)	50	47		1	94	70-130	05/22/2013 2304
Naphthalene	50	59		1	118	70-130	05/22/2013 2304
tert-butyl alcohol (TBA)	1000	900		1	90	70-130	05/22/2013 2304
Toluene	50	51		1	102	70-130	05/22/2013 2304
Xylenes (total)	100	100		1	100	70-130	05/22/2013 2304
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		97	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: OQ21126-003

Matrix: Aqueous

Batch: 21126

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1000		1	100	6.8	70-130	20	05/22/2013 2326
tert-Amyl methyl ether (TAME)	50	52		1	103	2.7	70-130	20	05/22/2013 2326
Benzene	50	52		1	105	4.3	70-130	20	05/22/2013 2326
tert-Butyl formate (TBF)	250	260		1	102	1.2	70-130	20	05/22/2013 2326
1,2-Dichloroethane	50	51		1	102	1.6	70-130	20	05/22/2013 2326
Diisopropyl ether (IPE)	50	49		1	98	4.1	70-130	20	05/22/2013 2326
3,3-Dimethyl-1-butanol	1000	1100		1	109	3.6	70-130	20	05/22/2013 2326
Ethanol	5000	4700		1	93	5.3	70-130	20	05/22/2013 2326
Ethylbenzene	50	51		1	103	4.0	70-130	20	05/22/2013 2326
Ethyl-tert-butyl ether (ETBE)	50	51		1	103	3.2	70-130	20	05/22/2013 2326
Methyl tertiary butyl ether (MTBE)	50	50		1	100	6.0	70-130	20	05/22/2013 2326
Naphthalene	50	58		1	117	1.2	70-130	20	05/22/2013 2326
tert-butyl alcohol (TBA)	1000	950		1	95	5.5	70-130	20	05/22/2013 2326
Toluene	50	52		1	105	2.4	70-130	20	05/22/2013 2326
Xylenes (total)	100	100		1	103	2.3	70-130	20	05/22/2013 2326
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		98	70-130						
1,2-Dichloroethane-d4		95	70-130						
Toluene-d8		99	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: OQ21126-001

Matrix: Aqueous

Batch: 21126

Prep Method: 5030B

Analytical Method: 8260B

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		101	70-130
1,2-Dichloroethane-d4		101	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: OQ21126-002

Matrix: Aqueous

Batch: 21126

Prep Method: 5030B

Analytical Method: 8260B

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		99	70-130
1,2-Dichloroethane-d4		97	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: QQ21126-003

Matrix: Aqueous

Batch: 21126

Prep Method: 5030B

Analytical Method: 8260B

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		98	70-130
1,2-Dichloroethane-d4		95	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: OQ21176-001

Matrix: Aqueous

Batch: 21176

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	05/23/2013 1225
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	05/23/2013 1225
Benzene	ND		1	5.0	0.20	ug/L	05/23/2013 1225
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	05/23/2013 1225
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	05/23/2013 1225
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	05/23/2013 1225
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	05/23/2013 1225
Ethanol	ND		1	1000	33	ug/L	05/23/2013 1225
Ethylbenzene	ND		1	5.0	1.7	ug/L	05/23/2013 1225
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	05/23/2013 1225
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	05/23/2013 1225
Naphthalene	ND		1	5.0	1.7	ug/L	05/23/2013 1225
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	05/23/2013 1225
Toluene	ND		1	5.0	1.7	ug/L	05/23/2013 1225
Xylenes (total)	ND		1	5.0	1.7	ug/L	05/23/2013 1225
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		101	70-130				
Toluene-d8		102	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: OQ21176-002

Matrix: Aqueous

Batch: 21176

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1000		1	102	70-130	05/23/2013 1118
tert-Amyl methyl ether (TAME)	50	55		1	109	70-130	05/23/2013 1118
Benzene	50	54		1	108	70-130	05/23/2013 1118
tert-Butyl formate (TBF)	250	280		1	112	70-130	05/23/2013 1118
1,2-Dichloroethane	50	55		1	110	70-130	05/23/2013 1118
Diisopropyl ether (IPE)	50	50		1	100	70-130	05/23/2013 1118
3,3-Dimethyl-1-butanol	1000	1100		1	113	70-130	05/23/2013 1118
Ethanol	5000	4700		1	94	70-130	05/23/2013 1118
Ethylbenzene	50	52		1	105	70-130	05/23/2013 1118
Ethyl-tert-butyl ether (ETBE)	50	54		1	108	70-130	05/23/2013 1118
Methyl tertiary butyl ether (MTBE)	50	51		1	102	70-130	05/23/2013 1118
Naphthalene	50	61		1	122	70-130	05/23/2013 1118
tert-butyl alcohol (TBA)	1000	1000		1	100	70-130	05/23/2013 1118
Toluene	50	55		1	110	70-130	05/23/2013 1118
Xylenes (total)	100	110		1	107	70-130	05/23/2013 1118
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		100	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: OQ21176-003

Matrix: Aqueous

Batch: 21176

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1000		1	102	0.14	70-130	20	05/23/2013 1140
tert-Amyl methyl ether (TAME)	50	53		1	107	2.1	70-130	20	05/23/2013 1140
Benzene	50	53		1	106	2.0	70-130	20	05/23/2013 1140
tert-Butyl formate (TBF)	250	280		1	112	0.68	70-130	20	05/23/2013 1140
1,2-Dichloroethane	50	54		1	107	2.6	70-130	20	05/23/2013 1140
Diisopropyl ether (IPE)	50	50		1	100	0.12	70-130	20	05/23/2013 1140
3,3-Dimethyl-1-butanol	1000	1100		1	113	0.20	70-130	20	05/23/2013 1140
Ethanol	5000	5000		1	100	6.5	70-130	20	05/23/2013 1140
Ethylbenzene	50	53		1	106	0.71	70-130	20	05/23/2013 1140
Ethyl-tert-butyl ether (ETBE)	50	53		1	106	1.4	70-130	20	05/23/2013 1140
Methyl tertiary butyl ether (MTBE)	50	52		1	104	1.4	70-130	20	05/23/2013 1140
Naphthalene	50	63		1	126	2.7	70-130	20	05/23/2013 1140
tert-butyl alcohol (TBA)	1000	1000		1	100	0.070	70-130	20	05/23/2013 1140
Toluene	50	54		1	108	2.0	70-130	20	05/23/2013 1140
Xylenes (total)	100	110		1	107	0.24	70-130	20	05/23/2013 1140
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		100	70-130						
1,2-Dichloroethane-d4		98	70-130						
Toluene-d8		100	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: OQ21178-001

Matrix: Aqueous

Batch: 21178

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	05/23/2013 1246
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	05/23/2013 1246
Benzene	ND		1	1.0	0.20	ug/L	05/23/2013 1246
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	05/23/2013 1246
1,2-Dichloroethane	ND		1	1.0	0.30	ug/L	05/23/2013 1246
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	05/23/2013 1246
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	05/23/2013 1246
Ethanol	ND		1	1000	33	ug/L	05/23/2013 1246
Ethylbenzene	ND		1	1.0	1.7	ug/L	05/23/2013 1246
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	05/23/2013 1246
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	05/23/2013 1246
Naphthalene	ND		1	1.0	1.7	ug/L	05/23/2013 1246
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	05/23/2013 1246
Toluene	ND		1	1.0	1.7	ug/L	05/23/2013 1246
Xylenes (total)	ND		1	1.0	1.7	ug/L	05/23/2013 1246
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		106	70-130				
1,2-Dichloroethane-d4		99	70-130				
Toluene-d8		110	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

* = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: OQ21178-002

Matrix: Aqueous

Batch: 21178

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	830		1	83	70-130	05/23/2013 1115
tert-Amyl methyl ether (TAME)	50	47		1	94	70-130	05/23/2013 1115
Benzene	50	46		1	93	70-130	05/23/2013 1115
tert-Butyl formate (TBF)	250	200		1	82	70-130	05/23/2013 1115
1,2-Dichloroethane	50	43		1	86	70-130	05/23/2013 1115
Diisopropyl ether (IPE)	50	43		1	87	70-130	05/23/2013 1115
3,3-Dimethyl-1-butanol	1000	900		1	90	70-130	05/23/2013 1115
Ethanol	5000	4000		1	80	70-130	05/23/2013 1115
Ethylbenzene	50	46		1	92	70-130	05/23/2013 1115
Ethyl-tert-butyl ether (ETBE)	50	42		1	84	70-130	05/23/2013 1115
Methyl tertiary butyl ether (MTBE)	50	41		1	82	70-130	05/23/2013 1115
Naphthalene	50	50		1	101	70-130	05/23/2013 1115
tert-butyl alcohol (TBA)	1000	820		1	82	70-130	05/23/2013 1115
Toluene	50	48		1	95	70-130	05/23/2013 1115
Xylenes (total)	100	94		1	94	70-130	05/23/2013 1115
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		98	70-130				
1,2-Dichloroethane-d4		91	70-130				
Toluene-d8		94	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: OQ21178-003

Matrix: Aqueous

Batch: 21178

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	790		1	79	5.6	70-130	20	05/23/2013 1138
tert-Amyl methyl ether (TAME)	50	44		1	87	7.5	70-130	20	05/23/2013 1138
Benzene	50	42		1	84	9.9	70-130	20	05/23/2013 1138
tert-Butyl formate (TBF)	250	190		1	75	9.2	70-130	20	05/23/2013 1138
1,2-Dichloroethane	50	41		1	81	5.7	70-130	20	05/23/2013 1138
Diisopropyl ether (IPE)	50	40		1	81	6.7	70-130	20	05/23/2013 1138
3,3-Dimethyl-1-butanol	1000	850		1	85	4.8	70-130	20	05/23/2013 1138
Ethanol	5000	3900		1	78	2.8	70-130	20	05/23/2013 1138
Ethylbenzene	50	42		1	85	7.6	70-130	20	05/23/2013 1138
Ethyl-tert-butyl ether (ETBE)	50	39		1	79	5.9	70-130	20	05/23/2013 1138
Methyl tertiary butyl ether (MTBE)	50	40		1	80	2.6	70-130	20	05/23/2013 1138
Naphthalene	50	45		1	91	11	70-130	20	05/23/2013 1138
tert-butyl alcohol (TBA)	1000	790		1	79	3.5	70-130	20	05/23/2013 1138
Toluene	50	44		1	87	8.6	70-130	20	05/23/2013 1138
Xylenes (total)	100	87		1	87	7.6	70-130	20	05/23/2013 1138
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		91	70-130						
1,2-Dichloroethane-d4		86	70-130						
Toluene-d8		90	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: OE14032-002MS

Matrix: Aqueous

Batch: 21178

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	ND	50000	40000		50	80	70-130	05/23/2013 2044
tert-Amyl methyl ether (TAME)	ND	2500	2300		50	92	70-130	05/23/2013 2044
Benzene	300	2500	2600		50	93	70-130	05/23/2013 2044
tert-Butyl formate (TBF)	ND	13000	8600	N	50	69	70-130	05/23/2013 2044
1,2-Dichloroethane	ND	2500	2300		50	91	70-130	05/23/2013 2044
Diisopropyl ether (IPE)	ND	2500	2200		50	87	70-130	05/23/2013 2044
3,3-Dimethyl-1-butanol	ND	50000	43000		50	86	70-130	05/23/2013 2044
Ethanol	ND	250000	190000		50	76	70-130	05/23/2013 2044
Ethylbenzene	320	2500	2700		50	97	70-130	05/23/2013 2044
Ethyl-tert-butyl ether (ETBE)	ND	2500	2100		50	82	70-130	05/23/2013 2044
Methyl tertiary butyl ether (MTBE)	ND	2500	2000		50	81	70-130	05/23/2013 2044
Naphthalene	99	2500	2500		50	95	70-130	05/23/2013 2044
tert-butyl alcohol (TBA)	ND	50000	41000		50	81	70-130	05/23/2013 2044
Toluene	2200	2500	4400		50	86	70-130	05/23/2013 2044
Xylenes (total)	2700	5000	7100		50	87	70-130	05/23/2013 2044
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		95	70-130					
Bromofluorobenzene		97	70-130					
Toluene-d8		100	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: OE14032-002MD

Matrix: Aqueous

Batch: 21178

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	ND	50000	39000		50	78	2.1	70-130	20	05/23/2013 2107
tert-Amyl methyl ether (TAME)	ND	2500	2300		50	92	0.23	70-130	20	05/23/2013 2107
Benzene	300	2500	2600		50	94	0.62	70-130	20	05/23/2013 2107
tert-Butyl formate (TBF)	ND	13000	8500	N	50	68	1.7	70-130	20	05/23/2013 2107
1,2-Dichloroethane	ND	2500	2200		50	89	2.2	70-130	20	05/23/2013 2107
Diisopropyl ether (IPE)	ND	2500	2200		50	88	0.78	70-130	20	05/23/2013 2107
3,3-Dimethyl-1-butanol	ND	50000	42000		50	83	2.5	70-130	20	05/23/2013 2107
Ethanol	ND	250000	190000		50	75	0.85	70-130	20	05/23/2013 2107
Ethylbenzene	320	2500	2700		50	94	2.7	70-130	20	05/23/2013 2107
Ethyl-tert-butyl ether (ETBE)	ND	2500	2000		50	81	1.9	70-130	20	05/23/2013 2107
Methyl tertiary butyl ether (MTBE)	ND	2500	2100		50	84	3.9	70-130	20	05/23/2013 2107
Naphthalene	99	2500	2500		50	95	0.17	70-130	20	05/23/2013 2107
tert-butyl alcohol (TBA)	ND	50000	40000		50	80	1.7	70-130	20	05/23/2013 2107
Toluene	2200	2500	4400		50	86	0.031	70-130	20	05/23/2013 2107
Xylenes (total)	2700	5000	7000		50	86	0.83	70-130	20	05/23/2013 2107
Surrogate	Q	% Rec	Acceptance Limit							
1,2-Dichloroethane-d4		96	70-130							
Bromofluorobenzene		95	70-130							
Toluene-d8		101	70-130							

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: OQ21178-001

Matrix: Aqueous

Batch: 21178

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	05/23/2013 1246
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	05/23/2013 1246
Benzene	ND		1	1.0	0.13	ug/L	05/23/2013 1246
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	05/23/2013 1246
1,2-Dichloroethane	ND		1	1.0	0.15	ug/L	05/23/2013 1246
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	05/23/2013 1246
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	05/23/2013 1246
Ethanol	ND		1	1000	33	ug/L	05/23/2013 1246
Ethylbenzene	ND		1	1.0	0.33	ug/L	05/23/2013 1246
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	05/23/2013 1246
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	05/23/2013 1246
Naphthalene	ND		1	1.0	0.40	ug/L	05/23/2013 1246
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	05/23/2013 1246
Toluene	ND		1	1.0	0.33	ug/L	05/23/2013 1246
Xylenes (total)	ND		1	1.0	0.33	ug/L	05/23/2013 1246
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		106	70-130				
1,2-Dichloroethane-d4		99	70-130				
Toluene-d8		110	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: OQ21178-002

Matrix: Aqueous

Batch: 21178

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	830		1	83	70-130	05/23/2013 1115
tert-Amyl methyl ether (TAME)	50	47		1	94	70-130	05/23/2013 1115
Benzene	50	46		1	93	70-130	05/23/2013 1115
tert-Butyl formate (TBF)	250	200		1	82	70-130	05/23/2013 1115
1,2-Dichloroethane	50	43		1	86	70-130	05/23/2013 1115
Diisopropyl ether (IPE)	50	43		1	87	70-130	05/23/2013 1115
3,3-Dimethyl-1-butanol	1000	900		1	90	70-130	05/23/2013 1115
Ethanol	5000	4000		1	80	70-130	05/23/2013 1115
Ethylbenzene	50	46		1	92	70-130	05/23/2013 1115
Ethyl-tert-butyl ether (ETBE)	50	42		1	84	70-130	05/23/2013 1115
Methyl tertiary butyl ether (MTBE)	50	41		1	82	70-130	05/23/2013 1115
Naphthalene	50	50		1	101	70-130	05/23/2013 1115
tert-butyl alcohol (TBA)	1000	820		1	82	70-130	05/23/2013 1115
Toluene	50	48		1	95	70-130	05/23/2013 1115
Xylenes (total)	100	94		1	94	70-130	05/23/2013 1115
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		98	70-130				
1,2-Dichloroethane-d4		91	70-130				
Toluene-d8		94	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: OQ21178-003

Matrix: Aqueous

Batch: 21178

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	790		1	79	5.6	70-130	20	05/23/2013 1138
tert-Amyl methyl ether (TAME)	50	44		1	87	7.5	70-130	20	05/23/2013 1138
Benzene	50	42		1	84	9.9	70-130	20	05/23/2013 1138
tert-Butyl formate (TBF)	250	190		1	75	9.2	70-130	20	05/23/2013 1138
1,2-Dichloroethane	50	41		1	81	5.7	70-130	20	05/23/2013 1138
Diisopropyl ether (IPE)	50	40		1	81	6.7	70-130	20	05/23/2013 1138
3,3-Dimethyl-1-butanol	1000	850		1	85	4.8	70-130	20	05/23/2013 1138
Ethanol	5000	3900		1	78	2.8	70-130	20	05/23/2013 1138
Ethylbenzene	50	42		1	85	7.6	70-130	20	05/23/2013 1138
Ethyl-tert-butyl ether (ETBE)	50	39		1	79	5.9	70-130	20	05/23/2013 1138
Methyl tertiary butyl ether (MTBE)	50	40		1	80	2.6	70-130	20	05/23/2013 1138
Naphthalene	50	45		1	91	11	70-130	20	05/23/2013 1138
tert-butyl alcohol (TBA)	1000	790		1	79	3.5	70-130	20	05/23/2013 1138
Toluene	50	44		1	87	8.6	70-130	20	05/23/2013 1138
Xylenes (total)	100	87		1	87	7.6	70-130	20	05/23/2013 1138
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		91	70-130						
1,2-Dichloroethane-d4		86	70-130						
Toluene-d8		90	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: OQ21215-001

Matrix: Aqueous

Batch: 21215

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	05/24/2013 0044
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	05/24/2013 0044
Benzene	ND		1	1.0	0.20	ug/L	05/24/2013 0044
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	05/24/2013 0044
1,2-Dichloroethane	ND		1	1.0	0.30	ug/L	05/24/2013 0044
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	05/24/2013 0044
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	05/24/2013 0044
Ethanol	ND		1	1000	33	ug/L	05/24/2013 0044
Ethylbenzene	ND		1	1.0	1.7	ug/L	05/24/2013 0044
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	05/24/2013 0044
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	05/24/2013 0044
Naphthalene	ND		1	1.0	1.7	ug/L	05/24/2013 0044
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	05/24/2013 0044
Toluene	ND		1	1.0	1.7	ug/L	05/24/2013 0044
Xylenes (total)	ND		1	1.0	1.7	ug/L	05/24/2013 0044
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		102	70-130				
Toluene-d8		102	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ21215-002

Matrix: Aqueous

Batch: 21215

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	980	1		98	70-130	05/23/2013 2314
tert-Amyl methyl ether (TAME)	50	52	1		105	70-130	05/23/2013 2314
Benzene	50	53	1		107	70-130	05/23/2013 2314
tert-Butyl formate (TBF)	250	280	1		111	70-130	05/23/2013 2314
1,2-Dichloroethane	50	53	1		106	70-130	05/23/2013 2314
Diisopropyl ether (IPE)	50	50	1		100	70-130	05/23/2013 2314
3,3-Dimethyl-1-butanol	1000	1100	1		110	70-130	05/23/2013 2314
Ethanol	5000	4600	1		92	70-130	05/23/2013 2314
Ethylbenzene	50	54	1		109	70-130	05/23/2013 2314
Ethyl-tert-butyl ether (ETBE)	50	52	1		105	70-130	05/23/2013 2314
Methyl tertiary butyl ether (MTBE)	50	49	1		99	70-130	05/23/2013 2314
Naphthalene	50	65	1		130	70-130	05/23/2013 2314
tert-butyl alcohol (TBA)	1000	950	1		95	70-130	05/23/2013 2314
Toluene	50	55	1		110	70-130	05/23/2013 2314
Xylenes (total)	100	110	1		109	70-130	05/23/2013 2314
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		95	70-130				
Toluene-d8		99	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: OQ21215-003

Matrix: Aqueous

Batch: 21215

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1000		1	105	6.3	70-130	20	05/23/2013 2337
tert-Amyl methyl ether (TAME)	50	54		1	109	4.1	70-130	20	05/23/2013 2337
Benzene	50	53		1	106	0.96	70-130	20	05/23/2013 2337
tert-Butyl formate (TBF)	250	290		1	116	3.7	70-130	20	05/23/2013 2337
1,2-Dichloroethane	50	54		1	109	2.3	70-130	20	05/23/2013 2337
Diisopropyl ether (IPE)	50	50		1	99	0.89	70-130	20	05/23/2013 2337
3,3-Dimethyl-1-butanol	1000	1200		1	117	6.6	70-130	20	05/23/2013 2337
Ethanol	5000	5100		1	102	10	70-130	20	05/23/2013 2337
Ethylbenzene	50	51		1	102	6.9	70-130	20	05/23/2013 2337
Ethyl-tert-butyl ether (ETBE)	50	54		1	108	3.0	70-130	20	05/23/2013 2337
Methyl tertiary butyl ether (MTBE)	50	50		1	101	2.2	70-130	20	05/23/2013 2337
Naphthalene	50	62		1	124	4.8	70-130	20	05/23/2013 2337
tert-butyl alcohol (TBA)	1000	1000		1	101	7.1	70-130	20	05/23/2013 2337
Toluene	50	53		1	105	4.3	70-130	20	05/23/2013 2337
Xylenes (total)	100	100		1	104	4.4	70-130	20	05/23/2013 2337
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		99	70-130						
1,2-Dichloroethane-d4		98	70-130						
Toluene-d8		99	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: OQ21215-001

Matrix: Aqueous

Batch: 21215

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	05/24/2013 0044
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	05/24/2013 0044
Benzene	ND		1	1.0	0.13	ug/L	05/24/2013 0044
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	05/24/2013 0044
1,2-Dichloroethane	ND		1	1.0	0.15	ug/L	05/24/2013 0044
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	05/24/2013 0044
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	05/24/2013 0044
Ethanol	ND		1	1000	33	ug/L	05/24/2013 0044
Ethylbenzene	ND		1	1.0	0.33	ug/L	05/24/2013 0044
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	05/24/2013 0044
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	05/24/2013 0044
Naphthalene	ND		1	1.0	0.40	ug/L	05/24/2013 0044
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	05/24/2013 0044
Toluene	ND		1	1.0	0.33	ug/L	05/24/2013 0044
Xylenes (total)	ND		1	1.0	0.33	ug/L	05/24/2013 0044
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		102	70-130				
Toluene-d8		102	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: OQ21215-002

Matrix: Aqueous

Batch: 21215

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	980	1		98	70-130	05/23/2013 2314
tert-Amyl methyl ether (TAME)	50	52	1		105	70-130	05/23/2013 2314
Benzene	50	53	1		107	70-130	05/23/2013 2314
tert-Butyl formate (TBF)	250	280	1		111	70-130	05/23/2013 2314
1,2-Dichloroethane	50	53	1		106	70-130	05/23/2013 2314
Diisopropyl ether (IPE)	50	50	1		100	70-130	05/23/2013 2314
3,3-Dimethyl-1-butanol	1000	1100	1		110	70-130	05/23/2013 2314
Ethanol	5000	4600	1		92	70-130	05/23/2013 2314
Ethylbenzene	50	54	1		109	70-130	05/23/2013 2314
Ethyl-tert-butyl ether (ETBE)	50	52	1		105	70-130	05/23/2013 2314
Methyl tertiary butyl ether (MTBE)	50	49	1		99	70-130	05/23/2013 2314
Naphthalene	50	65	1		130	70-130	05/23/2013 2314
tert-butyl alcohol (TBA)	1000	950	1		95	70-130	05/23/2013 2314
Toluene	50	55	1		110	70-130	05/23/2013 2314
Xylenes (total)	100	110	1		109	70-130	05/23/2013 2314
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		95	70-130				
Toluene-d8		99	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: OQ21215-003

Matrix: Aqueous

Batch: 21215

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1000		1	105	6.3	70-130	20	05/23/2013 2337
tert-Amyl methyl ether (TAME)	50	54		1	109	4.1	70-130	20	05/23/2013 2337
Benzene	50	53		1	106	0.96	70-130	20	05/23/2013 2337
tert-Butyl formate (TBF)	250	290		1	116	3.7	70-130	20	05/23/2013 2337
1,2-Dichloroethane	50	54		1	109	2.3	70-130	20	05/23/2013 2337
Diisopropyl ether (IPE)	50	50		1	99	0.89	70-130	20	05/23/2013 2337
3,3-Dimethyl-1-butanol	1000	1200		1	117	6.6	70-130	20	05/23/2013 2337
Ethanol	5000	5100		1	102	10	70-130	20	05/23/2013 2337
Ethylbenzene	50	51		1	102	6.9	70-130	20	05/23/2013 2337
Ethyl-tert-butyl ether (ETBE)	50	54		1	108	3.0	70-130	20	05/23/2013 2337
Methyl tertiary butyl ether (MTBE)	50	50		1	101	2.2	70-130	20	05/23/2013 2337
Naphthalene	50	62		1	124	4.8	70-130	20	05/23/2013 2337
tert-butyl alcohol (TBA)	1000	1000		1	101	7.1	70-130	20	05/23/2013 2337
Toluene	50	53		1	105	4.3	70-130	20	05/23/2013 2337
Xylenes (total)	100	100		1	104	4.4	70-130	20	05/23/2013 2337
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		99	70-130						
1,2-Dichloroethane-d4		98	70-130						
Toluene-d8		99	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

* = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MB

Sample ID: QO20618-001
 Batch: 20616
 Analytical Method: 8011

Matrix: Aqueous
 Prep Method: 8011
 Prep Date: 05/16/2013 1532

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	05/22/2013 1735
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		110	57-137				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - LCS

Sample ID: OQ20616-002
Batch: 20616
Analytical Method: 8011

Matrix: Aqueous
Prep Method: 8011
Prep Date: 05/16/2013 1532

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.25		1	102	60-140	05/22/2013 1757
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		110	57-137				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MS

Sample ID: OE14032-006MS	Matrix: Aqueous
Batch: 20616	Prep Method: 8011
Analytical Method: 8011	Prep Date: 05/16/2013 1532

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.25	0.26		1	107	60-140	05/22/2013 2030
Surrogate	Q	% Rec	Acceptance Limit					
1,1,1,2-Tetrachloroethane		115	57-137					

PQL = Practical quantitation limit P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL + = RPD is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MSD

Sample ID: OE14032-006MD	Matrix: Aqueous
Batch: 20616	Prep Method: 8011
Analytical Method: 8011	Prep Date: 05/16/2013 1532

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
1,2-Dibromoethane (EDB)	ND	0.24	0.26	1		107	1.2	60-140	20	05/22/2013 2051	
Surrogate	Q	% Rec	Acceptance Limit								
1,1,1,2-Tetrachloroethane		117	57-137								

PQL = Practical quantitation limit P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL + = RPD is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MB

Sample ID: QQ20659-001 Matrix: Aqueous
Batch: 20659 Prep Method: 8011
Analytical Method: 8011 Prep Date: 05/16/2013 2025

Parameter	Result	Q	DII	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	05/23/2013 0239
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		103	57-137				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - LCS

Sample ID: OQ20659-002

Matrix: Aqueous

Batch: 20659

Prep Method: 8011

Analytical Method: 8011

Prep Date: 05/16/2013 2025

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.26		1	105	60-140	05/23/2013 0301
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		110	57-137				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MS

Sample ID: OE14032-024MS	Matrix: Aqueous
Batch: 20659	Prep Method: 8011
Analytical Method: 8011	Prep Date: 05/16/2013 2025

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.25	0.21		1	85	60-140	05/23/2013 0451
Surrogate	Q	% Rec	Acceptance Limit					
1,1,1,2-Tetrachloroethane		85	57-137					

PQL = Practical quantitation limit P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL + = RPD is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MSD

Sample ID: OE14032-024MD
 Batch: 20659
 Analytical Method: 8011

Matrix: Aqueous
 Prep Method: 8011
 Prep Date: 05/16/2013 2025

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	DII	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.25	0.21		1	86	2.4	60-140	20	05/23/2013 0512
Surrogate	Q	% Rec	Acceptance Limit							
1,1,1,2-Tetrachloroethane		83	57-137							

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 23654

Client SCDHEC - UST		Report to Contact D. THOMA		Sampler (Printed Name) GAVIN GLOBENSKY		Quote No.	
Address 2600 Bull St.		Telephone No. / Fax No. / Email		Waybill No.		Page 1 of 4	
City COLUMBIA	State SC	Zip Code 29201	Preservative		Number of Containers		
Project Name STEADY SIMMONS			1. Unpres. 4. HNO3 7. NaOH		Bottle (See instructions on back)		
Project Number 18856/45339			2. NaOH/ZnA 5. HCL		Preservative		
P.O Number 460088529			3. H2SO4 6. Na Thio.		Lot No. 0514032		
Sample ID / Description (Containers for each sample may be combined on one line)		Date	Time	G-Grab C-Composite	Matrix	Analysis	
						Remarks / Cooler ID	
MW-1R		5/13	11:57	G	K	Slight odor	
MW-2			11:51			odor	
MW-3			13:28			No odor	
MW-4			12:27			No odor	
MW-5			11:18				
MW-6			11:14				
MW-7			11:16				
MW-8			10:55				
MW-9			10:44				
MW-10		5/13	13:39	G	K	No odor	
Turn Around Time Required (Prior lab approval required for expedited TAT)		Sample Disposal		QC Requirements (Specify)		Possible Hazard Identification	
<input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)		<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab				<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
1. Relinquished by / Sampler		Date	Time	1. Received by		Date	Time
[Signature]		5/13/13	17:00	[Signature]		5-13-13	1700
2. Relinquished by		Date	Time	2. Received by		Date	Time
[Signature]		5/14/13	1500	[Signature]		5/14/13	1500
3. Relinquished by		Date	Time	3. Received by		Date	Time
4. Relinquished by		Date	Time	4. Laboratory Received by		Date	Time
[Signature]		5/14/13	1545	[Signature]		5-14-13	1545
Note: All samples are retained for six weeks from receipt unless other arrangements are made.				LAB USE ONLY		Receipt Temp. 1.0 °C	
				Received on Ice (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack		Temp. Blank <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	



Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 23653

Client SCDHEC-UST		Report to Contact D. THOMA		Sampler (Printed Name) GAVIN GLOBENSKY		Quote No.	
Address 2600 Bull St.		Telephone No. / Fax No. / Email		Waybill No.		Page 2 of 4	
City COLUMBIA	State SC	Zip Code 29201	Preservative 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.		Number of Containers		Bottle (See Instructions on back)
Project Name STEADY SIMMONS		Project Number 18856/45339		P.O Number 4600088529		Lot No. 0614032	
Sample ID / Description (Containers for each sample may be combined on one line)		Date	Time	G-Grab C-Composite	Matrix GW DW WW S Other	Analysis BTEX, Naphthalene, MTBE, 1,2-DCA, 8-OXYGENATES, EDB	
MW-11		5/13	13:22	GK		X X X X	No odor
MW-12			12:01				
MW-13			12:38				
MW-14			12:31				
MW-15			12:18				
MW-16			11:37				
DW-1			11:14				
DW-2			10:33				
DW-3			13:11				
DW-4		5/13	12:50	GK		X X X X	No odor
Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)		Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab		QC Requirements (Specify)		Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
1. Relinquished by [Signature]		Date 5/13/13	Time 17:00	1. Received by [Signature]		Date 5-13-13	Time 1700
2. Relinquished by [Signature]		Date 5/14/13	Time 1500	2. Received by [Signature]		Date 5/14/13	Time 1500
3. Relinquished by [Signature]		Date	Time	3. Received by		Date	Time
4. Relinquished by [Signature]		Date 5/14/13	Time 1545	4. Laboratory Received by [Signature]		Date 5-14-13	Time 1545
Note: All samples are retained for six weeks from receipt unless other arrangements are made.				LAB USE ONLY Received on Ice (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack		Receipt Temp. 1.0 °C Temp. Blank <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	



Chain of Custody Record

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West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 23652

Client SCDHEC-UST		Report to Contact D. THOMA		Sampler (Printed Name) GAVIN GLOBENSKY		Quote No.		
Address 2600 BULL ST.		Telephone No. / Fax No. / Email		Waybill No.		Page 3 of 4		
City COLUMBIA	State SC	Zip Code 29201	Preservative					Number of Containers
Project Name STEADY SIMMONS			1. Unpres. 4. HNO3 7. NaOH					Bottle (See Instructions on back)
Project Number 18856/45339			2. NaOH/ZnA 5. HCL					Preservative
P.O. Number 4600088529			3. H2SO4 6. Na Thio.					Lot No. 0E14032
Sample ID / Description (Containers for each sample may be combined on one line)		Date	Time	G-Grab	C-Composite	Matrix	Analysis	Remarks / Cooler ID
DW-5	5/13	12:17	G	X	K		BREK NGRM	
DW-6		11:32			X		1,2-DCA	
DW-7		11:43			X		8-OXYGENATES	
NSW-1		13:01			K		EDB	1ppb;LDLs
NSW-2								NOT SAMPLED
NSW-3		13:09						1ppb;LDLs
NSW-4		13:24						1ppb;LDLs
NSW-5		13:18						1ppb;LDLs
NSW-6								NOT SAMPLED
NSW-7	5/13	13:34	G	X	K			1ppb;LDLs
Turn Around Time Required (Prior lab approval required for expedited TAT)		Sample Disposal		QC Requirements (Specify)		Possible Hazard Identification		
<input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)		<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab				<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		
1. Relinquished by [Signature]	Date 5/13/13	Time 17:00	1. Received by [Signature]	Date 5-13-13	Time 1700			
2. Relinquished by [Signature]	Date 5-14-13	Time 1500	2. Received by [Signature]	Date 5-14-13	Time 1500			
3. Relinquished by	Date	Time	3. Received by	Date	Time			
4. Relinquished by [Signature]	Date 5/14/13	Time 1545	4. Laboratory Received by [Signature]	Date 5-14-13	Time 1545			
Note: All samples are retained for six weeks from receipt unless other arrangements are made.				LAB USE ONLY		Receipt Temp. 10 °C Temp. Blank <input type="checkbox"/> Y <input type="checkbox"/> N		
				Received on Ice (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack				



Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

www.shealylab.com

Number 23651

Client SCDHEC-UST		Report to Contact D. THOMA		Sampler (Printed Name) GAVIN GLOBENSKY		Quote No.			
Address 2600 BULL ST.		Telephone No. / Fax No. / Email		Waybill No.		Page 4 of 4			
City COLUMBIA	State SC	Zip Code 29201	Preservative					Number of Containers	
Project Name STEADY SIMMONS			1. Unpres. 4. HNO3 7. NaOH					Bottle (See Instructions on back)	
Project Number 18856/45339			2. NaOH/ZnA 5. HCL					Preservative	
P.O Number 4600088529			3. H2SO4 6. Na Tho.					Lot No. 0E14032	
Sample ID / Description (Containers for each sample may be combined on one line)		Date	Time	G-Grab C-Composite	Matrix GW DW WW S Other	Analysis		Remarks / Cooler ID	
WSW-8		5/13	13:29	G	X	X	X	X	ppb; LPLS
WSW-9			13:13		X				
SW-1			13:29		X				
SW-2			13:33		X				
SW-3			13:37		X				ppb; LPLS
MW-1R Dup.			11:57						Slight odor
MW-2 Dup.			11:51						odor
Field Blank			13:40					X	
Trip Blank		5/13	13:40	G		X	X	X	
Turn Around Time Required (Prior lab approval required for expedited TAT)			Sample Disposal			QC Requirements (Specify)		Possible Hazard Identification	
<input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)			<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab					<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
1. Relinquished by / Sampler		Date	Time	1. Received by		Date	Time		
<i>[Signature]</i>		5/13/13	17:00	<i>[Signature]</i>		5.13.13	1700		
2. Relinquished by		Date	Time	2. Received by		Date	Time		
<i>[Signature]</i>		5.14.13	1500	<i>[Signature]</i>		5.14.13	1500		
3. Relinquished by		Date	Time	3. Received by		Date	Time		
4. Relinquished by		Date	Time	4. Laboratory Received by		Date	Time		
<i>[Signature]</i>		5/14/13	1545	<i>[Signature]</i>		5.14.13	1545		
Note: All samples are retained for six weeks from receipt unless other arrangements are made.						LAB USE ONLY		Receipt Temp 1.0 °C Temp. Blank <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
						Received on Ice (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack			

Sample Receipt Checklist (SRC)

Client: SEDANEL Cooler Inspected by/date: MSW / 5/14/13 Lot #: DE14032

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other			
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/temperature upon receipt: <u>0</u> / <u>0</u> °C / <u>0</u> / <u>0</u> °C / <u>0</u> / <u>0</u> °C / <u>0</u> / <u>0</u> °C			
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles			
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None			
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.			
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		8. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		12. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		13. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		14. Were any samples containers missing? <u>WSW-8 missing</u>
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		15. Were there any excess samples not listed on COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)			
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) with the SR # (number) _____			
Sample(s) <u>01(2) - 02(1) - 03(2) - 04(1) - 05(4)</u> were received with bubbles >6 mm in diameter.			
Sample(s) <u>01(4) - 02(4) - 03(5)</u> were received with TRC >0.2 mg/L for NH ₃ /TKN/cyanide/phenol			
Sample labels verified by: <u>MSW</u>			Date: <u>5/14/13</u>

Corrective Action taken, if necessary:

Was client notified: Yes No Did client respond: Yes No
 SESI employee: _____ Date of response: _____

Comments: _____



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MR WAYNE THOMPSON
16657 GRAYS HIGHWAY
EARLY BRANCH SC 29916-8016

AUG 21 2013



Re: Request for Property Access
Steady Simmons, 16661 Grays Highway, Early Branch, SC
UST Permit # 18856
Access to your property located at 16661 Grays Highway, Early Branch, SC
Tax Map # 052-00-05-027
Jasper County

Dear Mr. Thompson:

The Underground Storage Tank (UST) Management Division is conducting work to assess a gasoline release reported at the property located 16661 Grays Highway, Early Branch, South Carolina. The Division confirmed a release at the referenced site on September 9, 2002, and the release was qualified to receive funds from the State Underground Petroleum Environmental Response Bank (SUPERB). Costs for this work will be paid by the SUPERB Account at *no cost to you or a future landowner*. As current property owner, the Division is requesting that you provide property access for site activities. The Division will keep you apprised of all pending activities and will copy you on all correspondence. Midlands Environmental Consultants, Incorporated will be conducting assessment activities and will require access to your property to sample monitoring wells.

The wells will be properly abandoned upon completion of assessment and corrective action activities, and no permanent effects will remain on your property.

Please sign the enclosed right of entry form and return it to my attention within ten days of the date you received this letter. If you have any questions, please contact me by phone at (803) 898-7542, by fax at (803) 898-0673, or by email at hornosms@dhec.sc.gov.

Sincerely,

Minda Hornosky, Hydrogeologist
Assessment Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Right of Entry Form

cc: Midlands Environmental Consultants, Inc., PO Box 854, Lexington, SC 29071 (with enc)
Technical File (with enc)

Please return to: Minda Hornosky, UST Management Division, 2600 Bull St, Columbia, SC 29201

**PROPERTY RIGHT OF ENTRY
TAX MAP NUMBER 052-00-05-027**

I, _____ certify that I am the legal owner or the authorized representative for _____ (owner) of the property described below. I understand that monitoring wells will be installed to define the extent of petroleum Chemicals of Concern. I understand I may adjust the location of the well(s) to best meet my land use. Assessment activities will be paid by the UST Division at no cost to me or a future land owner. Permission is hereby granted to the Agency and its agents to enter the referenced property for the following purposes:

Name of Facility: Steady Simmons

Street Address: 16661 Grays Highway

City, State, ZIP: Early Branch, SC 29916-8016

1. Collecting groundwater samples from all existing groundwater monitoring wells. I understand that these wells will remain with the property until cleanup is complete. Additionally, the Agency or its agents will access the property at reasonable times for measurement and/or collection of groundwater samples in the future.
2. The monitoring wells will be properly abandoned upon completion of remediation activities.

NAME (Please print): _____

SIGNATURE: _____

WITNESS: _____

Date Signed: _____

Reference UST Permit # 18856

If you would like us to contact anyone to schedule property access, please print their name(s) and contact information below:

Name Telephone Number or e-mail address



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment



BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

SEP 18 2013

Re: QAPP Contractor Addendum Request
Groundwater Sampling Contract
Solicitation # IFB-5400002759, PO#4600088529

Dear Mr. Shane:

In accordance with bid solicitation # IFB-5400002759 and the UST Management Division Quality Assurance Program Plan (QAPP), Revision 2.0, it is requested that you submit a Contractor Addendum for each site listed below. The Addendums must be submitted within 15 business days in my attention. The project manager for each site will issue a notice to proceed once the Addendum has been reviewed and approved. Please note, site reconnaissance should be conducted during the Addendum review so that any issues that arise may be addressed prior to commencing work at the site.

Table with 5 columns: UST Permit #, Site Name, County, # samples and requested analysis*, Project Manager. Rows include sites like Nickelpumper 235, Evans Service Center, Curtis Service Station, etc.

12663	Jingle Jungle	Lancaster	25- BTEXMN, DCA, Oxygenates, & EDB	S. Fulmer
04244	Browns Texaco	Greenville	47-BTEXMN, DCA, Oxygenates, & EDB	S. Briney
10598	Amoco Station 11	Greenville	22- BTEXMN, DCA, Oxygenates, & EDB	S. Briney

* The number of samples may not include trip blanks, field blanks, or field duplicates.

Please contact me with the sampling schedule before commencing work at these facilities. In addition, a weekly update for each site is required to be submitted via e-mail to the site's project manager and myself. If you have any questions or need further assistance, please contact me at (803) 898-0631 or thomadl@dhec.sc.gov.

Sincerely,



Debra L. Thoma, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

Enc: Site Information Packages

cc: Technical Files

 **Midlands
Environmental
Consultants, Inc.**

September 24, 2013

Ms. Debra Thoma, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: QAPP Contractor Addendum – Revision 0
Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID Number 18856
MECI Project Number 13-4614
Certified Site Rehabilitation Contractor UCC-0009



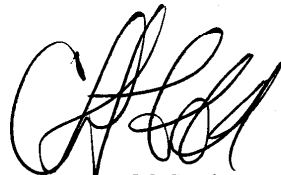
Dear Ms. Thoma,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached QAPP Contractor Addendum for the referenced site.

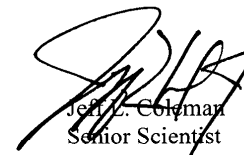
On September 23, 2013 MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
Midlands Environmental Consultants, Inc.



Courtney M. Sanders
Project Biologist



Jeff L. Coleman
Senior Scientist

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For

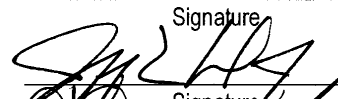
Steady Simmons, SCDHEC Site ID# 18856

16661 Grays Highway, Early Branch, South Carolina

Prepared by:
Courtney M. Sanders
Project Biologist
Midlands Environmental Consultants, Inc.
(Certified Site Rehabilitation Contractor UCC-0009)
235-B Dooley Road
Lexington, SC 29073
(803)808-2043

Date: September 24, 2013

Approvals

Minda Hornosky SC DHEC Project Manager	_____ Signature	_____ Date
Jeff L. Coleman Site Rehabilitation Contractor	 Signature	Date <u>9/26/13</u>
Courtney M. Sanders Contractor QA Manager	 Signature	Date <u>9-26-13</u>
Daniel J. Wright Laboratory Director	 Signature	Date <u>09/24/2013</u>

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A3 Distribution List

Name	Title	License Number/Exp. Date	Organization/Address	Telephone Number	Fax Number	Email Address
Minda Hornosky	SC DHEC Technical Project Manager		SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-898-7542	803-898-0673	hornosms@dhec.sc.gov
Bryan T. Shane, P.G.	Site Rehabilitation Contractor	Professional Geologist- SC 1102 Exp. 06/30/2015	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	bts@meci.net
Courtney M. Sanders	Quality Assurance Officer		Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	cms@meci.net
Jeff L. Coleman	Field Manager		Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	jlc@meci.net
Daniel J. Wright	Laboratory Director	Lab Certification SC 32010 Exp. 12/17/2015	Shealy Environmental Services, Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791-9700	803-791-9111	dwright@shealylab.com
Project Verifier	Courtney M. Sanders or Kyle V. Pudney		Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	cms@meci.net

Table 1A Addendum Distribution List

A4 Problem Definition/Background

Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed.

The subject site (Steady Simmons) is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The subject site formerly maintained one 550 gallon gasoline underground storage tank (UST) and one 1,000 gallon gasoline UST. The subject tanks were abandoned by removal from ground in July of 2002. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product from the subject tanks in September of 2002 and confirmed the release in October of 2002. The subject site is currently rated a Class 2BB.

Please answer the following: Does this project fall under UST or Brownfields area?

Underground Storage Tank Division

A5 Project/Task Description

1. Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).

The subject site (Steady Simmons) will be sampled in conjunction with the SCDHEC Groundwater Sampling Contract (Solicitation # IFB-5400002759, PO# 4600088529). During assessment activities monitoring wells will be sampled for petroleum constituents.

2. The work will begin within fourteen (14) days of receipt of approved QAPP contractors addendum after cost approval and sampling should be complete by twenty-one (21) days of receipt of approved QAPP contractors addendum.

3. *Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.*

Factors that may prevent schedule work will be, but not limited to, inclement weather, equipment malfunction, and machine failure.

A6 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

The subject site is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The site is currently occupied by a vacant lot surrounded by residential properties.

A7 Certification

The Following Laboratory(ies) will be used for this Project:

Commercial Lab(s)

Full Name of the Laboratory Shealy Environmental Services, Inc.
Name of Lab Director Daniel J. Wright
SC DHEC Certification Number 32010
Parameters this Lab will analyze for this project:

BTEX, Naphthalene, MTBE, 1,2 DCA, 8-Oxygenates (EPA Method 8260-B), and EDB (EPA Method 8011).

Please note: SC DHEC may require that the contractor submit some or all of the Laboratory's SOPs as part of this QAPP.

A8 Documents and Records

*Personnel will receive the most current version of the QAPP Addendum via:
(Check all that apply)*

US Mail Courier Hand delivered

Other (please specify): E-mailed electronic copies

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Instrument Raw Data	Target, Thermospec, or Iteva software	Hardcopy and Electronic	Hardcopy: Offsite storage for 7 yrs Electronic: Two external storage device backups – one offsite, one onsite storage for 10 yrs	Yes
Final Reports	LIMS	Electronic	Electronic: Two external storage device backups – one offsite, one onsite storage for 10 years	Yes
Field Work	Field Staff	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
Chain of Custody	Field Staff	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
QAPP Addendum	Courtney Sanders	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes
Internal QC record	Courtney Sanders	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
Sampling Report	Courtney Sanders	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes

Table 2A Record Identification, Storage, and Disposal

Section B Measurement/Data Acquisition

B1 Sampling Process/Experimental Design

Item	Start Date	End Date	Comments
Site Reconnaissance	9/23/13	9/23/13	Already Completed
QAPP preparation	9/24/13	9/24/13	In progress
QAPP approval	9/25/13	10/16/13	Assuming three week turnaround
Monitoring well Sampling	10/17/13	10/31/13	Sampled within 2 weeks of QAPP approval
Report Preparation	11/1/13	11/22/13	Three weeks to prepare/submit report

Table 3A Sampling Activities

B2 Sampling Methods

Please note: The contractor must follow sampling protocols as given in the UST QAPP.

Estimate the number of samples of each matrix that are expected to be collected:

Soil	_____
Ground Water from monitoring wells	_____23_____
From Drinking/Irrigation water wells	_____7_____
Field Duplicate Collection	_____2_____
Field Blank Collection	_____1_____
Trip Blank	_____1_____
From surface water features	_____3_____
Total number of Water samples	_____37_____

Notes:

During the September 23, 2013 site visit, twenty three (23) monitoring wells, seven (7) water supply wells, and three (3) surface water feature were located. Water supply wells WSW-2 and WSW-6 were located, but determined to be non operational.

During the initial site visit it was noted that all located monitoring wells were in good condition.

All monitoring well samples will be analyzed by Shealy Environmental Services, Inc. for BTEX, Naphthalene, MTBE, 1,2 DCA, 8-Oxygenates (EPA Method 8260-B), and EDB (EPA Method 8011).

Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.

Samples will be transported to the laboratory by shipment with a lab provided courier or with a lab approved shipping company. If a courier is scheduled to visit the MECI offices the day following a sampling event, sampling coolers will be repacked with wet ice, and left at the office for pick-up. If no courier is scheduled to visit the MECI office the day following a sampling event, all sampling coolers are to be dropped off at the lab or at an approved shipping company for overnight delivery to the lab immediately following the sampling event.

Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.

Failure	Response	Documentation	Individual Responsible
Water level indicator not working properly	Attempt to clean probe, change battery, use back-up indicator if need be.	Record on field sheets, notify office staff. Take indicator out of rotation until problem identified and corrected.	Field Staff, Field Manager

Field meters not working	Attempt to clean probes, recalibrate in the field.	Record on field sheets, notify office staff. Take meters out of rotation until problem identified and corrected.	Field Staff, Field Manager
Wells not located	Use metal detector, measure from known points, contact project manager for additional information.	Record method used to attempt to locate the well on field sheets, and possibly reasoning for the well to be missing	Field Staff

Table 4A Field Corrective Action

B3 Sample Handling and Custody

1. How will the samples get from the Site to the Lab to ensure holding requirements are met?

Following sample collection, the samples are immediately place in a laboratory provided cooler, pre-filled with wet ice obtained from the MECI office. Samples are transported to the MECI office once a sampling event is complete. A Chain of Custody (CoC) is filled out following the sampling event by the field staff. See attached CoC. If a lab provided courier is scheduled to visit the MECI offices the day following a sampling event, sampling coolers are repacked with wet ice, and left at the office for pick-up the following morning. If no courier is schedule to visit the MECI office the day following a sampling event, all sampling coolers are repacked with ice and are dropped off at a lab approved shipping company for overnight delivery to the lab.

2. If sample preservation procedures differ from the UST Programmatic QAPP, please provide details.

3. If chain of custody procedures differ from the UST Programmatic QAPP, please provide details.

B4 Analytical Methods

1. Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:

Parameter	Method Referenced	Comments
BTEX+Naph+MTBE+Oxygentaes	8260B	
PAH's	8270D	
EDB	8011	
Lead,T.	6010C	
Ferrous Iron	SM 3500-FED	
Nitrate	353.2	
Sulfate	300.0	

Methane	RSK-175	
TOC	Walkley-Black	
DRO - TPH	8015C	
pH	*	
Conductivity	*	
Dissolved Oxygen	*	
Temperature	*	
Turbidity	*	

Table 5A Analytical SOPs and Referenced Methods

- This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.
2. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. Identify all field equipment needing periodic maintenance, the schedule for this, and the person responsible.

Instrument	Serial Number	Type of Maintenance	Frequency	Person responsible
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace probe tip	Yearly	C. Sanders
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace batteries	As Needed	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	General inspection for wear and tear on equipment	Daily	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	Check buffer solutions for expiration	Weekly	C. Sanders
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace membrane	4 to 8 weeks	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace batteries	As Needed	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	General inspection for wear and tear on equipment	Daily	Field Staff
Micro TPW/TPI Turbidimeter	201301174 201301183	General inspection for wear and tear on	Daily	Field Staff

		equipment		
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Table 6A Instrument and Equipment Maintenance

B7 Instrument Calibration and Frequency

1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Serial Number	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA
Volatiles Mass Spec	Shealy SOP S-SV-021 Page 7	Minimum of 5 calibration standards for all compounds	When indicated by continuous calibration verification standard	Method Criteria	Detailed in SOP	MSV Analyst
Semi-volatile Mass Spec	Shealy SOP S-SV-021 Page 7	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	MSSV Analyst
GC ECD	Shealy SOP S-SV-012 Page 5	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	GC Analyst
Dionex IC	Shealy SOP S-IN-010 Page 6	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	IC Analyst
ICP	Shealy SOP S-IM-005 Page 6 & 7	Minimum of 3 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	ICP Analyst
Cetac Mercury Analyzer	Shealy SOP S-IM-006 Page 5	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	Mercury Analyst
Lacaht QuickChem 8000	Shealy SOP S-IN-042 Page 5	Minimum of 5 calibration standards	Daily or when indicated by calibration verification standard	Method Criteria	Detailed in SOP	Nitrate Analyst

Instrument	Serial Number	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA
YSI 63	09C 101302, 10K 101895, 07M 100905	pH Calibration	Daily	+/- 0.2 pH units	clean/replace probe tip, recalibrate	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	Conductivity Calibration	As directed by manufacturer	+/- 10 uS	clean/replace probe tip, recalibrate	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	DO calibration	Daily	+/- 0.25 mg/l	clean/replace probe tip, recalibrate	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Temperature Calibration	Daily	+/- 1 °C	clean/replace probe tip, recalibrate	Field Staff
Electronic Water Level Indicator	18432 77107	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff
Oil/Water Interface probe	01-2872 01-0261 01-4101 01-3464	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff

Table 7A Instrument Calibration Criteria and Corrective Action

* This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

B8 Inspection/Acceptance Requirements for Supplies and Consumables

1. If procedures for storage, handling or transport of supplies/consumables differ from the UST Programmatic QAPP, please provide details.

B9 Data Acquisition Requirements (Non-Direct Measurements)

1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.

2. Describe the intended use of this information and the rationale for their selection, i.e.,
3. Provide its relevance to the project.
4. Indicate the justification criteria for use of these data sources and/or models.

Data Source	Used for	Justification for use in this project	Comments
Small scope assessment sampling and monitoring well installation reports	Historic groundwater and CoC concentration data. Lithology and well construction data from previous MWI's	Establish the type of drilling rig required, time for sampling and any other potential problems that may be encountered.	Previous assessment reports will be used to help determine the location of missing monitoring wells, and screened intervals.

Table 8A Non-Direct Measurements

5. Identify key resources/support facilities needed.

There are no non-direct measurements in this project

B10 Data Management

1. Describe the data management scheme from field to final use and storage.

Following sample collection and chain of custody production, samples are shipped to the lab. Field work from the field staff is reviewed by the MECI project manager, and converted into digital form. All data entry is subsequently checked to validate the data entry. The original copies of the field work are stored in MECI files for a minimum of 5 years. Digital copies of the work are stored on the MECI server, which is backed up weekly, and stored for a minimum of 5 years. The digital copy of the field work is presented to SCDHEC with the final report.

2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?

The laboratory maintains comprehensive Quality Control and Training Programs. All sample receipt data, sample log-in, and analytical data is peer reviewed, including review for inappropriate changes. Data management, review procedures and the Quality Systems Program are documented in the laboratory's Quality Manual and Standard Operating Procedures. The Quality Assurance Department oversees adherence to and review of these programs.

All MECI field work is produced using ink-pens. Any attempt to alter field data, after sampling is complete, can be readily identified. MECI keeps a carbon copy of the chain of custody after it is shipped to the lab. This copy is kept with the field work. If any change to the CoC are suspected, this original carbon copy can be use to identify potential changes.

3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted?

Sample data acquisition software is reviewed periodically. The LIMS database is backed up daily and is able to be restored in the event of a system failure. These procedures are documented in laboratory SOP S-AD-003, LIMS. The IT Manager is responsible for these systems and procedures.”

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Laboratory Hardcopy data stored off site is logged, maintained and archived by the Quality Assurance Department. Laboratory Electronic Data Reports are maintained through IT back up under the responsibility of the IT Systems Manager.

MECI keeps all field work and paper copies of reports in its in-house filing system. All paper copies are stored for a minimum of 5 years. Any file can be retrieved easily by going to the correct filing cabinet/box.

All electronic copies of reports generated are kept on the MECI server. This server is backed-up on a weekly basis. Any file stored on the MECI server can be retrieved instantly, by accessing the server. All electronic files are stored for a minimum of 5 years on the server.

Section C Assessment and Oversight

C1 Assessment and Response Actions

1. *The Contractor is supposed to observe field personnel daily during sampling activities to ensure samples are collected and handled properly and report problems to DHEC within 24 hours. . Please state who is responsible for doing this and what observations will be made. Will this person have the authority to stop work if severe problems are seen?*

Field audits can be conducted on any field personnel at any time. MECI field audits can be conducted by the Field Manger, who will be responsible for ensuring that field personnel adhere to the QAPP. If during a random field audit, severe problems are found, work will be stopped by the field manager and the QA officer contacted to determine corrective action. All problems must be corrected prior to any additional work being performed. Should it be requested, an On-site Field Audit can be scheduled with the SCDHEC project manager. If severe problems are identified by the SCDHEC project manager, the project manager can stop the work until the problems are corrected.

2. *The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done by the Contractor on the Commercial Lab(s) that are being used—other than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?*

The laboratory participates in annual Proficiency Testing through an approved vendor, Wibby Environmental. If during a random audit, severe problems are found, work will be stopped by the according Wibby Environmental representative and the QA officer contacted to determine corrective action.

Proficiency Testing results are provided to the Office of Environmental Laboratory Certification. Audits will be conducted on site specific basis; Analytical results reported for QAPP required duplicates, field blanks, and trip blanks will compared to samples collected from the monitoring well network. When available current analytical results will be compared to historical analytical results to further test the accuracy of quality control.

C2 Reports to Management

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Section D Data Validation and Usability

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

RECEIVED

SEP 26 2013

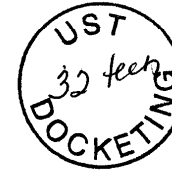
SC Department of
Health and Environmental
Control



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

NOV 20 2013



**BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071**

Re: **Notice to Proceed-Groundwater Sampling/QAPP Contractor Addendum Approval**
Groundwater Sampling Contract
Solicitation # IFB-5400002759, PO#4600088529
Steady Simmons, 16661 Grays Highway, Early Branch, SC
UST Permit # 18856, CA # 46626 (Shealy CA # 46625)
Jasper County

Dear Mr. Shane:

In accordance with bid solicitation # IFB-5400002759 and the UST Management Division Quality Assurance Program Plan (QAPP), the Site-Specific Contractor Addendum has been reviewed and approved. In accordance with the QAPP, a weekly status report of the project should be provided on a weekly basis via e-mail. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered, including quality assurance problems, the actions taken, and the results must be included in the final report submitted to the UST Management Division.

MECI will perform services at the site on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the final report. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs. **Please note, the final report is due within 3 weeks from the date the site is sampled. If the site is not sampled by the specified due date or the report is not received in the specified time period, a late fee may be imposed.**

The final report should contain the requirements of Section III.2.15 of the bid solicitation. The final report should be submitted to Debra Thoma, the contract manager.

If you have any site-specific questions, please contact me at (803) 898-7542 or via e-mail at hornosms@dhec.sc.gov. If you have any contract specific questions, please contact Debra Thoma at (803) 898-0631 or via e-mail at thomadl@dhec.sc.gov.

Sincerely,



Minda Hornosky, Hydrogeologist
Assessment/Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Approved QAPP Contractor Addendum Signature Page
Approved Cost Agreement (both CAs)

cc: Debra Thoma, Corrective Action Section, UST Management Division (w/o encs.)
Kelly Maberry, Shealy Environmental, 106 Vantage Point Dr., West Columbia, SC, 29172 (w/
approved CA)
Technical Files (w/ encs.)

Approved Cost Agreement 46625

Facility: 18856 STEADY SIMMONS

HORNOSMS

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
11 ANALYSES					
	GW GROUNDWATER	A1 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	38.0000	35.00	1,330.00
		F EDB	36.0000	20.00	720.00
			Total Amount		2,050.00

Approved Cost Agreement 46626

Facility: 18856 STEADY SIMMONS

HORNOSMS

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
04 MOB/DEMOB		B PERSONNEL	3.0000	100.00	300.00
10 SAMPLE COLLECTION		C WATER SUPPLY	9.0000	2.00	18.00
		D GROUNDWATER NO-PURGE	24.0000	4.50	108.00
		H FIELD BLANK	1.0000	2.00	2.00
17 DISPOSAL		A WASTEWATER	10.0000	0.10	1.00
18 MISCELLANEOUS		QAPP PREP	1.0000	0.00	0.00
Total Amount					429.00

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For

Steady Simmons, SCDHEC Site ID# 18856


16661 Grays Highway, Early Branch, South Carolina

Prepared by:
Courtney M. Sanders
Project Biologist
Midlands Environmental Consultants, Inc.
(Certified Site Rehabilitation Contractor UCC-0009)
235-B Dooley Road
Lexington, SC 29073
(803)808-2043

Date: September 24, 2013

Approvals


Minda Hornosky
SC DHEC Project Manager

 Date 10/18/13
Signature

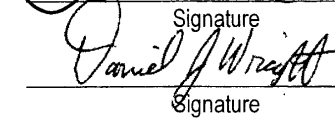
Jeff L. Coleman
Site Rehabilitation Contractor

 Date 9/26/13
Signature

Courtney M. Sanders
Contractor QA Manager

 Date 9-26-13
Signature

Daniel J. Wright
Laboratory Director

 Date 09/24/2013
Signature

QAPP Requested

QAPP Approved

2CA's

\$2,479.00

SUPERB RECOVERABLE COST AGREEMENT CHECKLIST

!!! Update payment code, task screen, punch list, status, etc. in tracking system !!!

UST Permit Name: Steady Simmons ID# 18856

Date Release Reported 9/9/2002 Release # 1 Project Manager Minda Hornosky

Priority Class (Circle) Emergency / 1 2A 2B 3A 3B 4A 4B 5

Category Assessment ACA MNA (901)

Description of Work Analyze gw samples

Cost Proposal # 46625 Amount Approved: \$2,050.00

Cost Proposal Type

Recoverable by SUPERB (RS)

SUPERB Paid to Date \$ 22,345.14

SUPERB Paying Deductible (R25)

Prior toward \$25K: _____

To complete \$25K: \$23,805.00

Over \$25K: _____

Payment above \$25K: RS DS WS

(circle one)

Cost Proposal Duration

4 Months (120 Days) 2 Months (60 Days)

Other _____

Payee & Address:

Shealy Environmental Services

406 Vantage Point Dr

West Columbia, SC

29172

Contractor Certification #:

Rate Schedule:

State Lead

IGWA

Tier I

Tier II

Analytical **PO#4600107190**

Sampling R 7590

GAC

Other FR 51644

Project Manager: Minda Hornosky Date: 10-18-13

Accountant: [Signature] Date: 11-19-13

Financial Supervisor: [Signature] Date: 11-20-13

Technical Supervisor: [Signature] Date: 11-14-13

SUPERB RECOVERABLE COST AGREEMENT CHECKLIST

!!! Update payment code, task screen, punch list, status, etc. in tracking system !!!

UST Permit Name: Steady Simmons ID# 18856
 Date Release Reported 9/9/2002 Release # 1 Project Manager Minda Hornosky
 Priority Class (Circle) Emergency / 1 2A 2B 3A 3B 4A 4B 5
 Category Assessment ACA MNA (901)
 Description of Work collect gw samples
 Cost Proposal # 46626 Amount Approved: \$429.00

Cost Proposal Type

Recoverable by SUPERB (RS)
 SUPERB Paid to Date \$ 22,345.14
 SUPERB Paying Deductible (R25)
 Prior toward \$25K: _____
 To complete \$25K: \$23,805.00
 Over \$25K: _____
 Payment above \$25K: RS DS WS
 (circle one)

Cost Proposal Duration

4 Months (120 Days) 2 Months (60 Days)
 Other _____

Payee & Address:

Midlands Environmental Consultants, Inc
PO Box 854
Lexington, SC
29071

Contractor Certification #: UCC-0009

Rate Schedule:

State Lead

- IGWA
- Tier I
- Tier II
- Analytical
- Sampling
- GAC
- Other

PO#460088529 ^{6400w}
_{R 66}
₂₅
EA 516430

Project Manager: Minda Hornosky Date: 10/24/13
 Accountant: _____ Date: _____
 Financial Supervisor: W. Steen Date: 11/20/13
 Technical Supervisor: CRJ Date: 11-14-13

SCANNED

UST Permit #	18856
Facility Name	Steady Simmons

Shealy CA# 46625
 PO#4600107190

GROUNDWATER ANALYSES

TASK CODE	WATER/ METHOD	QUANTITY	RATE	TOTAL
11A	BTEXNM (8260)		\$20.00	\$0.00
11A	BTEXNM+DCA (8260)		\$20.00	\$0.00
11A1	BTEXNM+DCA+Oxygenates (8260)	38	\$35.00	\$1,330.00
11C1	Trimethyl benzene, butyl benzene, isopropyl benzene, n-propyl benzene		\$25.00	\$0.00
11D	PAHs (8270)		\$49.00	\$0.00
11E	Lead		\$10.00	\$0.00
11F	EDB (8011)	36	\$20.00	\$720.00
11G	8 RCRA METALS		\$50.00	\$0.00
11H	TPH Waste Oil		\$40.00	\$0.00
11I	pH		\$7.00	\$0.00
11K	Nitrate		\$9.00	\$0.00
11L	Sulfate		\$9.00	\$0.00
11M	Ferrous Iron		\$7.00	\$0.00
11N	Methane		\$28.00	\$0.00
11P	Oxygenates		\$23.00	\$0.00
18	Full List 8260		\$65.00	\$0.00
18	Full List 8270		\$165.00	\$0.00
18	TOC (9060)		\$25.00	\$0.00

SOIL ANALYSES

TASK CODE	SOIL/ METHOD	QUANTITY	RATE	TOTAL
11Q	BTEX (8260-5035)		\$28.00	\$0.00
11R	PAHs (8270)		\$50.00	\$0.00
11S	8 RCRA METALS		\$50.00	\$0.00
11T	TPH (diesel)		\$30.00	\$0.00
11U	TPH (gas)		\$30.00	\$0.00
11V	TPH waste oil		\$40.00	\$0.00
11X	TOC (9060)		\$25.00	\$0.00
18	TCLP		\$75.00	\$0.00
18	LEAD (6010)		\$10.00	\$0.00

AIR ANALYSES

TASK CODE	AIR/ METHOD	QUANTITY	RATE	TOTAL
11Y	BTEX+EDB+DCA		\$110.00	\$0.00
18	PAH		\$150.00	\$0.00

EXPEDITE RATE (11B)		1	\$0.00
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Total \$2,050.00

MECI CA# 46626
 PO#4600088529

TASK CODE	TASK	QUANTITY	RATE	TOTAL
1C	QAPP Prep	1	\$0.00	\$0.00
4B	Mob/Demob	3	\$100.00	\$300.00
10A	Purge & Sample		\$4.50	\$0.00
10B	Air Sample		\$20.00	\$0.00
10C	Surface Water/ Tap Sample	9	\$2.00	\$18.00
10D	Gauge & Sample (no purge)	24	\$4.50	\$108.00
10E	Gauge Well (no sample)		\$2.00	\$0.00
10F	Sample below FP		\$4.50	\$0.00
10G	PDB Sample		\$20.00	\$0.00
10H	Field Blank	1	\$2.00	\$2.00
17A	Disposal/Water	10	\$0.10	\$1.00
25E	Replace well cover		\$50.00	\$0.00
25F	Replace well bolt		\$10.00	\$0.00
25G	Replace well cap		\$17.00	\$0.00

*** The following items require manager approval

TASK CODE	TASK	Qty	RATE	TOTAL	Ok
18	GW Contour Map		\$ 250.00	\$0.00	
18	Isopleth Map		\$ 250.00	\$0.00	
18	Table		\$ 100.00	\$0.00	

These rate are a per item cost. It assumes that the UST Division provides all necessary data to MECI.

TOTAL \$429.00

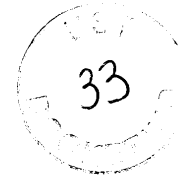


January 30, 2014

Ms. Debra Thoma, Hydrogeologist
Corrective Action Section
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: Report of Groundwater Sampling
Steady Simmons
16661 Grays Highway
Early Branch, South Carolina
SCDHEC Site ID Number 18856, CA # 46626
MECI Project Number 13-4614
Certified Site Rehabilitation Contractor UCC-0009



Dear Ms. Thoma,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Groundwater Sampling for the referenced site. This report describes site activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control's (SCDHEC) Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP).

PROJECT INFORMATION

The subject site (Steady Simmons) is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The subject site formerly maintained one 550 gallon gasoline underground storage tank (UST) and one 1,000 gallon gasoline UST. The subject tanks were abandoned by removal from ground in July of 2002. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product from the subject tanks in September of 2002 and confirmed the release in October of 2002. The subject site is currently rated a Class 2BB.

MONITORING WELL SAMPLING AND CHEMICAL ANALYSIS

On January 27, 2014, MECI personnel collected groundwater samples from twenty-three (23) monitoring wells, four (4) water supply wells, and three (3) surface water locations at the subject site. MECI personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase petroleum product level measurements. Based on a request by SCDHEC personnel, not all of the wells were purged prior to sampling. Sixteen (16) monitoring wells were purged prior to sampling. Sampling/purging was completed utilizing a prepackaged,

clear, disposable polyethylene bailer and nylon rope. A new set of nitrile gloves were worn at each monitoring well, and at all time samples were handled. Field measurements of pH, conductivity, dissolved oxygen, and water temperature were obtained before well sampling process. MECI utilized YSI550A meter for DO (mg/L) and temperature readings (°C) and YSI63 meters for pH and conductivity (uS) readings. The attached Field Data Information Sheets presents the results of the field measurements obtained. The wells were sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP, Dated April, 2013) and MECI's Standard Operating Procedures (MECI SOP, Dated August, 2011).

Groundwater samples obtained were sent to Shealy Environmental Services, Inc. of West Columbia, SC (SCDHEC Laboratory Certification #32010) for analysis.

The following sampling matrix contains well development and requested analyses for each well:

Monitoring Well	Purge	No Purge	Gauge Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
Analyte Sampled														
MW-1R	X				X	X	X	X						
MW-2	X				X	X	X	X						
MW-3	X				X	X	X	X						
MW-4	X				X	X	X	X						
MW-5		X			X	X	X	X						
MW-6		X			X	X	X	X						
MW-7		X			X	X	X	X						
MW-8		X			X	X	X	X						
MW-9		X			X	X	X	X						
MW-10	X				X	X	X	X						
MW-11	X				X	X	X	X						
MW-12	X				X	X	X	X						
MW-13		X			X	X	X	X						
MW-14		X			X	X	X	X						
MW-15	X				X	X	X	X						
MW-16	X				X	X	X	X						
DW-1	X				X	X	X	X						
DW-2	X				X	X	X	X						
DW-3	X				X	X	X	X						
DW-4	X				X	X	X	X						
DW-5	X				X	X	X	X						
DW-6	X				X	X	X	X						
DW-7	X				X	X	X	X						
WSW-1					X	X	X	X						

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane
PAH = polycyclic aromatic hydrocarbons


* = Indicates Duplicate Sample


Monitoring Well	Purge	No Purge	Gauge Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
	Analyte Sampled													
WSW-2														
WSW-3					X	X	X	X						
WSW-4					X	X	X	X						
WSW-5														
WSW-6														
WSW-7					X	X	X	X						
WSW-8														
WSW-9														
SW-1					X	X	X	X						
SW-2					X	X	X	X						
SW-3					X	X	X	X						
MW-1R Dup					X	X	X	X						
MW-2 Dup					X	X	X	X						
Field Blank					X	X	X	X						
Trip Blank					X		X	X						
Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dichloroethane PAH = polycyclic aromatic hydrocarbons * = Indicates Duplicate Sample														

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 140.0 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is attached at the end of this report.

Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.


Ryan D. Ariail
Staff Biologist


W.L. Coleman
Senior Scientist

Attachments:

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	X		
2	Is UST Owner/Operator name, address, & phone number provided?			X
3	Is name, address, & phone number of current property owner provided?			X
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	X		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?			X
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	X		
7	Has the facility history been summarized?	X		
8	Has the regional geology and hydrogeology been described?			X
9	Are the receptor survey results provided as required?			X
10	Has current use of the site and adjacent land been described?			X
11	Has the site-specific geology and hydrogeology been described?			X
12	Has the primary soil type been described?			X
13	Have field screening results been described?			X
14	Has a description of the soil sample collection and preservation been detailed?			X
15	Has the field screening methodology and procedure been detailed?			X
16	Has the monitoring well installation and development dates been provided?			X
17	Has the method of well development been detailed?			X
18	Has justification been provided for the locations of the monitoring wells?			X
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?			X
20	Has the groundwater sampling methodology been detailed? (For detailed specifics, See MECI's SOP on file with SCDHEC)	X		
21	Have the groundwater sampling dates and groundwater measurements been provided? See attached Site Activity Summary Sheet	X		
22	Has the purging methodology been detailed? (For detailed specifics, See MECI's SOP on file with SCDHEC)	X		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? See attached Field Data Information Sheets	X		
24	If free-product is present, has the thickness been provided? See attached Site Activity Summary Sheets	X		
25	Does the report include a brief discussion of the assessment done and the results?			X
26	Does the report include a brief discussion of the aquifer evaluation and results?			X
27	Does the report include a brief discussion of the fate & transport models used?			X

Item#	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			X
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			X
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			X
31	Have recommendations for further action been provided and explained?			X
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			X
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)			X
34	Has the current and historical laboratory data been provided in tabular format?			X
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			X
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			X
37	Has the topographic map been provided with all required elements? (Figure 1)		X	
38	Has the site base map been provided with all required elements? (Figure 2)	X		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)			X
40	Has the site potentiometric map been provided? (Figure 5)			X
41	Have the geologic cross-sections been provided? (Figure 6)			X
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			X
43	Has the site survey been provided and include all necessary elements? (Appendix A)			X
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	X		
45	Is the laboratory performing the analyses properly certified?	X		
46	Has the tax map been included with all necessary elements? (Appendix C)			X
47	Have the soil boring/field screening logs been provided? (Appendix D)			X
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)			X
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			X
50	Have the disposal manifests been provided? See attached	X		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			X
52	Has all fate and transport modeling been provided? (Appendix I)			X
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			X
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	X		

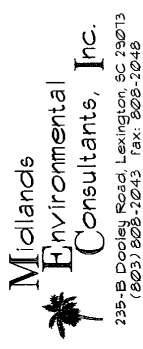
UST Permit #: 18856

Facility Name: Steady Simmons

County: Jasper

Field Personnel: Wess Huss, Gavin Globensky

Site Activity Summary



Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-1R	Y	1/27/14	14:50	7-17	***	4.86	***	3.79	4.0	Odor, Sheen
MW-2	Y	1/27/14	12:03	7-17	***	5.81	***	2.46	9.5	Odor, Sheen
MW-3	Y	1/27/14	14:28	7-17	***	4.30	***	2.71	8.0	No Odor
MW-4	Y	1/27/14	13:20	7-17	***	3.98	***	3.75	5.0	No Odor
MW-5	Y	1/27/14	11:20	5-15	***	7.02	***	4.88	***	No Odor
MW-6	Y	1/27/14	11:15	5-15	***	7.01	***	6.82	***	No Odor
MW-7	Y	1/27/14	11:10	5-15	***	6.96	***	6.74	***	No Odor
MW-8	Y	1/27/14	10:50	5-15	***	6.63	***	3.81	***	No Odor
MW-9	Y	1/27/14	10:35	5-15	***	5.23	***	5.74	***	No Odor
MW-10	Y	1/27/14	15:10	5-15	***	2.95	***	5.11	10.0	No Odor
MW-11	Y	1/27/14	14:05	5-15	***	3.11	***	2.59	10.0	No Odor
MW-12	Y	1/27/14	13:36	5-15	***	3.21	***	3.07	10.0	No Odor
MW-13	Y	1/27/14	13:10	5-15	***	5.09	***	5.12	***	No Odor
MW-14	Y	1/27/14	13:05	5-15	***	5.87	***	6.49	***	No Odor
MW-15	Y	1/27/14	17:30	10-20	***	5.77	***	7.73	11.5	No Odor
									68.0	TOTAL GALLONS PURGED

Site Activity Summary

UST Permit #: 18856
Facility Name: Steady Simmons
County: Jasper
Field Personnel: Wess Huss, Gavin Globensky

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-16	Y	1/27/14	11:46	10-20	***	6.97	***	6.46	1.0	No Odor
DW-1	Y	1/27/14	11:03	35-40	***	7.32	***	5.75	18.0	No Odor
DW-2	Y	1/27/14	10:45	35-40	***	8.49	***	7.89	5.0	No Odor
DW-3	Y	1/27/14	14:15	25-40	***	4.72	***	6.42	6.0	No Odor
DW-4	Y	1/27/14	13:49	33-38	***	14.73	***	4.90	3.0	No Odor
DW-5	Y	1/27/14	13:00	33-38	***	5.84	***	5.96	26.0	No Odor
DW-6	Y	1/27/14	11:40	31-36	***	7.25	***	7.24	8.0	No Odor
DW-7	Y	1/27/14	14:40	31-36	***	5.72	***	6.23	5.0	No Odor
WSW-1	Y	1/27/14	14:35	***	***	***	***	***	***	Taken From Spigot on Well
WSW-2	N	1/27/14	***	***	***	***	***	***	***	Non-Operational
WSW-3	Y	1/27/14	15:40	***	***	***	***	***	***	Taken From Spigot Next to Camper
WSW-4	Y	1/27/14	15:45	***	***	***	***	***	***	Taken From Spigot in Front Yard
WSW-5	N	1/27/14	***	***	***	***	***	***	***	Behind Locked Gate
WSW-6	N	1/27/14	***	***	***	***	***	***	***	Non-Operational
WSW-7	Y	1/27/14	15:30	***	***	***	***	***	***	Taken From Spigot on Well
									140.0	TOTAL GALLONS PURGED

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance
pH/Conductivity Meter
YSI 63
 09C 101302
 10K 101895
 07M 100905
 Calibration Buffer: 4, 7, & 10

DO Meter
YSI 550A
 04L 2026AK
 08B 101895
 04A 0912AI

Chain of Custody

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # MW-1R

Water Supply Well Public Private _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$
 for a 2 inch well C=0.163
 for a 4 inch well C=0.652

* Free Product Thickness: _____ feet
 Depth to Free Product (DFP) _____ feet
 Depth to Ground Water (DGW) 4.86 feet
 Total Well Depth (TWD) 17 feet
 Length of the water column (LWC=TWD-DGW) 12.14 feet
 1 casing volume (CV=LWC X C)= 0.163 X 5 = 1.98 gallons
 5 casing volume (5 X CV)= _____ gallons

Total Volume of Water Purged Before Sampling _____ gals.
 *If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	14:45	14:47	14:50				
pH (s.u.)	6.00	Sheen	Sheen				
Specific Conductivity (µmhos/cm)	53.8	Sheen	Sheen				
Water Temperature (°C)	16.6	Sheen	Sheen				
Dissolved Oxygen	3.79	Sheen	Sheen				
Turbidity (NTU)	30.08	Sheen	Sheen				
PID readings, if required							
Remarks: _____ Sample Time: <u>14:50</u> Dry @ 4.0 gallons							

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014
 Field Personnel: Wesley Huss, Gavin Globensky
 General Weather Conditions: Sunny
 Ambient Air Temperature: 13.9 °C
 Quality Assurance
 pH/Conductivity Meter **DO Meter**
YSI 63 **YSI 550A**
 09C 101302 04L 2026AK
 10K 101895 X 08B 101895
 07M 100905 04A 0912AI
 Calibration Buffer: 4, 7, & 10
 Chain of Custody
 Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

Facility Name: Steady Simmons
 Site ID#: 18856 Monitoring Well # MW-2
 Water Supply Well Public Private _____
 Monitoring Well Diameter (D): 2 inches
 Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
 for a 4 inch well C=0.652
 * Free Product Thickness: _____ feet
 Depth to Free Product (DFP) _____ feet
 Depth to Ground Water (DGW) 5.81 feet
 Total Well Depth (TWD) 17 feet
 Length of the water column (LWC=TWD-DGW) 11.19 feet
 1 casing volume (CV=LWC X C)= 0.163 X _____ gallons
 5 casing volume (5 X CV)= 5 X 0.163 = 0.815 gallons
 Total Volume of Water Purged Before Sampling 9.5 gals.
 *If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	11:55	11:57	11:59	12:01	12:02	12:03	
pH (s.u.)	5.06	Sheen	Sheen	Sheen	Sheen	Sheen	
Specific Conductivity (umhos/cm)	35.6	Sheen	Sheen	Sheen	Sheen	Sheen	
Water Temperature (°C)	18.8	Sheen	Sheen	Sheen	Sheen	Sheen	
Dissolved Oxygen	2.46	Sheen	Sheen	Sheen	Sheen	Sheen	
Turbidity (NTU)	21.79	Sheen	Sheen	Sheen	Sheen	Sheen	
PID readings, if required							
Remarks: _____ Sample Time: <u>12:03</u>							

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance

pH/Conductivity Meter

YSI 63 _____

09C 101302 _____

10K 101895 X

07M 100905 _____

Calibration Buffer: 4, 7, & 10

DO Meter

YSI 550A _____

04L 2026AK _____

08B 101895 X

04A 0912AI _____

Chain of Custody

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # MW-3

Water Supply Well Public Private _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 4.30 feet

Total Well Depth (TWD) 17 feet

Length of the water column (LWC=TWD-DGW) 12.7 feet

1 casing volume (CV=LWC X C)= 0.163 X 5 2.07 gallons

5 casing volume (5 X CV)= _____ gallons

Total Volume of Water Purged Before Sampling 8 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	14:20	14:22	14:24	14:26	14:28		
pH (s.u.)	4.98	4.72	4.61	4.53	4.45		
Specific Conductivity (umhos/cm)	88.2	91.5	84.1	83.6	82.1		
Water Temperature (°C)	15.1	16.1	16.7	16.9	17.1		
Dissolved Oxygen	2.71	3.05	5.21	4.08	2.97		
Turbidity (NTU)	37.62	81.6	132.5	199.1	226.5		
PID readings, if required							
Remarks: <u>Dry @ 8.0 gallons</u>							
Sample Time: <u>14:28</u>							

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance
DO Meter
YSI 550A
 04L 2026AK
 08B 101895
 04A 0912AI
 Calibration Buffer: 4, 7, & 10

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

Chain of Custody

Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # MW-4

Water Supply Well Public Private _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 3.98 feet

Total Well Depth (TWD) 17 feet

Length of the water column (LWC=TWD-DGW) 13.02 feet

1 casing volume (CV=LWC X C)= 0.163 X 5 2.12 gallons

5 casing volume (5 X CV)= 10.61 gallons

Total Volume of Water Purged Before Sampling 5 gals.
*if free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Cumulative Volume Purged (gallons)							
Time (military)	13:15	13:17	13:19				
pH (s.u.)	5.20	4.96	4.65				
Specific Conductivity (µmhos/cm)	110.5	114.9	110.0				
Water Temperature (°C)	15.5	16.9	17.8				
Dissolved Oxygen	3.75	4.18	5.08				
Turbidity (NTU)	21.63	137.4	169.5				
PID readings, if required							
Remarks: _____	Sample Time: <u>13:20</u> Dry @ 5.0 gallons						

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance

pH/Conductivity Meter	DO Meter
YSI 63	YSI 550A
09C 101302	04L 2026AK
10K 101895	08B 101895
07M 100905	04A 0912AI

Calibration Buffer: 4, 7, & 10

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Steady Simmons

Site ID#: 18856

Monitoring Well # MW-10

Water Supply Well Public

Monitoring Well # Private

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$
for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 2.95 feet

Total Well Depth (TWD) 15 feet

Length of the water column (LWC=TWD-DGW) 12.05 feet

1 casing volume (CV=LWC X C)= 0.163 X _____ X _____ gallons

5 casing volume (5 X CV)= 5 X _____ X _____ gallons

Total Volume of Water Purged Before Sampling 10 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	15:00	15:02	15:04	15:06	15:08	15:10	
pH (s.u.)	5.02	4.78	4.67	4.63	4.81	4.75	
Specific Conductivity (umhos/cm)	43.9	42.6	42.8	43.1	43.4	43.5	
Water Temperature (°C)	14.9	16.5	16.8	17.2	17.9	18.6	
Dissolved Oxygen	5.11	2.59	2.41	3.8	3.97	4.22	
Turbidity (NTU)	68.30	214.6	257.3	292.9	331.2	358.7	
PID readings, if required							

Remarks: _____

Sample Time: 15:10

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014
 Field Personnel: Wesley Huss, Gavin Globensky
 General Weather Conditions: Sunny
 Ambient Air Temperature: 13.9 °C
 Quality Assurance
 pH/Conductivity Meter
 YSI 63
 09C 101302
 10K 101895 X
 07M 100905
 Calibration Buffer: 4, 7, & 10
 DO Meter
 YSI 550A
 04L 2026AK
 08B 101895 X
 04A 0912AI
 Chain of Custody

Facility Name: Steady Simmons
 Site ID#: 18856
 Monitoring Well # MW-11
 Water Supply Well Public Private
 Monitoring Well Diameter (D): 2 inches
 Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
 for a 4 inch well C=0.652
 * Free Product Thickness: _____ feet
 Depth to Free Product (DFP) _____ feet
 Depth to Ground Water (DGW) 3.11 feet
 Total Well Depth (TWD) 15 feet
 Length of the water column (LWC=TWD-DGW) 11.89 feet
 1 casing volume (CV=LWC X C)= 0.163 X 5 1.94 gallons
 5 casing volume (5 X CV)= _____ X _____ 9.69 gallons
 Total Volume of Water Purged Before Sampling _____ 10 gals.
 *If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Cumulative Volume Purged (gallons)							
Time (military)	13:55	13:57	13:59	14:01	14:03	14:05	
pH (s.u.)	5.50	5.28	5.10	5.02	5.09	5.15	
Specific Conductivity (µmhos/cm)	82.6	82.5	79.1	67.5	61.3	59.9	
Water Temperature (°C)	15.6	17.4	18.1	18.7	19.0	19.4	
Dissolved Oxygen	2.59	2.62	2.21	2.78	3.11	3.44	
Turbidity (NTU)	63.12	157.6	289.4	297.9	370.6	436.5	
PID readings, if required							
Remarks:	Sample Time: <u>14:05</u>						

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance

pH/Conductivity Meter
YSI 63

DO Meter
YSI 550A

09C 101302 04L 2026AK

10K 101895 X 08B 101895

07M 100905 04A 0912AI

Calibration Buffer: 4, 7, & 10

Chain of Custody

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # MW-12

Water Supply Well Public Private _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$
for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 3.21 feet

Total Well Depth (TWD) 15 feet

Length of the water column (L WC=TWD-DGW) 11.79 feet

1 casing volume (CV=LWC X C)= 0.163 X _____ gallons

5 casing volume (5 X CV)= 5 X _____ gallons

Total Volume of Water Purged Before Sampling 10 gals.
*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	13:25	13:27	13:29	13:31	13:34	13:36	
pH (s.u.)	4.66	4.66	4.67	4.68	4.72	4.69	
Specific Conductivity (µmhos/cm)	65.1	68.9	53.2	47.6	42.8	39.6	
Water Temperature (°C)	14.2	16.6	17.9	18.3	18.7	19.2	
Dissolved Oxygen	3.07	3.14	4.92	5.13	5.56	5.90	
Turbidity (NTU)	27.32	249.8	288.6	336.5	411.7	541.2	
PID readings, if required							
Remarks:	Sample Time: <u>13:36</u>						

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance

pH/Conductivity Meter	DO Meter
YSI 63	YSI 550A
09C 101302	04L 2026AK
10K 101895	08B 101895
07M 100905	04A 0912AI

Calibration Buffer: 4, 7, & 10

Chain of Custody

Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____
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Facility Name: Steady Simmons

Site ID#: 18856

Monitoring Well # MW-15

Water Supply Well Public

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$
for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 5.77 feet

Total Well Depth (TWD) 20 feet

Length of the water column (LWC=TWD-DGW) 14.23 feet

1 casing volume (CV=LWC X C)= 0.163 X _____ gallons

5 casing volume (5 X CV)= 5 X _____ gallons

Total Volume of Water Purged Before Sampling 11.5 gals.
*if free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Cumulative Volume Purged (gallons)							
Time (military)	12:15	12:18	12:21	12:24	12:27	12:30	
pH (s.u.)	5.64	5.81	5.89	5.93	5.98	6.14	
Specific Conductivity (µmhos/cm)	742.0	908.0	884.0	871.0	858.0	849	
Water Temperature (°C)	17.7	18.6	18.6	18.7	18.7	18.8	
Dissolved Oxygen	7.73	7.86	7.82	7.78	7.74	7.71	
Turbidity (NTU)	63.89	326.4	394.7	436.5	489.3	540.6	
PID readings, if required							

Remarks: _____ Sample Time: 12:30

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance

pH/Conductivity Meter	DO Meter
YSI 63	YSI 550A
09C 101302	04L 2026AK
10K 101895	08B 101895
07M 100905	04A 0912AI

Calibration Buffer: 4, 7, & 10

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # MW-16

Water Supply Well Public Private

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$
for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: feet

Depth to Free Product (DFP) feet

Depth to Ground Water (DGW) 6.97 feet

Total Well Depth (TWD) 20 feet

Length of the water column (LWC=TWD-DGW) 13.03 feet

1 casing volume (CV=LWC X C)= 0.163 X 2.12 gallons

5 casing volume (5 X CV)= 5 X 10.62 gallons

Total Volume of Water Purged Before Sampling gallons.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	11:45	11:46					
pH (s.u.)	5.50	5.51					
Specific Conductivity (µmhos/cm)	28.6	28.8					
Water Temperature (°C)	18.8	18.5					
Dissolved Oxygen	6.46	7.54					
Turbidity (NTU)	19.83	374.8					
PID readings, if required							

Remarks: Dry @ 1.0 gallon Sample Time: 11:46

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance
DO Meter
YSI 550A
 04L 2026AK
 08B 101895
 04A 0912AI
 X
 X
 Calibration Buffer: 4, 7, & 10

Chain of Custody

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # DW-1

Water Supply Well Public Private _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: _____ feet
 Depth to Free Product (DFP) _____ feet
 Depth to Ground Water (DGW) 7.32 feet
 Total Well Depth (TWD) 40 feet
 Length of the water column (LWC=TWD-DGW) 32.68 feet
 1 casing volume (CV=LWC X C)= 0.163 X 5 5.33 gallons
 5 casing volume (5 X CV)= 26.63 gallons

Total Volume of Water Purged Before Sampling 18 gals.
 *If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	10:50	10:55	11:00				
pH (s.u.)	5.50	5.34	5.38				
Specific Conductivity (umhos/cm)	35.4	40.2	41.4				
Water Temperature (°C)	16.6	19.2	19.5				
Dissolved Oxygen	5.75	5.26	5.21				
Turbidity (NTU)	19.54	76.3	172.5				
PID readings, if required							
Remarks: <u>Dry @ 18.0 gallons</u>							
Sample Time: <u>11:03</u>							

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance

pH/Conductivity Meter	DO Meter
YSI 63	YSI 550A
09C 101302	04L 2026AK
10K 101895	08B 101895
07M 100905	04A 0912AI

Calibration Buffer: 4, 7, & 10

Chain of Custody

Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____
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Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # DW-2

Water Supply Well Public Private _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DCGW) 8.49 feet

Total Well Depth (TWD) 40 feet

Length of the water column (LWC=TWD-DCGW) 31.51 feet

1 casing volume (CV=LWC X C)= 0.163 X 5 5.14 gallons

5 casing volume (5 X CV)= 5 25.68 gallons

Total Volume of Water Purged Before Sampling 5 gals.
*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	10:40	10:45					
pH (s.u.)	5.73	5.76					
Specific Conductivity (µmhos/cm)	37.3	40.0					
Water Temperature (°C)	18.4	19.6					
Dissolved Oxygen	7.89	6.28					
Turbidity (NTU)	16.73	129.5					
PID readings, if required							

Remarks: _____ Sample Time: 10:45 **Dry @ 5.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance

pH/Conductivity Meter	DO Meter
YSI 63	YSI 550A
09C 101302	04L 2026AK
10K 101895	08B 101895
07M 100905	04A 0912AI

Calibration Buffer: 4, 7, & 10

Chain of Custody

Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____
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Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # DW-3

Water Supply Well Public Private

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 4.72 feet

Total Well Depth (TWD) 40 feet

Length of the water column (LWC=TWD-DGW) 35.28 feet

1 casing volume (CV=LWC X C)= 0.163 X 5 5.75 gallons

5 casing volume (5 X CV)= 28.75 gallons

Total Volume of Water Purged Before Sampling 6 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	14:10	14:15					
pH (s.u.)	5.17	4.96					
Specific Conductivity (umhos/cm)	39.3	47.1					
Water Temperature (°C)	16.5	18.9					
Dissolved Oxygen	6.42	4.86					
Turbidity (NTU)	46.78	164.1					
PID readings, if required							

Remarks: _____ Sample Time: 14:15 **Dry @ 6.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance
DO Meter
YSI 550A
 04L 2026AK
 08B 101895
 04A 0912AI

pH/Conductivity Meter
YSI 63
 09C 101302
 10K 101895
 07M 100905
 Calibration Buffer: 4, 7, & 10

Chain of Custody

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # DW-4

Water Supply Well Public Private _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 14.73 feet

Total Well Depth (TWD) 38 feet

Length of the water column (L WC=TWD-DGW) 23.27 feet

1 casing volume (CV=LWC X C)= 0.163 X 5 3.79 gallons

5 casing volume (5 X CV)= 18.97 gallons

Total Volume of Water Purged Before Sampling 3 gals.
*if free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	13:45	13:49					
pH (s.u.)	5.33	6.86					
Specific Conductivity (µmhos/cm)	85.6	92.8					
Water Temperature (°C)	19.4	19.7					
Dissolved Oxygen	4.90	5.91					
Turbidity (NTU)	26.55	167.2					
PID readings, if required							

Remarks: _____ Sample Time: 13:49 **Dry @ 3.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance

pH/Conductivity Meter	DO Meter
YSI 63	YSI 550A
09C 101302	04L 2026AK
10K 101895	08B 101895
07M 100905	04A 0912AI

Calibration Buffer: 4, 7, & 10

Chain of Custody

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

Facility Name: Steady Simmons

Site ID#: 18856

Monitoring Well # DW-5

Water Supply Well Public

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$
for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 5.84 feet

Total Well Depth (TWD) 38 feet

Length of the water column (LWC=TWD-DGW) 32.16 feet

1 casing volume (CV=LWC X C)= 0.163 gallons

5 casing volume (5 X CV)= 5 26.21 gallons

Total Volume of Water Purged Before Sampling 26 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	12:35	12:40	12:45	12:50	12:55	13:00	
pH (s.u.)	6.62	6.16	6.13	6.09	6.05	6.01	
Specific Conductivity (µmhos/cm)	94.8	52.3	50.4	49.6	49.9	49.8	
Water Temperature (°C)	18.3	19.7	19.7	19.6	19.7	19.8	
Dissolved Oxygen	5.96	5.27	5.22	5.17	5.10	5.02	
Turbidity (NTU)	18.51	76.4	81.46	85.63	91.22	98.59	
PID readings, if required							

Remarks: _____ Sample Time: 13:00

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance
DO Meter
YSI 550A
 04L 2026AK
 08B 101895
 04A 0912AI

pH/Conductivity Meter
YSI 63
 09C 101302
 10K 101895
 07M 100905
 Calibration Buffer: 4, 7, & 10

Chain of Custody

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

Facility Name: Steady Simmons

Site ID#: 18856 Monitoring Well # DW-6

Water Supply Well Public Private _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$
 for a 2 inch well C=0.163
 for a 4 inch well C=0.652

* Free Product Thickness: _____ feet
 Depth to Free Product (DFP) _____ feet
 Depth to Ground Water (DGW) 7.25 feet
 Total Well Depth (TWD) 36 feet
 Length of the water column (LWC=TWD-DGW) 28.75 feet
 1 casing volume (CV=LWC X C)= 0.163 X 5 4.69 gallons
 5 casing volume (5 X CV)= 23.43 gallons

Total Volume of Water Purged Before Sampling 8 gals.
 *if free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	11:30	11:35	11:40				
pH (s.u.)	4.39	4.74	5.02				
Specific Conductivity (µmhos/cm)	30.1	31.1	31.6				
Water Temperature (°C)	18.4	18.9	19.6				
Dissolved Oxygen	7.24	7.37	7.48				
Turbidity (NTU)	22.16	127.6	258.3				
PID readings, if required							
Remarks: _____	Sample Time: <u>11:40</u> Dry @ 8.0 gallons						

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 1/27/2014

Field Personnel: Wesley Huss, Gavin Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 13.9 °C

Quality Assurance

pH/Conductivity Meter

YSI 63

09C 101302

10K 101895

07M 100905

Calibration Buffer: 4, 7, & 10

DO Meter

YSI 550A

04L 2026AK

08B 101895

04A 0912AI

Chain of Custody

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

Facility Name: Steady Simmons

Site ID#: 18856

Water Supply Well Public Monitoring Well # DW-7

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 5.72 feet

Total Well Depth (TWD) 36 feet

Length of the water column (LWC=TWD-DGW) 30.28 feet

1 casing volume (CV=LWC X C)= 0.163 X 5 4.94 gallons

5 casing volume (5 X CV)= 24.68 gallons

Total Volume of Water Purged Before Sampling 5 gals.

* If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	14:35	14:40					
pH (s.u.)	5.60	5.65					
Specific Conductivity (µmhos/cm)	78.6	78.2					
Water Temperature (°C)	18.0	20.6					
Dissolved Oxygen	6.23	5.95					
Turbidity (NTU)	22.39	114.8					
PID readings, if required							
Remarks: <u>Dry @ 5.0 gallons</u>							
Sample Time: <u>14:40</u>							



January 30, 2014

Re: Treatment of Purge Water
Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID Number 18856
MECI Project Number 13-4614

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.


January 30, 2014

A total of 140.0 gallons were treated on January 27, 2014 at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.


Ryan D. Ariail
Staff Biologist



Chain of Custody Record

Shealy Environmental Services, Inc.

406 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 09465

Client S CDHEC - UST	Report to Contact D. THOMA	Sampler (Printed Name) GAVIN GLUBENSKI	Quote No.
Address 1600 BULL ST.	Telephone No. / Fax No. / Email 803-892-0631	Waybill No.	Pages 1 of 4
City COLUMBIA SC	State SC	Zip Code 29201	Number of Containers
Project Name STEADY SIMMONS	Preservative 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Trip.		Bottle (See Instructions on back)
Project Number 12856/40625	P.O. Number 4620088529		Preservative
Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	Lot No.
MW-1R	1/27	11:50	
MW-2		12:03	OTOP-STEEN
MW-3		14:28	OTOP-STEEN
MW-1		13:20	No Otop
MW-5		11:20	
MW-6		11:15	
MW-7		11:10	
MW-8		10:50	
MW-9		10:35	
MW-10	1/29	15:10	No Otop

Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)	Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab		Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
	1. Relinquished by Date: 1/27/14 Time: 18:00	1. Received by Date: 1/27/14 Time: 1306		
	2. Relinquished by Date: 1/28/14 Time: 1347	2. Received by Date: 1/28/14 Time: 1307		
	3. Relinquished by Date: _____ Time: _____	3. Received by Date: _____ Time: _____		
4. Relinquished by Date: _____ Time: _____	4. Laboratory Received by Date: _____ Time: _____			

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) Yes No Ice Pack Receipt Temp. _____ °C



Chain of Custody Record

Shealy Environmental Services, Inc.
106 Mariage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 09454

Client: SCDEHCC - UST
Address: 2600 Bull St.
City: Columbia SC 29201
Project Name: STEADY SIMMONS
P.O. Number: 40003529
Sample ID/Description: (Containers for each sample may be combined on one line)
MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, DW-1, DW-2, DW-3, DW-4
Date: 1/27/11, 1/30/11, 1/30/11, 1/30/11, 1/30/11, 1/30/11, 1/30/11, 1/30/11, 1/30/11, 1/30/11
Time: 11:05, 13:36, 13:10, 13:05, 12:30, 11:46, 11:03, 10:45, 11:15, 13:49
Matrix: G-Grab, C-Composite, GW, DW, WW, S, Other
Analysis: [Blacked out area]
Report to Contact: D THOMA
Telephone No.: 803-298-0631
Preservative: 1. Unpres., 2. NaOH/ZNA, 3. H2SO4, 4. HNO3, 5. HCL, 6. Na Thio., 7. NaOH
Sampler (Printed Name): GAVIN GLOBENSKI
Waybill No.:
Quote No.:
Page: 4 of 4
Number of Containers:
Bottle (See Instructions on back):
Preservative:
Lot No.:
Remarks / Cooler ID: No Cooler

Note: All samples are retained for six weeks from receipt unless other arrangements are made.



Chain of Custody Record

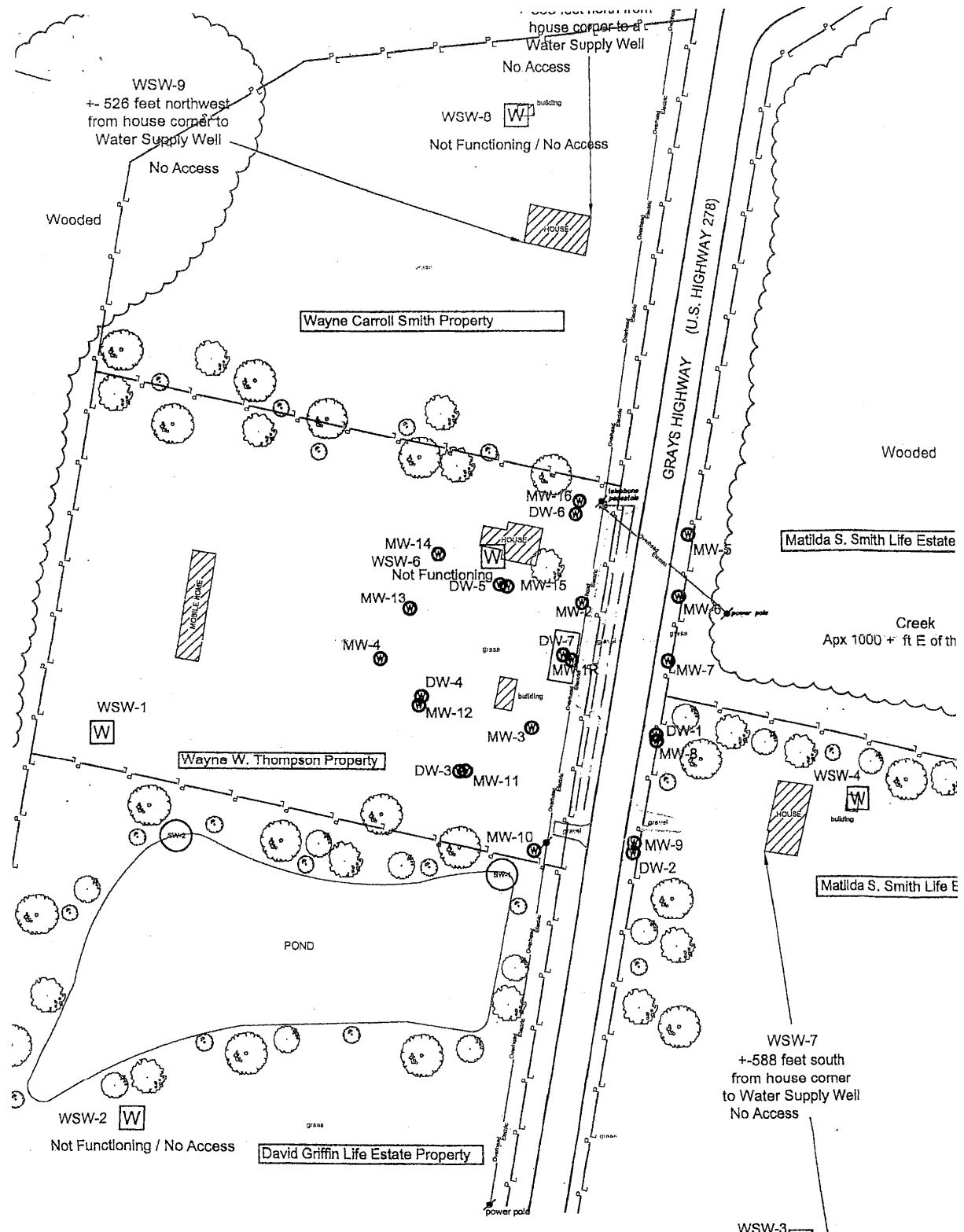
Shealy Environmental Services, Inc.

106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 09463

Client: JCDHEC-DST		Report to Contact: D. THOMA		Sampler (Printed Name): CHAZIN GLOBENSKY		Quote No.	
Address: 1600 BULL ST.		Telephone No. / Fax No. / Email: 803 898-0631		Waybill No.		Page 5 of 1	
City: COLUMBIA		State: SC Zip Code: 29201				Number of Containers	
Project Name: STADI STATIONS		Preservative: 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZNA 5. HCL 3. H2SO4 6. Na.Thio.				Bottle (See instructions on back)	
P.O. Number: 460039979		Matrix: Composite <input type="checkbox"/> Grab <input type="checkbox"/> Other <input type="checkbox"/>				Preservative	
Sample ID / Description (Containers for each sample may be combined on one line)		Date		Time		Lot No.	
DU-5		1/24		15:00		No O2OR	
DU-2		1/24		11:10		No O2OR	
DU-7		1/24		14:10		No O2OR	
DU-1		1/24		11:36		LTDL	
USW-2		1/24		15:10		NOT ANALYED	
USW-3		1/24		15:10		LAB. LTDLS	
USW-7		1/24		15:16		LAB. LTDLS	
USW-2		1/24		15:16		NOT SAMPLED	
USW-6		1/24		15:36		NOT ANALYED	
USW-7		1/24		15:36		LAB. LTDLS	
Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)		Sample Disposal: <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab		QC Requirements (Specify):		Possible Hazard Identification: <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
1. Relinquished by: [Signature]		Date: 1/24/14		Time: 18:00		Date: 1/27/14	
2. Relinquished by: [Signature]		Date: 1/24/14		Time: 13:17		Date: 1/26/14	
3. Relinquished by: [Signature]		Date:		Time:		Date:	
4. Relinquished by:		Date:		Time:		Date:	
LAB USE ONLY Received on Ice (Check) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack <input type="checkbox"/> Receipt Temp. °C		1. Received by: [Signature]		Date:		Time:	
		2. Received by: [Signature]		Date:		Time:	
		3. Received by:		Date:		Time:	
		4. Laboratory Received by:		Date:		Time:	

Note: All samples are retained for six weeks from receipt unless other arrangements are made.



WSW-9
 +- 526 feet northwest
 from house corner to
 Water Supply Well
 No Access

WSW-8
 Not Functioning / No Access

Wayne Carroll Smith Property

Matilda S. Smith Life Estate

Wayne W. Thompson Property

Matilda S. Smith Life E

WSW-2
 Not Functioning / No Access

David Griffin Life Estate Property

WSW-7
 +-588 feet south
 from house corner
 to Water Supply Well
 No Access

WSW-3

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

SC DHEC - UST Management

2600 Bull Street
Columbia, SC 29201
Attention: Debra Thoma

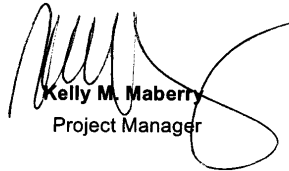
Project Name: **Steady Simmons**

Project Number: **UST Permit #18856/CA #46625**

Lot Number: **PA29003**

Date Completed: **02/05/2014**




Kelly M. Maberry
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.



SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative SC DHEC - UST Management Lot Number: PA29003

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

EDB/DBCP

The MSD associated with sample -002 had EDB recovered outside of the acceptance limits. The LCS was recovered within the required acceptance limits; therefore, this demonstrates a matrix effect and data quality is not impacted.

Sample -002 due to high detections for target compounds was diluted 10x. As a result, the associated surrogate was recovered outside of the acceptance limits. No corrective action was required, as dilutions of 5X and greater may impact surrogate recoveries.

Sample -004 had sediment in the vials that altered the sample volume.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary SC DHEC - UST Management Lot Number: PA29003

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-1R	Aqueous	01/27/2014 1450	01/28/2014
002	MW-2	Aqueous	01/27/2014 1203	01/28/2014
003	MW-3	Aqueous	01/27/2014 1428	01/28/2014
004	MW-4	Aqueous	01/27/2014 1320	01/28/2014
005	MW-5	Aqueous	01/27/2014 1120	01/28/2014
006	MW-6	Aqueous	01/27/2014 1115	01/28/2014
007	MW-7	Aqueous	01/27/2014 1110	01/28/2014
008	MW-8	Aqueous	01/27/2014 1050	01/28/2014
009	MW-9	Aqueous	01/27/2014 1035	01/28/2014
010	MW-10	Aqueous	01/27/2014 1510	01/28/2014
011	MW-11	Aqueous	01/27/2014 1405	01/28/2014
012	MW-12	Aqueous	01/27/2014 1336	01/28/2014
013	MW-13	Aqueous	01/27/2014 1310	01/28/2014
014	MW-14	Aqueous	01/27/2014 1305	01/28/2014
015	MW-15	Aqueous	01/27/2014 1230	01/28/2014
016	MW-16	Aqueous	01/27/2014 1146	01/28/2014
017	DW-1	Aqueous	01/27/2014 1103	01/28/2014
018	DW-2	Aqueous	01/27/2014 1045	01/28/2014
019	DW-3	Aqueous	01/27/2014 1415	01/28/2014
020	DW-4	Aqueous	01/27/2014 1349	01/28/2014
021	DW-5	Aqueous	01/27/2014 1300	01/28/2014
022	DW-6	Aqueous	01/27/2014 1140	01/28/2014
023	DW-7	Aqueous	01/27/2014 1440	01/28/2014
024	WSW-1	Aqueous	01/27/2014 1435	01/28/2014
025	WSW-3	Aqueous	01/27/2014 1540	01/28/2014
026	WSW-4	Aqueous	01/27/2014 1545	01/28/2014
027	WSW-7	Aqueous	01/27/2014 1530	01/28/2014
028	SW-1	Aqueous	01/27/2014 1500	01/28/2014
029	SW-2	Aqueous	01/27/2014 1505	01/28/2014
030	SW-3	Aqueous	01/27/2014 1510	01/28/2014
031	MW-2 Dup	Aqueous	01/27/2014 1203	01/28/2014
032	MW-1R Dup	Aqueous	01/27/2014 1450	01/28/2014
033	Field Blank	Aqueous	01/27/2014 1600	01/28/2014
034	Trip Blank	Aqueous	01/27/2014 1605	01/28/2014

(34 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary SC DHEC - UST Management Lot Number: PA29003

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-1R	Aqueous	Benzene	8260B	6.5	J	ug/L	5
001	MW-1R	Aqueous	Ethylbenzene	8260B	98		ug/L	5
001	MW-1R	Aqueous	Naphthalene	8260B	71		ug/L	5
001	MW-1R	Aqueous	Toluene	8260B	84		ug/L	5
001	MW-1R	Aqueous	Xylenes (total)	8260B	450		ug/L	5
002	MW-2	Aqueous	Benzene	8260B	460		ug/L	6
002	MW-2	Aqueous	Ethylbenzene	8260B	650		ug/L	6
002	MW-2	Aqueous	Naphthalene	8260B	180	J	ug/L	6
002	MW-2	Aqueous	Toluene	8260B	3700		ug/L	6
002	MW-2	Aqueous	Xylenes (total)	8260B	4600		ug/L	6
002	MW-2	Aqueous	1,2-Dibromoethane (EDB)	8011	3.2		ug/L	6
010	MW-10	Aqueous	Benzene	8260B	0.21	J	ug/L	14
011	MW-11	Aqueous	tert-Amyl alcohol (TAA)	8260B	65	J	ug/L	15
011	MW-11	Aqueous	Benzene	8260B	84		ug/L	15
011	MW-11	Aqueous	1,2-Dichloroethane	8260B	3.4	J	ug/L	15
011	MW-11	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	11		ug/L	15
011	MW-11	Aqueous	Naphthalene	8260B	6.4		ug/L	15
012	MW-12	Aqueous	tert-Amyl alcohol (TAA)	8260B	6.7	J	ug/L	16
012	MW-12	Aqueous	Benzene	8260B	8.3		ug/L	16
012	MW-12	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	2.1	J	ug/L	16
031	MW-2 Dup	Aqueous	Benzene	8260B	540		ug/L	35
031	MW-2 Dup	Aqueous	Ethylbenzene	8260B	740		ug/L	35
031	MW-2 Dup	Aqueous	Naphthalene	8260B	630		ug/L	35
031	MW-2 Dup	Aqueous	Toluene	8260B	4100		ug/L	35
031	MW-2 Dup	Aqueous	Xylenes (total)	8260B	5300		ug/L	35
031	MW-2 Dup	Aqueous	1,2-Dibromoethane (EDB)	8011	3.1		ug/L	35
032	MW-1R Dup	Aqueous	Benzene	8260B	8.9	J	ug/L	36
032	MW-1R Dup	Aqueous	Ethylbenzene	8260B	120		ug/L	36
032	MW-1R Dup	Aqueous	Naphthalene	8260B	86		ug/L	36
032	MW-1R Dup	Aqueous	Toluene	8260B	100		ug/L	36
032	MW-1R Dup	Aqueous	Xylenes (total)	8260B	530		ug/L	36

(31 detections)

Description: MW-1R

Matrix: Aqueous

Date Sampled: 01/27/2014 1450

Date Received: 01/28/2014

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	5	01/30/2014 1735	JHD		39445		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		500	34	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		50	1.0	ug/L	1	
Benzene	71-43-2	8260B	6.5	J	25	1.0	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		500	5.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.5	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		50	2.0	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		500	5.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		5000	170	ug/L	1	
Ethylbenzene	100-41-4	8260B	98		25	8.5	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		500	1.0	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	2.0	ug/L	1	
Naphthalene	91-20-3	8260B	71		25	8.5	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		500	34	ug/L	1	
Toluene	108-88-3	8260B	84		25	8.5	ug/L	1	
Xylenes (total)	1330-20-7	8260B	450		25	8.5	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		95	70-130						
Bromofluorobenzene		86	70-130						
Toluene-d8		91	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/01/2014 1323	JCG	01/31/2014 0915	39491		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.021	0.021	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		128	57-137						

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-2

Matrix: Aqueous

Date Sampled: 01/27/2014 1203

Date Received: 01/28/2014

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	50	01/30/2014 1757	JHD		39445			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		5000	340	ug/L	1		
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		500	10	ug/L	1		
Benzene	71-43-2	8260B	460		250	10	ug/L	1		
tert-Butyl formate (TBF)	762-75-4	8260B	ND		5000	50	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		250	15	ug/L	1		
Diisopropyl ether (IPE)	108-20-3	8260B	ND		500	20	ug/L	1		
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		5000	50	ug/L	1		
Ethanol	64-17-5	8260B	ND		50000	1700	ug/L	1		
Ethylbenzene	100-41-4	8260B	650		250	85	ug/L	1		
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		5000	10	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		250	20	ug/L	1		
Naphthalene	91-20-3	8260B	180	J	250	85	ug/L	1		
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		5000	340	ug/L	1		
Toluene	108-88-3	8260B	3700		250	85	ug/L	1		
Xylenes (total)	1330-20-7	8260B	4600		250	85	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		91	70-130							
Bromofluorobenzene		82	70-130							
Toluene-d8		90	70-130							

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	02/01/2014 1333	JCG	01/31/2014 0915	39491			
2	8011	8011	10	02/03/2014 1143	JCG	01/31/2014 0915	39491			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
1,2-Dibromoethane (EDB)	106-93-4	8011	3.2		0.20	0.20	ug/L	2		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits				
1,1,1,2-Tetrachloroethane		101	57-137	N	0.00	57-137				

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-3

Matrix: Aqueous

Date Sampled: 01/27/2014 1428

Date Received: 01/28/2014

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	01/30/2014 1225	JHD		39445		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		94	70-130						
Bromofluorobenzene		84	70-130						
Toluene-d8		88	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/01/2014 1405	JCG	01/31/2014 0915	39491		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		91	57-137						

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-4

Matrix: Aqueous

Date Sampled: 01/27/2014 1320

Date Received: 01/28/2014

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/30/2014 1248	JHD		39445				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		92	70-130								
Bromofluorobenzene		80	70-130								
Toluene-d8		87	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/01/2014 1415	JCG	01/31/2014 0915	39491				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.030	0.030	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		105	57-137								

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/30/2014 1310	JHD		39445				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		94	70-130								
Bromofluorobenzene		81	70-130								
Toluene-d8		88	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/01/2014 1426	JCG	01/31/2014 0915	39491				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		105	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-6

Matrix: Aqueous

Date Sampled: 01/27/2014 1115

Date Received: 01/28/2014

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	01/30/2014 1331	JHD		39445		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		95	70-130						
Bromofluorobenzene		80	70-130						
Toluene-d8		89	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/01/2014 1436	JCG	01/31/2014 0915	39491		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		110	57-137						

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	01/30/2014 1353	JHD		39445		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		97	70-130						
Bromofluorobenzene		81	70-130						
Toluene-d8		90	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/01/2014 1446	JCG	01/31/2014 0915	39491		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		106	57-137						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-8

Matrix: Aqueous

Date Sampled: 01/27/2014 1050

Date Received: 01/28/2014

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/30/2014 1416	JHD		39445				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		94	70-130								
Bromofluorobenzene		82	70-130								
Toluene-d8		89	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/01/2014 1457	JCG	01/31/2014 0915	39491				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		107	57-137								

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/30/2014 1438	JHD		39445

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		81	70-130
Toluene-d8		88	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/01/2014 1507	JCG	01/31/2014 0915	39491

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		105	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	01/30/2014 1500	JHD		39445		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene	71-43-2	8260B	0.21	J	5.0	0.20	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		95	70-130						
Bromofluorobenzene		80	70-130						
Toluene-d8		88	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/01/2014 1517	JCG	01/31/2014 0915	39491		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		98	57-137						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and > MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/30/2014 1522	JHD		39445				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	65	J	100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	84		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	3.4	J	5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	11		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	6.4		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		95	70-130								
Bromofluorobenzene		83	70-130								
Toluene-d8		92	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/01/2014 1527	JCG	01/31/2014 0915	39491				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		100	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/30/2014 1544	JHD		39445				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	6.7	J	100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	8.3		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	2.1	J	5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		94	70-130								
Bromofluorobenzene		80	70-130								
Toluene-d8		90	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/01/2014 1537	JCG	01/31/2014 0915	39491				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		101	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/30/2014 1606	JHD		39445				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		94	70-130								
Bromofluorobenzene		81	70-130								
Toluene-d8		89	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/01/2014 1548	JCG	01/31/2014 0915	39491				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		100	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: SC DHEC - UST Management	Laboratory ID: PA29003-014
Description: MW-14	Matrix: Aqueous
Date Sampled: 01/27/2014 1305	
Date Received: 01/28/2014	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/30/2014 2122	PMM2		39486				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		93	70-130								
Bromofluorobenzene		89	70-130								
Toluene-d8		95	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/01/2014 1558	JCG	01/31/2014 0915	39491				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		99	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/30/2014 2143	PMM2		39486

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		89	70-130
Toluene-d8		95	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/01/2014 1608	JCG	01/31/2014 0915	39491

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		99	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	01/30/2014 2204	PMM2		39486		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		94	70-130						
Bromofluorobenzene		89	70-130						
Toluene-d8		95	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/01/2014 1619	JCG	01/31/2014 0915	39491		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.021	0.021	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		90	57-137						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/30/2014 2225	PMM2		39486				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		95	70-130								
Bromofluorobenzene		89	70-130								
Toluene-d8		93	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/01/2014 1629	JCG	01/31/2014 0915	39491				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.021	0.021	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		99	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/30/2014 2246	PMM2		39486

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		88	70-130
Toluene-d8		94	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/01/2014 1639	JCG	01/31/2014 0915	39491

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		107	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: DW-3

Matrix: Aqueous

Date Sampled: 01/27/2014 1415

Date Received: 01/28/2014

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	01/30/2014 2307	PMM2		39486		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		93	70-130						
Bromofluorobenzene		88	70-130						
Toluene-d8		93	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/01/2014 1650	JCG	01/31/2014 0915	39491		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		107	57-137						

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	01/30/2014 2329	PMM2		39486		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		94	70-130						
Bromofluorobenzene		89	70-130						
Toluene-d8		94	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/01/2014 1700	JCG	01/31/2014 0915	39491		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		103	57-137						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: DW-5

Matrix: Aqueous

Date Sampled: 01/27/2014 1300

Date Received: 01/28/2014

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	01/30/2014 2349	PMM2		39486		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		94	70-130						
Bromofluorobenzene		88	70-130						
Toluene-d8		94	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/04/2014 1402	JCG	02/04/2014 0955	39700		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		100	57-137						

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/31/2014 0010	PMM2		39486				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		94	70-130								
Bromofluorobenzene		89	70-130								
Toluene-d8		93	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/04/2014 1412	JCG	02/04/2014 0955	39700				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		104	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: SC DHEC - UST Management	Laboratory ID: PA29003-023
Description: DW-7	Matrix: Aqueous
Date Sampled: 01/27/2014 1440	
Date Received: 01/28/2014	

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/31/2014 0032	PMM2		39486				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		94	70-130								
Bromofluorobenzene		91	70-130								
Toluene-d8		94	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/04/2014 1423	JCG	02/04/2014 0955	39700				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		108	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/31/2014 0053	PMM2		39486

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		90	70-130
Toluene-d8		94	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/03/2014 1101	JCG	02/03/2014 0847	39609

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		110	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	01/31/2014 0114	PMM2		39486		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		95	70-130						
Bromofluorobenzene		88	70-130						
Toluene-d8		95	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/04/2014 1433	JCG	02/04/2014 0955	39700		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		102	57-137						

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/31/2014 0134	PMM2		39486				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		93	70-130								
Bromofluorobenzene		89	70-130								
Toluene-d8		95	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/04/2014 1504	JCG	02/04/2014 0955	39700				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		94	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: WSW-7

Matrix: Aqueous

Date Sampled: 01/27/2014 1530

Date Received: 01/28/2014

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/31/2014 0155	PMM2		39486				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		95	70-130								
Bromofluorobenzene		90	70-130								
Toluene-d8		96	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/04/2014 1514	JCG	02/04/2014 0955	39700				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		95	57-137								

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: SW-1

Matrix: Aqueous

Date Sampled: 01/27/2014 1500

Date Received: 01/28/2014

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	01/31/2014 0216	PMM2		39486		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		94	70-130						
Bromofluorobenzene		87	70-130						
Toluene-d8		94	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/04/2014 1524	JCG	02/04/2014 0955	39700		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		98	57-137						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	01/30/2014 2306	PMM2		39488		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		92	70-130						
Bromofluorobenzene		81	70-130						
Toluene-d8		87	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/04/2014 1535	JCG	02/04/2014 0955	39700		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		93	57-137						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: SW-3

Matrix: Aqueous

Date Sampled: 01/27/2014 1510

Date Received: 01/28/2014

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	01/31/2014 0237	PMM2		39486		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		95	70-130						
Bromofluorobenzene		89	70-130						
Toluene-d8		95	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/04/2014 1545	JCG	02/04/2014 0955	39700		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		96	57-137						

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	50	01/31/2014 0319	PMM2		39486			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		5000	340	ug/L	1		
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		500	10	ug/L	1		
Benzene	71-43-2	8260B	540		250	10	ug/L	1		
tert-Butyl formate (TBF)	762-75-4	8260B	ND		5000	50	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		250	15	ug/L	1		
Diisopropyl ether (IPE)	108-20-3	8260B	ND		500	20	ug/L	1		
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		5000	50	ug/L	1		
Ethanol	64-17-5	8260B	ND		50000	1700	ug/L	1		
Ethylbenzene	100-41-4	8260B	740		250	85	ug/L	1		
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		5000	10	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		250	20	ug/L	1		
Naphthalene	91-20-3	8260B	630		250	85	ug/L	1		
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		5000	340	ug/L	1		
Toluene	108-88-3	8260B	4100		250	85	ug/L	1		
Xylenes (total)	1330-20-7	8260B	5300		250	85	ug/L	1		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		93	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/04/2014 1555	JCG	02/04/2014 0955	39700
2	8011	8011	5	02/05/2014 0838	JCG	02/04/2014 0955	39700

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	3.1		0.097	0.097	ug/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		112	57-137		86	57-137

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	5	01/31/2014 0504	PMM2		39488		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		500	34	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		50	1.0	ug/L	1	
Benzene	71-43-2	8260B	8.9	J	25	1.0	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		500	5.0	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.5	ug/L	1	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		50	2.0	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		500	5.0	ug/L	1	
Ethanol	64-17-5	8260B	ND		5000	170	ug/L	1	
Ethylbenzene	100-41-4	8260B	120		25	8.5	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		500	1.0	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	2.0	ug/L	1	
Naphthalene	91-20-3	8260B	86		25	8.5	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		500	34	ug/L	1	
Toluene	108-88-3	8260B	100		25	8.5	ug/L	1	
Xylenes (total)	1330-20-7	8260B	530		25	8.5	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		95	70-130						
Bromofluorobenzene		86	70-130						
Toluene-d8		93	70-130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/04/2014 1606	JCG	02/04/2014 0955	39700		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,1,1,2-Tetrachloroethane		92	57-137						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	5030B	8260B	1	01/30/2014 2040	PMM2		39486				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1			
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1			
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1			
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1			
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1			
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1			
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1			
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1			
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1			
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1			
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1			
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1			
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1			
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1			
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,2-Dichloroethane-d4		92	70-130								
Bromofluorobenzene		92	70-130								
Toluene-d8		95	70-130								

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	8011	8011	1	02/04/2014 1616	JCG	02/04/2014 0955	39700				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
1,1,1,2-Tetrachloroethane		100	57-137								

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/30/2014 2101	PMM2		39486

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		89	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ39445-001

Matrix: Aqueous

Batch: 39445

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	01/30/2014 1034
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	01/30/2014 1034
Benzene	ND		1	5.0	0.20	ug/L	01/30/2014 1034
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	01/30/2014 1034
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	01/30/2014 1034
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	01/30/2014 1034
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	01/30/2014 1034
Ethanol	ND		1	1000	33	ug/L	01/30/2014 1034
Ethylbenzene	ND		1	5.0	1.7	ug/L	01/30/2014 1034
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	01/30/2014 1034
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	01/30/2014 1034
Naphthalene	ND		1	5.0	1.7	ug/L	01/30/2014 1034
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	01/30/2014 1034
Toluene	ND		1	5.0	1.7	ug/L	01/30/2014 1034
Xylenes (total)	ND		1	5.0	1.7	ug/L	01/30/2014 1034
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		80	70-130				
1,2-Dichloroethane-d4		90	70-130				
Toluene-d8		88	70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: PQ39445-002

Matrix: Aqueous

Batch: 39445

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	890		1	89	70-130	01/30/2014 0905
tert-Amyl methyl ether (TAME)	50	49		1	98	70-130	01/30/2014 0905
Benzene	50	48		1	95	70-130	01/30/2014 0905
tert-Butyl formate (TBF)	250	240		1	96	70-130	01/30/2014 0905
1,2-Dichloroethane	50	47		1	95	70-130	01/30/2014 0905
Diisopropyl ether (IPE)	50	48		1	96	70-130	01/30/2014 0905
3,3-Dimethyl-1-butanol	1000	810		1	81	70-130	01/30/2014 0905
Ethanol	5000	4300		1	85	60-140	01/30/2014 0905
Ethylbenzene	50	50		1	100	70-130	01/30/2014 0905
Ethyl-tert-butyl ether (ETBE)	50	48		1	97	70-130	01/30/2014 0905
Methyl tertiary butyl ether (MTBE)	50	46		1	91	70-130	01/30/2014 0905

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: PQ39445-002

Matrix: Aqueous

Batch: 39445

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Naphthalene	50	53		1	107	70-130	01/30/2014 0905
tert-butyl alcohol (TBA)	1000	890		1	89	70-130	01/30/2014 0905
Toluene	50	49		1	98	70-130	01/30/2014 0905
Xylenes (total)	100	99		1	99	70-130	01/30/2014 0905
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		78	70-130				
1,2-Dichloroethane-d4		84	70-130				
Toluene-d8		82	70-130				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: PQ39445-003

Matrix: Aqueous

Batch: 39445

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	920		1	92	2.9	70-130	20	01/30/2014 0927
tert-Amyl methyl ether (TAME)	50	49		1	99	0.70	70-130	20	01/30/2014 0927
Benzene	50	48		1	97	2.0	70-130	20	01/30/2014 0927
tert-Butyl formate (TBF)	250	240		1	98	2.5	70-130	20	01/30/2014 0927
1,2-Dichloroethane	50	48		1	95	0.78	70-130	20	01/30/2014 0927
Diisopropyl ether (IPE)	50	48		1	96	0.019	70-130	20	01/30/2014 0927
3,3-Dimethyl-1-butanol	1000	850		1	85	4.5	70-130	20	01/30/2014 0927
Ethanol	5000	4400		1	88	2.9	60-140	20	01/30/2014 0927
Ethylbenzene	50	51		1	102	2.3	70-130	20	01/30/2014 0927
Ethyl-tert-butyl ether (ETBE)	50	49		1	98	1.1	70-130	20	01/30/2014 0927
Methyl tertiary butyl ether (MTBE)	50	46		1	91	0.0044	70-130	20	01/30/2014 0927
Naphthalene	50	56		1	111	4.1	70-130	20	01/30/2014 0927
tert-butyl alcohol (TBA)	1000	900		1	90	1.5	70-130	20	01/30/2014 0927
Toluene	50	50		1	101	2.6	70-130	20	01/30/2014 0927
Xylenes (total)	100	100		1	102	3.0	70-130	20	01/30/2014 0927
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		79	70-130						
1,2-Dichloroethane-d4		83	70-130						
Toluene-d8		82	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

* = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: PA29003-002MS

Matrix: Aqueous

Batch: 39445

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	ND	50000	49000		50	99	70-130	01/30/2014 1820
tert-Amyl methyl ether (TAME)	ND	2500	2600		50	105	70-130	01/30/2014 1820
Benzene	460	2500	3100		50	104	70-130	01/30/2014 1820
tert-Butyl formate (TBF)	ND	13000	10000		50	83	70-130	01/30/2014 1820
1,2-Dichloroethane	ND	2500	2600		50	105	70-130	01/30/2014 1820
Diisopropyl ether (IPE)	ND	2500	2500		50	101	70-130	01/30/2014 1820
3,3-Dimethyl-1-butanol	ND	50000	46000		50	92	70-130	01/30/2014 1820
Ethanol	ND	250000	260000		50	103	70-130	01/30/2014 1820
Ethylbenzene	650	2500	3400		50	110	70-130	01/30/2014 1820
Ethyl-tert-butyl ether (ETBE)	ND	2500	2600		50	104	70-130	01/30/2014 1820
Methyl tertiary butyl ether (MTBE)	ND	2500	2500		50	101	70-130	01/30/2014 1820
Naphthalene	180	2500	2700		50	101	70-130	01/30/2014 1820
tert-butyl alcohol (TBA)	ND	50000	51000		50	102	70-130	01/30/2014 1820
Toluene	3700	2500	6100		50	99	70-130	01/30/2014 1820
Xylenes (total)	4600	5000	9900		50	107	70-130	01/30/2014 1820
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		87	70-130					
Bromofluorobenzene		82	70-130					
Toluene-d8		86	70-130					

Volatile Organic Compounds by GC/MS - MSD

Sample ID: PA29003-002MD

Matrix: Aqueous

Batch: 39445

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	ND	50000	50000		50	99	0.18	70-130	20	01/30/2014 1842
tert-Amyl methyl ether (TAME)	ND	2500	2600		50	105	0.11	70-130	20	01/30/2014 1842
Benzene	460	2500	3000		50	101	2.1	70-130	20	01/30/2014 1842
tert-Butyl formate (TBF)	ND	13000	10000		50	83	0.57	70-130	20	01/30/2014 1842
1,2-Dichloroethane	ND	2500	2500		50	102	3.0	70-130	20	01/30/2014 1842
Diisopropyl ether (IPE)	ND	2500	2500		50	101	0.045	70-130	20	01/30/2014 1842
3,3-Dimethyl-1-butanol	ND	50000	46000		50	91	0.59	70-130	20	01/30/2014 1842
Ethanol	ND	250000	260000		50	104	0.65	70-130	20	01/30/2014 1842
Ethylbenzene	650	2500	3400		50	109	0.97	70-130	20	01/30/2014 1842
Ethyl-tert-butyl ether (ETBE)	ND	2500	2600		50	102	1.2	70-130	20	01/30/2014 1842
Methyl tertiary butyl ether (MTBE)	ND	2500	2500		50	101	0.087	70-130	20	01/30/2014 1842

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: PA29003-002MD

Matrix: Aqueous

Batch: 39445

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Naphthalene	180	2500	2900		50	107	5.5	70-130	20	01/30/2014 1842
tert-butyl alcohol (TBA)	ND	50000	51000		50	102	0.038	70-130	20	01/30/2014 1842
Toluene	3700	2500	6000		50	92	2.8	70-130	20	01/30/2014 1842
Xylenes (total)	4600	5000	9800		50	105	0.69	70-130	20	01/30/2014 1842
Surrogate	Q	% Rec	Acceptance Limit							
1,2-Dichloroethane-d4		83	70-130							
Bromofluorobenzene		79	70-130							
Toluene-d8		83	70-130							

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ39486-001

Matrix: Aqueous

Batch: 39486

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	01/30/2014 2019
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	01/30/2014 2019
Benzene	ND		1	5.0	0.20	ug/L	01/30/2014 2019
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	01/30/2014 2019
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	01/30/2014 2019
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	01/30/2014 2019
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	01/30/2014 2019
Ethanol	ND		1	1000	33	ug/L	01/30/2014 2019
Ethylbenzene	ND		1	5.0	1.7	ug/L	01/30/2014 2019
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	01/30/2014 2019
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	01/30/2014 2019
Naphthalene	ND		1	5.0	1.7	ug/L	01/30/2014 2019
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	01/30/2014 2019
Toluene	ND		1	5.0	1.7	ug/L	01/30/2014 2019
Xylenes (total)	ND		1	5.0	1.7	ug/L	01/30/2014 2019
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		89	70-130				
1,2-Dichloroethane-d4		92	70-130				
Toluene-d8		94	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: PQ39486-002

Matrix: Aqueous

Batch: 39486

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	910	1		91	70-130	01/30/2014 1855
tert-Amyl methyl ether (TAME)	50	51	1		102	70-130	01/30/2014 1855
Benzene	50	50	1		100	70-130	01/30/2014 1855
tert-Butyl formate (TBF)	250	250	1		101	70-130	01/30/2014 1855
1,2-Dichloroethane	50	48	1		96	70-130	01/30/2014 1855
Diisopropyl ether (IPE)	50	50	1		100	70-130	01/30/2014 1855
3,3-Dimethyl-1-butanol	1000	940	1		94	70-130	01/30/2014 1855
Ethanol	5000	4900	1		98	60-140	01/30/2014 1855
Ethylbenzene	50	50	1		101	70-130	01/30/2014 1855
Ethyl-tert-butyl ether (ETBE)	50	48	1		96	70-130	01/30/2014 1855
Methyl tertiary butyl ether (MTBE)	50	50	1		100	70-130	01/30/2014 1855
Naphthalene	50	51	1		102	70-130	01/30/2014 1855
tert-butyl alcohol (TBA)	1000	890	1		89	70-130	01/30/2014 1855
Toluene	50	51	1		101	70-130	01/30/2014 1855
Xylenes (total)	100	100	1		101	70-130	01/30/2014 1855
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		90	70-130				
1,2-Dichloroethane-d4		97	70-130				
Toluene-d8		95	70-130				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: PQ39486-003

Matrix: Aqueous

Batch: 39486

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	870		1	87	4.7	70-130	20	01/30/2014 1916
tert-Amyl methyl ether (TAME)	50	50		1	100	2.3	70-130	20	01/30/2014 1916
Benzene	50	48		1	96	3.4	70-130	20	01/30/2014 1916
tert-Butyl formate (TBF)	250	240		1	96	4.7	70-130	20	01/30/2014 1916
1,2-Dichloroethane	50	47		1	94	2.0	70-130	20	01/30/2014 1916
Diisopropyl ether (IPE)	50	48		1	97	3.6	70-130	20	01/30/2014 1916
3,3-Dimethyl-1-butanol	1000	900		1	90	4.2	70-130	20	01/30/2014 1916
Ethanol	5000	4500		1	91	7.3	60-140	20	01/30/2014 1916
Ethylbenzene	50	49		1	97	3.4	70-130	20	01/30/2014 1916
Ethyl-tert-butyl ether (ETBE)	50	46		1	91	5.4	70-130	20	01/30/2014 1916
Methyl tertiary butyl ether (MTBE)	50	49		1	98	2.0	70-130	20	01/30/2014 1916

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

* = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: PQ39486-003

Matrix: Aqueous

Batch: 39486

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Naphthalene	50	49		1	97	5.0	70-130	20	01/30/2014 1916
tert-butyl alcohol (TBA)	1000	890		1	89	0.80	70-130	20	01/30/2014 1916
Toluene	50	49		1	98	3.3	70-130	20	01/30/2014 1916
Xylenes (total)	100	97		1	97	3.6	70-130	20	01/30/2014 1916
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		89	70-130						
1,2-Dichloroethane-d4		96	70-130						
Toluene-d8		93	70-130						

Volatile Organic Compounds by GC/MS - MS

Sample ID: PA29003-031MS

Matrix: Aqueous

Batch: 39486

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date	
tert-Amyl alcohol (TAA)	ND	50000	47000		50	94	70-130	01/31/2014 0341	
tert-Amyl methyl ether (TAME)	ND	2500	2700		50	107	70-130	01/31/2014 0341	
Benzene	540	2500	3300		50	110	70-130	01/31/2014 0341	
tert-Butyl formate (TBF)	ND	13000	9800		50	79	70-130	01/31/2014 0341	
1,2-Dichloroethane	ND	2500	2600		50	102	70-130	01/31/2014 0341	
Diisopropyl ether (IPE)	ND	2500	2700		50	108	70-130	01/31/2014 0341	
3,3-Dimethyl-1-butanol	ND	50000	48000		50	96	70-130	01/31/2014 0341	
Ethanol	ND	250000	230000		50	94	70-130	01/31/2014 0341	
Ethylbenzene	740	2500	3500		50	110	70-130	01/31/2014 0341	
Ethyl-tert-butyl ether (ETBE)	ND	2500	2600		50	103	70-130	01/31/2014 0341	
Methyl tertiary butyl ether (MTBE)	ND	2500	2600		50	104	70-130	01/31/2014 0341	
Naphthalene	630	2500	2700		50	85	70-130	01/31/2014 0341	
tert-butyl alcohol (TBA)	ND	50000	48000		50	96	70-130	01/31/2014 0341	
Toluene	4100	2500	7000		50	115	70-130	01/31/2014 0341	
Xylenes (total)	5300	5000	11000		50	108	70-130	01/31/2014 0341	
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		91	70-130						
Bromofluorobenzene		91	70-130						
Toluene-d8		96	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: PA29003-031MD

Matrix: Aqueous

Batch: 39486

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
tert-Amyl alcohol (TAA)	ND	50000	45000	50	90	4.2	70-130	20	01/31/2014 0401		
tert-Amyl methyl ether (TAME)	ND	2500	2600	50	104	3.2	70-130	20	01/31/2014 0401		
Benzene	540	2500	3200	50	107	3.1	70-130	20	01/31/2014 0401		
tert-Butyl formate (TBF)	ND	13000	9600	50	76	2.9	70-130	20	01/31/2014 0401		
1,2-Dichloroethane	ND	2500	2500	50	101	1.3	70-130	20	01/31/2014 0401		
Diisopropyl ether (IPE)	ND	2500	2600	50	105	2.5	70-130	20	01/31/2014 0401		
3,3-Dimethyl-1-butanol	ND	50000	48000	50	95	1.3	70-130	20	01/31/2014 0401		
Ethanol	ND	250000	230000	50	92	1.6	70-130	20	01/31/2014 0401		
Ethylbenzene	740	2500	3400	50	106	2.7	70-130	20	01/31/2014 0401		
Ethyl-tert-butyl ether (ETBE)	ND	2500	2500	50	99	3.7	70-130	20	01/31/2014 0401		
Methyl tertiary butyl ether (MTBE)	ND	2500	2500	50	101	2.2	70-130	20	01/31/2014 0401		
Naphthalene	630	2500	2800	50	86	1.3	70-130	20	01/31/2014 0401		
tert-butyl alcohol (TBA)	ND	50000	48000	50	96	0.77	70-130	20	01/31/2014 0401		
Toluene	4100	2500	6700	50	106	3.4	70-130	20	01/31/2014 0401		
Xylenes (total)	5300	5000	10000	50	103	2.7	70-130	20	01/31/2014 0401		
Surrogate	Q	% Rec	Acceptance Limit								
1,2-Dichloroethane-d4		90	70-130								
Bromofluorobenzene		91	70-130								
Toluene-d8		95	70-130								

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ39486-001

Matrix: Aqueous

Batch: 39486

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	01/30/2014 2019
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	01/30/2014 2019
Benzene	ND		1	1.0	0.13	ug/L	01/30/2014 2019
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	01/30/2014 2019
1,2-Dichloroethane	ND		1	1.0	0.15	ug/L	01/30/2014 2019
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	01/30/2014 2019
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	01/30/2014 2019
Ethanol	ND		1	1000	33	ug/L	01/30/2014 2019
Ethylbenzene	ND		1	1.0	0.33	ug/L	01/30/2014 2019
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	01/30/2014 2019
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	01/30/2014 2019

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ39486-001

Matrix: Aqueous

Batch: 39486

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Naphthalene	ND		1	1.0	0.40	ug/L	01/30/2014 2019
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	01/30/2014 2019
Toluene	ND		1	1.0	0.33	ug/L	01/30/2014 2019
Xylenes (total)	ND		1	1.0	0.33	ug/L	01/30/2014 2019
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		89	70-130				
1,2-Dichloroethane-d4		92	70-130				
Toluene-d8		94	70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: PQ39486-002

Matrix: Aqueous

Batch: 39486

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	910		1	91	70-130	01/30/2014 1855
tert-Amyl methyl ether (TAME)	50	51		1	102	70-130	01/30/2014 1855
Benzene	50	50		1	100	70-130	01/30/2014 1855
tert-Butyl formate (TBF)	250	250		1	101	70-130	01/30/2014 1855
1,2-Dichloroethane	50	48		1	96	70-130	01/30/2014 1855
Diisopropyl ether (IPE)	50	50		1	100	70-130	01/30/2014 1855
3,3-Dimethyl-1-butanol	1000	940		1	94	70-130	01/30/2014 1855
Ethanol	5000	4900		1	98	60-140	01/30/2014 1855
Ethylbenzene	50	50		1	101	70-130	01/30/2014 1855
Ethyl-tert-butyl ether (ETBE)	50	48		1	96	70-130	01/30/2014 1855
Methyl tertiary butyl ether (MTBE)	50	50		1	100	70-130	01/30/2014 1855
Naphthalene	50	51		1	102	70-130	01/30/2014 1855
tert-butyl alcohol (TBA)	1000	890		1	89	70-130	01/30/2014 1855
Toluene	50	51		1	101	70-130	01/30/2014 1855
Xylenes (total)	100	100		1	101	70-130	01/30/2014 1855
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		90	70-130				
1,2-Dichloroethane-d4		97	70-130				
Toluene-d8		95	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: PQ39486-003

Matrix: Aqueous

Batch: 39486

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	870		1	87	4.7	70-130	20	01/30/2014 1916
tert-Amyl methyl ether (TAME)	50	50		1	100	2.3	70-130	20	01/30/2014 1916
Benzene	50	48		1	96	3.4	70-130	20	01/30/2014 1916
tert-Butyl formate (TBF)	250	240		1	96	4.7	70-130	20	01/30/2014 1916
1,2-Dichloroethane	50	47		1	94	2.0	70-130	20	01/30/2014 1916
Diisopropyl ether (IPE)	50	48		1	97	3.6	70-130	20	01/30/2014 1916
3,3-Dimethyl-1-butanol	1000	900		1	90	4.2	70-130	20	01/30/2014 1916
Ethanol	5000	4500		1	91	7.3	60-140	20	01/30/2014 1916
Ethylbenzene	50	49		1	97	3.4	70-130	20	01/30/2014 1916
Ethyl-tert-butyl ether (ETBE)	50	46		1	91	5.4	70-130	20	01/30/2014 1916
Methyl tertiary butyl ether (MTBE)	50	49		1	98	2.0	70-130	20	01/30/2014 1916
Naphthalene	50	49		1	97	5.0	70-130	20	01/30/2014 1916
tert-butyl alcohol (TBA)	1000	890		1	89	0.80	70-130	20	01/30/2014 1916
Toluene	50	49		1	98	3.3	70-130	20	01/30/2014 1916
Xylenes (total)	100	97		1	97	3.6	70-130	20	01/30/2014 1916
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		89	70-130						
1,2-Dichloroethane-d4		96	70-130						
Toluene-d8		93	70-130						

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ39488-001

Matrix: Aqueous

Batch: 39488

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	01/30/2014 2158
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	01/30/2014 2158
Benzene	ND		1	5.0	0.20	ug/L	01/30/2014 2158
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	01/30/2014 2158
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	01/30/2014 2158
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	01/30/2014 2158
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	01/30/2014 2158
Ethanol	ND		1	1000	33	ug/L	01/30/2014 2158
Ethylbenzene	ND		1	5.0	1.7	ug/L	01/30/2014 2158
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	01/30/2014 2158
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	01/30/2014 2158

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ39488-001

Matrix: Aqueous

Batch: 39488

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Naphthalene	ND		1	5.0	1.7	ug/L	01/30/2014 2158
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	01/30/2014 2158
Toluene	ND		1	5.0	1.7	ug/L	01/30/2014 2158
Xylenes (total)	ND		1	5.0	1.7	ug/L	01/30/2014 2158
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene	80		70-130				
1,2-Dichloroethane-d4	90		70-130				
Toluene-d8	88		70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: PQ39488-002

Matrix: Aqueous

Batch: 39488

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	900	1		90	70-130	01/30/2014 2029
tert-Amyl methyl ether (TAME)	50	48	1		96	70-130	01/30/2014 2029
Benzene	50	47	1		94	70-130	01/30/2014 2029
tert-Butyl formate (TBF)	250	250	1		98	70-130	01/30/2014 2029
1,2-Dichloroethane	50	46	1		92	70-130	01/30/2014 2029
Diisopropyl ether (IPE)	50	46	1		93	70-130	01/30/2014 2029
3,3-Dimethyl-1-butanol	1000	820	1		82	70-130	01/30/2014 2029
Ethanol	5000	4400	1		88	60-140	01/30/2014 2029
Ethylbenzene	50	50	1		99	70-130	01/30/2014 2029
Ethyl-tert-butyl ether (ETBE)	50	47	1		94	70-130	01/30/2014 2029
Methyl tertiary butyl ether (MTBE)	50	45	1		90	70-130	01/30/2014 2029
Naphthalene	50	53	1		106	70-130	01/30/2014 2029
tert-butyl alcohol (TBA)	1000	900	1		90	70-130	01/30/2014 2029
Toluene	50	48	1		97	70-130	01/30/2014 2029
Xylenes (total)	100	98	1		98	70-130	01/30/2014 2029
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene	80		70-130				
1,2-Dichloroethane-d4	84		70-130				
Toluene-d8	84		70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: PQ39488-003

Matrix: Aqueous

Batch: 39488

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	940		1	94	4.1	70-130	20	01/30/2014 2051
tert-Amyl methyl ether (TAME)	50	49		1	98	2.3	70-130	20	01/30/2014 2051
Benzene	50	49		1	98	3.5	70-130	20	01/30/2014 2051
tert-Butyl formate (TBF)	250	250		1	99	1.3	70-130	20	01/30/2014 2051
1,2-Dichloroethane	50	48		1	95	2.9	70-130	20	01/30/2014 2051
Diisopropyl ether (IPE)	50	48		1	96	3.0	70-130	20	01/30/2014 2051
3,3-Dimethyl-1-butanol	1000	850		1	85	4.2	70-130	20	01/30/2014 2051
Ethanol	5000	4500		1	91	3.4	60-140	20	01/30/2014 2051
Ethylbenzene	50	51		1	103	3.6	70-130	20	01/30/2014 2051
Ethyl-tert-butyl ether (ETBE)	50	49		1	97	3.5	70-130	20	01/30/2014 2051
Methyl tertiary butyl ether (MTBE)	50	46		1	93	2.9	70-130	20	01/30/2014 2051
Naphthalene	50	53		1	106	0.52	70-130	20	01/30/2014 2051
tert-butyl alcohol (TBA)	1000	920		1	92	3.1	70-130	20	01/30/2014 2051
Toluene	50	51		1	102	4.9	70-130	20	01/30/2014 2051
Xylenes (total)	100	100		1	101	2.6	70-130	20	01/30/2014 2051
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		78	70-130						
1,2-Dichloroethane-d4		85	70-130						
Toluene-d8		84	70-130						

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ39488-001

Matrix: Aqueous

Batch: 39488

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	01/30/2014 2158
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	01/30/2014 2158
Benzene	ND		1	1.0	0.13	ug/L	01/30/2014 2158
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	01/30/2014 2158
1,2-Dichloroethane	ND		1	1.0	0.15	ug/L	01/30/2014 2158
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	01/30/2014 2158
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	01/30/2014 2158
Ethanol	ND		1	1000	33	ug/L	01/30/2014 2158
Ethylbenzene	ND		1	1.0	0.33	ug/L	01/30/2014 2158
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	01/30/2014 2158
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	01/30/2014 2158

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ39488-001

Matrix: Aqueous

Batch: 39488

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Naphthalene	ND		1	1.0	0.40	ug/L	01/30/2014 2158
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	01/30/2014 2158
Toluene	ND		1	1.0	0.33	ug/L	01/30/2014 2158
Xylenes (total)	ND		1	1.0	0.33	ug/L	01/30/2014 2158
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene	80		70-130				
1,2-Dichloroethane-d4	90		70-130				
Toluene-d8	88		70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: PQ39488-002

Matrix: Aqueous

Batch: 39488

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	900		1	90	70-130	01/30/2014 2029
tert-Amyl methyl ether (TAME)	50	48		1	96	70-130	01/30/2014 2029
Benzene	50	47		1	94	70-130	01/30/2014 2029
tert-Butyl formate (TBF)	250	250		1	98	70-130	01/30/2014 2029
1,2-Dichloroethane	50	46		1	92	70-130	01/30/2014 2029
Diisopropyl ether (IPE)	50	46		1	93	70-130	01/30/2014 2029
3,3-Dimethyl-1-butanol	1000	820		1	82	70-130	01/30/2014 2029
Ethanol	5000	4400		1	88	60-140	01/30/2014 2029
Ethylbenzene	50	50		1	99	70-130	01/30/2014 2029
Ethyl-tert-butyl ether (ETBE)	50	47		1	94	70-130	01/30/2014 2029
Methyl tertiary butyl ether (MTBE)	50	45		1	90	70-130	01/30/2014 2029
Naphthalene	50	53		1	106	70-130	01/30/2014 2029
tert-butyl alcohol (TBA)	1000	900		1	90	70-130	01/30/2014 2029
Toluene	50	48		1	97	70-130	01/30/2014 2029
Xylenes (total)	100	98		1	98	70-130	01/30/2014 2029
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene	80		70-130				
1,2-Dichloroethane-d4	84		70-130				
Toluene-d8	84		70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: PQ39488-003

Matrix: Aqueous

Batch: 39488

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	940		1	94	4.1	70-130	20	01/30/2014 2051
tert-Amyl methyl ether (TAME)	50	49		1	98	2.3	70-130	20	01/30/2014 2051
Benzene	50	49		1	98	3.5	70-130	20	01/30/2014 2051
tert-Butyl formate (TBF)	250	250		1	99	1.3	70-130	20	01/30/2014 2051
1,2-Dichloroethane	50	48		1	95	2.9	70-130	20	01/30/2014 2051
Diisopropyl ether (IPE)	50	48		1	96	3.0	70-130	20	01/30/2014 2051
3,3-Dimethyl-1-butanol	1000	850		1	85	4.2	70-130	20	01/30/2014 2051
Ethanol	5000	4500		1	91	3.4	60-140	20	01/30/2014 2051
Ethylbenzene	50	51		1	103	3.6	70-130	20	01/30/2014 2051
Ethyl-tert-butyl ether (ETBE)	50	49		1	97	3.5	70-130	20	01/30/2014 2051
Methyl tertiary butyl ether (MTBE)	50	46		1	93	2.9	70-130	20	01/30/2014 2051
Naphthalene	50	53		1	106	0.52	70-130	20	01/30/2014 2051
tert-butyl alcohol (TBA)	1000	920		1	92	3.1	70-130	20	01/30/2014 2051
Toluene	50	51		1	102	4.9	70-130	20	01/30/2014 2051
Xylenes (total)	100	100		1	101	2.6	70-130	20	01/30/2014 2051
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		78	70-130						
1,2-Dichloroethane-d4		85	70-130						
Toluene-d8		84	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MB

Sample ID: PQ39491-001	Matrix: Aqueous
Batch: 39491	Prep Method: 8011
Analytical Method: 8011	Prep Date: 01/31/2014 915

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	02/01/2014 1303
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		106	57-137				

EDB & DBCP by Microextraction - LCS

Sample ID: PQ39491-002	Matrix: Aqueous
Batch: 39491	Prep Method: 8011
Analytical Method: 8011	Prep Date: 01/31/2014 915

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.34		1	135	60-140	02/01/2014 1313
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		116	57-137				

EDB & DBCP by Microextraction - MS

Sample ID: PA29003-002MS	Matrix: Aqueous
Batch: 39491	Prep Method: 8011
Analytical Method: 8011	Prep Date: 01/31/2014 915

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	3.2	0.25	2.6		1	114	60-140	02/01/2014 1344
Surrogate	Q	% Rec	Acceptance Limit					
1,1,1,2-Tetrachloroethane		100	57-137					

PQL = Practical quantitation limit P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL + = RPD is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MSD

Sample ID: PA29003-002MD

Matrix: Aqueous

Batch: 39491

Prep Method: 8011

Analytical Method: 8011

Prep Date: 01/31/2014 915

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
1,2-Dibromoethane (EDB)	3.2	0.25	2.8	N	1	184	6.2	60-140	20	02/01/2014 1354
Surrogate	Q	% Rec	Acceptance Limit							
1,1,1,2-Tetrachloroethane		100	57-137							

EDB & DBCP by Microextraction - MB

Sample ID: PQ39609-001

Matrix: Aqueous

Batch: 39609

Prep Method: 8011

Analytical Method: 8011

Prep Date: 02/03/2014 847

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	02/03/2014 0959
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		75	57-137				

EDB & DBCP by Microextraction - LCS

Sample ID: PQ39609-002

Matrix: Aqueous

Batch: 39609

Prep Method: 8011

Analytical Method: 8011

Prep Date: 02/03/2014 847

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.24		1	97	60-140	02/03/2014 1010
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		121	57-137				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

* = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MS

Sample ID: PA29003-024MS Matrix: Aqueous
 Batch: 39609 Prep Method: 8011
 Analytical Method: 8011 Prep Date: 02/03/2014 847

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.25		1	101	60-140	02/03/2014 1133
Surrogate	Q	% Rec	Acceptance Limit					
1,1,1,2-Tetrachloroethane		87	57-137					

EDB & DBCP by Microextraction - MSD

Sample ID: PA29003-024MD Matrix: Aqueous
 Batch: 39609 Prep Method: 8011
 Analytical Method: 8011 Prep Date: 02/03/2014 847

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.26		1	105	4.3	60-140	20	02/03/2014 1122
Surrogate	Q	% Rec	Acceptance Limit							
1,1,1,2-Tetrachloroethane		82	57-137							

EDB & DBCP by Microextraction - MB

Sample ID: PQ39700-001 Matrix: Aqueous
 Batch: 39700 Prep Method: 8011
 Analytical Method: 8011 Prep Date: 02/04/2014 955

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	02/04/2014 1341
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		81	57-137				

PQL = Practical quantitation limit P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL + = RPD is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - LCS

Sample ID: PQ39700-002 Matrix: Aqueous
 Batch: 39700 Prep Method: 8011
 Analytical Method: 8011 Prep Date: 02/04/2014 955

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.29		1	115	60-140	02/04/2014 1352
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		94					57-137

EDB & DBCP by Microextraction - MS

Sample ID: PA29003-025MS Matrix: Aqueous
 Batch: 39700 Prep Method: 8011
 Analytical Method: 8011 Prep Date: 02/04/2014 955

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.25	0.29		1	117	60-140	02/04/2014 1443
Surrogate	Q	% Rec	Acceptance Limit					
1,1,1,2-Tetrachloroethane		97						57-137

EDB & DBCP by Microextraction - MSD

Sample ID: PA29003-025MD Matrix: Aqueous
 Batch: 39700 Prep Method: 8011
 Analytical Method: 8011 Prep Date: 02/04/2014 955

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.29		1	118	0.14	60-140	20	02/04/2014 1453
Surrogate	Q	% Rec	Acceptance Limit							
1,1,1,2-Tetrachloroethane		103								57-137

PQL = Practical quantitation limit P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL + = RPD is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 09465

Client SCDHEC - UST		Report to Contact D. THOMA		Sampler (Printed Name) GAVIN GLOBENSKY		Quote No.	
Address 2600 Bull St.		Telephone No. / Fax No. / Email 803-888-0631		Waybill No.		Page 7 of 4	
City COLUMBIA SC		State SC Zip Code 29201		Preservative		Number of Containers	
Project Name STEADY SIMMONS		P.O. Number 4600088529		1. Unpres. 2. NaOH/ZnA 3. H2SO4		Bottle (See Instructions on back)	
Project Number 18856/46625		Date 1/27 Time 14:50		4. HNO3 5. HCL 6. Na Tho.		Preservative	
Sample ID / Description (Containers for each sample may be combined on one line)		Date		Time		Lot No.	
MW-1R		1/27		14:50		PA29003	
MW-2		1/27		12:03		Remarks / Cooler ID	
MW-3		1/27		14:28		ODOR ISHEEN	
MW-4		1/27		13:20		ODOR ISHEEN	
MW-5		1/27		11:20		No Odor	
MW-6		1/27		11:15			
MW-7		1/27		11:10			
MW-8		1/27		10:50			
MW-9		1/27		10:35			
MW-10		1/27		15:10		No Odor	

Turn Around Time Required (Prior lab approval required for expedited TAT) <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)	Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab		Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
	1. Relinquished by <i>[Signature]</i>	Date 1/27/14 Time 18:00	1. Received by <i>[Signature]</i>	Date 1/27/14 Time 1500
	2. Relinquished by <i>[Signature]</i>	Date 1/28/14 Time 13:57	2. Received by <i>[Signature]</i>	Date 1/28/14 Time 13:27
	3. Relinquished by <i>[Signature]</i>	Date 1/28/14 Time 13:57	3. Received by <i>[Signature]</i>	Date 1/28/14 Time 13:57
4. Relinquished by <i>[Signature]</i>	Date 1/28/14 Time 13:30	4. Laboratory Received by <i>[Signature]</i>	Date 1/28/14 Time 13:30	

LAB USE ONLY
Received on Ice (Check) Yes No Ice Pack Receipt Temp. **0.5** °C

Note: All samples are retained for six weeks from receipt unless other arrangements are made.



Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 09464

Client: SCDHEC - UST
Address: 2600 Bull St.
City: Columbia SC 29201
Project Name: STEADY SIMMONS
Report to Contact: D. THOMA
Sampler (Printed Name): GAVIN GLOBENSKY
Quote No.:
Page 2 of 4
Number of Containers: 4
Bottle (See Instructions on back):
Preservative:
Lot No.: PA 29 003
Remarks / Cooler ID: No Odor
Analysis:
Matrix:
Sample Disposal:
QC Requirements (Specify):
Possible Hazard Identification:
Turn Around Time Required (Prior lab approval required for expedited TAT):
1. Relinquished by:
2. Relinquished by:
3. Relinquished by:
4. Relinquished by:
Note: All samples are retained for six weeks from receipt unless other arrangements are made.



Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 09463

Client: SCDHEC-UST
Address: 2600 Bull St.
City: Columbia, SC 29201
Project Name: STEADY SIMMONS
Report to Contact: D. THOMA
Sampler (Printed Name): GAUEN GLOBENSKY
Quote No.:
Page 5 of 4
Number of Containers: 4
Bottle (See Instructions on back):
Preservative:
Lot No.: PA 2A 003
Remarks / Cooler ID:
Analysis table with columns for Sample ID, Date, Time, Matrix, and various analysis results (e.g., DW-5, DW-6, DW-7, NSW-1, NSW-2, NSW-3, NSW-4, NSW-5, NSW-6, NSW-7).

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

Sample Receipt Checklist (SRC)

Client: SCDHCCUUST Cooler Inspected by/date: W-1 1/29/14 Lot #: PA29002

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other			
Yes <input type="checkbox"/>	No <input type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>0.4 10.51</u> °C / / °C / / °C / / °C			
Method: <input type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>#3</u> IR Gun Correction Factor: <u>0.1</u> °C			
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None			
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.			
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		8. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		12. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		13. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		14. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		15. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	16. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)			
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) with the SR # (number)			
Sample(s) _____ were received with bubbles >6 mm in diameter.			
Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/phenol			
Sample labels verified by: _____		Date: _____	

Corrective Action taken, if necessary:

Was client notified: Yes No

Did client respond: Yes No

SESI employee: _____

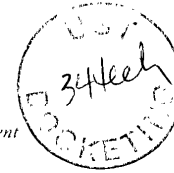
Date of response: _____

Comments: _____



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment



BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

SEP 30 2014

Re: **Site Specific Work Plan Request**
Groundwater Sampling Contract
Solicitation # IFB-5400007403, PO#4600368640

Dear Mr. Shane:

In accordance with bid solicitation # IFB-5400007403 and the UST Management Division Quality Assurance Program Plan (QAPP), Revision 2.0 it is requested that you submit a Site Specific Work Plan for each site listed below. The plans must be submitted **within 15 business days** to my attention. The project manager for each site will issue a notice to proceed once the plan has been reviewed and approved.

UST Permit #	Site Name	County	# samples and requested analysis*	Project Manager
14472	Southside Grocery	Chester	22-BTEXMN, DCA, Oxygenates, & EDB	C. Ridgley
19260	Goldrush Restaurant	Darlington	44-BTEXMN, DCA, & Oxygenates	C. Ridgley
19560	Frm Gulf Station	Richland	17-BTEXMN, DCA, Oxygenates, & EDB	R. Dunn
05443	General Store	Kershaw	22- BTEXMN, DCA, Oxygenates, & EDB, 1-EDB, 1-total Lead	M. Hornosky
09079	Nesmith Store	Williamsburg	21-BTEXMN, DCA, & Oxygenates	M. Hornosky
11774	A&P Coastal Mart	Sumter	36-BTEXMN, DCA, Oxygenates, & EDB	C. Ridgley
14989	Frm Majik Market	Florence	20- BTEXMN, DCA, Oxygenates, 3-EDB, 2-total Lead	M. Milenkova
15674	Pineview Investment	Marion	66- BTEXMN, DCA, Oxygenates, & EDB	D. Thoma
06346	Ma-Shakit #1	Marlboro	55-BTEXMN, DCA, & Oxygenates	J. Martin
07178	Roper 66	Pickens	31-BTEXMN, DCA, Oxygenates, EDB, & Lead	R. Dunn
17947	Backstage Deli	Charleston	17- BTEXMN, DCA, Oxygenates, & EDB	R. Dunn
18856	Steady Simmons	Jasper	27-BTEXMN, DCA, Oxygenates, 10- total lead, 1- EDB	M. Hornosky
01617	Ancrum	Charleston	22- BTEXMN, DCA, Oxygenates, & EDB	J. Padgett
12097	Greenwave Amoco	Charleston	64- BTEXMN, DCA, Oxygenates, & EDB	J. Padgett
15222	Sweatman's Grocery	Dorchester	16- BTEXMN, DCA, Oxygenates, & EDB	J. Padgett

*The number of samples may not include trip blanks, field blanks, or field duplicates.

Page 2

Please contact me with the sampling schedule before commencing work at these facilities. In addition, a weekly update for each site is required to be submitted via e-mail to the site's project manager and myself. If you have any questions or need further assistance, please contact me at (803) 898-0631 or thomadl@dhcc.sc.gov.

Sincerely,

A handwritten signature in black ink that reads "Debra L. Thoma". The signature is written in a cursive style with a large initial "D".

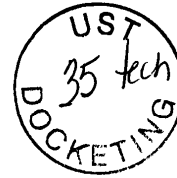
Debra L. Thoma, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

Enc: Site Information Packages

cc: Technical Files



October 28, 2014



Ms. Debra Thoma, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Subject: Site-Specific Work Plan
Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID Number 18856
MECI Project Number 14-4978
Certified Site Rehabilitation Contractor UCC-0009

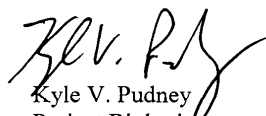
Dear Ms. Thoma,


Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Site-Specific Work Plan for the referenced site.

On October 15, 2014, MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
Midlands Environmental Consultants, Inc.


Kyle V. Pudney
Project Biologist


Jeff L. Coffman
Senior Scientist



**Site-Specific Work Plan for Approved ACQAP
Underground Storage Tank Management Division**

To: Ms. Minda Hornosky (SCDHEC Project Manager)
 From: Mr. Jeff Coleman (Contractor Project Manager)
 Contractor: Midlands Environmental Consultants, Inc. UST Contractor Certification Number: 009

Facility Name: Steady Simmons UST Permit #: 18856
 Facility Address: 16661 Grays Highway, Early Branch, SC 29916
 Responsible Party: Steady Simmons Phone: N/A
 RP Address: N/A
 Property Owner (if different): Wayne Thompson
 Property Owner Address: 16657 Grays Highway, Early Branch, SC 29916
 Current Use of Property: Residential

Scope of Work (Please check all that apply)
 IGWA Tier II Groundwater Sampling GAC
 Tier I Monitoring Well Installation Other _____

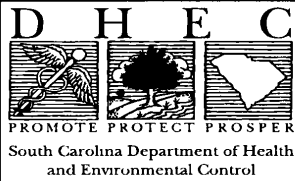
Analyses (Please check all that apply)
 Groundwater/Surface Water:
 BTEXNMDCA (8260B) Lead BOD Methane
 Oxygenates (8260B) 8 RCRA Metals Nitrate Ethanol
 EDB (8011) TPH Sulfate Dissolved Iron
 PAH (8270D) pH Other _____
 Soil:
 BTEXN 8 RCRA Metals TPH-DRO (3550B/8015B) Grain Size
 PAH Oil & Grease (9071) TPH-GRO (5030B/8015B) TOC
 Air:
 BTEXN

Sample Collection (Estimate the number of samples of each matrix that are expected to be collected.)
 _____ Soil 7 Water Supply Wells _____ Air 1 Field Blank
23 Monitoring Wells _____ Surface Water 2 Duplicate 1 Trip Blank

Field Screening Methodology
 Estimate number and total completed depth for each point, and include their proposed locations on the attached map.
 # of shallow points proposed: _____ Estimated Footage: _____ feet per point
 # of deep points proposed: _____ Estimated Footage: _____ feet per point
 Field Screening Methodology: _____

Permanent Monitoring Wells
 Estimate number and total completed depth for each well, and include their proposed locations on the attached map.
 # of shallow wells: _____ Estimated Footage: _____ feet per point
 # of deep wells: _____ Estimated Footage: _____ feet per point
 # of recovery wells: _____ Estimated Footage: _____ feet per point
 Monitoring Well development method (consistent with SOP): _____
 Comments, if warranted:

UST Permit #: <u>18856</u> Facility Name: <u>Steady Simmons</u>												
Implementation Schedule (Number of calendar days from approval) Field Work Start-Up: <u>11/11/2014</u> Field Work Completion: <u>12/11/2014</u> Report Submittal: <u>1/11/2015</u> # of Copies Provided to Property Owners: _____												
Aquifer Characterization Pump Test: <input type="checkbox"/> Slug Test: <input type="checkbox"/> (Check one and provide explanation below for choice) _____ _____												
Investigation Derived Waste Disposal Soil: _____ Tons Purge Water: <u>300.0</u> Gallons Drilling Fluids: _____ Gallons Free-Phase Product: _____ Gallons												
Additional Details For This Scope of Work For example, list wells to be sampled, wells to be abandoned/repared, well pads/bolts/caps to replace, details of AFVR event, etc. -Monitoring well MW-6 needs a man hole cover in order to properly secure the well. _____ -All other wells were found to be in good condition _____ -Water supply well WSW-6 was found to be not functioning and WSW-9 was not located because there was no access. _____ -All other water supply wells were located. _____ _____ _____												
Compliance With Annual Contractor Quality Assurance Plan (ACQAP) <u>No</u> Laboratory as indicated in ACQAP? (Yes/No) If no, indicate laboratory information below. Name of Laboratory: <u>PACE Analytical Services, Inc.</u> SCDHEC Certification Number: <u>99006001</u> Name of Laboratory Director: <u>Jeff Graham</u> <u>N/A</u> Well Driller as indicated in ACQAO? (Yes/No) If no, indicate driller information below. Name of Well Driller: _____ SCLLR Certification Number: _____ <u>Yes</u> Other variations from ACQAP. Please describe below. <u>MECI has submitted ammended ACQAP for review. The ammended ACQAP documents MECI's intention to utilize PACE Analytical Services, Inc. as our primary lab. This ammended ACQAP is still under review, however MECI is requesting approval to send samples collected from the above referenced site to PACE Analytical Services, Inc.</u> _____ _____												
Attachments 1. Attach a copy of the relevant portion of the USGS topographic map showing the site location. 2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">North Arrow</td> <td>Proposed monitoring well locations</td> </tr> <tr> <td>Location of property lines</td> <td>Legend with facility name and address, UST permit number, and bar scale</td> </tr> <tr> <td>Location of buildings</td> <td>Streets or highways (indicate names and numbers)</td> </tr> <tr> <td>Previous soil sampling locations</td> <td>Location of all present and former ASTs and USTs</td> </tr> <tr> <td>Previous monitoring well locations</td> <td>Location of all potential receptors</td> </tr> <tr> <td>Proposed soil boring locations</td> <td></td> </tr> </table> 3. Assessment Component Cost Agreement, SCDHEC Form D-3664	North Arrow	Proposed monitoring well locations	Location of property lines	Legend with facility name and address, UST permit number, and bar scale	Location of buildings	Streets or highways (indicate names and numbers)	Previous soil sampling locations	Location of all present and former ASTs and USTs	Previous monitoring well locations	Location of all potential receptors	Proposed soil boring locations	
North Arrow	Proposed monitoring well locations											
Location of property lines	Legend with facility name and address, UST permit number, and bar scale											
Location of buildings	Streets or highways (indicate names and numbers)											
Previous soil sampling locations	Location of all present and former ASTs and USTs											
Previous monitoring well locations	Location of all potential receptors											
Proposed soil boring locations												



**ASSESSMENT COMPONENT COST AGREEMENT
SOUTH CAROLINA**

Department of Health and Environmental Control
Underground Storage Tank Management Division
State Underground Petroleum Environmental Response Bank Account
CONTRACT PO NUMBER 4600328425

Facility Name: Steady Simmons

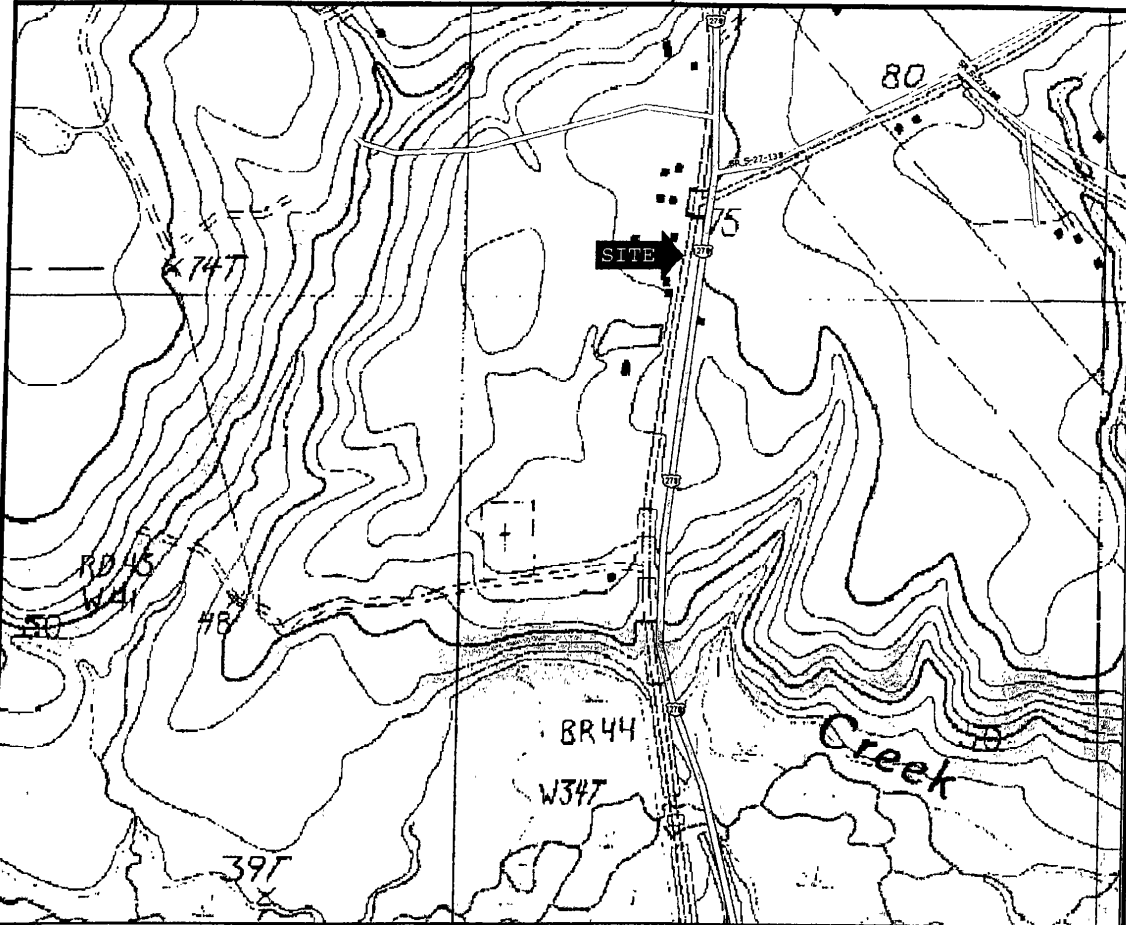
UST Permit #: 18856

Cost Agreement #: Proposal

ITEM	QUANTITY	UNIT	UNIT PRICE		TOTAL
1. Plan*					
A1. Site Specific Work Plan	1	each	\$0.00		\$0.00
C1. QAPP Appendix B		each	\$0.00		\$0.00
2. A1. Receptor Survey		each	\$0.00		\$0.00
4. Mob/Demob					
B1. Personnel	2	each	\$350.00		\$700.00
10. Groundwater Sample Collection / Gauge Depth to Water or Product (Each)					
A1. Groundwater Purge	23	per well	\$16.00		\$368.00
B1. Air or Vapors		samples	\$0.00		\$0.00
C1. Water Supply	7	samples	\$5.00		\$35.00
D1. Groundwater No Purge or Duplicate		per well	\$8.00		\$0.00
E1. Gauge Well only		per well	\$0.00		\$0.00
F1. Sample Below Product		per well	\$0.00		\$0.00
G1. Pasive Diffusion Bag		each	\$20.00		\$0.00
H1. Field Blank	1	each	\$10.00		\$10.00
17. Disposal* (gallons or tons)					
AA. Disposal/Water	300	gallons	\$1.00		\$300.00
BB. Free Product		gallons	\$0.00		\$0.00
Note: Rate includes costs or rental of suitable container(s)					
23. D. Site Reconnaissance	1	each	\$0.00		\$0.00
18. Miscellaneous (attach receipts)					
GW Contour Map		each	\$25.00		\$0.00
Isopleth Map		each	\$25.00		\$0.00
High-Strength Well Pad Replacement		each	\$75.00		\$0.00
Data Table		each	\$25.00		\$0.00
25. Well Repair					
B1. Repair 2x2 MW Pad		each	\$75.00		\$0.00
C1. Repair 4x4 MW Pad		each	\$75.00		\$0.00
D1. Replace Well Vault		each	\$75.00		\$0.00
E. Replace well cover	1	each	\$25.00		\$25.00
F1. Replace well cover bolts		each	\$2.60		\$0.00
G. Replace locking well cap & lock		each	\$15.00		\$0.00
K1. Replace Missing Well ID Plate		each	\$10.00		\$0.00
TOTAL					\$1,438.00

*The appropriate mobilization cost can be added to complete these tasks, as necessary

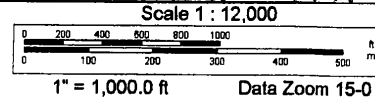
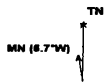
FIGURE 1
Site Location Map



Data use subject to license.

© DeLorme. DeLorme Topo USA® 7.0.

www.delorme.com



CRAWFORD
ENVIRONMENTAL
SERVICES

Division of C.F.Crawford, Inc.
104 Corporate Blvd.,
West Columbia, SC 29169

803-708-0079 (office) 803-708-8137 (fax)

GRAYS, SOUTH CAROLINA

Source: DeLorme Topo USA 7.0
Scale: 1:12,000 Contour Interval: 10 Feet

Steady Simmons
16661 Grays Highway
Early Branch, SC 29916-08016
UST Permit: 18856

Project: Tier II Assessment





Client: SCDHEC

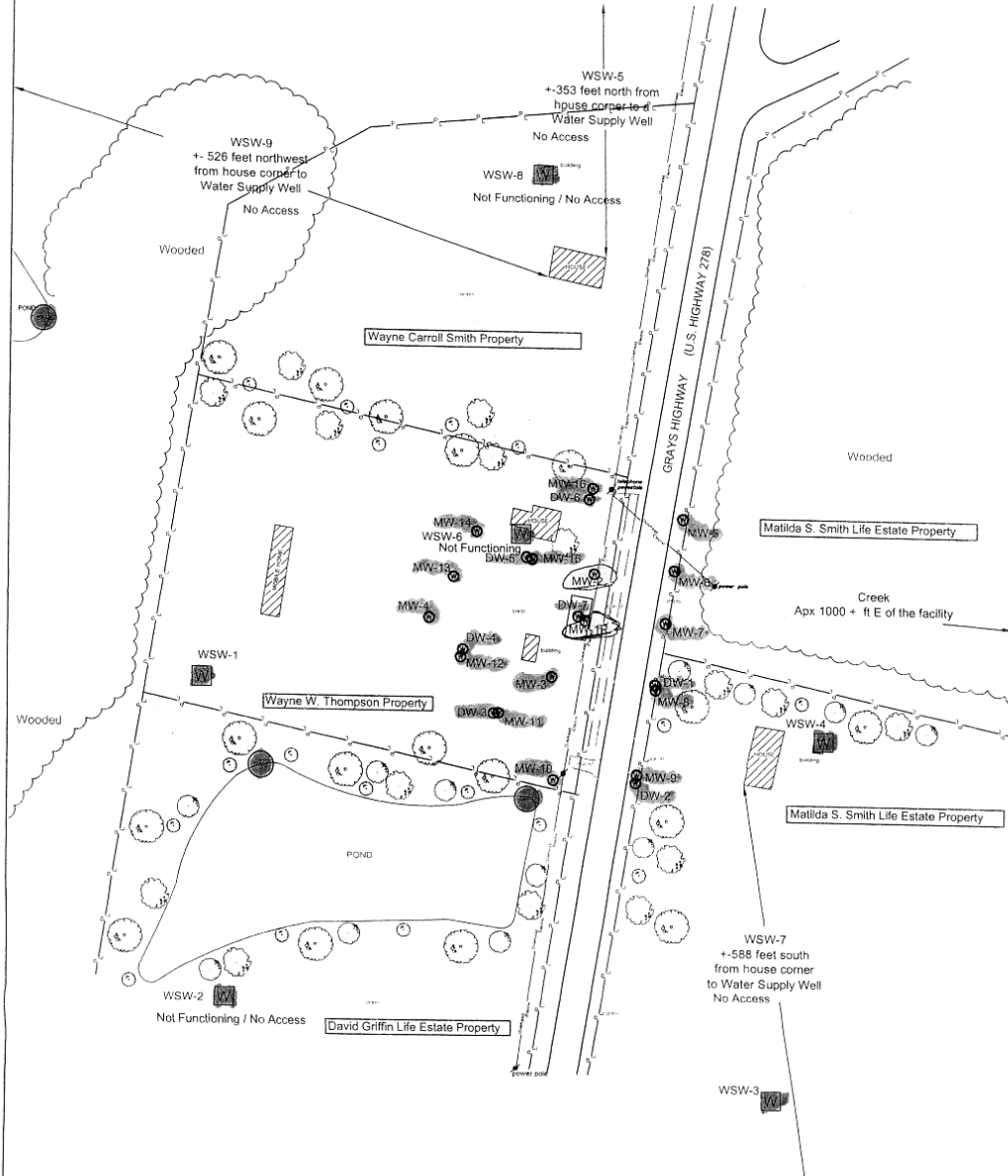
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




Date: January 2012



7/11 5/7/12

-  - TRBSLS
-  - VRBSLS
-  - EDB TRBSLS
-  - receptors



	<p>Notes</p> <p>1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes</p>	<p>Legend</p> <ul style="list-style-type: none">  UST Basin  Building  Monitoring Well  Water Supply Well  Property Line Surface Water Sample 	<p style="text-align: center;">Figure 2 Site Facility Base Map Steady Simmons 16661 Grays Highway Early Branch, SC 29916</p>						
	<p>GRAPHIC SCALE</p> <p>0 40 80 160</p> <p style="text-align: center;">(In Feet)</p>	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Project Mgr: JSR</td> <td style="width: 50%;">Project No: 15.103</td> </tr> <tr> <td>Drawn by: JSR</td> <td>Date: 5/4/12</td> </tr> <tr> <td>Checked by: HDO</td> <td>Revision: 0</td> </tr> <tr> <td colspan="2" style="font-size: small;"> 104 Corporate Blvd, Suite 412 West Columbia, SC 29201 803-708-0070 (ph) 803-708-8136 (fx) </td> </tr> </table>	Project Mgr: JSR	Project No: 15.103	Drawn by: JSR	Date: 5/4/12	Checked by: HDO	Revision: 0	104 Corporate Blvd, Suite 412 West Columbia, SC 29201 803-708-0070 (ph) 803-708-8136 (fx)
Project Mgr: JSR	Project No: 15.103								
Drawn by: JSR	Date: 5/4/12								
Checked by: HDO	Revision: 0								
104 Corporate Blvd, Suite 412 West Columbia, SC 29201 803-708-0070 (ph) 803-708-8136 (fx)									



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

13-4614

RECEIVED
DEC 08 2014

BY:.....

**BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071**

DEC 05 2014



Re: **Notice to Proceed-Site Specific Work Plan Approval**
Groundwater Sampling Contract
Solicitation # IFB-5400007403, PO#4600368640
Steady Simmons, 16661 Grays Hwy, Early Branch, SC
UST Permit #18856; CA #48806 (Pace CA #48807)
Jasper County

Dear Mr. Shane:

In accordance with bid solicitation #IFB-5400007403 and the UST Management Division Quality Assurance Program Plan (QAPP), the Site-Specific Work Plan has been reviewed and approved. In accordance with the approved ACQAP, a status report of the project should be provided on a weekly basis via e-mail. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered, including quality assurance problems, the actions taken, and the results must be included in the final report submitted to the UST Management Division.

MECI will perform services at the site on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the final report. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs.

Please note, sampling should be conducted within 15 calendar days from the date of this letter. The final report is due within 3 weeks from the date the site is sampled. If the site is not sampled by the specified due date or the report is not received in the specified time period, a late fee may be imposed. The final report should contain the requirements of Section III.2.15 of the bid solicitation. The final report should be submitted to Debra Thoma, the contract manager.

Page 2

If you have any site-specific questions, please contact me at (803) 898-7542 or via e-mail at hornosms@dhec.sc.gov. If you have any contract specific questions, please contact Debra Thoma at (803) 898-0631 or via e-mail at thomadl@dhec.sc.gov.

Sincerely,



Minda Hornosky, Hydrogeologist
Assessment/Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Approved Cost Agreement (both CAs)

cc: Debra Thoma, Corrective Action Section, UST Management Division (w/o encs.)
Angela Baioni, Pace Analytical Services, 9800 Kincey Ave, Ste 100, Huntersville, NC, 28078
(w/ approved CA)
Technical Files (w/ encs.)

Approved Cost Agreement 48807

Facility: 18856 STEADY SIMMONS

HORNOSMS

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
11 ANALYSES	GW GROUNDWATER	A2 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	32.0000	19.00	608.00
Total Amount					608.00

Approved Cost Agreement 48806

Facility: 18856 STEADY SIMMONS

HORNOSMS

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
04 MOB/DEMOB		B1 PERSONNEL	2.0000	350.00	700.00
10 SAMPLE COLLECTION		A1 GROUNDWATER (PURGE)	23.0000	16.00	368.00
		C1 WATER SUPPLY	7.0000	5.00	35.00
		H1 FIELD BLANK	1.0000	10.00	10.00
17 DISPOSAL		AA WASTEWATER	300.0000	1.00	300.00
18 MISCELLANEOUS		SITE RECONNAISSANCE	1.0000	0.00	0.00
		SITE SPECIFIC WORK PLAN	1.0000	0.00	0.00
25 WELL REPAIR		E REPLACE WELL COVER & GASKET	1.0000	25.00	25.00
				Total Amount	1,438.00



February 4, 2015



Mr. John C. Bryant, Hydrogeologist
Corrective Action Section
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Subject: Report of Groundwater Sampling
Steady Simmons
16661 Grays Highway
Early Branch, South Carolina
SCDHEC Site ID Number 18856; CA # 48806
MECI Project Number 14-4978
Certified Site Rehabilitation Contractor UCC-0009



Dear Mr. Bryant,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Groundwater Sampling for the referenced site. This report describes site activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control's (SCDHEC) Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP).

PROJECT INFORMATION

The subject site (Steady Simmons) is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The subject site formerly maintained one 1,000 gallon gasoline underground storage tank (UST), and one 550 gallon gasoline UST. The subject tanks were abandoned by removal from the ground in July of 2002. The South Carolina Department of Health and Environmental Control reported a release of petroleum product in September of 2002 and confirmed the release in October of 2002. The site is currently rated a Class 2BB.

The above information is based on reports and correspondence obtained from MECI field notes and SCDHEC files.

MONITORING WELL SAMPLING AND CHEMICAL ANALYSIS

On January 27, 2015, MECI personnel collected groundwater samples from twenty-three (23) monitoring wells, four (4) water supply wells, and three (3) surface water samples at the subject site. Water supply wells WSW-5 and WSW-9 were unable to be sampled because they were behind locked gates. Water supply wells WSW-6, WSW-7, and WSW-8 were not operational. MECI

personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase petroleum product level measurements. Since it has been less than one year between sampling events for the subject site, only wells with a depth to groundwater which did not bracket the screen needed to be purged. Eleven (11) monitoring wells were purged prior to sampling. Purging was completed by bailing at least five well volumes of water from the well or until pH, conductivity, dissolved oxygen and turbidity stabilized, whichever occurred first. Sampling/purging was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. A new set of nitrile gloves were worn at each monitoring well, and at all time samples were handled. Field measurements of pH, conductivity, dissolved oxygen, and water temperature were obtained before well sampling process. MECI utilized YSI550A meter for DO (mg/L) and temperature readings (°C) and YSI63 meters for pH and conductivity (uS) readings. The attached Field Data Information Sheets presents the results of the field measurements obtained. The wells were sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP, Revision 2.0) and MECI's Standard Operating Procedures (MECI SOP, January 2014).

Groundwater samples obtained were sent to PACE Analytical Services, Inc. of Huntersville, NC (SCDHEC Laboratory Certification #99006) for analysis.

The following sampling matrix contains well development and requested analyses for each well during the sampling event:

Monitoring Well	Purge	No Purge	Not Sampled	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
	Analyte Sampled													
MW-1R		X			X		X	X						
MW-2		X			X		X	X	X					
MW-3		X			X		X	X						
MW-4	X				X		X	X						
MW-5		X			X		X	X	X					
MW-6		X			X		X	X	X					
MW-7		X			X		X	X	X					
MW-8		X			X		X	X						
MW-9		X			X		X	X						
MW-10	X				X		X	X	X					
MW-11		X			X		X	X	X					
MW-12		X			X		X	X						
MW-13		X			X		X	X	X					
MW-14		X			X		X	X	X					
MW-15	X				X		X	X	X					
MW-16	X				X		X	X	X					

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dichloroethane
PAH = polycyclic aromatic hydrocarbons
Trip Blank provided by Pace Analytical, temperature obtained upon receipt at Laboratory

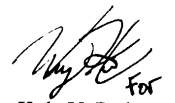
Monitoring Well	Purge	No Purge	Not Sampled	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 3752)	Nitrate (EPA Method 3852)	Methane (BS&K Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
Analyte Sampled														
DW-1	X				X		X	X						
DW-2	X				X		X	X						
DW-3	X				X		X	X						
DW-4	X				X		X	X						
DW-5	X				X		X	X						
DW-6	X				X		X	X						
DW-7	X				X		X	X						
WSW-1					X		X	X						
WSW-2					X		X	X						
WSW-3					X		X	X						
WSW-4					X		X	X						
WSW-5			X											
WSW-6			X											
WSW-7			X											
WSW-8			X											
WSW-9			X											
SW-1					X		X	X						
SW-2					X		X	X						
SW-3					X		X	X						
MW-1R Dup.					X		X	X						
MW-3 Dup.					X		X	X						
Field Blank					X	X	X	X						
Trip Blank					X		X	X						


Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dichloroethane
PAH = polycyclic aromatic hydrocarbons
Trip Blank provided by Pace Analytical, temperature obtained upon receipt at Laboratory

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 104.5 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is attached at the end of this report.

Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.


Kyle V. Pudney
Project Biologist


Jeff L. Coleman
Senior Scientist

Attachments:

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	X		
2	Is UST Owner/Operator name, address, & phone number provided?			X
3	Is name, address, & phone number of current property owner provided?			X
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	X		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?			X
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	X		
7	Has the facility history been summarized?	X		
8	Has the regional geology and hydrogeology been described?			X
9	Are the receptor survey results provided as required?			X
10	Has current use of the site and adjacent land been described?			X
11	Has the site-specific geology and hydrogeology been described?			X
12	Has the primary soil type been described?			X
13	Have field screening results been described?			X
14	Has a description of the soil sample collection and preservation been detailed?			X
15	Has the field screening methodology and procedure been detailed?			X
16	Has the monitoring well installation and development dates been provided?			X
17	Has the method of well development been detailed?			X
18	Has justification been provided for the locations of the monitoring wells?			X
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?			X
20	Has the groundwater sampling methodology been detailed? See MECI SOP	X		
21	Have the groundwater sampling dates and groundwater measurements been provided? See attached Site Activity Summary Sheet	X		
22	Has the purging methodology been detailed? See MECI SOP	X		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? See attached Field Data Information Sheets	X		
24	If free-product is present, has the thickness been provided? See attached Site Activity Summary Sheets	X		
25	Does the report include a brief discussion of the assessment done and the results?			X
26	Does the report include a brief discussion of the aquifer evaluation and results?			X
27	Does the report include a brief discussion of the fate & transport models used?			X

Item#	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			X
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			X
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			X
31	Have recommendations for further action been provided and explained?			X
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			X
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)			X
34	Has the current and historical laboratory data been provided in tabular format?			X
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			X
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			X
37	Has the topographic map been provided with all required elements? (Figure 1)	X		
38	Has the site base map been provided with all required elements? (Figure 2)	X		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)			X
40	Has the site potentiometric map been provided? (Figure 5)			X
41	Have the geologic cross-sections been provided? (Figure 6)			X
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			X
43	Has the site survey been provided and include all necessary elements? (Appendix A)			X
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	X		
45	Is the laboratory performing the analyses properly certified?	X		
46	Has the tax map been included with all necessary elements? (Appendix C)			X
47	Have the soil boring/field screening logs been provided? (Appendix D)			X
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)			X
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			X
50	Have the disposal manifests been provided? See attached	X		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			X
52	Has all fate and transport modeling been provided? (Appendix I)			X
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			X
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	X		

Site Activity Summary

UST Permit #: 18856
Facility Name: Steady Simmons
County: Jasper
Field Personnel: W. Huss, A. Best


 231 Dooley Road, Lexington, SC 29073
 (803) 808-2043 Fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-1R	Y	1/27/15	14:34	7-17	***	7.55	***	0.97	***	Odor / Duplicated / No-Purge Sample
MW-2	Y	1/27/15	14:41	7-17	***	7.25	***	1.06	***	Odor / No-Purge Sample
MW-3	Y	1/27/15	12:49	7-17	***	7.31	***	1.94	***	No Odor / Duplicated / No-Purge Sample
MW-4	Y	1/27/15	13:43	7-17	***	5.91	***	2.34	2.00	No Odor
MW-5	Y	1/27/15	10:17	5-15	***	6.22	***	3.23	***	No Odor / No-Purge Sample
MW-6	Y	1/27/15	10:12	5-15	***	6.24	***	2.62	***	No Odor / No-Purge Sample
MW-7	Y	1/27/15	10:22	5-15	***	6.20	***	2.19	***	No Odor / No-Purge Sample
MW-8	Y	1/27/15	10:26	5-15	***	5.89	***	2.01	***	No Odor / No-Purge Sample
MW-9	Y	1/27/15	11:07	5-15	***	6.17	***	2.33	***	No Odor / No-Purge Sample
MW-10	Y	1/27/15	11:56	5-15	***	3.25	***	3.43	1.50	No Odor
MW-11	Y	1/27/15	12:07	5-15	***	5.52	***	1.94	***	No Odor / No-Purge Sample
MW-12	Y	1/27/15	13:03	5-15	***	5.21	***	3.33	***	No Odor / No-Purge Sample
MW-13	Y	1/27/15	13:47	5-15	***	5.84	***	2.47	***	No Odor / No-Purge Sample
MW-14	Y	1/27/15	13:55	5-15	***	6.02	***	2.84	***	No Odor / No-Purge Sample
MW-15	Y	1/27/15	14:04	10-20	***	6.14	***	3.03	2.50	No Odor
									6.00	TOTAL GALLONS PURGED

Site Activity Summary

UST Permit #: 18856
Facility Name: Steady Simmons
County: Jasper
Field Personnel: W. Huss, A. Best


**Midlands
Environmental
Consultants, Inc.**
 231 Dooley Road, Lexington, SC 29073
 (803) 808-2043 Fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-16	Y	1/27/15	14:52	10-20	***	6.91	***	2.45	2.00	No Odor
DW-1	Y	1/27/15	10:41	35-40	***	8.96	***	3.93	12.00	No Odor
DW-2	Y	1/27/15	11:00	35-40	***	8.21	***	3.02	14.00	No Odor
DW-3	Y	1/27/15	12:40	35-40	***	7.87	***	3.95	26.50	No Odor
DW-4	Y	1/27/15	13:35	33-38	***	7.54	***	1.95	25.00	No Odor
DW-5	Y	1/27/15	14:14	33-38	***	9.04	***	2.42	5.00	No Odor
DW-6	Y	1/27/15	15:05	31-36	***	8.40	***	2.33	5.00	No Odor
DW-7	Y	1/27/15	14:27	31-36	***	8.50	***	2.09	9.00	No Odor
WSW-1	Y	1/27/15	15:30	***	***	***	***	***	***	Sample Taken From Spigot on Well
WSW-2	Y	1/27/15	11:47	***	***	***	***	***	***	Sample Taken From Spigot on Well
WSW-3	Y	1/27/15	11:24	***	***	***	***	***	***	Sample Taken From Spigot on Well
WSW-4	Y	1/27/15	11:15	***	***	***	***	***	***	Sample Taken From Spigot in Front Yard
WSW-5	N	1/27/15	NS	***	***	NS	***	NS	***	Unable to Sample / Behind Locked Gate
WSW-6	N	1/27/15	NS	***	***	NS	***	NS	***	Not Operational
WSW-7	N	1/27/15	NS	***	***	NS	***	NS	***	Not Operational
									98.50	TOTAL GALLONS PURGED

**South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program
Field Data Information Sheet for Groundwater Sampling**

Date (mm/dd/yy): 1/27/2015

Field Personnel: Adrian Best, Wes Huss

General Weather Conditions: Clear

Ambient Air Temperature: 15.0 °C

Quality Assurance

pH/Conductivity Meter	DO Meter
YSI 63	YSI 550A
09C 101302	04L 2026AK
10K 101895 <u>X</u>	08B 101895 <u>X</u>
07M 100905	04A 0912AI
Calibration Buffer: <u>4, 7, & 10</u>	

Chain of Custody

<u>Relinquished by</u>	<u>Date/Time</u>	<u>Received by</u>	<u>Date/Time</u>
------------------------	------------------	--------------------	------------------

Facility Name: Steady Simmons

Site ID#: 18856 **Monitoring Well #** DW-6

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

*** Free Product Thickness:** _____ feet

Depth to Free Product (DFP) _____ feet

Depth to Ground Water (DGW) 8.40 feet

Total Well Depth (TWD) 36 feet

Length of the water column (LWC=TWD-DGW) 27.6 feet

1 casing volume (CV=LWC X C)= _____ X 0.163 = 4.50 gallons

5 casing volume (5 X CV)= 5 X 4.50 = 22.49 gallons

Total Volume of Water Purged Before Sampling 5 gals.

**If free product is present over 1/8 inch, sampling will not be required.*

Cumulative Volume Purged (gallons)	Initial	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	15:00	15:05					
pH (s.u.)	6.39	6.30					
Specific Conductivity (µmhos/cm)	61.7	52.5					
Water Temperature (°C)	21.0	20.6					
Dissolved Oxygen	2.33	2.39					
Turbidity (NTU)	30.52	55.91					
PID readings, if required							

Remarks: _____ **Sample Time:** 14:14 **Dry at 5.0 Gallons**



February 4, 2015

Re: Treatment of Purge Water
Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID Number 18856
MECI Project Number 14-4978

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

February 4, 2015

A total of 104.5 gallons were treated on January 27, 2015 at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

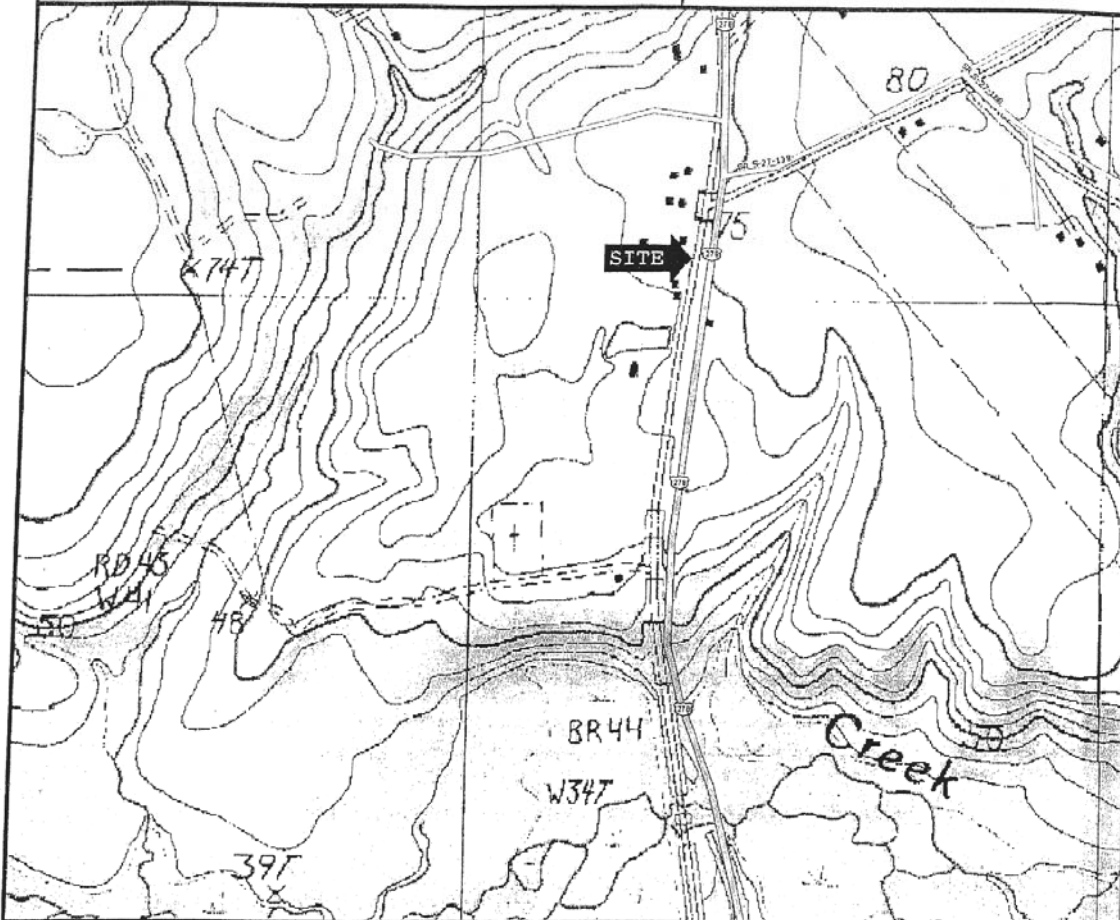
Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

A handwritten signature in black ink, appearing to read 'K. Pudney', with a stylized flourish at the end.

Kyle V. Pudney
Project Biologist

FIGURE 1
Site Location Map

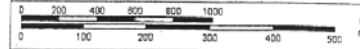


Data use subject to license.

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www.delorme.com

Scale 1 : 12,000



1" = 1,000.0 ft

Data Zoom 15-0

CRAWFORD
ENVIRONMENTAL
SERVICES

Division of C.F.Crawford, Inc.

104 Corporate Blvd.,
West Columbia, SC 29169

803-708-0079 (office) 803-708-8137 (fax)

GRAYS, SOUTH CAROLINA

Source: DeLorme Topo USA 7.0
Scale: 1:12,000 Contour Interval: 10 Feet

Steady Simmons
16661 Grays Highway
Early Branch, SC 29916-08016
UST Permit: 18856

Project: Tier II Assessment





Client: SCDHEC

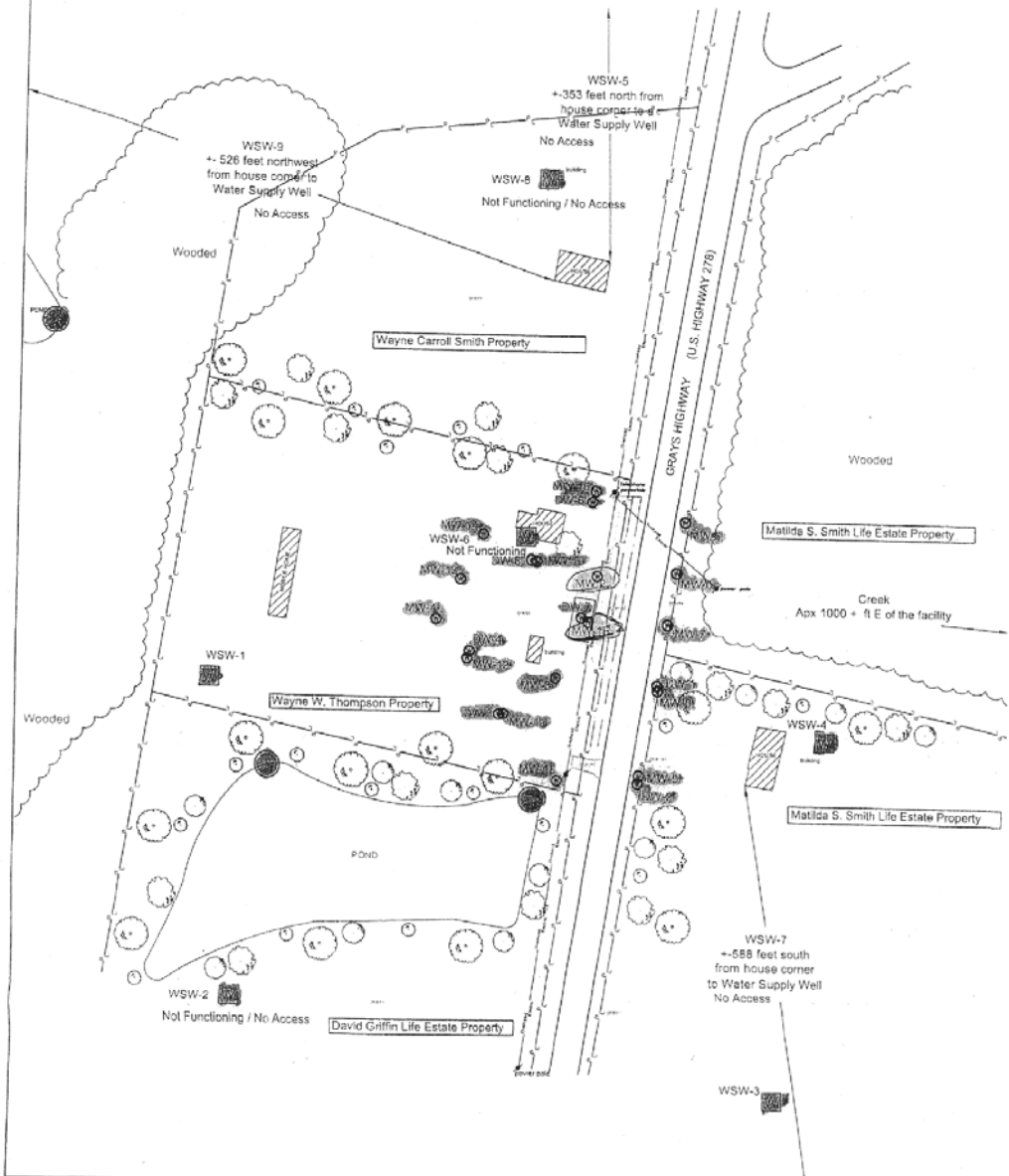
CES Job #: 15.102











Date: January 2012

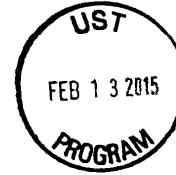


11er 4 5/7/12

-  - TRBSLS
-  - VRBSLS
-  - EDB TRBSLS
-  - receptors



	<p>Notes</p> <p>1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes</p>	<p>Legend</p> <ul style="list-style-type: none">  UST Basin  Building  Monitoring Well  Water Supply Well  Property Line  Surface Water Sample 	<p style="text-align: center;">Figure 2 Site Facility Base Map Steady Simmons 16661 Grays Highway Early Branch, SC 29916</p>											
	<p>GRAPHIC SCALE</p> <p>0 40 80 160</p> <p>(In Feet)</p>	<table border="0" style="width: 100%;"> <tr> <td style="font-size: small;">Project Manager:</td> <td style="font-weight: bold;">JSR</td> <td rowspan="3" style="text-align: center; vertical-align: middle;">  </td> <td style="font-size: small;">Project No:</td> <td>15.103</td> </tr> <tr> <td style="font-size: small;">Drawn by:</td> <td>JSR</td> <td style="font-size: small;">Date:</td> <td>5/4/12</td> </tr> <tr> <td style="font-size: small;">Checked by:</td> <td>HDO</td> <td style="font-size: small;">Revision:</td> <td>0</td> </tr> </table> <p style="font-size: x-small;">154 Corporate Blvd. Suite 412 West Columbia, SC 29221 803-728-0070 (PH) 803-728-8129 (FX)</p> <p style="font-size: x-small;">UST Permit ID: 18856</p>	Project Manager:	JSR		Project No:	15.103	Drawn by:	JSR	Date:	5/4/12	Checked by:	HDO	Revision:
Project Manager:	JSR		Project No:	15.103										
Drawn by:	JSR		Date:	5/4/12										
Checked by:	HDO		Revision:	0										



February 09, 2015

Mr. John Bryant
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201

RE: Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Dear Mr. Bryant:

Enclosed are the analytical results for sample(s) received by the laboratory on January 28, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,



Angela Baioni
angela.baioni@pacelabs.com
Project Manager

Laboratory of
this report
March 13, 2015

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92235469001	MW-1R	Water	01/27/15 14:34	01/28/15 17:10
92235469002	MW-3	Water	01/27/15 12:49	01/28/15 17:10
92235469003	MW-4	Water	01/27/15 13:43	01/28/15 17:10
92235469004	MW-8	Water	01/27/15 10:26	01/28/15 17:10
92235469005	MW-9	Water	01/27/15 11:07	01/28/15 17:10
92235469006	MW-11	Water	01/27/15 12:07	01/28/15 17:10
92235469007	MW-2	Water	01/27/15 14:41	01/28/15 17:10
92235469008	MW-5	Water	01/27/15 10:17	01/28/15 17:10
92235469009	MW-6	Water	01/27/15 10:12	01/28/15 17:10
92235469010	MW-7	Water	01/27/15 10:22	01/28/15 17:10
92235469011	MW-10	Water	01/27/15 11:56	01/28/15 17:10
92235469012	MW-12	Water	01/27/15 13:03	01/28/15 17:10
92235469013	MW-13	Water	01/27/15 13:47	01/28/15 17:10
92235469014	MW-14	Water	01/27/15 13:47	01/28/15 17:40
92235469015	MW-15	Water	01/27/15 14:04	01/28/15 17:10
92235469016	MW-16	Water	01/27/15 14:52	01/28/15 17:10
92235469017	DW-1	Water	01/27/15 10:41	01/28/15 17:10
92235469018	DW-2	Water	01/27/15 11:00	01/28/15 17:10
92235469019	DW-3	Water	01/27/15 12:40	01/28/15 17:10
92235469020	DW-4	Water	01/27/15 13:35	01/28/15 17:10
92235469021	DW-5	Water	01/27/15 14:14	01/28/15 17:10
92235469022	DW-6	Water	01/27/15 15:05	01/28/15 17:10
92235469023	DW-7	Water	01/27/15 14:27	01/28/15 17:10
92235469024	WSW-1	Water	01/27/15 15:30	01/28/15 17:10
92235469025	WSW-2	Water	01/27/15 11:47	01/28/15 17:10
92235469026	WSW-3	Water	01/27/15 11:24	01/28/15 17:10
92235469027	WSW-4	Water	01/27/15 11:15	01/28/15 17:10
92235469028	SW-1	Water	01/27/15 11:31	01/28/15 17:10
92235469029	SW-2	Water	01/27/15 11:39	01/28/15 17:10
92235469030	SW-3	Water	01/27/15 15:11	01/28/15 17:10
92235469031	MW-1R DUP	Water	01/27/15 14:34	01/28/15 17:10
92235469032	MW-3 DUP	Water	01/27/15 14:41	01/28/15 17:10
92235469033	FIELD BLANK	Water	01/27/15 11:00	01/28/15 17:10
92235469034	TRIP BLANK	Water	01/27/15 11:00	01/28/15 17:10

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SAMPLE ANALYTE COUNT

Project Steady Simmons 18856/48807
Pace Project No. 92235469

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92235469001	MW-1R	EPA 8260	CCL	20	PASI-C
92235469002	MW-3	EPA 8260	CCL	20	PASI-C
92235469003	MW-4	EPA 8260	CCL	20	PASI-C
92235469004	MW-8	EPA 8260	CCL	20	PASI-C
92235469005	MW-9	EPA 8260	CCL	20	PASI-C
92235469006	MW-11	EPA 8260	CCL	20	PASI-C
92235469007	MW-2	EPA 8011	JMC	2	PASI-C
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92235469008	MW-5	EPA 6010	JMW	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92235469009	MW-6	EPA 6010	JMW	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92235469010	MW-7	EPA 6010	JMW	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92235469011	MW-10	EPA 6010	JMW	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92235469012	MW-12	EPA 6010	JMW	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92235469013	MW-13	EPA 6010	JMW	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92235469014	MW-14	EPA 6010	JMW	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92235469015	MW-15	EPA 6010	JMW	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92235469016	MW-16	EPA 6010	JMW	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92235469017	DW-1	EPA 8260	CCL	20	PASI-C
92235469018	DW-2	EPA 8260	CCL	20	PASI-C
92235469019	DW-3	EPA 8260	CCL	20	PASI-C
92235469020	DW-4	EPA 8260	CCL	20	PASI-C
92235469021	DW-5	EPA 8260	CCL	20	PASI-C
92235469022	DW-6	EPA 8260	CCL	20	PASI-C
92235469023	DW-7	EPA 8260	CCL	20	PASI-C
92235469024	WSW-1	EPA 8260	GAW	20	PASI-C
92235469025	WSW-2	EPA 8260	GAW	20	PASI-C
92235469026	WSW-3	EPA 8260	GAW	20	PASI-C

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SAMPLE ANALYTE COUNT

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92235469027	WSW-4	EPA 8260	GAW	20	PASI-C
92235469028	SW-1	EPA 8260	GAW	20	PASI-C
92235469029	SW-2	EPA 8260	GAW	20	PASI-C
92235469030	SW-3	EPA 8260	GAW	20	PASI-C
92235469031	MW-1R DUP	EPA 8260	CCL	20	PASI-C
92235469032	MW-3 DUP	EPA 8260	CCL	20	PASI-C
92235469033	FIELD BLANK	EPA 8011	JMC	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92235469034	TRIP BLANK	EPA 8260	CCL	20	PASI-C

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SUMMARY OF DETECTION

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92235469001	MW-1R					
EPA 8260	Benzene	3.2J	ug/L	5.0	02/07/15 23:28	
EPA 8260	Ethylbenzene	85.3	ug/L	5.0	02/07/15 23:28	
EPA 8260	Naphthalene	62.8	ug/L	5.0	02/07/15 23:28	
EPA 8260	Toluene	69.8	ug/L	5.0	02/07/15 23:28	
EPA 8260	Xylene (Total)	348	ug/L	10.0	02/07/15 23:28	
EPA 8260	m&p-Xylene	195	ug/L	10.0	02/07/15 23:28	
EPA 8260	o-Xylene	153	ug/L	5.0	02/07/15 23:28	
92235469006	MW-11					
EPA 8260	Toluene	2.8J	ug/L	5.0	02/08/15 03:24	
EPA 8260	m&p-Xylene	3.9J	ug/L	10.0	02/08/15 03:24	
EPA 8260	o-Xylene	2.3J	ug/L	5.0	02/08/15 03:24	
92235469007	MW-2					
EPA 8011	1,2-Dibromoethane (EDB)	3.1	ug/L	0.098	02/03/15 12:04	
EPA 6010	Lead	21.3	ug/L	5.0	01/30/15 23:06	
EPA 8260	Benzene	732	ug/L	25.0	02/08/15 03:08	
EPA 8260	Ethylbenzene	899	ug/L	25.0	02/08/15 03:08	
EPA 8260	Naphthalene	314	ug/L	25.0	02/08/15 03:08	
EPA 8260	Toluene	4550	ug/L	125	02/09/15 15:17	
EPA 8260	Xylene (Total)	5470	ug/L	250	02/09/15 15:17	
EPA 8260	m&p-Xylene	3480	ug/L	250	02/09/15 15:17	
EPA 8260	o-Xylene	2000	ug/L	125	02/09/15 15:17	
92235469008	MW-5					
EPA 6010	Lead	42.3	ug/L	5.0	01/30/15 23:15	
92235469009	MW-6					
EPA 6010	Lead	2.8J	ug/L	5.0	01/30/15 23:18	
92235469011	MW-10					
EPA 6010	Lead	15.3	ug/L	5.0	01/30/15 23:34	
92235469014	MW-14					
EPA 6010	Lead	2.9J	ug/L	5.0	01/30/15 23:43	
92235469015	MW-15					
EPA 6010	Lead	4.3J	ug/L	5.0	01/30/15 23:46	
92235469031	MW-1R DUP					
EPA 8260	Benzene	3.6J	ug/L	5.0	02/08/15 11:02	
EPA 8260	Ethylbenzene	85.8	ug/L	5.0	02/08/15 11:02	
EPA 8260	Naphthalene	65.7	ug/L	5.0	02/08/15 11:02	
EPA 8260	Toluene	72.9	ug/L	5.0	02/08/15 11:02	
EPA 8260	Xylene (Total)	357	ug/L	10.0	02/08/15 11:02	
EPA 8260	m&p-Xylene	199	ug/L	10.0	02/08/15 11:02	
EPA 8260	o-Xylene	158	ug/L	5.0	02/08/15 11:02	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No 92235469

Sample: MW-1R Lab ID: 92235469001 Collected: 01/27/15 14:34 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/07/15 23:28	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/07/15 23:28	994-05-8	
Benzene	3.2J	ug/L	5.0	1.7	1		02/07/15 23:28	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/07/15 23:28	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/07/15 23:28	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/07/15 23:28	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/07/15 23:28	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/07/15 23:28	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/07/15 23:28	64-17-5	
Ethylbenzene	85.3	ug/L	5.0	1.6	1		02/07/15 23:28	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/07/15 23:28	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/07/15 23:28	1634-04-4	
Naphthalene	62.8	ug/L	5.0	2.0	1		02/07/15 23:28	91-20-3	
Toluene	69.8	ug/L	5.0	1.6	1		02/07/15 23:28	108-88-3	
Xylene (Total)	348	ug/L	10.0	2.7	1		02/07/15 23:28	1330-20-7	
m&p-Xylene	195	ug/L	10.0	3.1	1		02/07/15 23:28	179601-23-1	
o-Xylene	153	ug/L	5.0	1.6	1		02/07/15 23:28	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	86	%	70-130		1		02/07/15 23:28	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		02/07/15 23:28	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/07/15 23:28	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No : 92235469

Sample: MW-3 Lab ID: 92235469002 Collected: 01/27/15 12:49 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV									
Analytical Method EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/07/15 20:05	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/07/15 20:05	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/07/15 20:05	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/07/15 20:05	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/07/15 20:05	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/07/15 20:05	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/07/15 20:05	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/07/15 20:05	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/07/15 20:05	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/07/15 20:05	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/07/15 20:05	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/07/15 20:05	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/07/15 20:05	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/07/15 20:05	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/07/15 20:05	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/07/15 20:05	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/07/15 20:05	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	85 %		70-130		1		02/07/15 20:05	460-00-4	
1,2-Dichloroethane-d4 (S)	108 %		70-130		1		02/07/15 20:05	17060-07-0	
Toluene-d8 (S)	101 %		70-130		1		02/07/15 20:05	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807

Pace Project No: 92235469

Sample: MW-4 Lab ID: 92235469003 Collected: 01/27/15 13:43 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/07/15 20:22	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/07/15 20:22	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/07/15 20:22	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/07/15 20:22	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/07/15 20:22	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/07/15 20:22	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/07/15 20:22	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/07/15 20:22	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/07/15 20:22	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/07/15 20:22	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/07/15 20:22	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/07/15 20:22	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/07/15 20:22	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/07/15 20:22	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/07/15 20:22	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/07/15 20:22	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/07/15 20:22	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	83 %		70-130		1		02/07/15 20:22	460-00-4	
1,2-Dichloroethane-d4 (S)	109 %		70-130		1		02/07/15 20:22	17060-07-0	
Toluene-d8 (S)	100 %		70-130		1		02/07/15 20:22	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Sample: MW-8 **Lab ID: 92235469004** Collected: 01/27/15 10:26 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/07/15 20:39	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/07/15 20:39	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/07/15 20:39	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/07/15 20:39	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/07/15 20:39	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/07/15 20:39	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/07/15 20:39	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/07/15 20:39	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/07/15 20:39	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/07/15 20:39	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/07/15 20:39	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/07/15 20:39	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/07/15 20:39	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/07/15 20:39	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/07/15 20:39	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/07/15 20:39	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/07/15 20:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	84	%	70-130		1		02/07/15 20:39	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		02/07/15 20:39	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/07/15 20:39	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807

Pace Project No.: 92235469

Sample: MW-9 **Lab ID: 92235469005** Collected: 01/27/15 11:07 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/07/15 21:46	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/07/15 21:46	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/07/15 21:46	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/07/15 21:46	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/07/15 21:46	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/07/15 21:46	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/07/15 21:46	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/07/15 21:46	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/07/15 21:46	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/07/15 21:46	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/07/15 21:46	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/07/15 21:46	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/07/15 21:46	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/07/15 21:46	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/07/15 21:46	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/07/15 21:46	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/07/15 21:46	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	83	%	70-130		1		02/07/15 21:46	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		02/07/15 21:46	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/07/15 21:46	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Sample: MW-11 **Lab ID: 92235469006** Collected: 01/27/15 12:07 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 03:24	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 03:24	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 03:24	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 03:24	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 03:24	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 03:24	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 03:24	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 03:24	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 03:24	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 03:24	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 03:24	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 03:24	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 03:24	91-20-3	
Toluene	2.8J	ug/L	5.0	1.6	1		02/08/15 03:24	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 03:24	1330-20-7	
m&p-Xylene	3.9J	ug/L	10.0	3.1	1		02/08/15 03:24	179601-23-1	
o-Xylene	2.3J	ug/L	5.0	1.6	1		02/08/15 03:24	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	70-130		1		02/08/15 03:24	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		02/08/15 03:24	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/08/15 03:24	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807

Pace Project No.: 92235469

Sample: MW-2 Lab ID: 92235469007 Collected: 01/27/15 14:41 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	3.1	ug/L	0.098	0.098	5	02/02/15 14:24	02/03/15 12:04	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	0	%	60-140		5	02/02/15 14:24	02/03/15 12:04	301-79-56	S4
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	21.3	ug/L	5.0	2.5	1	01/30/15 15:10	01/30/15 23:06	7439-92-1	
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	500	384	5		02/08/15 03:08	75-85-4	
tert-Amylmethyl ether	ND	ug/L	50.0	17.0	5		02/08/15 03:08	994-05-8	
Benzene	732	ug/L	25.0	8.5	5		02/08/15 03:08	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	500	160	5		02/08/15 03:08	624-95-3	
tert-Butyl Alcohol	ND	ug/L	500	288	5		02/08/15 03:08	75-65-0	
tert-Butyl Formate	ND	ug/L	250	36.5	5		02/08/15 03:08	762-75-4	
1,2-Dichloroethane	ND	ug/L	25.0	9.0	5		02/08/15 03:08	107-06-2	
Diisopropyl ether	ND	ug/L	25.0	8.5	5		02/08/15 03:08	108-20-3	
Ethanol	ND	ug/L	1000	689	5		02/08/15 03:08	64-17-5	
Ethylbenzene	899	ug/L	25.0	8.0	5		02/08/15 03:08	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	50.0	18.0	5		02/08/15 03:08	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	25.0	8.5	5		02/08/15 03:08	1634-04-4	
Naphthalene	314	ug/L	25.0	10.0	5		02/08/15 03:08	91-20-3	
Toluene	4550	ug/L	125	40.0	25		02/09/15 15:17	108-88-3	
Xylene (Total)	5470	ug/L	250	67.5	25		02/09/15 15:17	1330-20-7	
m&p-Xylene	3480	ug/L	250	77.5	25		02/09/15 15:17	179601-23-1	
o-Xylene	2000	ug/L	125	40.0	25		02/09/15 15:17	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	85	%	70-130		5		02/08/15 03:08	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		5		02/08/15 03:08	17060-07-0	
Toluene-d8 (S)	101	%	70-130		5		02/08/15 03:08	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-5 Lab ID: 92235469008 Collected: 01/27/15 10:17 Received: 01/28/15 17:10 Matrix: Water									
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	42.3	ug/L	5.0	2.5	1	01/30/15 15:10	01/30/15 23:15	7439-92-1	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/07/15 23:45	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/07/15 23:45	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/07/15 23:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/07/15 23:45	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/07/15 23:45	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/07/15 23:45	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/07/15 23:45	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/07/15 23:45	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/07/15 23:45	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/07/15 23:45	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/07/15 23:45	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/07/15 23:45	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/07/15 23:45	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/07/15 23:45	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/07/15 23:45	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/07/15 23:45	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/07/15 23:45	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	84	%	70-130		1		02/07/15 23:45	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		02/07/15 23:45	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/07/15 23:45	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807

Pace Project No.: 92235469

Sample: MW-6 **Lab ID: 92235469009** Collected: 01/27/15 10:12 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	2.8J	ug/L	5.0	2.5	1	01/30/15 15:10	01/30/15 23:18	7439-92-1	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 00:02	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 00:02	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 00:02	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 00:02	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 00:02	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 00:02	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 00:02	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 00:02	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 00:02	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 00:02	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 00:02	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 00:02	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 00:02	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 00:02	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 00:02	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 00:02	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 00:02	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	83 %		70-130		1		02/08/15 00:02	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		70-130		1		02/08/15 00:02	17060-07-0	
Toluene-d8 (S)	100 %		70-130		1		02/08/15 00:02	2037-26-5	

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ANALYTICAL RESULTS

Project Steady Simmons 18856/48807
Pace Project No : 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-7									
Lab ID: 92235469010 Collected: 01/27/15 10:22 Received: 01/28/15 17:10 Matrix: Water									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
6010 MET ICP									
Lead	ND	ug/L	5.0	2.5	1	01/30/15 15:10	01/30/15 23:21	7439-92-1	
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 00:19	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 00:19	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 00:19	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 00:19	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 00:19	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 00:19	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 00:19	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 00:19	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 00:19	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 00:19	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 00:19	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 00:19	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 00:19	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 00:19	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 00:19	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 00:19	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 00:19	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	84	%	70-130		1		02/08/15 00:19	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		02/08/15 00:19	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/08/15 00:19	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-10									
Lab ID: 92235469011 Collected: 01/27/15 11:56 Received: 01/28/15 17:10 Matrix: Water									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	15.3	ug/L	5.0	2.5	1	01/30/15 15:10	01/30/15 23:34	7439-92-1	
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 00:35	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 00:35	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 00:35	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 00:35	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 00:35	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 00:35	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 00:35	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 00:35	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 00:35	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 00:35	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 00:35	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 00:35	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 00:35	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 00:35	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 00:35	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 00:35	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 00:35	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	70-130		1		02/08/15 00:35	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		02/08/15 00:35	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		02/08/15 00:35	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No: 92235469

Sample: MW-12 Lab ID: 92235469012 Collected: 01/27/15 13:03 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
6010 MET ICP									
Lead	ND	ug/L	5.0	2.5	1	01/30/15 15:10	01/30/15 23:37	7439-92-1	
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 00:52	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 00:52	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 00:52	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 00:52	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 00:52	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 00:52	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 00:52	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 00:52	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 00:52	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 00:52	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 00:52	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 00:52	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 00:52	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 00:52	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 00:52	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 00:52	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 00:52	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	85 %		70-130		1		02/08/15 00:52	460-00-4	
1,2-Dichloroethane-d4 (S)	111 %		70-130		1		02/08/15 00:52	17060-07-0	
Toluene-d8 (S)	100 %		70-130		1		02/08/15 00:52	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No: 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-13									
Lab ID: 92235469013 Collected: 01/27/15 13:47 Received: 01/28/15 17:10 Matrix: Water									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	ND	ug/L	5.0	2.5	1	01/30/15 15:10	01/30/15 23:40	7439-92-1	
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 01:26	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 01:26	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 01:26	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 01:26	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 01:26	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 01:26	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 01:26	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 01:26	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 01:26	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 01:26	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 01:26	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 01:26	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 01:26	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 01:26	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 01:26	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 01:26	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 01:26	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	83	%	70-130		1		02/08/15 01:26	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		02/08/15 01:26	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/08/15 01:26	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807

Pace Project No : 92235469

Sample: MW-14 **Lab ID: 92235469014** Collected: 01/27/15 13:47 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	2.9J	ug/L	5.0	2.5	1	01/30/15 15:10	01/30/15 23:43	7439-92-1	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 01:43	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 01:43	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 01:43	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 01:43	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 01:43	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 01:43	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 01:43	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 01:43	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 01:43	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 01:43	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 01:43	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 01:43	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 01:43	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 01:43	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 01:43	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 01:43	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 01:43	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	70-130		1		02/08/15 01:43	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		02/08/15 01:43	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/08/15 01:43	2037-26-5	

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ANALYTICAL RESULTS

Project Steady Simmons 18856/48807
Pace Project No.: 92235469

Sample: MW-15		Lab ID: 92235469015	Collected: 01/27/15 14:04	Received: 01/28/15 17:10	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	4.3J	ug/L	5.0	2.5	1	01/30/15 15:10	01/30/15 23:46	7439-92-1	
8260 MSV		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 02:00	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 02:00	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 02:00	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 02:00	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 02:00	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 02:00	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 02:00	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 02:00	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 02:00	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 02:00	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 02:00	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 02:00	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 02:00	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 02:00	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 02:00	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 02:00	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 02:00	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	83	%	70-130		1		02/08/15 02:00	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		02/08/15 02:00	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/08/15 02:00	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Sample: MW-16 Lab ID: 92235469016 Collected: 01/27/15 14:52 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP			Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Lead	ND	ug/L	5.0	2.5	1	01/30/15 15:10	01/30/15 23:49	7439-92-1	
8260 MSV			Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 02:17	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 02:17	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 02:17	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 02:17	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 02:17	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 02:17	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 02:17	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 02:17	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 02:17	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 02:17	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 02:17	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 02:17	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 02:17	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 02:17	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 02:17	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 02:17	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 02:17	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	84	%	70-130		1		02/08/15 02:17	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		02/08/15 02:17	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/08/15 02:17	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No : 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: DW-1									
Lab ID: 92235469017									
Collected: 01/27/15 10:41 Received: 01/28/15 17:10 Matrix: Water									
Analytical Method: EPA 8260									
8260 MSV									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 02:34	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 02:34	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 02:34	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 02:34	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 02:34	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 02:34	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 02:34	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 02:34	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 02:34	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 02:34	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 02:34	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 02:34	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 02:34	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 02:34	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 02:34	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 02:34	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 02:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	83	%	70-130		1		02/08/15 02:34	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		02/08/15 02:34	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/08/15 02:34	2037-26-5	

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ANALYTICAL RESULTS

Project Steady Simmons 18856/48807
Pace Project No.: 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: DW-2 Lab ID: 92235469018 Collected: 01/27/15 11:00 Received: 01/28/15 17:10 Matrix: Water									
Analytical Method: EPA 8260									
8260 MSV									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 02:51	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 02:51	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 02:51	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 02:51	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 02:51	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 02:51	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 02:51	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 02:51	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 02:51	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 02:51	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 02:51	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 02:51	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 02:51	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 02:51	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 02:51	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 02:51	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 02:51	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	84	%	70-130		1		02/08/15 02:51	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		02/08/15 02:51	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/08/15 02:51	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No: 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: DW-3									
Lab ID: 92235469019									
Collected: 01/27/15 12:40									
Received: 01/28/15 17:10									
Matrix: Water									
Analytical Method: EPA 8260									
8260 MSV									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 07:21	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 07:21	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 07:21	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 07:21	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 07:21	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 07:21	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 07:21	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 07:21	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 07:21	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 07:21	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 07:21	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 07:21	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 07:21	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 07:21	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 07:21	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 07:21	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 07:21	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	70-130		1		02/08/15 07:21	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	70-130		1		02/08/15 07:21	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/08/15 07:21	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Sample:	Lab ID:	Collected:	Received:	Matrix:					
DW-4	92235469020	01/27/15 13:35	01/28/15 17:10	Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 11:19	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 11:19	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 11:19	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 11:19	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 11:19	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 11:19	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 11:19	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 11:19	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 11:19	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 11:19	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 11:19	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 11:19	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 11:19	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 11:19	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 11:19	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 11:19	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 11:19	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	70-130		1		02/08/15 11:19	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		02/08/15 11:19	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/08/15 11:19	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: DW-5									
Lab ID: 92235469021 Collected: 01/27/15 14:14 Received: 01/28/15 17:10 Matrix: Water									
Analytical Method: EPA 8260									
8260 MSV									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 07:38	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 07:38	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 07:38	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 07:38	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 07:38	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 07:38	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 07:38	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 07:38	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 07:38	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 07:38	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 07:38	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 07:38	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 07:38	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 07:38	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 07:38	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 07:38	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 07:38	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	70-130		1		02/08/15 07:38	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		02/08/15 07:38	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/08/15 07:38	2037-26-5	

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ANALYTICAL RESULTS

Project Steady Simmons 18856/48807
Pace Project No.: 92235469

Sample: DW-6 Lab ID: 92235469022 Collected: 01/27/15 15:05 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 07:55	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 07:55	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 07:55	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 07:55	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 07:55	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 07:55	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 07:55	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 07:55	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 07:55	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 07:55	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 07:55	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 07:55	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 07:55	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 07:55	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 07:55	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 07:55	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 07:55	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	84 %		70-130		1		02/08/15 07:55	460-00-4	
1,2-Dichloroethane-d4 (S)	115 %		70-130		1		02/08/15 07:55	17060-07-0	
Toluene-d8 (S)	101 %		70-130		1		02/08/15 07:55	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No. 92235469

Sample: DW-7 **Lab ID:** 92235469023 **Collected:** 01/27/15 14:27 **Received:** 01/28/15 17:10 **Matrix:** Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 08:29	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 08:29	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 08:29	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 08:29	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 08:29	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 08:29	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 08:29	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 08:29	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 08:29	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 08:29	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 08:29	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 08:29	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 08:29	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 08:29	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 08:29	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 08:29	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 08:29	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	70-130		1		02/08/15 08:29	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		02/08/15 08:29	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		02/08/15 08:29	2037-26-5	

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ANALYTICAL RESULTS

Project Steady Simmons 18856/48807
Pace Project No : 92235469

Sample: WSW-1 Lab ID: 92235469024 Collected: 01/27/15 15:30 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report		DF	Prepared	Analyzed	CAS No.	Qual
			Limit	MDL					
8260 MSV Low Level SC									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/30/15 21:30	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/30/15 21:30	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		01/30/15 21:30	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/30/15 21:30	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/30/15 21:30	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/30/15 21:30	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/30/15 21:30	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/30/15 21:30	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		01/30/15 21:30	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/30/15 21:30	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/30/15 21:30	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/30/15 21:30	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		01/30/15 21:30	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		01/30/15 21:30	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		01/30/15 21:30	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/30/15 21:30	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/30/15 21:30	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95 %		70-130		1		01/30/15 21:30	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130		1		01/30/15 21:30	17060-07-0	
Toluene-d8 (S)	92 %		70-130		1		01/30/15 21:30	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807

Pace Project No.: 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: WSW-2		Lab ID: 92235469025		Collected: 01/27/15 11:47		Received: 01/28/15 17:10		Matrix: Water	
8260 MSV Low Level SC									
Analytical Method EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/31/15 07:33	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/31/15 07:33	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		01/31/15 07:33	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/31/15 07:33	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/31/15 07:33	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/31/15 07:33	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/31/15 07:33	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/31/15 07:33	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		01/31/15 07:33	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/31/15 07:33	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/31/15 07:33	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/31/15 07:33	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		01/31/15 07:33	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		01/31/15 07:33	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		01/31/15 07:33	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/31/15 07:33	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/31/15 07:33	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	96 %		70-130		1		01/31/15 07:33	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		70-130		1		01/31/15 07:33	17060-07-0	
Toluene-d8 (S)	94 %		70-130		1		01/31/15 07:33	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Sample: WSW-3 Lab ID: 92235469026 Collected: 01/27/15 11:24 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV Low Level SC									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/31/15 07:50	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/31/15 07:50	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		01/31/15 07:50	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/31/15 07:50	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/31/15 07:50	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/31/15 07:50	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/31/15 07:50	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/31/15 07:50	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		01/31/15 07:50	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/31/15 07:50	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/31/15 07:50	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/31/15 07:50	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		01/31/15 07:50	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		01/31/15 07:50	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		01/31/15 07:50	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/31/15 07:50	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/31/15 07:50	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	92 %		70-130		1		01/31/15 07:50	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		70-130		1		01/31/15 07:50	17060-07-0	
Toluene-d8 (S)	94 %		70-130		1		01/31/15 07:50	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No: 92235469

Sample: WSW-4		Lab ID: 92235469027	Collected: 01/27/15 11:15	Received: 01/28/15 17:10	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level SC		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/31/15 08:07	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/31/15 08:07	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		01/31/15 08:07	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/31/15 08:07	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/31/15 08:07	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/31/15 08:07	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/31/15 08:07	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/31/15 08:07	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		01/31/15 08:07	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/31/15 08:07	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/31/15 08:07	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/31/15 08:07	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		01/31/15 08:07	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		01/31/15 08:07	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		01/31/15 08:07	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/31/15 08:07	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/31/15 08:07	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	94 %		70-130		1		01/31/15 08:07	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130		1		01/31/15 08:07	17060-07-0	
Toluene-d8 (S)	94 %		70-130		1		01/31/15 08:07	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: SW-1 Lab ID: 92235469028 Collected: 01/27/15 11:31 Received: 01/28/15 17:10 Matrix: Water									
2260 MSV Low Level SC Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/31/15 08:24	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/31/15 08:24	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		01/31/15 08:24	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/31/15 08:24	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/31/15 08:24	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/31/15 08:24	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/31/15 08:24	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/31/15 08:24	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		01/31/15 08:24	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/31/15 08:24	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/31/15 08:24	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/31/15 08:24	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		01/31/15 08:24	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		01/31/15 08:24	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		01/31/15 08:24	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/31/15 08:24	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/31/15 08:24	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	94 %		70-130		1		01/31/15 08:24	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		70-130		1		01/31/15 08:24	17060-07-0	
Toluene-d8 (S)	94 %		70-130		1		01/31/15 08:24	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Sample: SW-2 Lab ID: 92235469029 Collected: 01/27/15 11:39 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level SC		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/31/15 08:40	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/31/15 08:40	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		01/31/15 08:40	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/31/15 08:40	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/31/15 08:40	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/31/15 08:40	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/31/15 08:40	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/31/15 08:40	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		01/31/15 08:40	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/31/15 08:40	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/31/15 08:40	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/31/15 08:40	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		01/31/15 08:40	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		01/31/15 08:40	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		01/31/15 08:40	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/31/15 08:40	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/31/15 08:40	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97 %		70-130		1		01/31/15 08:40	460-00-4	
1,2-Dichloroethane-d4 (S)	93 %		70-130		1		01/31/15 08:40	17060-07-0	
Toluene-d8 (S)	94 %		70-130		1		01/31/15 08:40	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: SW-3 Lab ID: 92235469030 Collected: 01/27/15 15:11 Received: 01/28/15 17:10 Matrix: Water									
8260 MSV Low Level SC Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/31/15 08:57	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/31/15 08:57	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		01/31/15 08:57	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/31/15 08:57	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/31/15 08:57	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/31/15 08:57	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/31/15 08:57	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/31/15 08:57	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		01/31/15 08:57	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/31/15 08:57	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/31/15 08:57	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		01/31/15 08:57	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		01/31/15 08:57	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		01/31/15 08:57	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		01/31/15 08:57	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		01/31/15 08:57	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		01/31/15 08:57	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	94 %		70-130		1		01/31/15 08:57	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130		1		01/31/15 08:57	17060-07-0	
Toluene-d8 (S)	92 %		70-130		1		01/31/15 08:57	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No. 92235469

Sample: MW-1R DUP Lab ID: 92235469031 Collected: 01/27/15 14:34 Received: 01/28/15 17:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 11:02	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 11:02	994-05-8	
Benzene	3.6J	ug/L	5.0	1.7	1		02/08/15 11:02	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 11:02	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 11:02	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 11:02	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 11:02	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 11:02	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 11:02	64-17-5	
Ethylbenzene	85.8	ug/L	5.0	1.6	1		02/08/15 11:02	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 11:02	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 11:02	1634-04-4	
Naphthalene	65.7	ug/L	5.0	2.0	1		02/08/15 11:02	91-20-3	
Toluene	72.9	ug/L	5.0	1.6	1		02/08/15 11:02	108-88-3	
Xylene (Total)	357	ug/L	10.0	2.7	1		02/08/15 11:02	1330-20-7	
m&p-Xylene	199	ug/L	10.0	3.1	1		02/08/15 11:02	179601-23-1	
o-Xylene	158	ug/L	5.0	1.6	1		02/08/15 11:02	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	83	%	70-130		1		02/08/15 11:02	460-00-4	
1,2-Dichloroethane-d4 (S)	120	%	70-130		1		02/08/15 11:02	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		02/08/15 11:02	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No: 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-3 DUP Lab ID: 92235469032 Collected: 01/27/15 14:41 Received: 01/28/15 17:10 Matrix: Water									
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 08:46	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 08:46	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 08:46	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 08:46	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 08:46	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 08:46	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 08:46	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 08:46	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 08:46	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 08:46	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 08:46	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 08:46	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 08:46	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 08:46	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 08:46	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 08:46	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 08:46	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	83	%	70-130		1		02/08/15 08:46	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	70-130		1		02/08/15 08:46	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/08/15 08:46	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: FIELD BLANK Lab ID: 92235469033 Collected: 01/27/15 11:00 Received: 01/28/15 17:10 Matrix: Water									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
8011 GCS EDB and DBCP									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	02/02/15 14:24	02/02/15 21:21	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	02/02/15 14:24	02/02/15 21:21	301-79-56	
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 06:14	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 06:14	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 06:14	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 06:14	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 06:14	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 06:14	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 06:14	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 06:14	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 06:14	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 06:14	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 06:14	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 06:14	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 06:14	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 06:14	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 06:14	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 06:14	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 06:14	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	81	%	70-130		1		02/08/15 06:14	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		02/08/15 06:14	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/08/15 06:14	2037-26-5	

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ANALYTICAL RESULTS

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: TRIP BLANK Lab ID: 92235469034 Collected: 01/27/15 11:00 Received: 01/28/15 17:10 Matrix: Water									
Analytical Method: EPA 8260									
8260 MSV									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		02/08/15 07:04	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		02/08/15 07:04	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		02/08/15 07:04	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		02/08/15 07:04	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/08/15 07:04	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		02/08/15 07:04	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/08/15 07:04	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/08/15 07:04	108-20-3	
Ethanol	ND	ug/L	200	138	1		02/08/15 07:04	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/08/15 07:04	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		02/08/15 07:04	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/08/15 07:04	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/08/15 07:04	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		02/08/15 07:04	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/15 07:04	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/08/15 07:04	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/08/15 07:04	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	83 %		70-130		1		02/08/15 07:04	460-00-4	
1,2-Dichloroethane-d4 (S)	112 %		70-130		1		02/08/15 07:04	17060-07-0	
Toluene-d8 (S)	101 %		70-130		1		02/08/15 07:04	2037-26-5	

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No: 92235469

QC Batch: MPRP/17809 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 92235469007, 92235469008, 92235469009, 92235469010, 92235469011, 92235469012, 92235469013, 92235469014, 92235469015, 92235469016

METHOD BLANK 1381539 Matrix: Water
Associated Lab Samples: 92235469007, 92235469008, 92235469009, 92235469010, 92235469011, 92235469012, 92235469013, 92235469014, 92235469015, 92235469016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	01/30/15 23:00	

LABORATORY CONTROL SAMPLE 1381540

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	502	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE. 1381541 1381542

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Min RPD	Qualifiers
		92235469007 Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Lead	ug/L	21.3	500	500	518	516	99	99	75-125	0	20		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

QC Batch: MSV/30180 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level SC
Associated Lab Samples: 92235469024

METHOD BLANK: 1381709 Matrix: Water
Associated Lab Samples: 92235469024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1.0	01/30/15 13:25	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	01/30/15 13:25	
Benzene	ug/L	ND	1.0	01/30/15 13:25	
Diisopropyl ether	ug/L	ND	1.0	01/30/15 13:25	
Ethanol	ug/L	92.7J	200	01/30/15 13:25	
Ethyl-tert-butyl ether	ug/L	ND	10.0	01/30/15 13:25	
Ethylbenzene	ug/L	ND	1.0	01/30/15 13:25	
m&p-Xylene	ug/L	ND	2.0	01/30/15 13:25	
Methyl-tert-butyl ether	ug/L	ND	1.0	01/30/15 13:25	
Naphthalene	ug/L	0.39J	1.0	01/30/15 13:25	
o-Xylene	ug/L	ND	1.0	01/30/15 13:25	
tert-Amyl Alcohol	ug/L	ND	100	01/30/15 13:25	
tert-Amylmethyl ether	ug/L	ND	10.0	01/30/15 13:25	
tert-Butyl Alcohol	ug/L	ND	100	01/30/15 13:25	
tert-Butyl Formate	ug/L	ND	50.0	01/30/15 13:25	
Toluene	ug/L	ND	1.0	01/30/15 13:25	
Xylene (Total)	ug/L	ND	2.0	01/30/15 13:25	
1,2-Dichloroethane-d4 (S)	%	96	70-130	01/30/15 13:25	
4-Bromofluorobenzene (S)	%	102	70-130	01/30/15 13:25	
Toluene-d8 (S)	%	96	70-130	01/30/15 13:25	

LABORATORY CONTROL SAMPLE: 1381710

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.4	99	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1180	118	70-130	
Benzene	ug/L	50	54.1	108	70-130	
Diisopropyl ether	ug/L	50	49.2	98	70-130	
Ethanol	ug/L	2000	2400	120	70-130	
Ethyl-tert-butyl ether	ug/L	100	112	112	70-130	
Ethylbenzene	ug/L	50	52.0	104	70-130	
m&p-Xylene	ug/L	100	103	103	70-130	
Methyl-tert-butyl ether	ug/L	50	53.2	106	70-130	
Naphthalene	ug/L	50	59.9	120	70-130	
o-Xylene	ug/L	50	51.8	104	70-130	
tert-Amyl Alcohol	ug/L	1000	1130	113	70-130	
tert-Amylmethyl ether	ug/L	100	107	107	70-130	
tert-Butyl Alcohol	ug/L	500	583	117	70-130	
tert-Butyl Formate	ug/L	400	515	129	70-130	
Toluene	ug/L	50	52.3	105	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

LABORATORY CONTROL SAMPLE: 1381710

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	155	103	70-130	
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE SAMPLE: 1381712

Parameter	Units	92235175002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	23.5	118	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	454	113	70-130	
Benzene	ug/L	3.6	20	28.0	122	70-130	
Disopropyl ether	ug/L	ND	20	22.8	114	70-130	
Ethanol	ug/L	ND	800	1070	134	70-130	M0
Ethyl-tert-butyl ether	ug/L	ND	40	49.6	124	70-130	
Ethylbenzene	ug/L	ND	20	24.6	123	70-130	
m&p-Xylene	ug/L	ND	40	51.7	129	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	22.8	114	70-130	
Naphthalene	ug/L	ND	20	24.5	122	70-130	
o-Xylene	ug/L	ND	20	24.8	123	70-130	
tert-Amyl Alcohol	ug/L	ND	400	451	113	70-130	
tert-Amylmethyl ether	ug/L	ND	40	47.1	118	70-130	
tert-Butyl Alcohol	ug/L	ND	200	266	112	70-130	
tert-Butyl Formate	ug/L	ND	160	218	136	70-130	M0
Toluene	ug/L	ND	20	26.4	131	70-130	M0
1,2-Dichloroethane-d4 (S)	%				98	70-130	
4-Bromofluorobenzene (S)	%				95	70-130	
Toluene-d8 (S)	%				97	70-130	

SAMPLE DUPLICATE: 1381711

Parameter	Units	92235175001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	1.2	1.2	24.6	30	
Disopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	0.32J		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

SAMPLE DUPLICATE: 1381711

Parameter	Units	92235175001 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	41.1J		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	0.28J		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	94	96	2		
4-Bromofluorobenzene (S)	%	93	94	1		
Toluene-d8 (S)	%	92	94	2		

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

QC Batch: MSV/30181 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level SC
Associated Lab Samples: 92235469025, 92235469026, 92235469027, 92235469028, 92235469029, 92235469030

METHOD BLANK: 1381765 Matrix: Water
Associated Lab Samples: 92235469025, 92235469026, 92235469027, 92235469028, 92235469029, 92235469030

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1.0	01/31/15 01:24	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	01/31/15 01:24	
Benzene	ug/L	ND	1.0	01/31/15 01:24	
Diisopropyl ether	ug/L	ND	1.0	01/31/15 01:24	
Ethanol	ug/L	61.5J	200	01/31/15 01:24	
Ethyl-tert-butyl ether	ug/L	ND	10.0	01/31/15 01:24	
Ethylbenzene	ug/L	ND	1.0	01/31/15 01:24	
m&p-Xylene	ug/L	ND	2.0	01/31/15 01:24	
Methyl-tert-butyl ether	ug/L	ND	1.0	01/31/15 01:24	
Naphthalene	ug/L	0.44J	1.0	01/31/15 01:24	
o-Xylene	ug/L	ND	1.0	01/31/15 01:24	
tert-Amyl Alcohol	ug/L	ND	100	01/31/15 01:24	
tert-Amylmethyl ether	ug/L	ND	10.0	01/31/15 01:24	
tert-Butyl Alcohol	ug/L	ND	100	01/31/15 01:24	
tert-Butyl Formate	ug/L	ND	50.0	01/31/15 01:24	
Toluene	ug/L	ND	1.0	01/31/15 01:24	
Xylene (Total)	ug/L	ND	2.0	01/31/15 01:24	
1,2-Dichloroethane-d4 (S)	%	92	70-130	01/31/15 01:24	
4-Bromofluorobenzene (S)	%	103	70-130	01/31/15 01:24	
Toluene-d8 (S)	%	96	70-130	01/31/15 01:24	

LABORATORY CONTROL SAMPLE: 1381766

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.0	98	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1070	107	70-130	
Benzene	ug/L	50	51.8	104	70-130	
Diisopropyl ether	ug/L	50	47.4	95	70-130	
Ethanol	ug/L	2000	1820	91	70-130	
Ethyl-tert-butyl ether	ug/L	100	109	109	70-130	
Ethylbenzene	ug/L	50	50.8	102	70-130	
m&p-Xylene	ug/L	100	103	103	70-130	
Methyl-tert-butyl ether	ug/L	50	51.8	104	70-130	
Naphthalene	ug/L	50	55.0	110	70-130	
o-Xylene	ug/L	50	51.1	102	70-130	
tert-Amyl Alcohol	ug/L	1000	1100	110	70-130	
tert-Amylmethyl ether	ug/L	100	109	109	70-130	
tert-Butyl Alcohol	ug/L	500	561	112	70-130	
tert-Butyl Formate	ug/L	400	490	123	70-130	
Toluene	ug/L	50	52.5	105	70-130	

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No: 92235469

LABORATORY CONTROL SAMPLE: 1381766

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	154	103	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE: 1381768

Parameter	Units	92235176004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	28.2	141	70-130	M0
3,3-Dimethyl-1-Butanol	ug/L	ND	400	385	96	70-130	
Benzene	ug/L	ND	20	22.7	114	70-130	
Diisopropyl ether	ug/L	ND	20	24.0	120	70-130	
Ethanol	ug/L	ND	800	682	85	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	50.9	127	70-130	
Ethylbenzene	ug/L	ND	20	24.2	121	70-130	
m&p-Xylene	ug/L	ND	40	51.0	127	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	22.3	111	70-130	
Naphthalene	ug/L	ND	20	20.9	104	70-130	
o-Xylene	ug/L	ND	20	23.7	118	70-130	
tert-Amyl Alcohol	ug/L	ND	400	450	112	70-130	
tert-Amylmethyl ether	ug/L	ND	40	47.2	118	70-130	
tert-Butyl Alcohol	ug/L	ND	200	229	115	70-130	
tert-Butyl Formate	ug/L	ND	160	218	136	70-130	M0
Toluene	ug/L	ND	20	22.8	114	70-130	
1,2-Dichloroethane-d4 (S)	%				94	70-130	
4-Bromofluorobenzene (S)	%				98	70-130	
Toluene-d8 (S)	%				99	70-130	

SAMPLE DUPLICATE: 1381767

Parameter	Units	92235176003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No : 92235469

SAMPLE DUPLICATE: 1381767

Parameter	Units	92235176003 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	95	100	5		
4-Bromofluorobenzene (S)	%	95	93	3		
Toluene-d8 (S)	%	95	96	1		

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

QC Batch: MSV/30260 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92235469001, 92235469002, 92235469003, 92235469004, 92235469005

METHOD BLANK: 1387020 Matrix: Water
Associated Lab Samples: 92235469001, 92235469002, 92235469003, 92235469004, 92235469005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	02/07/15 17:17	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	02/07/15 17:17	
Benzene	ug/L	ND	5.0	02/07/15 17:17	
Diisopropyl ether	ug/L	ND	5.0	02/07/15 17:17	
Ethanol	ug/L	ND	200	02/07/15 17:17	
Ethyl-tert-butyl ether	ug/L	ND	10.0	02/07/15 17:17	
Ethylbenzene	ug/L	ND	5.0	02/07/15 17:17	
m&p-Xylene	ug/L	ND	10.0	02/07/15 17:17	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/07/15 17:17	
Naphthalene	ug/L	ND	5.0	02/07/15 17:17	
o-Xylene	ug/L	ND	5.0	02/07/15 17:17	
tert-Amyl Alcohol	ug/L	ND	100	02/07/15 17:17	
tert-Amylmethyl ether	ug/L	ND	10.0	02/07/15 17:17	
tert-Butyl Alcohol	ug/L	ND	100	02/07/15 17:17	
tert-Butyl Formate	ug/L	ND	50.0	02/07/15 17:17	
Toluene	ug/L	ND	5.0	02/07/15 17:17	
Xylene (Total)	ug/L	ND	10.0	02/07/15 17:17	
1,2-Dichloroethane-d4 (S)	%	109	70-130	02/07/15 17:17	
4-Bromofluorobenzene (S)	%	95	70-130	02/07/15 17:17	
Toluene-d8 (S)	%	98	70-130	02/07/15 17:17	

LABORATORY CONTROL SAMPLE: 1387021

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	50.4	101	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1020	102	70-130	
Benzene	ug/L	50	53.9	108	70-130	
Diisopropyl ether	ug/L	50	53.3	107	70-130	
Ethanol	ug/L	2000	3090	155	70-130 L3	
Ethyl-tert-butyl ether	ug/L	100	107	107	70-130	
Ethylbenzene	ug/L	50	49.3	99	70-130	
m&p-Xylene	ug/L	100	93.9	94	70-130	
Methyl-tert-butyl ether	ug/L	50	51.0	102	70-130	
Naphthalene	ug/L	50	50.9	102	70-130	
o-Xylene	ug/L	50	48.6	97	70-130	
tert-Amyl Alcohol	ug/L	1000	1180	118	70-130	
tert-Amylmethyl ether	ug/L	100	99.3	99	70-130	
tert-Butyl Alcohol	ug/L	500	601	120	70-130	
tert-Butyl Formate	ug/L	400	382	95	70-130	
Toluene	ug/L	50	49.6	99	70-130	

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No : 92235469

LABORATORY CONTROL SAMPLE: 1387021

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	143	95	70-130	
1,2-Dichloroethane-d4 (S)	%			106	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 1387022

Parameter	Units	92235412016 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	21.0	105	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	498	125	70-130	
Benzene	ug/L	ND	20	24.2	121	70-130	
Diisopropyl ether	ug/L	ND	20	22.6	113	70-130	
Ethanol	ug/L	ND	800	1340	167	70-130	M0
Ethyl-tert-butyl ether	ug/L	ND	40	46.0	115	70-130	
Ethylbenzene	ug/L	ND	20	22.6	113	70-130	
m&p-Xylene	ug/L	ND	40	45.0	113	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	21.1	105	70-130	
Naphthalene	ug/L	ND	20	21.3	107	70-130	
o-Xylene	ug/L	ND	20	21.8	109	70-130	
tert-Amyl Alcohol	ug/L	ND	400	541	135	70-130	M0
tert-Amylmethyl ether	ug/L	ND	40	42.7	107	70-130	
tert-Butyl Alcohol	ug/L	ND	200	331	166	70-130	M0
tert-Butyl Formate	ug/L	ND	160	66.9	42	70-130	P5
Toluene	ug/L	ND	20	22.5	113	70-130	
1,2-Dichloroethane-d4 (S)	%				105	70-130	
4-Bromofluorobenzene (S)	%				89	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 1387023

Parameter	Units	92235412017 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

SAMPLE DUPLICATE: 1387023

Parameter	Units	92235412017 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	105	104	1		
4-Bromofluorobenzene (S)	%	85	83	2		
Toluene-d8 (S)	%	97	98	1		

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

QC Batch: MSV/30261 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92235469006, 92235469007, 92235469008, 92235469009, 92235469010, 92235469011, 92235469012, 92235469013, 92235469014, 92235469015, 92235469016, 92235469017, 92235469018

METHOD BLANK: 1387024 Matrix: Water
Associated Lab Samples: 92235469006, 92235469007, 92235469008, 92235469009, 92235469010, 92235469011, 92235469012, 92235469013, 92235469014, 92235469015, 92235469016, 92235469017, 92235469018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	02/07/15 17:34	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	02/07/15 17:34	
Benzene	ug/L	ND	5.0	02/07/15 17:34	
Diisopropyl ether	ug/L	ND	5.0	02/07/15 17:34	
Ethanol	ug/L	ND	200	02/07/15 17:34	
Ethyl-tert-butyl ether	ug/L	ND	10.0	02/07/15 17:34	
Ethylbenzene	ug/L	ND	5.0	02/07/15 17:34	
m&p-Xylene	ug/L	ND	10.0	02/07/15 17:34	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/07/15 17:34	
Naphthalene	ug/L	ND	5.0	02/07/15 17:34	
o-Xylene	ug/L	ND	5.0	02/07/15 17:34	
tert-Amyl Alcohol	ug/L	ND	100	02/07/15 17:34	
tert-Amylmethyl ether	ug/L	ND	10.0	02/07/15 17:34	
tert-Butyl Alcohol	ug/L	ND	100	02/07/15 17:34	
tert-Butyl Formate	ug/L	ND	50.0	02/07/15 17:34	
Toluene	ug/L	ND	5.0	02/07/15 17:34	
Xylene (Total)	ug/L	ND	10.0	02/07/15 17:34	
1,2-Dichloroethane-d4 (S)	%	103	70-130	02/07/15 17:34	
4-Bromofluorobenzene (S)	%	95	70-130	02/07/15 17:34	
Toluene-d8 (S)	%	98	70-130	02/07/15 17:34	

LABORATORY CONTROL SAMPLE: 1387025

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	52.9	106	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1180	118	70-130	
Benzene	ug/L	50	57.8	116	70-130	
Diisopropyl ether	ug/L	50	57.6	115	70-130	
Ethanol	ug/L	2000	3550	178	70-130 L3	
Ethyl-tert-butyl ether	ug/L	100	114	114	70-130	
Ethylbenzene	ug/L	50	52.8	106	70-130	
m&p-Xylene	ug/L	100	102	102	70-130	
Methyl-tert-butyl ether	ug/L	50	53.7	107	70-130	
Naphthalene	ug/L	50	53.7	107	70-130	
o-Xylene	ug/L	50	52.4	105	70-130	
tert-Amyl Alcohol	ug/L	1000	1370	137	70-130 L3	
tert-Amylmethyl ether	ug/L	100	109	109	70-130	
tert-Butyl Alcohol	ug/L	500	698	140	70-130 L3	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

LABORATORY CONTROL SAMPLE: 1387025

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	400	408	102	70-130	
Toluene	ug/L	50	54.7	109	70-130	
Xylene (Total)	ug/L	150	155	103	70-130	
1,2-Dichloroethane-d4 (S)	%			109	70-130	
4-Bromofluorobenzene (S)	%			94	70-130	
Toluene-d8 (S)	%			104	70-130	

MATRIX SPIKE SAMPLE: 1387026

Parameter	Units	92235469011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	20.7	103	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	453	113	70-130	
Benzene	ug/L	ND	20	24.5	122	70-130	
Diisopropyl ether	ug/L	ND	20	22.4	112	70-130	
Ethanol	ug/L	ND	800	1040	130	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	45.2	113	70-130	
Ethylbenzene	ug/L	ND	20	22.6	113	70-130	
m&p-Xylene	ug/L	ND	40	44.2	110	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	20.9	104	70-130	
Naphthalene	ug/L	ND	20	21.0	105	70-130	
o-Xylene	ug/L	ND	20	21.6	108	70-130	
tert-Amyl Alcohol	ug/L	ND	400	505	126	70-130	
tert-Amylmethyl ether	ug/L	ND	40	42.1	105	70-130	
tert-Butyl Alcohol	ug/L	ND	200	303	151	70-130 M0	
tert-Butyl Formate	ug/L	ND	160	92.5	58	70-130 P5	
Toluene	ug/L	ND	20	22.2	111	70-130	
1,2-Dichloroethane-d4 (S)	%				105	70-130	
4-Bromofluorobenzene (S)	%				89	70-130	
Toluene-d8 (S)	%				102	70-130	

SAMPLE DUPLICATE: 1387027

Parameter	Units	92235469012 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

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Project Steady Simmons 18856/48807
Pace Project No.: 92235469

SAMPLE DUPLICATE: 1387027

Parameter	Units	92235469012 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	111	107	4		
4-Bromofluorobenzene (S)	%	85	85	0		
Toluene-d8 (S)	%	100	100	0		

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No : 92235469

QC Batch: MSV/30262 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92235469019, 92235469020, 92235469021, 92235469022, 92235469023, 92235469031, 92235469032, 92235469033, 92235469034

METHOD BLANK: 1387028 Matrix: Water
Associated Lab Samples: 92235469019, 92235469020, 92235469021, 92235469022, 92235469023, 92235469031, 92235469032, 92235469033, 92235469034

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	02/08/15 05:40	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	02/08/15 05:40	
Benzene	ug/L	ND	5.0	02/08/15 05:40	
Diisopropyl ether	ug/L	ND	5.0	02/08/15 05:40	
Ethanol	ug/L	ND	200	02/08/15 05:40	
Ethyl-tert-butyl ether	ug/L	ND	10.0	02/08/15 05:40	
Ethylbenzene	ug/L	ND	5.0	02/08/15 05:40	
m&p-Xylene	ug/L	ND	10.0	02/08/15 05:40	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/08/15 05:40	
Naphthalene	ug/L	ND	5.0	02/08/15 05:40	
o-Xylene	ug/L	ND	5.0	02/08/15 05:40	
tert-Amyl Alcohol	ug/L	ND	100	02/08/15 05:40	
tert-Amylmethyl ether	ug/L	ND	10.0	02/08/15 05:40	
tert-Butyl Alcohol	ug/L	ND	100	02/08/15 05:40	
tert-Butyl Formate	ug/L	ND	50.0	02/08/15 05:40	
Toluene	ug/L	ND	5.0	02/08/15 05:40	
Xylene (Total)	ug/L	ND	10.0	02/08/15 05:40	
1,2-Dichloroethane-d4 (S)	%	111	70-130	02/08/15 05:40	
4-Bromofluorobenzene (S)	%	90	70-130	02/08/15 05:40	
Toluene-d8 (S)	%	100	70-130	02/08/15 05:40	

LABORATORY CONTROL SAMPLE: 1387029

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	52.6	105	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1140	114	70-130	
Benzene	ug/L	50	55.9	112	70-130	
Diisopropyl ether	ug/L	50	56.2	112	70-130	
Ethanol	ug/L	2000	3260	163	70-130 MO	
Ethyl-tert-butyl ether	ug/L	100	111	111	70-130	
Ethylbenzene	ug/L	50	51.2	102	70-130	
m&p-Xylene	ug/L	100	99.1	99	70-130	
Methyl-tert-butyl ether	ug/L	50	52.6	105	70-130	
Naphthalene	ug/L	50	53.6	107	70-130	
o-Xylene	ug/L	50	50.9	102	70-130	
tert-Amyl Alcohol	ug/L	1000	1240	124	70-130	
tert-Amylmethyl ether	ug/L	100	104	104	70-130	
tert-Butyl Alcohol	ug/L	500	676	135	70-130 MO	

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No. 92235469

LABORATORY CONTROL SAMPLE: 1387029

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	400	366	92	70-130	
Toluene	ug/L	50	50.7	101	70-130	
Xylene (Total)	ug/L	150	150	100	70-130	
1,2-Dichloroethane-d4 (S)	%			111	70-130	
4-Bromofluorobenzene (S)	%			94	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE SAMPLE: 1387030

Parameter	Units	92235469021 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	21.6	108	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	501	125	70-130	
Benzene	ug/L	ND	20	25.8	129	70-130	
Diisopropyl ether	ug/L	ND	20	23.1	115	70-130	
Ethanol	ug/L	ND	800	1470	183	70-130	M0
Ethyl-tert-butyl ether	ug/L	ND	40	46.3	116	70-130	
Ethylbenzene	ug/L	ND	20	23.7	119	70-130	
m&p-Xylene	ug/L	ND	40	46.1	115	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	21.5	107	70-130	
Naphthalene	ug/L	ND	20	22.3	111	70-130	
o-Xylene	ug/L	ND	20	22.3	112	70-130	
tert-Amyl Alcohol	ug/L	ND	400	513	128	70-130	
tert-Amylmethyl ether	ug/L	ND	40	42.7	107	70-130	
tert-Butyl Alcohol	ug/L	ND	200	417	208	70-130	M0
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	P5
Toluene	ug/L	ND	20	22.7	113	70-130	
1,2-Dichloroethane-d4 (S)	%				110	70-130	
4-Bromofluorobenzene (S)	%				88	70-130	
Toluene-d8 (S)	%				103	70-130	

SAMPLE DUPLICATE: 1387031

Parameter	Units	92235469022 Result	Dup Result	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND	30	
Benzene	ug/L	ND	ND	30	
Diisopropyl ether	ug/L	ND	ND	30	
Ethanol	ug/L	ND	ND	30	
Ethyl-tert-butyl ether	ug/L	ND	ND	30	
Ethylbenzene	ug/L	ND	ND	30	
m&p-Xylene	ug/L	ND	ND	30	
Methyl-tert-butyl ether	ug/L	ND	ND	30	
Naphthalene	ug/L	ND	ND	30	
o-Xylene	ug/L	ND	ND	30	

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No.. 92235469

SAMPLE DUPLICATE: 1387031

Parameter	Units	92235469022 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	115	113	2		
4-Bromofluorobenzene (S)	%	84	82	3		
Toluene-d8 (S)	%	101	102	1		

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QUALITY CONTROL DATA

Project: Steady Simmons 18856/48807
Pace Project No : 92235469

QC Batch: OEXT/32662 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92235469007, 92235469033

METHOD BLANK: 1382252 Matrix: Water
Associated Lab Samples: 92235469007, 92235469033

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.019	02/02/15 17:29	
1-Chloro-2-bromopropane (S)	%	103	60-140	02/02/15 17:29	

LABORATORY CONTROL SAMPLE & LCSD 1382253 1382254

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.29	0.28	102	102	60-140	2	20	
1-Chloro-2-bromopropane (S)	%				102	105	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382255 1382256

Parameter	Units	92235615003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	28	.28	0.29	0.30	102	104	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						109	114	60-140			

SAMPLE DUPLICATE: 1382257

Parameter	Units	92235615004 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	106	106	1		

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QUALIFIERS

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Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A Pace Analytical Services - Asheville
PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

P5 The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

Method 8270
Duplicate
Duplicate

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Steady Simmons 18856/48807
Pace Project No.: 92235469

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92235469007	MW-2	EPA 8011	OEXT/32662	EPA 8011	GCSV/20233
92235469033	FIELD BLANK	EPA 8011	OEXT/32662	EPA 8011	GCSV/20233
92235469007	MW-2	EPA 3010	MPRP/17809	EPA 6010	ICP/16031
92235469008	MW-5	EPA 3010	MPRP/17809	EPA 6010	ICP/16031
92235469009	MW-6	EPA 3010	MPRP/17809	EPA 6010	ICP/16031
92235469010	MW-7	EPA 3010	MPRP/17809	EPA 6010	ICP/16031
92235469011	MW-10	EPA 3010	MPRP/17809	EPA 6010	ICP/16031
92235469012	MW-12	EPA 3010	MPRP/17809	EPA 6010	ICP/16031
92235469013	MW-13	EPA 3010	MPRP/17809	EPA 6010	ICP/16031
92235469014	MW-14	EPA 3010	MPRP/17809	EPA 6010	ICP/16031
92235469015	MW-15	EPA 3010	MPRP/17809	EPA 6010	ICP/16031
92235469016	MW-16	EPA 3010	MPRP/17809	EPA 6010	ICP/16031
92235469024	WSW-1	EPA 8260	MSV/30180		
92235469025	WSW-2	EPA 8260	MSV/30181		
92235469026	WSW-3	EPA 8260	MSV/30181		
92235469027	WSW-4	EPA 8260	MSV/30181		
92235469028	SW-1	EPA 8260	MSV/30181		
92235469029	SW-2	EPA 8260	MSV/30181		
92235469030	SW-3	EPA 8260	MSV/30181		
92235469001	MW-1R	EPA 8260	MSV/30260		
92235469002	MW-3	EPA 8260	MSV/30260		
92235469003	MW-4	EPA 8260	MSV/30260		
92235469004	MW-8	EPA 8260	MSV/30260		
92235469005	MW-9	EPA 8260	MSV/30260		
92235469006	MW-11	EPA 8260	MSV/30261		
92235469007	MW-2	EPA 8260	MSV/30261		
92235469008	MW-5	EPA 8260	MSV/30261		
92235469009	MW-6	EPA 8260	MSV/30261		
92235469010	MW-7	EPA 8260	MSV/30261		
92235469011	MW-10	EPA 8260	MSV/30261		
92235469012	MW-12	EPA 8260	MSV/30261		
92235469013	MW-13	EPA 8260	MSV/30261		
92235469014	MW-14	EPA 8260	MSV/30261		
92235469015	MW-15	EPA 8260	MSV/30261		
92235469016	MW-16	EPA 8260	MSV/30261		
92235469017	DW-1	EPA 8260	MSV/30261		
92235469018	DW-2	EPA 8260	MSV/30261		
92235469019	DW-3	EPA 8260	MSV/30262		
92235469020	DW-4	EPA 8260	MSV/30262		
92235469021	DW-5	EPA 8260	MSV/30262		
92235469022	DW-6	EPA 8260	MSV/30262		
92235469023	DW-7	EPA 8260	MSV/30262		
92235469031	MW-1R DUP	EPA 8260	MSV/30262		
92235469032	MW-3 DUP	EPA 8260	MSV/30262		
92235469033	FIELD BLANK	EPA 8260	MSV/30262		
92235469034	TRIP BLANK	EPA 8260	MSV/30262		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 3 of 4
1885122

Section A Required Client Information		Section B Required Project Information:		Section C Invoice Information.	
Company: <u>SCDHEC - UST</u>		Report To: <u>J. Bryant - UST</u>		Attention:	
Address: <u>7600 Bull Street</u>		Copy To:		Company Name:	
<u>Columbia, SC 29201</u>				Address:	
Email To: <u>bryantj@sdhec.sc.gov</u>		Purchase Order No.: <u>4600328425</u>		Pace Quote Reference:	
Phone: <u>803-878-7541</u> / <u>803-878-1615</u>		Project Name: <u>Steady Simmons</u>		Pace Project Manager: <u>A. Baiori</u>	
Requested On-Date/TAT:		Project Number: <u>1885122 / 45801</u>		Pace Profile #:	
				REGULATORY AGENCY	
				<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input checked="" type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER	
				Site Location: <u>SC</u>	

ITEM #	SAMPLE ID (A-Z, 0-9, -) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE	MATERIAL CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test: <u>Black, Magn, PCB, 1,2,4,6,8 PAHs</u>	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.	
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol				Other
					DATE	TIME	DATE	TIME													
1	NSW-2		DW G				1/27/15	1147	3			3							LDL'S 025		
2	NSW-3							1124	3			3							LDL'S 026		
3	NSW-4							1115	3			3							LDL'S 027		
4	NSW-5							NS											not sampled		
5	NSW-6							NS											not sampled		
6	NSW-7							NS											not sampled		
7	NSW-8							NS											not sampled		
8	NSW-9							NS											not sampled		
9	SW-1							1131	3			3							LDL'S 028		
10	SW-2							1139	3			3							LDL'S 029		
11	SW-3		DW					1511	3			3							LDL'S 030		
12	MW-1R Dup.		WT G				1/27/15	1434	3			3							0207 031		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
				<u>P. Huss / Pace</u>	1/28	1110	2:1	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: <u>Wes Huss for</u>	SIGNATURE of SAMPLER: <u>[Signature]</u>				
DATE Signed (MM/DD/YY): <u>1/27/15</u>					



Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071



AUG 14 2015

Re: **Site Specific Work Plan Request**
Groundwater Sampling Contract
Solicitation # IFB-5400007403, PO#4600422513

Dear Mr. Shane:

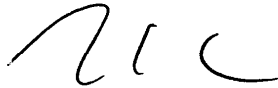
In accordance with bid solicitation # IFB-5400007403 and the UST Management Division Quality Assurance Program Plan (QAPP), Revision 2.0 it is requested that you submit a Site Specific Work Plan for each site listed below. The plans must be submitted **within 15 business days** to my attention. The project manager for each site will issue a notice to proceed once the plan has been reviewed and approved.

UST Permit	Site Name	County	# samples and requested analysis*	Project Manager
14989	Former Majik Market	Florence	4-BTEXMN, DCA, Oxygenates; 2-Total Lead	M. Milenkova
18856	Steady Simmons	Jasper	35-BTEXMN, DCA, Oxygenates; 1-EDB; 10-Total Lead	M. Hornosky
14726	Sam's Mart 90	York	45-BTEXMN, DCA, Oxygenates, Total Lead & EDB	K. Kuhn
13140	Pantry 3691 DBA Kangaroo	Charleston	19-BTEXMN, DCA, & Oxygenates	M. Hornosky
14941	Village Store	Beaufort	20-BTEXMN, DCA, Oxygenates & EDB	J. Bryant
00870	Daniels Grocery	Barnwell	20-BTEXMN, DCA, Oxygenates & EDB	J. Bryant
00046/00039	Rocket Service & Hutchinson's 76	Abbeville	60-BTEXMN, DCA, Oxygenates, & EDB	A. Thrash
12371	Blacks Car Care	Hampton	38-BTEXMN, DCA, Oxygenates & EDB	M. Hetrick

*The number of samples do not include trip blanks, field blanks, or field duplicate

Please contact me with the sampling schedule before commencing work at these facilities. In addition, a weekly update for each site is required to be submitted via e-mail to the site's project manager and myself. If you have any questions or need further assistance, please contact me at (803) 898-0606 or bryantjc@dhec.sc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'JCB', written in a cursive style.

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Site Information Packages
cc: Technical Files



September 10, 2015

Mr. John Bryant, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: Site-Specific Work Plan
Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID Number 18856
MECI Project Number 15-5280
Certified Site Rehabilitation Contractor UCC-0009


Dear Mr. Bryant,


Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Site-Specific Work Plan for the referenced site.

On September 2, 2015, MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
Midlands Environmental Consultants, Inc.


Kyle V. Pudney
Project Biologist


Jeff L. Coleman
Senior Scientist



**Site-Specific Work Plan for Approved ACQAP
Underground Storage Tank Management Division**

To: Ms. Minida Hornosky (SCDHEC Project Manager)
 From: Mr. Jeff Coleman (Contractor Project Manager)
 Contractor: Midlands Environmental Consultants, Inc. UST Contractor Certification Number: 009

Facility Name: Steady Simmons UST Permit #: 18856
 Facility Address: 1661 Grays Highway, Early Branch, SC 29916
 Responsible Party: Orphan: Steady Simmons Phone: N/A
 RP Address: N/A
 Property Owner (if different): Wayne Thompson
 Property Owner Address: 16657 Grays Highway, Early Branch, SC 29916
 Current Use of Property: Vacant Store Front

Scope of Work (Please check all that apply)
 IGWA Tier II Groundwater Sampling GAC
 Tier I Monitoring Well Installation Other _____

Analyses (Please check all that apply)
 Groundwater/Surface Water:
 BTEXNMDCA (8260B) Lead BOD Methane
 Oxygenates (8260B) 8 RCRA Metals Nitrate Ethanol
 EDB (8011) TPH Sulfate Dissolved Iron
 PAH (8270D) pH Other _____
 Soil:
 BTEXN 8 RCRA Metals TPH-DRO (3550B/8015B) Grain Size
 PAH Oil & Grease (9071) TPH-GRO (5030B/8015B) TOC
 Air:
 BTEXN

Sample Collection (Estimate the number of samples of each matrix that are expected to be collected.)
 _____ Soil 9 Water Supply Wells _____ Air 1 Field Blank
23 Monitoring Wells 3 Surface Water 2 Duplicate 2 Trip Blank

Field Screening Methodology
 Estimate number and total completed depth for each point, and include their proposed locations on the attached map.
 # of shallow points proposed: _____ Estimated Footage: _____ feet per point
 # of deep points proposed: _____ Estimated Footage: _____ feet per point
 Field Screening Methodology: _____

Permanent Monitoring Wells
 Estimate number and total completed depth for each well, and include their proposed locations on the attached map.
 # of shallow wells: _____ Estimated Footage: _____ feet per point
 # of deep wells: _____ Estimated Footage: _____ feet per point
 # of recovery wells: _____ Estimated Footage: _____ feet per point
 Monitoring Well development method (consistent with SOP): _____
 Comments, if warranted:

UST Permit #: 18856 Facility Name: Steady Simmons

Implementation Schedule (Number of calendar days from approval)

Field Work Start-Up: 9/15/2015 Field Work Completion: 10/15/2015
Report Submittal: 11/15/2015 # of Copies Provided to Property Owners: _____

Aquifer Characterization

Pump Test: Slug Test: (Check one and provide explanation below for choice)

Investigation Derived Waste Disposal

Soil: _____ Tons Purge Water: 100.0 Gallons
Drilling Fluids: _____ Gallons Free-Phase Product: _____ Gallons

Additional Details For This Scope of Work

For example, list wells to be sampled, wells to be abandoned/repared, well pads/bolts/caps to replace, details of AFVR event, etc.

-During the initial site visit, all monitoring wells and water supply wells were located.

-Last sampling event was conducted in January of 2015, therefore only monitoring wells which do not bracket the watertable will be purged prior to sample collection.

-It was noted that monitoring well MW-7 had a damaged well vault.

-All sampling locales will be analyzed for BTEXNM, DCA and Oxy's.

-In addition to BTEXNM, DCA and Oxy's, monitoring well MW-2 will also be analyzed for EDB.

Compliance With Annual Contractor Quality Assurance Plan (ACQAP)

Yes Laboratory as indicated in ACQAP? (Yes/No) If no, indicate laboratory information below.

Name of Laboratory: _____
SCDHEC Certification Number: _____
Name of Laboratory Director: _____

N/A Well Driller as indicated in ACQAO? (Yes/No) If no, indicate driller information below.

Name of Well Driller: _____
SCLLR Certification Number: _____

No Other variations from ACQAP. Please describe below.

Attachments

1. Attach a copy of the relevant portion of the USGS topographic map showing the site location.
2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following:

North Arrow	Proposed monitoring well locations
Location of property lines	Legend with facility name and address, UST permit number, and bar scale
Location of buildings	Streets or highways (indicate names and numbers)
Previous soil sampling locations	Location of all present and former ASTs and USTs
Previous monitoring well locations	Location of all potential receptors
Proposed soil boring locations	
3. Assessment Component Cost Agreement, SCDHEC Form D-3664



ASSESSMENT COMPONENT INVOICE
SOUTH CAROLINA
 Department of Health and Environmental Control
 Underground Storage Tank Management Division
 State Underground Petroleum Environmental Response Bank Account
CONTRACT PO NUMBER 4600328425

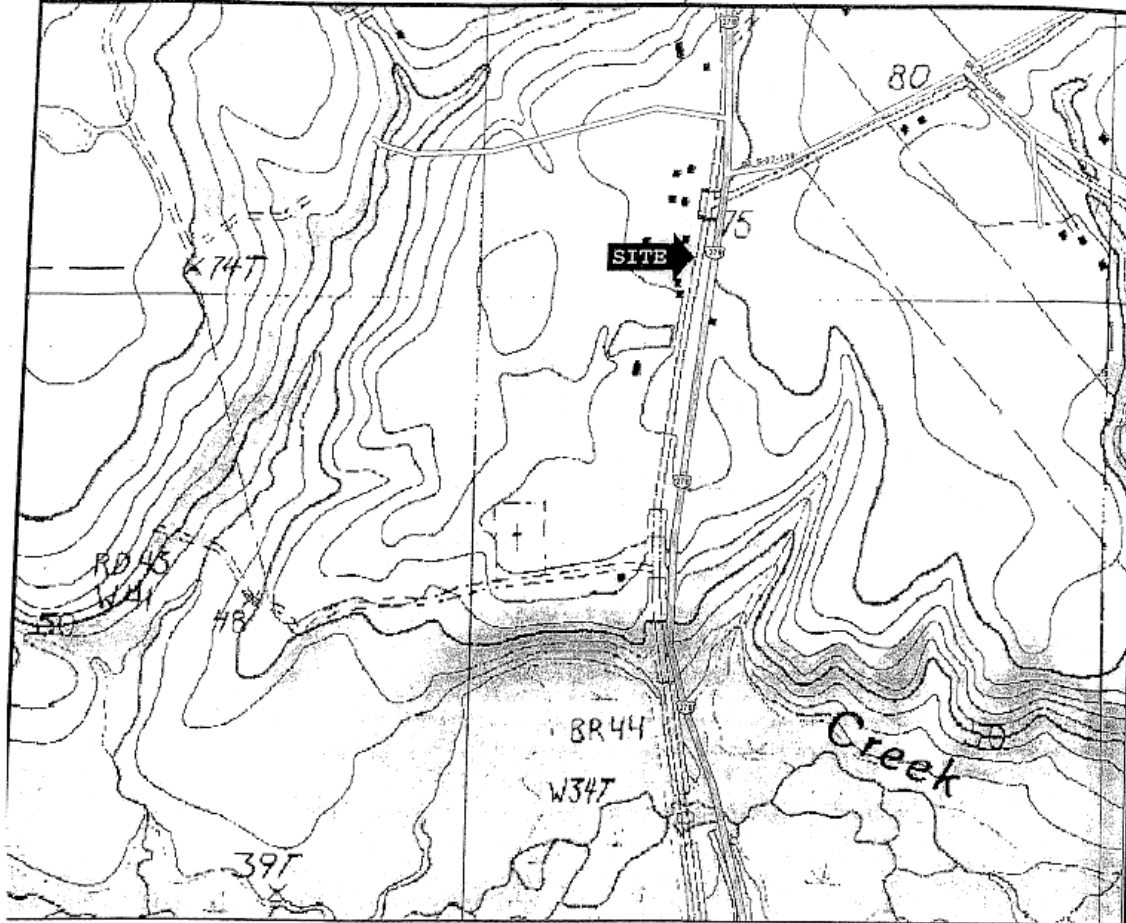
Facility Name: Steady Simmons

UST Permit #: 18856

Cost Agreement #: Proposal

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
1. Plan*				
A1. Site Specific Work Plan	1	each	\$0.00	\$0.00
C1. QAPP Appendix B		each	\$0.00	\$0.00
2. A1. Receptor Survey		each	\$0.00	\$0.00
4. Mob/Demob				
B1. Personnel	2	each	\$350.00	\$700.00
10. Groundwater Sample Collection / Gauge Depth to Water or Product (Each)				
A1. Groundwater Purge	7	per well	\$16.00	\$112.00
B1. Air or Vapors		samples	\$0.00	\$0.00
C1. Water Supply	12	samples	\$5.00	\$60.00
D1. Groundwater No Purge	16	per well	\$8.00	\$128.00
E1. Gauge Well only		per well	\$0.00	\$0.00
F1. Sample Below Product		per well	\$0.00	\$0.00
G1. Pasive Diffusion Bag		each	\$20.00	\$0.00
H1. Field Blank	1	each	\$10.00	\$10.00
17. Disposal* (gallons or tons)				
AA. Disposal/Water	100	gallons	\$1.00	\$100.00
BB. Free Product		gallons	\$0.00	\$0.00
Note: Rate includes costs or rental of suitable container(s)				
23. D. Site Reconnaissance		each	\$0.00	\$0.00
18. Miscellaneous (attach receipts)				
GW Contour Map		each	\$25.00	\$0.00
Isopleth Map		each	\$25.00	\$0.00
High-Strength Well Pad Replacement		each	\$75.00	\$0.00
Trip Blank	2	each	\$10.00	\$20.00
Data Table		each	\$25.00	\$0.00
25. Well Repair				
B1. Repair 2x2 MW Pad		each	\$75.00	\$0.00
C1. Repair 4x4 MW Pad		each	\$75.00	\$0.00
D1. Replace Well Vault		each	\$75.00	\$0.00
E. Replace well cover		each	\$25.00	\$0.00
F1. Replace well cover bolts		each	\$2.60	\$0.00
G. Replace locking well cap & lock		each	\$15.00	\$0.00
K1. Replace Missing Well ID Plate		each	\$10.00	\$0.00
TOTAL				\$1,130.00

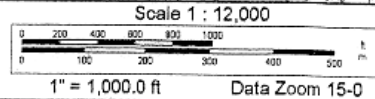
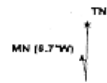
FIGURE 1
Site Location Map



Data use subject to license.

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www.delorme.com



CRAWFORD
ENVIRONMENTAL
SERVICES

Division of C.F. Crawford, Inc.
104 Corporate Blvd.,
West Columbia, SC 29169

803-708-0079 (office) 803-708-8137 (fax)

GRAYS, SOUTH CAROLINA

Source: DeLorme Topo USA 7.0
Scale: 1:12,000 Contour Interval: 10 Feet

Steady Simmons
16661 Grays Highway
Early Branch, SC 29916-08016
UST Permit: 18856

Project: Tier II Assessment

Client: SCDHEC

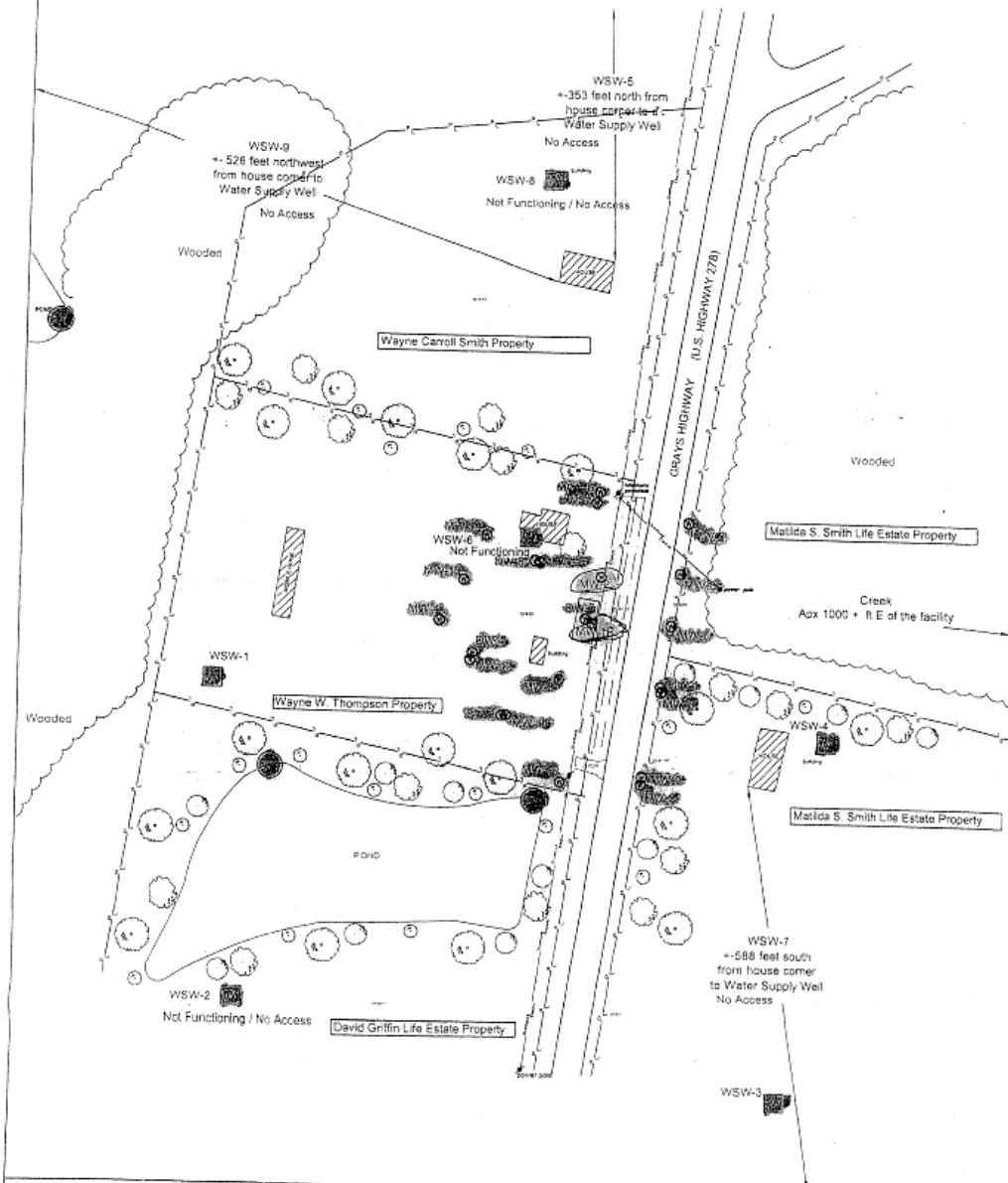
CES Job #: 15.102

Date: January 2012



7/12/12 5/7/12

- TRBSLS
- VRBSLS
- EDB TRBSLS
- receptors



	<p>Notes 1:10 Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes</p>	<p>Figure 2 Site Facility Base Map Steady Simmons 15661 Grays Highway Early Branch, SC 29915</p>
	<p>GRAPHIC SCALE 0 40 80 160 (In Feet)</p>	<p>Legend</p> <ul style="list-style-type: none"> UST Basin Building Monitoring Well Water Supply Well Property Line Surface Water Sample



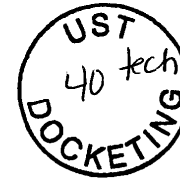
Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

**BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071**

SEP 2 8 2015

Re: **Notice to Proceed-Site Specific Work Plan Approval**
Groundwater Sampling Contract
Solicitation # IFB-5400007403, PO#4600445246
Steady Simmons
UST Permit # 18856; CA # 50611 (Pace CA # 50612)
Jasper County



Dear Mr. Shane:

In accordance with bid solicitation #IFB-5400007403 and the UST Management Division Quality Assurance Program Plan (QAPP), the Site-Specific Work Plan has been reviewed and is **approved with the following changes: monitoring wells MW-2, 5, 6, 7, 10, 12, 14, 15, and 16 should also be sampled for lead and MW-2 should also be sampled for EDB.** In accordance with the approved ACQAP, a status report of the project should be provided on a weekly basis via e-mail. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered, including quality assurance problems, the actions taken, and the results must be included in the final report submitted to the UST Management Division.

MECI will perform services at the site on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the final report. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs.

Please note, sampling should be conducted within 15 calendar days from the date of this letter. The final report is due within 3 weeks from the date the site is sampled. If the site is not sampled by the specified due date or the report is not received in the specified time period, a late fee may be imposed. The final report should contain the requirements of Section III.2.15 of the bid solicitation. The final report should be submitted to John Bryant, the contract manager.

Page 2

If you have any site-specific questions, please contact me at (803) 898-7542 or via e-mail at hornosms@dhec.sc.gov. If you have any contract specific questions, please contact John Bryant at (803) 898-0606 or via e-mail at bryantjc@dhec.sc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Minda Hornosky". The signature is written in a cursive style with some loops and flourishes.

Minda Hornosky, Hydrogeologist
Assessment Section
UST Management Division
Bureau of Land & Waste Management

enc: Approved Cost Agreement (both CAs)

cc: John Bryant, Corrective Action Section, UST Management Division (w/o encs.)
Trey Carter, Pace Analytical Services, 9800 Kinsey Ave. Ste 100, Huntersville, NC. 28078 (w/
approved CA)
✓ Technical Files (w/ encs.)

Approved Cost Agreement 50612

Facility: 18856 STEADY SIMMONS

HORNOSMS

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
11 ANALYSES					
	GW GROUNDWATER	A2 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	38.0000	19.00	722.00
		E1 LEAD	9.0000	10.00	90.00
		F1 EDB BY 8011	1.0000	18.00	18.00
		Total Amount			830.00

Approved Cost Agreement 50611

Facility: 18856 STEADY SIMMONS

HORNOSMS

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
04 MOB/DEMOB		B1 PERSONNEL	2.0000	350.00	700.00
10 SAMPLE COLLECTION		A1 GROUNDWATER (PURGE)	7.0000	16.00	112.00
		C1 WATER SUPPLY	12.0000	5.00	60.00
		D1 GROUNDWATER NO PURGE/DUPLICATE	16.0000	8.00	128.00
		H1 FIELD BLANK	1.0000	10.00	10.00
17 DISPOSAL		AA WASTEWATER	100.0000	1.00	100.00
18 MISCELLANEOUS		SITE RECONNAISSANCE	1.0000	0.00	0.00
		SITE SPECIFIC WORK PLAN	1.0000	0.00	0.00
		TRIP BLANK	2.0000	10.00	20.00
Total Amount					1,130.00



November 5, 2015

Mr. John C. Bryant, Hydrogeologist
Corrective Action Section
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Subject: Report of Groundwater Sampling
Steady Simmons
16661 Grays Highway
Early Branch, South Carolina
SCDHEC Site ID Number 18856; CA # 50611
MECI Project Number 15-5280
Certified Site Rehabilitation Contractor UCC-0009



Dear Mr. Bryant,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Groundwater Sampling for the referenced site. This report describes site activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control's (SCDHEC) Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP).

PROJECT INFORMATION

The subject site (Steady Simmons) is located at 16661 Grays Highway, Early Branch, Jasper County, South Carolina. The subject site formerly maintained one 1,000 gallon gasoline underground storage tank (UST), and one 550 gallon gasoline UST. The subject tanks were abandoned by removal from the ground in July of 2002. The South Carolina Department of Health and Environmental Control reported a release of petroleum product in September of 2002 and confirmed the release in October of 2002. The site is currently rated a Class 2BB.

The above information is based on reports and correspondence obtained from MECI field notes and SCDHEC files.

MONITORING WELL SAMPLING AND CHEMICAL ANALYSIS

On October 22, 2015, MECI personnel collected groundwater samples from twenty-three (23) monitoring wells, four (4) water supply wells and one (1) surface water sample at the subject site. Water supply wells WSW-5, WSW-6, WSW-7 and WSW-8 were found to be inoperable with no power supplying the wells. WSW-9 was unable to be sampled because the well is located inside a

locked gate and the property owner not be found to access well. The area where SW-2 has been historically collected was found to be dry and MECI personnel could not access the pond from which SW-3 has historically been collected due to the area being located behind a lick fence. At the request of SCDHEC, only monitoring wells which did not bracket the watertable were to be purged prior to sample collection. Sixteen (16) monitoring wells were purged prior to sample collection.

Prior to sampling, MECI personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase petroleum product level measurements. Purging was completed by bailing at least five well volumes of water from the well or until pH, conductivity, dissolved oxygen and turbidity stabilized, whichever occurred first. Sampling/purging was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. A new set of nitrile gloves were worn at each monitoring well, and at all time samples were handled. Field measurements of pH, conductivity, dissolved oxygen, and water temperature were obtained before well sampling process. MECI utilized YSI Pro20 meter for DO (mg/L) and temperature readings (°C) and YSI Pro1030 meter for pH and conductivity (uS) readings, and a HF Scientific TPI Turbidimeter for turbidity (NTU) readings. The attached Field Data Information Sheets presents the results of the field measurements obtained. The wells were sampled in accordance with SCDHEC's most recent revision of the Quality Assurance Program Plan for the Underground Storage Tank Management Division and MECI's Standard Operating Procedures.

Groundwater samples obtained were sent to PACE Analytical Services, Inc. of Huntersville, NC (SCDHEC Laboratory Certification #99006) for analysis.

The following sampling matrix contains well development and requested analyses for each well during the sampling event:

Monitoring Well	Purge	No Purge	Not Sampled	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 8010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSC Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
	Analyte Sampled													
MW-1R	X				X		X	X						
MW-2	X				X	X	X	X	X					
MW-3	X				X		X	X						
MW-4	X				X		X	X						
MW-5		X			X		X	X	X					
MW-6		X			X		X	X	X					
MW-7		X			X		X	X	X					
MW-8		X			X		X	X						
MW-9		X			X		X	X						
MW-10	X				X		X	X	X					
MW-11	X				X		X	X						
MW-12	X				X		X	X	X					
MW-13		X			X		X	X						
MW-14		X			X		X	X	X					

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dichloroethane
PAH = polycyclic aromatic hydrocarbons


Monitoring Well	Purge	No Purge	Not Sampled	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 385.2)	Methane (RSC Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
	Analyte Sampled													
MW-15	X				X		X	X	X					
MW-16	X				X		X	X						
DW-1	X				X		X	X						
DW-2	X				X		X	X						
DW-3	X				X		X	X						
DW-4	X				X		X	X						
DW-5	X				X		X	X						
DW-6	X				X		X	X						
DW-7	X				X		X	X						
WSW-1					X		X	X						
WSW-2					X		X	X						
WSW-3					X		X	X						
WSW-4					X		X	X						
WSW-5			X											
WSW-6			X											
WSW-7			X											
WSW-8			X											
WSW-9			X											
SW-1					X		X	X						
SW-2			X											
SW-3			X											
MW-1R Dup.					X		X	X						
MW-15 Dup.					X		X	X	X					
Field Blank					X	X	X	X						
Trip Blank					X		X	X						


Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dichloroethane
PAH = polycyclic aromatic hydrocarbons

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 162.50 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is attached at the end of this report.

Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.


Kyle V. Pudney
Project Biologist


Jeff L. Coleman
Senior Scientist

Attachments:

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	X		
2	Is UST Owner/Operator name, address, & phone number provided?			X
3	Is name, address, & phone number of current property owner provided?			X
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	X		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?			X
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	X		
7	Has the facility history been summarized?	X		
8	Has the regional geology and hydrogeology been described?			X
9	Are the receptor survey results provided as required?			X
10	Has current use of the site and adjacent land been described?			X
11	Has the site-specific geology and hydrogeology been described?			X
12	Has the primary soil type been described?			X
13	Have field screening results been described?			X
14	Has a description of the soil sample collection and preservation been detailed?			X
15	Has the field screening methodology and procedure been detailed?			X
16	Has the monitoring well installation and development dates been provided?			X
17	Has the method of well development been detailed?			X
18	Has justification been provided for the locations of the monitoring wells?			X
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?			X
20	Has the groundwater sampling methodology been detailed? See MECI SOP	X		
21	Have the groundwater sampling dates and groundwater measurements been provided? See attached Site Activity Summary Sheet	X		
22	Has the purging methodology been detailed? See MECI SOP	X		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? See attached Field Data Information Sheets	X		
24	If free-product is present, has the thickness been provided? See attached Site Activity Summary Sheets	X		
25	Does the report include a brief discussion of the assessment done and the results?			X
26	Does the report include a brief discussion of the aquifer evaluation and results?			X
27	Does the report include a brief discussion of the fate & transport models used?			X

Item#	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			X
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			X
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			X
31	Have recommendations for further action been provided and explained?			X
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			X
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)			X
34	Has the current and historical laboratory data been provided in tabular format?			X
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			X
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			X
37	Has the topographic map been provided with all required elements? (Figure 1)	X		
38	Has the site base map been provided with all required elements? (Figure 2)	X		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)			X
40	Has the site potentiometric map been provided? (Figure 5)			X
41	Have the geologic cross-sections been provided? (Figure 6)			X
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			X
43	Has the site survey been provided and include all necessary elements? (Appendix A)			X
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	X		
45	Is the laboratory performing the analyses properly certified?	X		
46	Has the tax map been included with all necessary elements? (Appendix C)			X
47	Have the soil boring/field screening logs been provided? (Appendix D)			X
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)			X
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			X
50	Have the disposal manifests been provided? See attached	X		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			X
52	Has all fate and transport modeling been provided? (Appendix I)			X
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			X
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	X		

Site Activity Summary

UST Permit #: 18856
Facility Name: Steady Simmons
County: Jasper
Field Personnel: T. Elder, B. Garner, C. Hansen, J. Phillips


 Midlands
 Environmental
 Consultants, Inc.
231 Dooley Road, Lexington, SC 29073
 (803) 808-2043 Fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-1R	Y	10/22/15	13:06	7-17	***	5.13	***	3.12	9.75	Slight Odor
MW-2	Y	10/22/15	13:04	7-17	***	6.08	***	2.11	9.00	Odor, Light Sheen
MW-3	Y	10/22/15	12:20	7-17	***	4.65	***	2.83	10.00	No Odor
MW-4	Y	10/22/15	11:08	7-17	***	4.23	***	1.81	10.50	No Odor
MW-5	Y	10/22/15	12:49	5-15	***	6.83	***	3.58	0.00	No Odor
MW-6	Y	10/22/15	12:46	5-15	***	7.24	***	5.86	0.00	No Odor
MW-7	Y	10/22/15	12:45	5-15	***	7.23	***	4.62	0.00	No Odor
MW-8	Y	10/22/15	12:40	5-15	***	6.83	***	0.18	0.00	No Odor
MW-9	Y	10/22/15	12:31	5-15	***	6.78	***	0.76	0.00	No Odor
MW-10	Y	10/22/15	12:20	5-15	***	2.93	***	2.18	10.00	No Odor
MW-11	Y	10/22/15	11:29	5-15	***	3.43	***	0.86	9.50	Sulphuric Odor
MW-12	Y	10/22/15	11:45	5-15	***	3.60	***	1.71	9.50	No Odor
MW-13	Y	10/22/15	10:55	5-15	***	5.25	***	1.98	0.00	No Odor
MW-14	Y	10/22/15	11:00	5-15	***	6.32	***	3.09	0.00	No Odor
MW-15	Y	10/22/15	13:34	10-20	***	6.11	***	2.54	11.50	No Odor
									79.75	TOTAL GALLONS PURGED

Site Activity Summary

UST Permit #: 18856
Facility Name: Steady Simmons
County: Jasper
Field Personnel: T. Elder, B. Garner, C. Hansen, J. Phillips


 231 Dooley Road, Lexington, SC 29073
 (803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-16	Y	10/22/15	10:43	10-20	***	7.24	***	3.62	6.50	No Odor
DW-1	Y	10/22/15	12:55	35-40	***	7.34	***	3.28	9.50	No Odor
DW-2	Y	10/22/15	12:48	35-40	***	8.88	***	4.17	6.00	No Odor
DW-3	Y	10/22/15	11:40	35-40	***	4.34	***	4.74	16.50	No Odor
DW-4	Y	10/22/15	11:55	33-38	***	16.38	***	2.64	3.00	No Odor
DW-5	Y	10/22/15	13:55	33-38	***	6.22	***	2.67	13.25	No Odor
DW-6	Y	10/22/15	10:52	31-36	***	7.52	***	4.78	14.00	No Odor
DW-7	Y	10/22/15	13:34	31-36	***	6.09	***	1.69	14.00	No Odor
WSW-1	Y	10/22/15	10:34	***	***	***	***	***	***	Sample Taken From Spigot on Well, White Trailer on Onsite
WSW-2	Y	10/22/15	10:44	***	***	***	***	***	***	Sample Taken From Spigot on Well, 16589 Grays Highway, Property owner request results
WSW-3	Y	10/22/15	11:17	***	***	***	***	***	***	Sample Taken From Spigot on Well, 16586 Grays Highway
WSW-4	Y	10/22/15	11:04	***	***	***	***	***	***	Sample Taken From Spigot in Front Yard, 16640 Grays Highway
WSW-5	N	10/22/15	NS	***	***	NS	***	NS	***	Unable to Sample, No Power to Well, Well House Boarded Shut, 16713 Grays Highway
WSW-6	N	10/22/15	NS	***	***	NS	***	NS	***	Not Operational, Onsite
WSW-7	N	10/22/15	NS	***	***	NS	***	NS	***	Not Operational, 16506 Grays Highway
									82.75	TOTAL GALLONS PURGED

Site Activity Summary

UST Permit #: 18856
Facility Name: Steady Simmons
County: Jasper
Field Personnel: T. Elder, B. Garner, C. Hansen, J. Phillips


**Midlands
Environmental
Consultants, Inc.**
 231 Dooley Road, Lexington, SC 29073
 (803) 808-2043 Fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
WSW-8	N	10/22/15	NS	***	***	NS	***	NS	***	Not Operational, 16713 Gray Highway
WSW-9	N	10/22/15	NS	***	***	NS	***	NS	***	Unable to Sample, Behind Locked Gate, 16743 Grays Highway
SW-1	Y	10/22/15	12:55	***	***	***	***	***	***	Collected from pond, Adjacent to MW-10
SW-2	N	10/22/15	NS	***	***	***	***	***	***	Area Dry
SW-3	N	10/22/15	NS	***	***	***	***	***	***	Area fenced off, No Access, Could not locate Property Owner
MW-1R Dup	Y	10/22/15	14:34	***	***	***	***	***	***	Duplicate Sample
MW-15 Dup.	Y	10/22/15	14:41	***	***	***	***	***	***	Duplicate Sample
Field Blank	Y	10/22/15	11:00	***	***	***	***	***	***	Field Blank
Trip Blank	Y	10/22/15	11:00	***	***	***	***	***	***	Trip Blank
									0.00	TOTAL GALLONS PURGED

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-1R	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	7-17	Total Well Depth (TWD) (ft.):	17
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	5.13	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	11.87	1 casing volume (CV = LWC x C) (gals.):	1.93	5 casing volumes (5 x CV) (gals.):	9.67

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.93	3.87	5.80	7.74	9.67		
Time (military)	12:53	12:55	13:00	13:02	13:04	13:06		
PH (s.u.)	5.54	5.56	5.59	5.61	5.63	5.61		
Specific Conductivity (µS/cm)	52.80	53.30	55.4	56.70	59.20	63.50		
Water Temperature (°C)	24.10	23.50	23.7	23.80	23.70	23.90		
Dissolved Oxygen (mg/L)	3.12	3.86	3.94	4.06	4.00	4.03		
Turbidity (NTU)	21.21	40.09	62.33	70.01	79.23	94.68		

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	13:06	Duplicate: Y or N	Y	If yes, Duplicate Time:	13:07	Total Gallons Purged:	9.75
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Notes: Slight Odor; Duplicated Sample

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Hornosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-2	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	7-17	Total Well Depth (TWD) (ft.):	17
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	6.08	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD - DGW) (ft.):	10.92	1 casing volume (CV = LWC x C) (gals.):	1.78	5 casing volumes (5 x CV) (gals.):	8.90

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.78	3.56	5.34	7.12	8.90		
Time (military)	12:54	12:56	12:58	13:00	13:02	13:04		
PH (s.u.)	4.98	4.95	Sheen	Sheen	Sheen	Sheen		
Specific Conductivity (µS/cm)	42.70	41.20	Sheen	Sheen	Sheen	Sheen		
Water Temperature (°C)	23.60	23.90	Sheen	Sheen	Sheen	Sheen		
Dissolved Oxygen (mg/L)	2.11	2.08	Sheen	Sheen	Sheen	Sheen		
Turbidity (NTU)	14.2	26.84	Sheen	Sheen	Sheen	Sheen		

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	13:04	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	9.00
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Notes: Odor; Noticeable petroleum sheen on samples

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips		
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70		
Quality Assurance									
Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		
Well Information									
Well ID:	MW-3	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652		0.163	Method of Purging/Sample Collection		Bailer		
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):		7-17	Total Well Depth (TWD) (ft.):		17		
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):		4.65	Free Product Thickness (ft.):		Not Detected		
Length of water column (LWC = TWD – DGW) (ft.):	12.35	1 casing volume (CV = LWC x C) (gals.):		2.01	5 casing volumes (5 x CV) (gals.):		10.07		
Purging Data									
	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling	
Volume Purged (gallons)	0.00	2.01	4.03	6.04	8.05	10.07			
Time (military)	12:10	12:12	12:14	12:16	12:18	12:20			
PH (s.u.)	5.09	5.15	5.20	5.23	5.21	5.22			
Specific Conductivity (µS/cm)	34.60	31.30	32.90	35.00	39.00	42.30			
Water Temperature (°C)	23.00	23.10	23.00	23.20	23.50	23.40			
Dissolved Oxygen (mg/L)	2.83	2.44	2.29	2.09	2.17	2.14			
Turbidity (NTU)	36.48	71.20	83.04	98.38	121.10	139.40			
Sampling Data									
Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	12:20	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	10.00
Notes: No Odor									

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Hornosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301163	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-4	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	7-17	Total Well Depth (TWD) (ft.):	17
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	4.23	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD - DGW) (ft.):	12.77	1 casing volume (CV = LWC x C) (gals.):	2.08	5 casing volumes (5 x CV) (gals.):	10.41

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.08	4.16	6.24	8.33	10.41		
Time (military)	10:58	11:00	11:02	11:04	11:06	11:08		
PH (s.u.)	5.66	5.24	5.21	5.35	5.36	5.3		
Specific Conductivity (µS/cm)	139.80	151.20	141.50	162.40	170.90	176.60		
Water Temperature (°C)	23.80	23.20	24.10	24.20	24.00	24.20		
Dissolved Oxygen (mg/L)	1.81	2.74	1.88	1.74	1.86	1.97		
Turbidity (NTU)	20.11	51.07	63.20	87.29	103.60	119.20		

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	11:08	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	10.50
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Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18E56	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-5	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	5-15	Total Well Depth (TWD) (ft.):	15
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	6.83	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD - DGW) (ft.):	8.17	1 casing volume (CV = LWC x C) (gals.):	1.33	5 casing volumes (5 x CV) (gals.):	6.66

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.33	2.66	4.00	5.33	6.66		
Time (military)	12:49							
PH (s.u.)	5.04							
Specific Conductivity (µS/cm)	22.90							
Water Temperature (°C)	20.00							
Dissolved Oxygen (mg/L)	3.58							
Turbidity (NTU)	43.59							

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	12:49	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	0.00
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Notes: No Odor, No-Purge Sample Collected

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-6	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	5-15	Total Well Depth (TWD) (ft.):	15
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	7.24	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	7.76	1 casing volume (CV = LWC x C) (gals.):	1.26	5 casing volumes (5 x CV) (gals.):	6.32

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.26	2.53	3.79	5.06	6.32		
Time (military)	12:46							
PH (s.u.)	4.94							
Specific Conductivity (µS/cm)	27.70							
Water Temperature (°C)	22.20							
Dissolved Oxygen (mg/L)	5.86							
Turbidity (NTU)	12.11							

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	12:46	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	0.00
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Notes: No Odor, No-Purge Sample Collected

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-7	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	5-15	Total Well Depth (TWD) (ft.):	15
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	7.23	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD - DGW) (ft.):	7.77	1 casing volume (CV = LWC x C) (gals.):	1.27	5 casing volumes (5 x CV) (gals.):	6.33

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.27	2.53	3.80	5.07	6.33		
Time (military)	12:45							
PH (s.u.)	4.71							
Specific Conductivity (µS/cm)	27.20							
Water Temperature (°C)	22.10							
Dissolved Oxygen (mg/L)	4.62							
Turbidity (NTU)	13.46							

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	12:45	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	0.00
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Notes: No Odor, No-Purge Sample Collected

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18956	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-8	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	5-15	Total Well Depth (TWD) (ft.):	15
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	6.83	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD - DGW) (ft.):	8.17	1 casing volume (CV = LWC x C) (gals.):	1.33	5 casing volumes (5 x CV) (gals.):	6.66

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.33	2.66	4.00	5.33	6.66		
Time (military)	12:40							
PH (s.u.)	5.16							
Specific Conductivity (µS/cm)	56.10							
Water Temperature (°C)	21.90							
Dissolved Oxygen (mg/L)	0.18							
Turbidity (NTU)	42.41							

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	12:40	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	0.00
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Notes: No Odor, No-Purge Sample Collected

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips		
County:	Jasper	Project Manager:	Minda Hornosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70		
Quality Assurance									
Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		
Well Information									
Well ID:	MW-9	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652			0.163	Method of Purging/Sample Collection		Bailer	
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):			5-15	Total Well Depth (TWD) (ft.):		15	
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):			6.78	Free Product Thickness (ft.):		Not Detected	
Length of water column (LWC = TWD – DGW) (ft.):	8.22	1 casing volume (CV = LWC x C) (gals.):			1.34	5 casing volumes (5 x CV) (gals.):		6.70	
Purging Data									
	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling	
Volume Purged (gallons)	0.00	1.34	2.68	4.02	5.36	6.70			
Time (military)	12:31								
PH (s.u.)	5.64								
Specific Conductivity (µS/cm)	38.80								
Water Temperature (°C)	22.60								
Dissolved Oxygen (mg/L)	0.76								
Turbidity (NTU)	46.76								
Sampling Data									
Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	12:31	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	0.00
Notes: No Odor, No-Purge Sample Collected									

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips		
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70		
Quality Assurance									
Meter Name	Serial #:				Calibration:				
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		
Well Information									
Well ID:	MW-10	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652			0.163	Method of Purging/Sample Collection		Bailer	
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):			5-15	Total Well Depth (TWD) (ft.):		15	
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):			2.93	Free Product Thickness (ft.):		Not Detected	
Length of water column (LWC = TWD – DGW) (ft.):	12.07	1 casing volume (CV = LWC x C) (gals.):			1.97	5 casing volumes (5 x CV) (gals.):		9.84	
Purging Data									
	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling	
Volume Purged (gallons)	0.00	1.97	3.93	5.90	7.87	9.84			
Time (military)	12:10	12:12	12:14	12:16	12:18	12:20			
PH (s.u.)	5.15	5.06	5.09	5.11	5.10	5.07			
Specific Conductivity (µS/cm)	43.70	41.30	40.07	36.20	32.10	29.60			
Water Temperature (°C)	22.50	22.20	22.07	22.40	21.80	21.30			
Dissolved Oxygen (mg/L)	2.18	1.00	2.07	2.37	2.84	3.19			
Turbidity (NTU)	56.33	60.93	71.22	98.78	141.40	176.00			
Sampling Data									
Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	12:20	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	10.00
Notes:	No Odor								
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Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips			
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70			
Quality Assurance										
Meter Name	Serial #:	Calibration:								
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y	
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y							
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y			
Well Information										
Well ID:	MW-11	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652			0.163	Method of Purging/Sample Collection		Bailer		
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):			5-15	Total Well Depth (TWD) (ft.):		15		
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):			3.43	Free Product Thickness (ft.):		Not Detected		
Length of water column (LWC = TWD – DGW) (ft.):	11.57	1 casing volume (CV = LWC x C) (gals.):			1.89	5 casing volumes (5 x CV) (gals.):		9.43		
Purging Data										
	<i>Initial</i>	<i>1st Vol.</i>	<i>2nd Vol.</i>	<i>3rd Vol.</i>	<i>4th Vol.</i>	<i>5th Vol.</i>	<i>Post</i>	<i>Sampling</i>		
Volume Purged (gallons)	0.00	1.89	3.77	5.66	7.54	9.43				
Time (military)	11:21	11:23	11:25	11:26	11:27	11:29				
PH (s.u.)	5.26	5.22	5.30	5.44	5.51	5.50				
Specific Conductivity (µS/cm)	95.40	97.70	82.60	60.30	66.20	68.70				
Water Temperature (°C)	21.50	21.60	21.00	20.50	20.40	20.40				
Dissolved Oxygen (mg/L)	0.86	0.64	1.16	0.87	0.77	0.92				
Turbidity (NTU)	39.06	98.39	151.70	174.90	177.50	186.30				
Sampling Data										
Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips		Sampling Time:	11:29	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	9.50
Notes:										
Sulphur Odor										

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-12	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	5-15	Total Well Depth (TWD) (ft.):	15
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	3.60	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	11.4	1 casing volume (CV = LWC x C) (gals.):	1.86	5 casing volumes (5 x CV) (gals.):	9.29

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.86	3.72	5.57	7.43	9.29		
Time (military)	11:35	11:37	11:39	11:41	11:43	11:45		
PH (s.u.)	5.47	5.25	5.28	5.31	5.34	5.31		
Specific Conductivity (µS/cm)	61.50	62.30	43.70	49.20	42.80	39.00		
Water Temperature (°C)	22.50	22.30	21.40	21.40	21.50	21.70		
Dissolved Oxygen (mg/L)	1.71	2.43	3.35	3.46	3.61	3.54		
Turbidity (NTU)	21.29	47.61	63.99	90.83	121.00	134.90		

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	11:45	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	9.50
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Notes:

Sulphur Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-13	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	5-15	Total Well Depth (TWD) (ft.):	15
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	5.25	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD - DGW) (ft.):	9.75	1 casing volume (CV = LWC x C) (gals.):	1.59	5 casing volumes (5 x CV) (gals.):	7.95

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.59	3.18	4.77	6.36	7.95		
Time (military)	10:55							
PH (s.u.)	5.36							
Specific Conductivity (µS/cm)	139.10							
Water Temperature (°C)	23.40							
Dissolved Oxygen (mg/L)	1.98							
Turbidity (NTU)	24.37							

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	10:55	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	0.00
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Notes: No Odor, No-Purge Sample Collected

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Hornosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-14	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	5-15	Total Well Depth (TWD) (ft.):	15
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	6.32	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	8.68	1 casing volume (CV = LWC x C) (gals.):	1.41	5 casing volumes (5 x CV) (gals.):	7.07

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.41	2.83	4.24	5.66	7.07		
Time (military)	11:00							
PH (s.u.)	5.21							
Specific Conductivity (µS/cm)	131.30							
Water Temperature (°C)	22.00							
Dissolved Oxygen (mg/L)	3.09							
Turbidity (NTU)	61.06							

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	11:00	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	0.00
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Notes: No Odor, No-Purge Sample Collected

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Hornosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-15	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	10-20	Total Well Depth (TWD) (ft.):	20
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	6.11	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD - DGW) (ft.):	13.89	1 casing volume (CV = LWC x C) (gals.):	2.26	5 casing volumes (5 x CV) (gals.):	11.32

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.26	4.53	6.79	9.06	11.32		
Time (military)	13:20	13:23	13:26	13:29	13:31	13:34		
PH (s.u.)	5.63	5.72	5.70	5.74	5.80	5.77		
Specific Conductivity (µS/cm)	513.00	533.00	413.40	425.10	434.80	457.00		
Water Temperature (°C)	23.70	23.10	22.80	22.60	22.40	22.60		
Dissolved Oxygen (mg/L)	2.54	3.03	3.64	3.83	3.91	3.95		
Turbidity (NTU)	19.47	61.18	75.41	98.47	110.90	115.30		

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	13:34	Duplicate: Y or N	Y	If yes, Duplicate Time:	13:35	Total Gallons Purged:	11.50
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Notes: No Odor; Duplicated Sample

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Hornosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-16	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (I.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	10-20	Total Well Depth (TWD) (ft.):	20
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	7.24	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	12.76	1 casing volume (CV = LWC x C) (gals.):	2.08	5 casing volumes (5 x CV) (gals.):	10.40

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.08	4.16	6.24	8.32	10.40		6.50
Time (military)	10:35	10:37	10:39	10:42				10:43
PH (s.u.)	6.08	5.94	5.73	5.57				5.54
Specific Conductivity (µS/cm)	37.80	26.10	20.80	19.40				19.00
Water Temperature (°C)	21.90	21.70	21.40	21.50				21.5
Dissolved Oxygen (mg/L)	3.62	5.24	6.50	6.60				6.68
Turbidity (NTU)	41.1	98.18	110.20	146.70				159.00

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	10:43	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	6.50
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Notes: Dry @ 6.5 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18656	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	DW-1	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	35-40	Total Well Depth (TWD) (ft.):	40
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	7.34	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD - DGW) (ft.):	32.66	1 casing volume (CV = LWC x C) (gals.):	5.32	5 casing volumes (5 x CV) (gals.):	26.62

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	5.32	10.65	15.97	21.29	26.62		9.50
Time (military)	12:42	12:53						12:55
PH (s.u.)	5.14	5.15						5.07
Specific Conductivity (µS/cm)	41.80	43.40						38.00
Water Temperature (°C)	22.20	22.40						19.90
Dissolved Oxygen (mg/L)	3.28	3.04						2.97
Turbidity (NTU)	29.17	35.02						48.94

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	12:55	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	9.50
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Notes:

Dry @ 9.5 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18656	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips			
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70			
Quality Assurance										
Meter Name	Serial #:	Calibration:								
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y	
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y							
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y			
Well Information										
Well ID:	DW-3	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652			0.163	Method of Purging/Sample Collection		Bailer		
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):			35-40	Total Well Depth (TWD) (ft.):		40		
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):			4.34	Free Product Thickness (ft.):		Not Detected		
Length of water column (LWC = TWD – DGW) (ft.):	35.66	1 casing volume (CV = LWC x C) (gals.):			5.81	5 casing volumes (5 x CV) (gals.):		29.06		
Purging Data										
	<i>Initial</i>	<i>1st Vol.</i>	<i>2nd Vol.</i>	<i>3rd Vol.</i>	<i>4th Vol.</i>	<i>5th Vol.</i>	<i>Post</i>	<i>Sampling</i>		
Volume Purged (gallons)	0.00	5.81	11.63	17.44	23.25	29.06		16.50		
Time (military)	11:14	11:20	11:30					11:40		
PH (s.u.)	5.79	5.51	5.44					5.40		
Specific Conductivity (µS/cm)	43.20	40.20	39.20					36.20		
Water Temperature (°C)	21.90	19.60	19.50					20.90		
Dissolved Oxygen (mg/L)	4.74	4.33	4.62					4.61		
Turbidity (NTU)	29.08	54.34	109.21					144.40		
Sampling Data										
Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips		Sampling Time:	11:40	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	16.50
Notes:										
Dry @ 16.50 Gallons; No Odor										

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Hornosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	DW-2	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	35-40	Total Well Depth (TWD) (ft.):	40
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	8.88	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD - DGW) (ft.):	31.12	1 casing volume (CV = LWC x C) (gals.):	5.07	5 casing volumes (5 x CV) (gals.):	25.36

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	5.07	10.15	15.22	20.29	25.36		6.00
Time (military)	12:35	12:41						12:48
PH (s.u.)	5.14	5.39						5.63
Specific Conductivity (µS/cm)	39.70	41.00						45.70
Water Temperature (°C)	22.80	20.00						19.70
Dissolved Oxygen (mg/L)	4.17	4.06						4.59
Turbidity (NTU)	17.40	32.31						84.36

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	12:48	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	6.00
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Notes: Dry @ 6.0 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Hornosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	DW-4	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Baier
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	33-38	Total Well Depth (TWD) (ft.):	38
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	16.38	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD - DGW) (ft.):	21.62	1 casing volume (CV = LWC x C) (gals.):	3.52	5 casing volumes (5 x CV) (gals.):	17.62

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	3.52	7.05	10.57	14.10	17.62		3.00
Time (military)	11:45	11:50						11:55
PH (s.u.)	6.25	6.18						6.22
Specific Conductivity (µS/cm)	96.90	93.10						94.50
Water Temperature (°C)	21.50	20.20						20.40
Dissolved Oxygen (mg/L)	2.64	1.77						1.84
Turbidity (NTU)	21.93	55.19						110.30

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	11:55	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	3.00
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Notes: Dry @ 3.0 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips			
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70			
Quality Assurance										
Meter Name	Serial #:	Calibration:								
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y	
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y							
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y			
Well Information										
Well ID:	DW-5	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652			0.163	Method of Purging/Sample Collection		Bailer		
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):			33-38	Total Well Depth (TWD) (ft.):		38		
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):			6.22	Free Product Thickness (ft.):		Not Detected		
Length of water column (LWC = TWD – DGW) (ft.):	31.78	1 casing volume (CV = LWC x C) (gals.):			5.18	5 casing volumes (5 x CV) (gals.):		25.90		
Purging Data										
	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling		
Volume Purged (gallons)	0.00	5.18	10.36	15.54	20.72	25.90		13.25		
Time (military)	13:40	13:45	13:51					13:55		
PH (s.u.)	5.85	5.91	5.95					5.83		
Specific Conductivity (µS/cm)	64.80	70.00	74.50					56.50		
Water Temperature (°C)	23.40	23.10	23.20					23.00		
Dissolved Oxygen (mg/L)	2.67	2.74	2.85					2.91		
Turbidity (NTU)	11.70	19.36	24.73					57.21		
Sampling Data										
Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips		Sampling Time:	13:55	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	13.25
Notes: Dry @ 13.25 Gallons; No Odor										

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	DW-6	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	31-36	Total Well Depth (TWD) (ft.):	36
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	7.52	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD - DGW) (ft.):	28.48	1 casing volume (CV = LWC x C) (gals.):	4.64	5 casing volumes (5 x CV) (gals.):	23.21

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	4.64	9.28	13.93	18.57	23.21		14.00
Time (military)	10:34	10:40	10:46	10:50				10:52
PH (s.u.)	6.03	6.08	5.98	5.83				5.77
Specific Conductivity (µS/cm)	46.40	32.00	29.90	34.60				35.40
Water Temperature (°C)	21.30	20.50	20.20	20.20				20.10
Dissolved Oxygen (mg/L)	4.78	5.76	5.85	5.51				5.44
Turbidity (NTU)	15.62	19.03	61.47	87.33				99.84

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	10:52	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	14.00
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Notes: Dry @ 14.00 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	10/22/2015	Site ID #:	18856	Site Name:	Steady Simmons	Field Personnel:	T. Elder, B. Garner, C. Hanson, J. Phillips
County:	Jasper	Project Manager:	Minda Homosky	General Weather Conditions:	foggy	Ambient Air Temp (°F):	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15h101448	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	12g102878	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301183	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	DW-7	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	31-36	Total Well Depth (TWD) (ft.):	36
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	6.09	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD - DGW) (ft.):	29.91	1 casing volume (CV = LWC x C) (gals.):	4.88	5 casing volumes (5 x CV) (gals.):	24.38

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	4.88	9.75	14.63	19.50	24.38		14.00
Time (military)	13:13	13:19	13:25	13:32				13:34
PH (s.u.)	5.43	5.53	5.57	5.59				5.63
Specific Conductivity (µS/cm)	48.70	49.40	46.80	48.50				51.40
Water Temperature (°C)	21.60	21.50	21.30	21.40				21.60
Dissolved Oxygen (mg/L)	1.69	1.73	1.78	1.84				1.91
Turbidity (NTU)	11.30	17.08	31.11	40.76				61.13

Sampling Data

Sampled By:	T. Elder, B. Garner, C. Hanson, J. Phillips	Sampling Time:	13:34	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	14.00
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Notes: Dry @ 14.00 Gallons; No Odor



November 5, 2015

Re: Treatment of Purge Water
Steady Simmons
Early Branch, South Carolina
SCDHEC Site ID Number 18856
MECI Project Number 15-5280

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

A total of 162.50 gallons were treated on October 22, 2015 at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

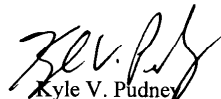
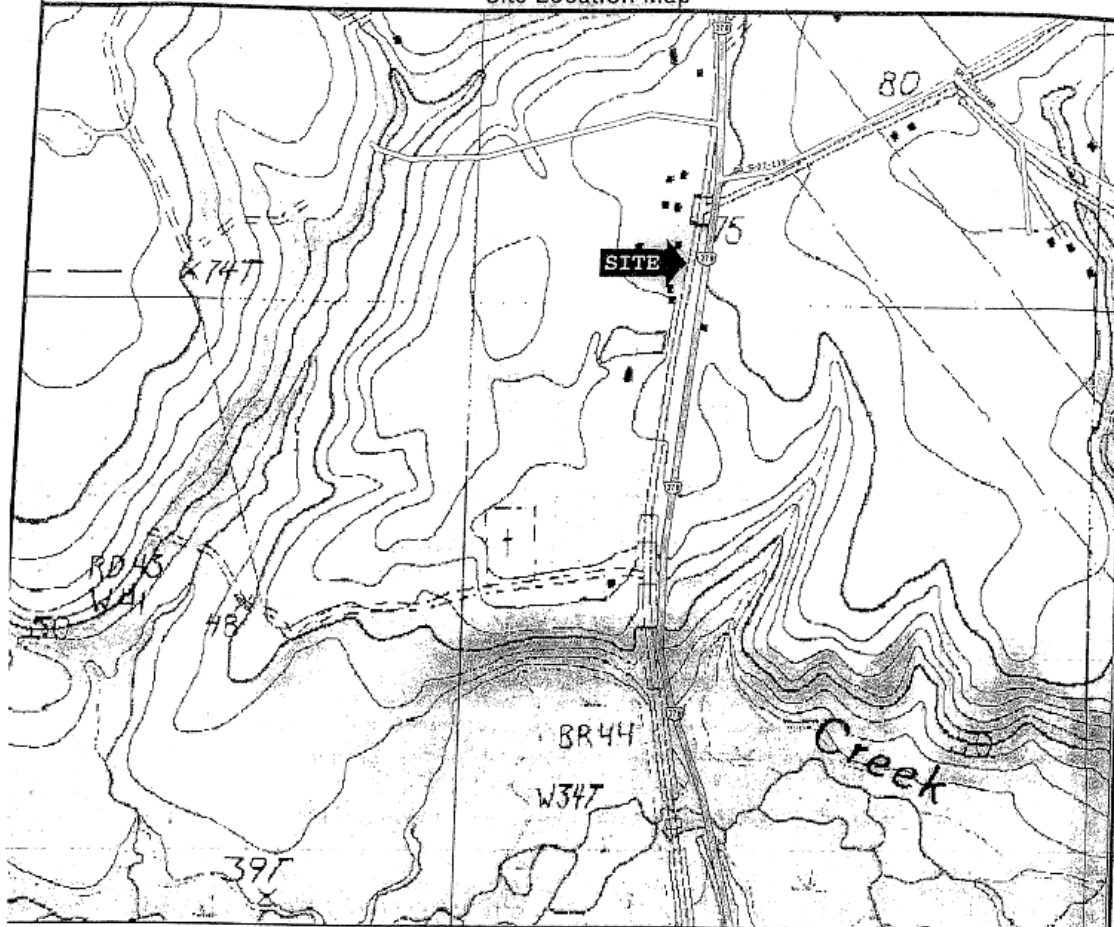

Kyle V. Pudney
Project Biologist

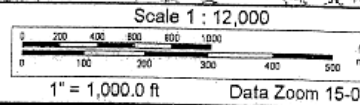
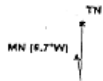
FIGURE 1
Site Location Map



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DeLorme. DeLorme Topo USA® 7.0.

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CRAWFORD
ENVIRONMENTAL
SERVICES

Division of C.F. Crawford, Inc.

104 Corporate Blvd.,
West Columbia, SC 29169

803-708-0079 (office) 803-708-8137 (fax)

GRAYS, SOUTH CAROLINA

Source: DeLorme Topo USA 7.0
Scale: 1:12,000 Contour Interval: 10 Feet

Steady Simmons
16661 Grays Highway
Early Branch, SC 29916-08016
UST Permit: 18856

Project: Tier II Assessment





Client: SCDHEC

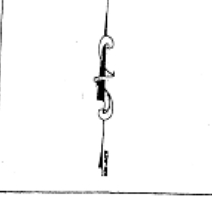
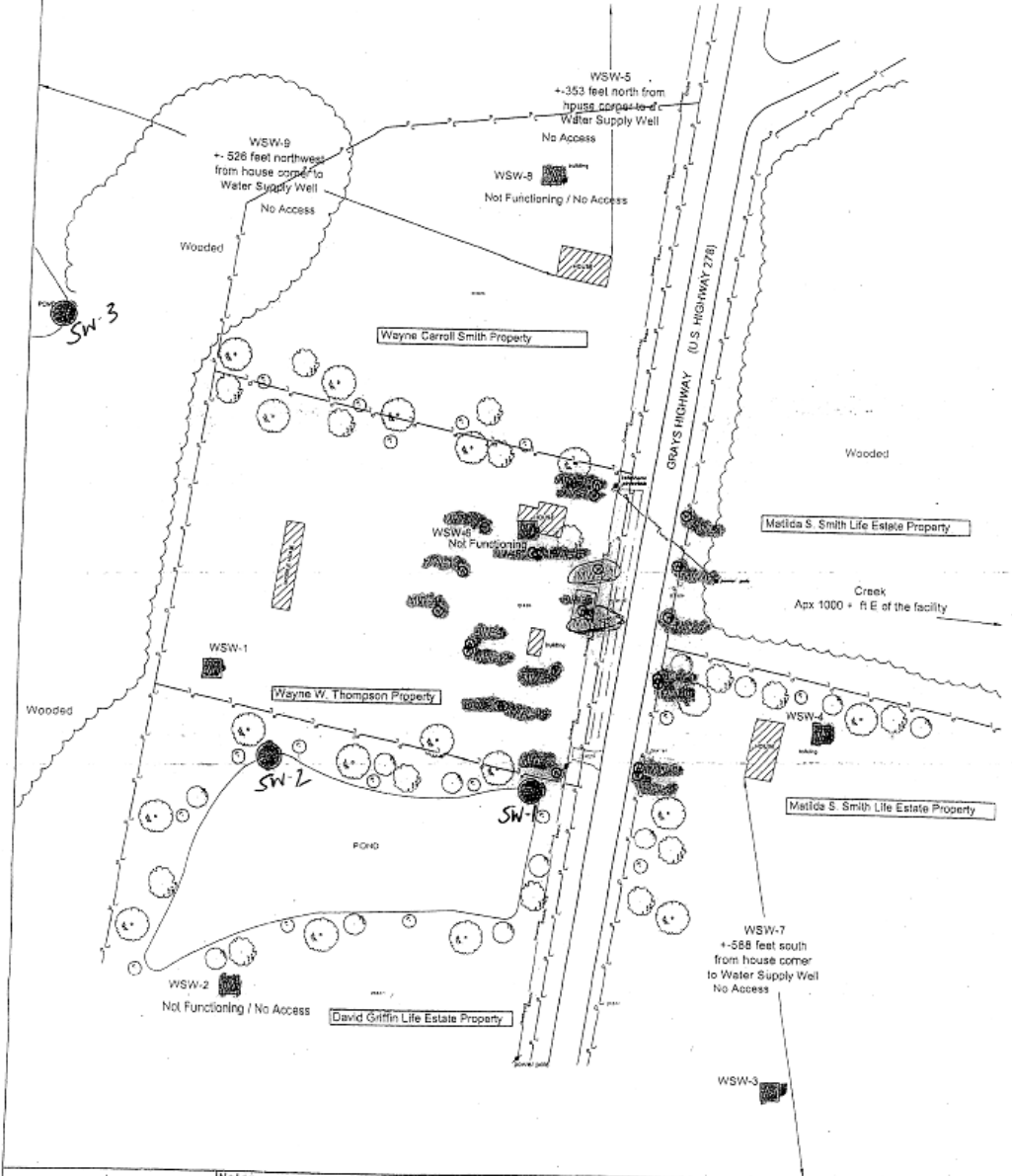
CES Job #: 15.102

Date: January 2012



Tier II 5/7/12

-  - TRBSLs
-  - VRBSLs
-  - EDB TRBSLs
-  - receptors



Notes
1. Diagram based RLS Survey, Aerial Photographs, GIS records and CES field notes

GRAPHIC SCALE
0 40 80 160
(In Feet)








Legend	
	UST Basin
	Building
	Monitoring Well
	Water Supply Well
	Property Line
	Surface Water Sample

Figure 2
Site Facility Base Map
Steady Simmons
16661 Grays Highway
Early Branch, SC 29916

Project Lead:	JSR	 CRAWFORD ENVIRONMENTAL SERVICES 12450 Highway 278, Suite 412 Wm. C. Cawford, SC 29221 803-724-0579 (ph) 803-724-1109 (fax)	Project No.:	15.103
Checked by:	JSR		Date:	5/4/12
Drawn by:	HBO		Revisions:	0

UST PAPER 10



Pace Analytical Services, Inc.
9800 Kinsey Ave Suite 100
Huntersville, NC 28078
(704)875-9092

November 03, 2015

Mr. John Bryant
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201



RE: Project: STEADY SIMMONS 18856/50611
Pace Project No.: 92273181

Dear Mr. Bryant:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Trey Carter
treycarter@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc



Pace Analytical Services, Inc.
9800 Kinsey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: STEADY SIMMONS 18856/50611
Pace Project No.: 92273181

Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification # 37706
North Carolina Field Services Certification # 5342
North Carolina Wastewater Certification # 12
South Carolina Certification # 99006001

Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification # 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification # M-NC030
North Carolina Drinking Water Certification # 37712

North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification # 356
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: STEADY SIMMONS 18856/50611
Pace Project No 92273181

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92273181001	MW-1R	Water	10/22/15 13:06	10/23/15 08:18
92273181002	MW-2	Water	10/22/15 13:04	10/23/15 08:18
92273181003	MW-3	Water	10/22/15 12:20	10/23/15 08:18
92273181004	MW-4	Water	10/22/15 11:08	10/23/15 08:18
92273181005	MW-5	Water	10/22/15 12:49	10/23/15 08:18
92273181006	MW-6	Water	10/22/15 12:46	10/23/15 08:18
92273181007	MW-7	Water	10/22/15 12:45	10/23/15 08:18
92273181008	MW-8	Water	10/22/15 12:40	10/23/15 08:18
92273181009	MW-9	Water	10/22/15 12:31	10/23/15 08:18
92273181010	MW-10	Water	10/22/15 12:20	10/23/15 08:18
92273181011	MW-11	Water	10/22/15 11:29	10/23/15 08:18
92273181012	MW-12	Water	10/22/15 11:45	10/23/15 08:18
92273181013	MW-13	Water	10/22/15 10:55	10/23/15 08:18
92273181014	MW-14	Water	10/22/15 11:00	10/23/15 08:18
92273181015	MW-15	Water	10/22/15 13:34	10/23/15 08:18
92273181016	MW-16	Water	10/22/15 10:43	10/23/15 08:18
92273181017	DW-1	Water	10/22/15 12:55	10/23/15 08:18
92273181018	DW-2	Water	10/22/15 12:48	10/23/15 08:18
92273181019	DW-3	Water	10/22/15 11:40	10/23/15 08:18
92273181020	DW-4	Water	10/22/15 11:55	10/23/15 08:18
92273181021	DW-5	Water	10/22/15 13:55	10/23/15 08:18
92273181022	DW-6	Water	10/22/15 10:52	10/23/15 08:18
92273181023	DW-7	Water	10/22/15 13:34	10/23/15 08:18
92273181024	WSW-1	Water	10/22/15 10:34	10/23/15 08:18
92273181025	WSW-2	Water	10/22/15 10:44	10/23/15 08:18
92273181026	WSW-3	Water	10/22/15 11:17	10/23/15 08:18
92273181027	WSW-4	Water	10/22/15 11:04	10/23/15 08:18
92273181028	SW-1	Water	10/22/15 12:55	10/23/15 08:18
92273181029	MW-1R DUP	Water	10/22/15 13:07	10/23/15 08:18
92273181030	MW-15 DUP	Water	10/22/15 13:35	10/23/15 08:18
92273181031	FIELD BLANK	Water	10/22/15 13:40	10/23/15 08:18
92273181032	TRIP BLANK	Water	10/22/15 13:41	10/23/15 08:18

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SAMPLE ANALYTE COUNT

Project STEADY SIMMONS 18856/50611
 Pace Project No.: 92273181

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92273181001	MW-1R	EPA 8260	CCL	20	PASI-C
92273181002	MW-2	EPA 8011	HSK	2	PASI-C
		EPA 6010	CDF	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92273181003	MW-3	EPA 8260	CCL	20	PASI-C
92273181004	MW-4	EPA 8260	CCL	20	PASI-C
92273181005	MW-5	EPA 6010	CDF	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92273181006	MW-6	EPA 6010	CDF	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92273181007	MW-7	EPA 6010	CDF	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92273181008	MW-8	EPA 8260	CCL	20	PASI-C
92273181009	MW-9	EPA 8260	CCL	20	PASI-C
92273181010	MW-10	EPA 6010	CDF	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92273181011	MW-11	EPA 8260	CCL	20	PASI-C
92273181012	MW-12	EPA 6010	CDF	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92273181013	MW-13	EPA 8260	CCL	20	PASI-C
92273181014	MW-14	EPA 6010	CDF	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92273181015	MW-15	EPA 6010	JMW	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92273181016	MW-16	EPA 8260	CCL	20	PASI-C
92273181017	DW-1	EPA 8260	CCL	20	PASI-C
92273181018	DW-2	EPA 8260	CCL	20	PASI-C
92273181019	DW-3	EPA 8260	CCL	20	PASI-C
92273181020	DW-4	EPA 8260	CCL	20	PASI-C
92273181021	DW-5	EPA 8260	CCL	20	PASI-C
92273181022	DW-6	EPA 8260	CCL	20	PASI-C
92273181023	DW-7	EPA 8260	CCL	20	PASI-C
92273181024	WSW-1	EPA 8260	GAW	20	PASI-C
92273181025	WSW-2	EPA 8260	GAW	20	PASI-C
92273181026	WSW-3	EPA 8260	GAW	20	PASI-C
92273181027	WSW-4	EPA 8260	GAW	20	PASI-C
92273181028	SW-1	EPA 8260	GAW	20	PASI-C

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SAMPLE ANALYTE COUNT

Project STEADY SIMMONS 18856/50611
Pace Project No 92273181

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92273181029	MW-1R DUP	EPA 8260	CCL	20	PASI-C
92273181030	MW-15 DUP	EPA 6010	JMW	1	PASI-A
		EPA 8260	CCL	20	PASI-C
92273181031	FIELD BLANK	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92273181032	TRIP BLANK	EPA 8260	CCL	20	PASI-C

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SUMMARY OF DETECTION

Project: STEADY SIMMONS 18856/50611
Pace Project No 92273181

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92273181001	MW-1R					
EPA 8260	Benzene	12.1	ug/L	5.0	10/27/15 17:04	
EPA 8260	Ethylbenzene	149	ug/L	5.0	10/27/15 17:04	
EPA 8260	Naphthalene	128	ug/L	5.0	10/27/15 17:04	
EPA 8260	Toluene	159	ug/L	5.0	10/27/15 17:04	
EPA 8260	Xylene (Total)	727	ug/L	40.0	10/27/15 21:55	
EPA 8260	m&p-Xylene	402	ug/L	40.0	10/27/15 21:55	
EPA 8260	o-Xylene	325	ug/L	20.0	10/27/15 21:55	
92273181002	MW-2					
EPA 8011	1,2-Dibromoethane (EDB)	0.42	ug/L	0.020	10/27/15 23:13	
EPA 6010	Lead	22.2	ug/L	5.0	10/27/15 19:57	
EPA 8260	Benzene	166	ug/L	50.0	10/30/15 06:33	
EPA 8260	Ethylbenzene	358	ug/L	50.0	10/30/15 06:33	
EPA 8260	Naphthalene	130	ug/L	50.0	10/30/15 06:33	
EPA 8260	Toluene	1220	ug/L	50.0	10/30/15 06:33	
EPA 8260	Xylene (Total)	2410	ug/L	100	10/30/15 06:33	
EPA 8260	m&p-Xylene	1520	ug/L	100	10/30/15 06:33	
EPA 8260	o-Xylene	882	ug/L	50.0	10/30/15 06:33	
92273181008	MW-8					
EPA 8260	Toluene	7.6	ug/L	5.0	10/27/15 10:48	
92273181011	MW-11					
EPA 8260	Benzene	20.8	ug/L	5.0	10/27/15 11:39	
EPA 8260	Methyl-tert-butyl ether	4.5J	ug/L	5.0	10/27/15 11:39	
92273181012	MW-12					
EPA 8260	Benzene	108	ug/L	5.0	10/27/15 11:56	
EPA 8260	Ethylbenzene	3.4J	ug/L	5.0	10/27/15 11:56	
EPA 8260	Methyl-tert-butyl ether	13.8	ug/L	5.0	10/27/15 11:56	
EPA 8260	Naphthalene	8.3	ug/L	5.0	10/27/15 11:56	
EPA 8260	m&p-Xylene	4.6J	ug/L	10.0	10/27/15 11:56	
EPA 8260	o-Xylene	2.4J	ug/L	5.0	10/27/15 11:56	
92273181015	MW-15					
EPA 6010	Lead	2.8J	ug/L	5.0	11/02/15 16:27	
92273181029	MW-1R DUP					
EPA 8260	Benzene	14.6	ug/L	5.0	10/27/15 16:47	
EPA 8260	Ethylbenzene	173	ug/L	5.0	10/27/15 16:47	
EPA 8260	Naphthalene	142	ug/L	5.0	10/27/15 16:47	
EPA 8260	Toluene	199	ug/L	5.0	10/27/15 16:47	
EPA 8260	Xylene (Total)	787	ug/L	40.0	10/27/15 21:38	
EPA 8260	m&p-Xylene	439	ug/L	40.0	10/27/15 21:38	
EPA 8260	o-Xylene	348	ug/L	20.0	10/27/15 21:38	
92273181030	MW-15 DUP					
EPA 6010	Lead	8.2	ug/L	5.0	11/02/15 16:30	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
 Pace Project No 92273181

Sample: **MW-1R** Lab ID: **92273181001** Collected: 10/22/15 13:06 Received: 10/23/15 08:18 Matrix Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8260 MSV			Analytical Method EPA 8260						
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 17:04	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 17:04	994-05-8	
Benzene	12.1	ug/L	5.0	1.7	1		10/27/15 17:04	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 17:04	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 17:04	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 17:04	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 17:04	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 17:04	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 17:04	64-17-5	L3
Ethylbenzene	149	ug/L	5.0	1.6	1		10/27/15 17:04	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 17:04	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 17:04	1634-04-4	
Naphthalene	128	ug/L	5.0	2.0	1		10/27/15 17:04	91-20-3	
Toluene	159	ug/L	5.0	1.6	1		10/27/15 17:04	108-88-3	
Xylene (Total)	727	ug/L	40.0	10.8	4		10/27/15 21:55	1330-20-7	
m&p-Xylene	402	ug/L	40.0	12.4	4		10/27/15 21:55	179601-23-1	
o-Xylene	325	ug/L	20.0	6.4	4		10/27/15 21:55	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		10/27/15 17:04	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		10/27/15 17:04	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		10/27/15 17:04	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611
 Pace Project No.: 92273181

Sample: MW-2 Lab ID: 92273181002 Collected: 10/22/15 13:04 Received: 10/23/15 08:18 Matrix Water									
Parameters	Results	Units	Report		DF	Prepared	Analyzed	CAS No	Qual
			Limit	MDL					
8011 GCS EDB and DBCP Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	0.42	ug/L	0.020	0.020	1	10/27/15 17:58	10/27/15 23:13	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	10/27/15 17:58	10/27/15 23:13	301-79-56	
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	22.2	ug/L	5.0	2.5	1	10/26/15 18:30	10/27/15 19:57	7439-92-1	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	1000	768	10		10/30/15 06:33	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	100	34.0	10		10/30/15 06:33	994-05-8	
Benzene	166	ug/L	50.0	17.0	10		10/30/15 06:33	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	1000	321	10		10/30/15 06:33	624-95-3	
tert-Butyl Alcohol	ND	ug/L	1000	577	10		10/30/15 06:33	75-65-0	L3
tert-Butyl Formate	ND	ug/L	500	73.0	10		10/30/15 06:33	762-75-4	
1,2-Dichloroethane	ND	ug/L	50.0	18.0	10		10/30/15 06:33	107-06-2	
Diisopropyl ether	ND	ug/L	50.0	17.0	10		10/30/15 06:33	108-20-3	
Ethanol	ND	ug/L	2000	1380	10		10/30/15 06:33	64-17-5	L3
Ethylbenzene	358	ug/L	50.0	16.0	10		10/30/15 06:33	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	100	36.0	10		10/30/15 06:33	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	50.0	17.0	10		10/30/15 06:33	1634-04-4	
Naphthalene	130	ug/L	50.0	20.0	10		10/30/15 06:33	91-20-3	
Toluene	1220	ug/L	50.0	16.0	10		10/30/15 06:33	108-88-3	
Xylene (Total)	2410	ug/L	100	27.0	10		10/30/15 06:33	1330-20-7	
m&p-Xylene	1520	ug/L	100	31.0	10		10/30/15 06:33	179601-23-1	
o-Xylene	882	ug/L	50.0	16.0	10		10/30/15 06:33	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		10		10/30/15 06:33	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		10		10/30/15 06:33	17060-07-0	
Toluene-d8 (S)	105	%	70-130		10		10/30/15 06:33	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
 Pace Project No. 92273181

Sample: MW-3	Lab ID: 92273181003	Collected: 10/22/15 12:20	Received: 10/23/15 08 18	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 09 06	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 09 06	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 09 06	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 09:06	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 09:06	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 09:06	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 09:06	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 09:06	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 09 06	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 09 06	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 09 06	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 09 06	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 09 06	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 09 06	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 09 06	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 09:06	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 09:06	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		10/27/15 09:06	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		10/27/15 09:06	17060-07-0	
Toluene-d8 (S)	108	%	70-130		1		10/27/15 09 06	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
Pace Project No.: 92273181

Sample: MW-4	Lab ID: 92273181004	Collected: 10/22/15 11:08	Received: 10/23/15 08:18	Matrx: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8260 MSV									
Analytical Method EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 09:23	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 09:23	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 09:23	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 09:23	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 09:23	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 09:23	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 09:23	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 09:23	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 09:23	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 09:23	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 09:23	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 09:23	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 09:23	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 09:23	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 09:23	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 09:23	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 09:23	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		10/27/15 09:23	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		10/27/15 09:23	17060-07-0	
Toluene-d8 (S)	108	%	70-130		1		10/27/15 09:23	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
Pace Project No.: 92273181

Sample:	Lab ID:	Collected:	Received:	Matrix:					
MW-5	92273181005	10/22/15 12 49	10/23/15 08 18	Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	ND	ug/L	5.0	2.5	1	10/26/15 18 30	10/27/15 20:09	7439-92-1	
8260 MSV		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 09:40	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 09:40	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 09:40	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 09:40	624-95-3	L3,M0
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 09:40	75-65-0	L3,M0
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 09:40	762-75-4	M1
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 09:40	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 09:40	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 09:40	64-17-5	L3,M0
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 09:40	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 09:40	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 09:40	1634-04-4	M1
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 09:40	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 09:40	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 09:40	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 09:40	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 09:40	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		10/27/15 09:40	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		10/27/15 09:40	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/27/15 09:40	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611
 Pace Project No 92273181

Sample: **MW-6** Lab ID: **92273181006** Collected: 10/22/15 12:46 Received: 10/23/15 08:18 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
6010 MET ICP			Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Lead	ND	ug/L	5.0	2.5	1	10/26/15 18:30	10/27/15 20:12	7439-92-1	
8260 MSV			Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 09:57	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 09:57	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 09:57	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 09:57	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 09:57	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 09:57	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 09:57	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 09:57	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 09:57	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 09:57	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 09:57	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 09:57	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 09:57	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 09:57	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 09:57	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 09:57	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 09:57	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		10/27/15 09:57	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		10/27/15 09:57	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		10/27/15 09:57	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611
Pace Project No.: 92273181

Sample: MW-7									
Lab ID: 92273181007 Collected: 10/22/15 12:45 Received 10/23/15 08:18 Matrix Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	ND	ug/L	5.0	2.5	1	10/26/15 18:30	10/27/15 20:16	7439-92-1	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 10:31	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 10:31	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 10:31	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 10:31	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 10:31	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 10:31	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 10:31	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 10:31	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 10:31	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 10:31	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 10:31	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 10:31	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 10:31	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 10:31	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 10:31	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 10:31	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 10:31	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	109	%	70-130		1		10/27/15 10:31	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		10/27/15 10:31	17060-07-0	
Toluene-d8 (S)	109	%	70-130		1		10/27/15 10:31	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
 Pace Project No.: 92273181

Sample: MW-8 Lab ID: 92273181008 Collected: 10/22/15 12 40 Received: 10/23/15 08:18 Matrix: Water									
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 10:48	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 10:48	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 10:48	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 10:48	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 10:48	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 10:48	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 10:48	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 10:48	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 10:48	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 10:48	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 10:48	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 10:48	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 10:48	91-20-3	
Toluene	7.6	ug/L	5.0	1.6	1		10/27/15 10:48	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 10:48	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 10:48	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 10:48	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		10/27/15 10:48	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		10/27/15 10:48	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/27/15 10:48	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611

Pace Project No.: 92273181

Sample: MW-9 Lab ID: 92273181009 Collected: 10/22/15 12:31 Received: 10/23/15 08:18 Matrx: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 11:05	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 11:05	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 11:05	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 11:05	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 11:05	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 11:05	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 11:05	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 11:05	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 11:05	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 11:05	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 11:05	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 11:05	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 11:05	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 11:05	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 11:05	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 11:05	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 11:05	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		10/27/15 11:05	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		10/27/15 11:05	17060-07-0	
Toluene-d8 (S)	109	%	70-130		1		10/27/15 11:05	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611
Pace Project No 92273181

Sample: MW-10 Lab ID: 92273181010 Collected: 10/22/15 12.20 Received: 10/23/15 08.18 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	ND	ug/L	5.0	2.5	1	10/26/15 18:30	10/27/15 20:19	7439-92-1	
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 23:20	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 23:20	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 23:20	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 23:20	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 23:20	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 23:20	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 23:20	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 23:20	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 23:20	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 23:20	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 23:20	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 23:20	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 23:20	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 23:20	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 23:20	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 23:20	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 23:20	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		10/27/15 23:20	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		10/27/15 23:20	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/27/15 23:20	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611
Pace Project No 92273181

Sample: MW-11 Lab ID: 92273181011 Collected: 10/22/15 11:29 Received: 10/23/15 08 18 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 11 39	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 11:39	994-05-8	
Benzene	20.8	ug/L	5.0	1.7	1		10/27/15 11:39	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 11:39	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 11:39	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 11:39	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 11:39	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 11:39	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 11:39	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 11 39	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 11 39	637-92-3	
Methyl-tert-butyl ether	4.5J	ug/L	5.0	1.7	1		10/27/15 11 39	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 11 39	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 11:39	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 11:39	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 11:39	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 11:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		10/27/15 11:39	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		10/27/15 11 39	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/27/15 11 39	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
 Pace Project No.: 92273181

Sample: MW-12 Lab ID: 92273181012 Collected: 10/22/15 11:45 Received: 10/23/15 08:18 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	ND	ug/L	5.0	2.5	1	10/26/15 18:30	10/27/15 20:22	7439-92-1	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 11:56	75-85-4	L3
tert-Amyl methyl ether	ND	ug/L	10.0	3.4	1		10/27/15 11:56	994-05-8	
Benzene	108	ug/L	5.0	1.7	1		10/27/15 11:56	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 11:56	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 11:56	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 11:56	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 11:56	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 11:56	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 11:56	64-17-5	L3
Ethylbenzene	3.4J	ug/L	5.0	1.6	1		10/27/15 11:56	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 11:56	637-92-3	
Methyl-tert-butyl ether	13.8	ug/L	5.0	1.7	1		10/27/15 11:56	1634-04-4	
Naphthalene	8.3	ug/L	5.0	2.0	1		10/27/15 11:56	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 11:56	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 11:56	1330-20-7	
m&p-Xylene	4.6J	ug/L	10.0	3.1	1		10/27/15 11:56	179601-23-1	
o-Xylene	2.4J	ug/L	5.0	1.6	1		10/27/15 11:56	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		10/27/15 11:56	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		10/27/15 11:56	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		10/27/15 11:56	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
 Pace Project No 92273181

Sample: MW-13									
Lab ID: 92273181013									
Collected: 10/22/15 10:55 Received: 10/23/15 08:18 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 12:13	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 12:13	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 12:13	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 12:13	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 12:13	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 12:13	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 12:13	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 12:13	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 12:13	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 12:13	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 12:13	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 12:13	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 12:13	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 12:13	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 12:13	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 12:13	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 12:13	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		10/27/15 12:13	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		10/27/15 12:13	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/27/15 12:13	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611
 Pace Project No. 92273181

Sample: MW-14									
Lab ID: 92273181014 Collected: 10/22/15 11:00 Received 10/23/15 08:18 Matrix Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method EPA 6010 Preparation Method: EPA 3010									
Lead	ND	ug/L	5.0	2.5	1	10/30/15 20:30	11/02/15 16:08	7439-92-1	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 12:31	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 12:31	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 12:31	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 12:31	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 12:31	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 12:31	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 12:31	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 12:31	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 12:31	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 12:31	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 12:31	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 12:31	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 12:31	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 12:31	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 12:31	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 12:31	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 12:31	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		10/27/15 12:31	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		10/27/15 12:31	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/27/15 12:31	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
 Pace Project No.: 92273181

Sample: MW-15									
Lab ID: 92273181015 Collected: 10/22/15 13:34 Received: 10/23/15 08:18 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	2.8J	ug/L	5.0	2.5	1	10/30/15 20:30	11/02/15 16:27	7439-92-1	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 12:48	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 12:48	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 12:48	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 12:48	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 12:48	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 12:48	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 12:48	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 12:48	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 12:48	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 12:48	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 12:48	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 12:48	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 12:48	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 12:48	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 12:48	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 12:48	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 12:48	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		10/27/15 12:48	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		10/27/15 12:48	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		10/27/15 12:48	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
Pace Project No 92273181

Sample: MW-16		Lab ID: 92273181016	Collected: 10/22/15 10:43	Received: 10/23/15 08:18	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
8260 MSV									
Analytical Method EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 13:05	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 13:05	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 13:05	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 13:05	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 13:05	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 13:05	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 13:05	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 13:05	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 13:05	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 13:05	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 13:05	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 13:05	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 13:05	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 13:05	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 13:05	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 13:05	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 13:05	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		10/27/15 13:05	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		10/27/15 13:05	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		10/27/15 13:05	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611
 Pace Project No. 92273181

Sample: DW-1 Lab ID: 92273181017 Collected: 10/22/15 12:55 Received: 10/23/15 08 18 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 15:39	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 15:39	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 15:39	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 15:39	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 15:39	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 15:39	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 15:39	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 15:39	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 15:39	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 15:39	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 15:39	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 15:39	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 15:39	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 15:39	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 15:39	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 15:39	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 15:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		10/27/15 15:39	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		10/27/15 15:39	17060-07-0	
Toluene-d8 (S)	108	%	70-130		1		10/27/15 15:39	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611

Pace Project No.: 92273181

Sample: DW-2									
Lab ID: 92273181018 Collected: 10/22/15 12:48 Received: 10/23/15 08:18 Matrix: Water									
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 13:22	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 13:22	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 13:22	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 13:22	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 13:22	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 13:22	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 13:22	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 13:22	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 13:22	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 13:22	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 13:22	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 13:22	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 13:22	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 13:22	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 13:22	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 13:22	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 13:22	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		10/27/15 13:22	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		10/27/15 13:22	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		10/27/15 13:22	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611
Pace Project No.. 92273181

Sample: DW-3 Lab ID: 92273181019 Collected: 10/22/15 11:40 Received: 10/23/15 08:18 Matrx: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 13:39	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 13:39	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 13:39	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 13:39	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 13:39	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 13:39	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 13:39	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 13:39	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 13:39	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 13:39	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 13:39	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 13:39	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 13:39	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 13:39	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 13:39	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 13:39	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 13:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		10/27/15 13:39	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		10/27/15 13:39	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		10/27/15 13:39	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611
 Pace Project No.. 92273181

Sample: DW-4 Lab ID: 92273181020 Collected: 10/22/15 11:55 Received: 10/23/15 08:18 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 13:56	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 13:56	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 13:56	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 13:56	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 13:56	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 13:56	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 13:56	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 13:56	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 13:56	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 13:56	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 13:56	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 13:56	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 13:56	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 13:56	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 13:56	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 13:56	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 13:56	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		10/27/15 13:56	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		10/27/15 13:56	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		10/27/15 13:56	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611
 Pace Project No 92273181

Sample: DW-5									
Lab ID: 92273181021									
Collected: 10/22/15 13:55 Received 10/23/15 08:18 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 14:13	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 14:13	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 14:13	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 14:13	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 14:13	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 14:13	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 14:13	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 14:13	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 14:13	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 14:13	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 14:13	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 14:13	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 14:13	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 14:13	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 14:13	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 14:13	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 14:13	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		10/27/15 14:13	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		10/27/15 14:13	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/27/15 14:13	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
 Pace Project No.: 92273181

Sample: DW-6									
Lab ID: 92273181022									
Collected 10/22/15 10:52 Received 10/23/15 08:18 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 14:30	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 14:30	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 14:30	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 14:30	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 14:30	75-65-0	L3,M0
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 14:30	762-75-4	P5
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 14:30	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 14:30	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 14:30	64-17-5	L3,M0
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 14:30	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 14:30	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 14:30	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 14:30	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 14:30	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 14:30	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 14:30	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 14:30	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		10/27/15 14:30	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		10/27/15 14:30	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/27/15 14:30	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611

Pace Project No.: 92273181

Sample:	Lab ID:	Collected:	Received:	Matrix	Water				
DW-7	92273181023	10/22/15 13:34	10/23/15 08:18						
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 14:47	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 14:47	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 14:47	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 14:47	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 14:47	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 14:47	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 14:47	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 14:47	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 14:47	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 14:47	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 14:47	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 14:47	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 14:47	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 14:47	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 14:47	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 14:47	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 14:47	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		10/27/15 14:47	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		10/27/15 14:47	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/27/15 14:47	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611

Pace Project No.: 92273181

Sample: WSW-1 Lab ID: 92273181024 Collected: 10/22/15 10:34 Received: 10/23/15 08:18 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
8260 MSV Low Level SC									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/30/15 16:35	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/30/15 16:35	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/30/15 16:35	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/30/15 16:35	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/30/15 16:35	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/30/15 16:35	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/30/15 16:35	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/30/15 16:35	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/30/15 16:35	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/30/15 16:35	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/30/15 16:35	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/30/15 16:35	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/30/15 16:35	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/30/15 16:35	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/30/15 16:35	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/30/15 16:35	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/30/15 16:35	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		10/30/15 16:35	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		10/30/15 16:35	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/30/15 16:35	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611
 Pace Project No : 92273181

Sample: WSW-2 Lab ID: 92273181025 Collected: 10/22/15 10:44 Received 10/23/15 08:18 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level SC		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/30/15 16:51	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/30/15 16:51	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/30/15 16:51	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/30/15 16:51	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/30/15 16:51	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/30/15 16:51	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/30/15 16:51	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/30/15 16:51	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/30/15 16:51	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/30/15 16:51	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/30/15 16:51	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/30/15 16:51	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/30/15 16:51	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/30/15 16:51	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/30/15 16:51	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/30/15 16:51	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/30/15 16:51	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		10/30/15 16:51	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		10/30/15 16:51	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		10/30/15 16:51	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611

Pace Project No.: 92273181

Sample:	WSW-3	Lab ID:	92273181026	Collected:	10/22/15 11:17	Received:	10/23/15 08:18	Matrix:	Water
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
8260 MSV Low Level SC									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/30/15 17:07	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/30/15 17:07	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/30/15 17:07	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/30/15 17:07	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/30/15 17:07	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/30/15 17:07	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/30/15 17:07	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/30/15 17:07	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/30/15 17:07	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/30/15 17:07	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/30/15 17:07	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/30/15 17:07	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/30/15 17:07	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/30/15 17:07	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/30/15 17:07	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/30/15 17:07	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/30/15 17:07	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		10/30/15 17:07	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		10/30/15 17:07	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/30/15 17:07	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611

Pace Project No.: 92273181

Sample: WSW-4 Lab ID: 92273181027 Collected: 10/22/15 11:04 Received: 10/23/15 08:18 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
8260 MSV Low Level SC									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/30/15 17:39	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/30/15 17:39	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/30/15 17:39	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/30/15 17:39	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/30/15 17:39	75-65-0	M1
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/30/15 17:39	762-75-4	M1
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/30/15 17:39	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/30/15 17:39	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/30/15 17:39	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/30/15 17:39	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/30/15 17:39	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/30/15 17:39	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/30/15 17:39	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/30/15 17:39	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/30/15 17:39	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/30/15 17:39	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/30/15 17:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/30/15 17:39	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	70-130		1		10/30/15 17:39	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		10/30/15 17:39	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611
 Pace Project No.: 92273181

Sample: SW-1 Lab ID: 92273181028 Collected: 10/22/15 12:55 Received: 10/23/15 08 18 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV Low Level SC									
Analytical Method EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/30/15 17:55	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/30/15 17:55	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/30/15 17:55	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/30/15 17:55	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/30/15 17:55	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/30/15 17:55	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/30/15 17:55	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/30/15 17:55	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/30/15 17:55	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/30/15 17:55	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/30/15 17:55	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/30/15 17:55	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/30/15 17:55	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/30/15 17:55	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/30/15 17:55	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/30/15 17:55	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/30/15 17:55	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		10/30/15 17:55	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		10/30/15 17:55	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/30/15 17:55	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
 Pace Project No.: 92273181

Sample: MW-1R DUP Lab ID: 92273181029 Collected: 10/22/15 13:07 Received: 10/23/15 08:18 Matrx: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 16:47	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 16:47	994-05-8	
Benzene	14.6	ug/L	5.0	1.7	1		10/27/15 16:47	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 16:47	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 16:47	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 16:47	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 16:47	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 16:47	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 16:47	64-17-5	L3
Ethylbenzene	173	ug/L	5.0	1.6	1		10/27/15 16:47	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 16:47	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 16:47	1634-04-4	
Naphthalene	142	ug/L	5.0	2.0	1		10/27/15 16:47	91-20-3	
Toluene	199	ug/L	5.0	1.6	1		10/27/15 16:47	108-88-3	
Xylene (Total)	787	ug/L	40.0	10.8	4		10/27/15 21:38	1330-20-7	
m&p-Xylene	439	ug/L	40.0	12.4	4		10/27/15 21:38	179601-23-1	
o-Xylene	348	ug/L	20.0	6.4	4		10/27/15 21:38	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		10/27/15 16:47	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		10/27/15 16:47	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		10/27/15 16:47	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
Pace Project No: 92273181

Sample: MW-15 DUP									
Lab ID: 92273181030 Collected: 10/22/15 13 35 Received 10/23/15 08 18 Matrix: Water									
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method EPA 3010									
Lead	8.2	ug/L	5.0	2.5	1	10/30/15 20:30	11/02/15 16:30	7439-92-1	
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 15:22	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 15:22	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 15:22	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 15:22	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 15:22	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 15:22	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 15:22	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 15:22	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 15:22	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 15:22	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 15:22	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 15:22	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 15:22	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 15:22	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 15:22	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 15:22	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 15:22	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		10/27/15 15:22	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		10/27/15 15:22	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/27/15 15:22	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/50611

Pace Project No.: 92273181

Sample: FIELD BLANK									
Lab ID: 92273181031									
Collected: 10/22/15 13:40 Received: 10/23/15 08:18 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP									
Analytical Method EPA 8011 Preparation Method EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/27/15 17:58	10/27/15 23:33	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	101	%	60-140		1	10/27/15 17:58	10/27/15 23:33	301-79-56	
8260 MSV									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 08:14	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 08:14	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 08:14	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 08:14	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 08:14	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 08:14	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 08:14	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 08:14	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 08:14	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 08:14	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 08:14	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 08:14	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 08:14	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 08:14	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 08:14	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 08:14	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 08:14	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		10/27/15 08:14	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		10/27/15 08:14	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/27/15 08:14	2037-26-5	

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/50611
 Pace Project No 92273181

Sample: TRIP BLANK Lab ID: 92273181032 Collected: 10/22/15 13 41 Received: 10/23/15 08 18 Matrx: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV									
Analytical Method EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/27/15 08:32	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/27/15 08:32	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/27/15 08:32	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/27/15 08:32	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/27/15 08:32	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/27/15 08:32	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/27/15 08:32	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/27/15 08:32	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/27/15 08:32	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/27/15 08:32	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/27/15 08:32	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/27/15 08:32	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/27/15 08:32	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/27/15 08:32	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/27/15 08:32	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/27/15 08:32	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/27/15 08:32	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		10/27/15 08:32	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		10/27/15 08:32	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		10/27/15 08:32	2037-26-5	

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QUALITY CONTROL DATA

Project STEADY SIMMONS 18856/50611
Pace Project No.: 92273181

QC Batch:	MPRP/19895	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET
Associated Lab Samples	92273181002, 92273181005, 92273181006, 92273181007, 92273181010, 92273181012		

METHOD BLANK: 1591999 Matrix: Water
Associated Lab Samples: 92273181002, 92273181005, 92273181006, 92273181007, 92273181010, 92273181012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	2.5	10/27/15 18:52	

LABORATORY CONTROL SAMPLE: 1592000

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	480	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE 1592001 1592002

Parameter	Units	1592001		1592002		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		MS 92273105001 Result	MSD Spike Conc	MS Spike Conc	MSD Result					
Lead	ug/L	62.9	500	500	516	519	91	91	75-125	1 20

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/50611
 Pace Project No.: 92273181

QC Batch: MPRP/19937 Analysis Method: EPA 6010
 QC Batch Method: EPA 3010 Analysis Description: 6010 MET
 Associated Lab Samples: 92273181014, 92273181015, 92273181030

METHOD BLANK: 1596314 Matrix: Water
 Associated Lab Samples: 92273181014, 92273181015, 92273181030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	2.5	11/02/15 16:02	

LABORATORY CONTROL SAMPLE: 1596315

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	482	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1596316 1596317

Parameter	Units	1596316		1596317		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92273181014 Result	MS Spike Conc	MSD Spike Conc	MS Result							MSD Result
Lead	ug/L	ND	500	500	526	467	105	93	75-125	12	20	

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/50611
Pace Project No.: 92273181

QC Batch: MSV/34065 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level SC
Associated Lab Samples: 92273181024, 92273181025, 92273181026, 92273181027, 92273181028

METHOD BLANK: 1595895 Matrix: Water
Associated Lab Samples: 92273181024, 92273181025, 92273181026, 92273181027, 92273181028

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1 0	0.24	10/30/15 13:42	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	50 0	10/30/15 13:42	
Benzene	ug/L	ND	1 0	0.25	10/30/15 13:42	
Diisopropyl ether	ug/L	ND	1.0	0 12	10/30/15 13:42	
Ethanol	ug/L	ND	200	33.0	10/30/15 13:42	
Ethyl-tert-butyl ether	ug/L	ND	10.0	0 070	10/30/15 13:42	
Ethylbenzene	ug/L	ND	1 0	0 30	10/30/15 13:42	
m&p-Xylene	ug/L	ND	2.0	0 66	10/30/15 13:42	
Methyl-tert-butyl ether	ug/L	ND	1 0	0.21	10/30/15 13:42	
Naphthalene	ug/L	ND	1.0	0.24	10/30/15 13:42	
o-Xylene	ug/L	ND	1 0	0.23	10/30/15 13:42	
tert-Amyl Alcohol	ug/L	ND	100	50 0	10/30/15 13:42	
tert-Amylmethyl ether	ug/L	ND	10.0	0.10	10/30/15 13:42	
tert-Butyl Alcohol	ug/L	ND	100	3.6	10/30/15 13:42	
tert-Butyl Formate	ug/L	ND	50.0	1.9	10/30/15 13:42	
Toluene	ug/L	ND	1.0	0 26	10/30/15 13:42	
Xylene (Total)	ug/L	ND	2.0	0 66	10/30/15 13:42	
1,2-Dichloroethane-d4 (S)	%	89	70-130		10/30/15 13:42	
4-Bromofluorobenzene (S)	%	98	70-130		10/30/15 13:42	
Toluene-d8 (S)	%	106	70-130		10/30/15 13:42	

LABORATORY CONTROL SAMPLE 1595896

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	40 8	82	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1100	110	70-130	
Benzene	ug/L	50	51.0	102	70-130	
Diisopropyl ether	ug/L	50	55 3	111	70-130	
Ethanol	ug/L	2000	2000	100	70-130	
Ethyl-tert-butyl ether	ug/L	100	101	101	70-130	
Ethylbenzene	ug/L	50	46.8	94	70-130	
m&p-Xylene	ug/L	100	93.1	93	70-130	
Methyl-tert-butyl ether	ug/L	50	52.1	104	70-130	
Naphthalene	ug/L	50	60 4	121	70-130	
o-Xylene	ug/L	50	47.9	96	70-130	
tert-Amyl Alcohol	ug/L	1000	1090	109	70-130	
tert-Amylmethyl ether	ug/L	100	95 9	96	70-130	
tert-Butyl Alcohol	ug/L	500	543	109	70-130	
tert-Butyl Formate	ug/L	400	467	117	70-130	
Toluene	ug/L	50	49.2	98	70-130	

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QUALITY CONTROL DATA

Project STEADY SIMMONS 18856/50611
Pace Project No.: 92273181

LABORATORY CONTROL SAMPLE 1595896		Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Parameter	Units					
Xylene (Total)	ug/L	150	141	94	70-130	
1,2-Dichloroethane-d4 (S)	%			83	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE 1595898		92273181027 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Parameter	Units						
1,2-Dichloroethane	ug/L	ND	20	21.1	105	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	414	103	70-130	
Benzene	ug/L	ND	20	21.2	106	70-130	
Diisopropyl ether	ug/L	ND	20	21.3	107	70-130	
Ethanol	ug/L	ND	800	738	92	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	43.3	108	70-130	
Ethylbenzene	ug/L	ND	20	20.3	102	70-130	
m&p-Xylene	ug/L	ND	40	41.3	103	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	21.4	107	70-130	
Naphthalene	ug/L	ND	20	21.1	106	70-130	
o-Xylene	ug/L	ND	20	21.1	106	70-130	
tert-Amyl Alcohol	ug/L	ND	400	436	109	70-130	
tert-Amylmethyl ether	ug/L	ND	40	42.3	106	70-130	
tert-Butyl Alcohol	ug/L	ND	200	336	168	70-130 M1	
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130 M1	
Toluene	ug/L	ND	20	20.9	104	70-130	
1,2-Dichloroethane-d4 (S)	%				109	70-130	
4-Bromofluorobenzene (S)	%				101	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE 1595897		92273181026 Result	Dup Result	RPD	Max RPD	Qualifiers
Parameter	Units					
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/50611
Pace Project No 92273181

SAMPLE DUPLICATE: 1595897

Parameter	Units	92273181026 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	108	112	3		
4-Bromofluorobenzene (S)	%	100	100	0		
Toluene-d8 (S)	%	101	100	1		

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/50611
Pace Project No.: 92273181

QC Batch: MSV/33994 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92273181003, 92273181004, 92273181005, 92273181006, 92273181007, 92273181008, 92273181009, 92273181011, 92273181012, 92273181013, 92273181014, 92273181015, 92273181016, 92273181031, 92273181032

METHOD BLANK 1591679 Matrix: Water
Associated Lab Samples: 92273181003, 92273181004, 92273181005, 92273181006, 92273181007, 92273181008, 92273181009, 92273181011, 92273181012, 92273181013, 92273181014, 92273181015, 92273181016, 92273181031, 92273181032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	10/27/15 06:49	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	10/27/15 06:49	
Benzene	ug/L	ND	5.0	1.7	10/27/15 06:49	
Diisopropyl ether	ug/L	ND	5.0	1.7	10/27/15 06:49	
Ethanol	ug/L	ND	200	138	10/27/15 06:49	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	10/27/15 06:49	
Ethylbenzene	ug/L	ND	5.0	1.6	10/27/15 06:49	
m&p-Xylene	ug/L	ND	10.0	3.1	10/27/15 06:49	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	10/27/15 06:49	
Naphthalene	ug/L	ND	5.0	2.0	10/27/15 06:49	
o-Xylene	ug/L	ND	5.0	1.6	10/27/15 06:49	
tert-Amyl Alcohol	ug/L	ND	100	76.8	10/27/15 06:49	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	10/27/15 06:49	
tert-Butyl Alcohol	ug/L	ND	100	57.7	10/27/15 06:49	
tert-Butyl Formate	ug/L	ND	50.0	7.3	10/27/15 06:49	
Toluene	ug/L	ND	5.0	1.6	10/27/15 06:49	
Xylene (Total)	ug/L	ND	10.0	2.7	10/27/15 06:49	
1,2-Dichloroethane-d4 (S)	%	100	70-130		10/27/15 06:49	
4-Bromofluorobenzene (S)	%	107	70-130		10/27/15 06:49	
Toluene-d8 (S)	%	108	70-130		10/27/15 06:49	

LABORATORY CONTROL SAMPLE: 1591680

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	53.0	106	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1340	134	70-130 LO	
Benzene	ug/L	50	60.3	121	70-130	
Diisopropyl ether	ug/L	50	64.8	130	70-130	
Ethanol	ug/L	2000	2720	136	70-130 LO	
Ethyl-tert-butyl ether	ug/L	100	125	125	70-130	
Ethylbenzene	ug/L	50	55.7	111	70-130	
m&p-Xylene	ug/L	100	111	111	70-130	
Methyl-tert-butyl ether	ug/L	50	65.0	130	70-130	
Naphthalene	ug/L	50	61.7	123	70-130	
o-Xylene	ug/L	50	56.5	113	70-130	
tert-Amyl Alcohol	ug/L	1000	1310	131	70-130 LO	

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QUALITY CONTROL DATA

Project STEADY SIMMONS 18856/50611
Pace Project No : 92273181

LABORATORY CONTROL SAMPLE: 1591680

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Amylmethyl ether	ug/L	100	120	120	70-130	
tert-Butyl Alcohol	ug/L	500	728	146	70-130	L0
tert-Butyl Formate	ug/L	400	507	127	70-130	
Toluene	ug/L	50	57.6	115	70-130	
Xylene (Total)	ug/L	150	168	112	70-130	
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE SAMPLE: 1591681

Parameter	Units	92273181005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	22.4	112	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	537	134	70-130	M0
Benzene	ug/L	ND	20	24.7	124	70-130	
Diisopropyl ether	ug/L	ND	20	25.5	127	70-130	
Ethanol	ug/L	ND	800	1380	173	70-130	M0
Ethyl-tert-butyl ether	ug/L	ND	40	48.6	121	70-130	
Ethylbenzene	ug/L	ND	20	21.3	106	70-130	
m&p-Xylene	ug/L	ND	40	43.1	108	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	26.6	133	70-130	M1
Naphthalene	ug/L	ND	20	24.1	120	70-130	
o-Xylene	ug/L	ND	20	21.8	109	70-130	
tert-Amyl Alcohol	ug/L	ND	400	494	123	70-130	
tert-Amylmethyl ether	ug/L	ND	40	46.0	115	70-130	
tert-Butyl Alcohol	ug/L	ND	200	417	208	70-130	M0
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	P5
Toluene	ug/L	ND	20	22.5	113	70-130	
1,2-Dichloroethane-d4 (S)	%				98	70-130	
4-Bromofluorobenzene (S)	%				104	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 1591682

Parameter	Units	92273181006 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project STEADY SIMMONS 18856/50611
Pace Project No 92273181

SAMPLE DUPLICATE 1591682

Parameter	Units	92273181006 Result	Dup Result	RPD	Max RPD	Qualifiers
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	109	110	0		
4-Bromofluorobenzene (S)	%	108	108	0		
Toluene-d8 (S)	%	106	108	1		

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QUALITY CONTROL DATA

Project STEADY SIMMONS 18856/50611
Pace Project No 92273181

QC Batch: MSV/33995 Analysis Method: EPA 8260
QC Batch Method EPA 8260 Analysis Description 8260 MSV SC
Associated Lab Samples 92273181001, 92273181017, 92273181018, 92273181019, 92273181020, 92273181021, 92273181022, 92273181023, 92273181029, 92273181030

METHOD BLANK 1591686 Matrix: Water
Associated Lab Samples: 92273181001, 92273181017, 92273181018, 92273181019, 92273181020, 92273181021, 92273181022, 92273181023, 92273181029, 92273181030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	10/27/15 07:06	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	10/27/15 07:06	
Benzene	ug/L	ND	5.0	1.7	10/27/15 07:06	
Diisopropyl ether	ug/L	ND	5.0	1.7	10/27/15 07:06	
Ethanol	ug/L	ND	200	138	10/27/15 07:06	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	10/27/15 07:06	
Ethylbenzene	ug/L	ND	5.0	1.6	10/27/15 07:06	
m&p-Xylene	ug/L	ND	10.0	3.1	10/27/15 07:06	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	10/27/15 07:06	
Naphthalene	ug/L	ND	5.0	2.0	10/27/15 07:06	
o-Xylene	ug/L	ND	5.0	1.6	10/27/15 07:06	
tert-Amyl Alcohol	ug/L	ND	100	76.8	10/27/15 07:06	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	10/27/15 07:06	
tert-Butyl Alcohol	ug/L	ND	100	57.7	10/27/15 07:06	
tert-Butyl Formate	ug/L	ND	50.0	7.3	10/27/15 07:06	
Toluene	ug/L	ND	5.0	1.6	10/27/15 07:06	
Xylene (Total)	ug/L	ND	10.0	2.7	10/27/15 07:06	
1,2-Dichloroethane-d4 (S)	%	102	70-130		10/27/15 07:06	
4-Bromofluorobenzene (S)	%	108	70-130		10/27/15 07:06	
Toluene-d8 (S)	%	106	70-130		10/27/15 07:06	

LABORATORY CONTROL SAMPLE: 1591687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	51.2	102	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1330	133	70-130 L0	
Benzene	ug/L	50	57.0	114	70-130	
Diisopropyl ether	ug/L	50	63.0	126	70-130	
Ethanol	ug/L	2000	2740	137	70-130 L0	
Ethyl-tert-butyl ether	ug/L	100	123	123	70-130	
Ethylbenzene	ug/L	50	53.6	107	70-130	
m&p-Xylene	ug/L	100	108	108	70-130	
Methyl-tert-butyl ether	ug/L	50	64.0	128	70-130	
Naphthalene	ug/L	50	56.4	113	70-130	
o-Xylene	ug/L	50	54.8	110	70-130	
tert-Amyl Alcohol	ug/L	1000	1270	127	70-130	
tert-Amylmethyl ether	ug/L	100	115	115	70-130	
tert-Butyl Alcohol	ug/L	500	722	144	70-130 L0	

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/50611
Pace Project No.: 92273181

LABORATORY CONTROL SAMPLE: 1591687

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	400	497	124	70-130	
Toluene	ug/L	50	54.0	108	70-130	
Xylene (Total)	ug/L	150	162	108	70-130	
1,2-Dichloroethane-d4 (S)	%			94	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE SAMPLE: 1591688

Parameter	Units	92273181022 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	21.6	108	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	505	126	70-130	
Benzene	ug/L	ND	20	24.5	123	70-130	
Diisopropyl ether	ug/L	ND	20	24.0	120	70-130	
Ethanol	ug/L	ND	800	1290	161	70-130 M0	
Ethyl-tert-butyl ether	ug/L	ND	40	46.4	116	70-130	
Ethylbenzene	ug/L	ND	20	21.1	105	70-130	
m&p-Xylene	ug/L	ND	40	42.9	107	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	25.4	127	70-130	
Naphthalene	ug/L	ND	20	21.4	107	70-130	
o-Xylene	ug/L	ND	20	21.6	108	70-130	
tert-Amyl Alcohol	ug/L	ND	400	470	118	70-130	
tert-Amylmethyl ether	ug/L	ND	40	44.6	111	70-130	
tert-Butyl Alcohol	ug/L	ND	200	412	206	70-130 M0	
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130 P5	
Toluene	ug/L	ND	20	22.2	111	70-130	
1,2-Dichloroethane-d4 (S)	%				99	70-130	
4-Bromofluorobenzene (S)	%				104	70-130	
Toluene-d8 (S)	%				99	70-130	

SAMPLE DUPLICATE: 1591689

Parameter	Units	92273181023 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/50611
Pace Project No : 92273181

SAMPLE DUPLICATE: 1591689

Parameter	Units	92273181023 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	111	111	0		
4-Bromofluorobenzene (S)	%	108	108	0		
Toluene-d8 (S)	%	107	108	1		

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/50611
Pace Project No.: 92273181

QC Batch	MSV/34009	Analysis Method	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV SC
Associated Lab Samples:	92273181010		

METHOD BLANK: 1592331 Matrix: Water
Associated Lab Samples: 92273181010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	10/27/15 22:29	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	10/27/15 22:29	
Benzene	ug/L	ND	5.0	1.7	10/27/15 22:29	
Diisopropyl ether	ug/L	ND	5.0	1.7	10/27/15 22:29	
Ethanol	ug/L	ND	200	138	10/27/15 22:29	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	10/27/15 22:29	
Ethylbenzene	ug/L	ND	5.0	1.6	10/27/15 22:29	
m&p-Xylene	ug/L	ND	10.0	3.1	10/27/15 22:29	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	10/27/15 22:29	
Naphthalene	ug/L	ND	5.0	2.0	10/27/15 22:29	
o-Xylene	ug/L	ND	5.0	1.6	10/27/15 22:29	
tert-Amyl Alcohol	ug/L	ND	100	76.8	10/27/15 22:29	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	10/27/15 22:29	
tert-Butyl Alcohol	ug/L	ND	100	57.7	10/27/15 22:29	
tert-Butyl Formate	ug/L	ND	50.0	7.3	10/27/15 22:29	
Toluene	ug/L	ND	5.0	1.6	10/27/15 22:29	
Xylene (Total)	ug/L	ND	10.0	2.7	10/27/15 22:29	
1,2-Dichloroethane-d4 (S)	%	102	70-130		10/27/15 22:29	
4-Bromofluorobenzene (S)	%	106	70-130		10/27/15 22:29	
Toluene-d8 (S)	%	106	70-130		10/27/15 22:29	

LABORATORY CONTROL SAMPLE 1592332

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	47.9	96	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1240	124	70-130	
Benzene	ug/L	50	54.8	110	70-130	
Diisopropyl ether	ug/L	50	55.2	110	70-130	
Ethanol	ug/L	2000	2450	122	70-130	
Ethyl-tert-butyl ether	ug/L	100	107	107	70-130	
Ethylbenzene	ug/L	50	53.7	107	70-130	
m&p-Xylene	ug/L	100	106	106	70-130	
Methyl-tert-butyl ether	ug/L	50	55.0	110	70-130	
Naphthalene	ug/L	50	59.8	120	70-130	
o-Xylene	ug/L	50	54.1	108	70-130	
tert-Amyl Alcohol	ug/L	1000	1150	115	70-130	
tert-Amylmethyl ether	ug/L	100	110	110	70-130	
tert-Butyl Alcohol	ug/L	500	571	114	70-130	
tert-Butyl Formate	ug/L	400	449	112	70-130	
Toluene	ug/L	50	51.4	103	70-130	

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/50611
Pace Project No. 92273181

LABORATORY CONTROL SAMPLE 1592332		Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Parameter	Units					
Xylene (Total)	ug/L	150	160	107	70-130	
1,2-Dichloroethane-d4 (S)	%			95	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE SAMPLE: 1592333		92273143003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Parameter	Units						
1,2-Dichloroethane	ug/L	ND	20	19.8	98	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	457	114	70-130	
Benzene	ug/L	ND	20	23.3	117	70-130	
Diisopropyl ether	ug/L	ND	20	21.1	106	70-130	
Ethanol	ug/L	ND	800	1060	133	70-130 M1	
Ethyl-tert-butyl ether	ug/L	ND	40	39.7	99	70-130	
Ethylbenzene	ug/L	ND	20	23.5	117	70-130	
m&p-Xylene	ug/L	ND	40	47.1	117	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	21.4	107	70-130	
Naphthalene	ug/L	ND	20	24.8	124	70-130	
o-Xylene	ug/L	ND	20	22.9	114	70-130	
tert-Amyl Alcohol	ug/L	ND	400	402	100	70-130	
tert-Amylmethyl ether	ug/L	ND	40	41.2	103	70-130	
tert-Butyl Alcohol	ug/L	ND	200	303	152	70-130 M1	
tert-Butyl Formate	ug/L	ND	160	ND	2	70-130 P5	
Toluene	ug/L	ND	20	22.4	111	70-130	
1,2-Dichloroethane-d4 (S)	%				100	70-130	
4-Bromofluorobenzene (S)	%				103	70-130	
Toluene-d8 (S)	%				99	70-130	

SAMPLE DUPLICATE: 1592334		92273143004 Result	Dup Result	RPD	Max RPD	Qualifiers
Parameter	Units					
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	12.7	21.0	50	30 D6	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	3.5J	5.6		30	
m&p-Xylene	ug/L	3.6J	6.3J		30	
Methyl-tert-butyl ether	ug/L	4.4J	4.8J		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	86.3J	123		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/50611
Pace Project No 92273181

SAMPLE DUPLICATE: 1592334

Parameter	Units	92273143004 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	106	105	1		
4-Bromofluorobenzene (S)	%	103	104	1		
Toluene-d8 (S)	%	103	103	0		

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/50611
 Pace Project No. 92273181

QC Batch: MSV/34028 Analysis Method: EPA 8260
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
 Associated Lab Samples: 92273181002

METHOD BLANK 1593571 Matrix: Water
 Associated Lab Samples 92273181002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	10/30/15 01:26	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	10/30/15 01:26	
Benzene	ug/L	ND	5.0	1.7	10/30/15 01:26	
Diisopropyl ether	ug/L	ND	5.0	1.7	10/30/15 01:26	
Ethanol	ug/L	ND	200	138	10/30/15 01:26	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	10/30/15 01:26	
Ethylbenzene	ug/L	ND	5.0	1.6	10/30/15 01:26	
m&p-Xylene	ug/L	ND	10.0	3.1	10/30/15 01:26	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	10/30/15 01:26	
Naphthalene	ug/L	ND	5.0	2.0	10/30/15 01:26	
o-Xylene	ug/L	ND	5.0	1.6	10/30/15 01:26	
tert-Amyl Alcohol	ug/L	ND	100	76.8	10/30/15 01:26	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	10/30/15 01:26	
tert-Butyl Alcohol	ug/L	ND	100	57.7	10/30/15 01:26	
tert-Butyl Formate	ug/L	ND	50.0	7.3	10/30/15 01:26	
Toluene	ug/L	ND	5.0	1.6	10/30/15 01:26	
Xylene (Total)	ug/L	ND	10.0	2.7	10/30/15 01:26	
1,2-Dichloroethane-d4 (S)	%	108	70-130		10/30/15 01:26	
4-Bromofluorobenzene (S)	%	112	70-130		10/30/15 01:26	
Toluene-d8 (S)	%	108	70-130		10/30/15 01:26	

LABORATORY CONTROL SAMPLE 1593572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.4	99	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1250	125	70-130	
Benzene	ug/L	50	54.3	109	70-130	
Diisopropyl ether	ug/L	50	65.0	130	70-130	
Ethanol	ug/L	2000	2790	139	70-130 LO	
Ethyl-tert-butyl ether	ug/L	100	116	116	70-130	
Ethylbenzene	ug/L	50	51.7	103	70-130	
m&p-Xylene	ug/L	100	106	106	70-130	
Methyl-tert-butyl ether	ug/L	50	58.3	117	70-130	
Naphthalene	ug/L	50	54.6	109	70-130	
o-Xylene	ug/L	50	54.1	108	70-130	
tert-Amyl Alcohol	ug/L	1000	1370	137	70-130 LO	
tert-Amylmethyl ether	ug/L	100	114	114	70-130	
tert-Butyl Alcohol	ug/L	500	676	135	70-130 LO	
tert-Butyl Formate	ug/L	400	484	121	70-130	
Toluene	ug/L	50	51.4	103	70-130	

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QUALITY CONTROL DATA

Project STEADY SIMMONS 18856/50611
 Pace Project No 92273181

LABORATORY CONTROL SAMPLE: 1593572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	160	107	70-130	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			106	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE SAMPLE: 1593573

Parameter	Units	92273286005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	21.6	107	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	457	114	70-130	
Benzene	ug/L	ND	20	23.5	118	70-130	
Diisopropyl ether	ug/L	ND	20	24.8	124	70-130	
Ethanol	ug/L	ND	800	1210	151	70-130 M0	
Ethyl-tert-butyl ether	ug/L	ND	40	43.8	110	70-130	
Ethylbenzene	ug/L	ND	20	21.2	106	70-130	
m&p-Xylene	ug/L	ND	40	43.4	109	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	23.3	117	70-130	
Naphthalene	ug/L	ND	20	25.6	128	70-130	
o-Xylene	ug/L	ND	20	22.3	112	70-130	
tert-Amyl Alcohol	ug/L	ND	400	468	117	70-130	
tert-Amylmethyl ether	ug/L	ND	40	41.9	105	70-130	
tert-Butyl Alcohol	ug/L	ND	200	371	185	70-130 M0	
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130 P5	
Toluene	ug/L	ND	20	22.0	110	70-130	
1,2-Dichloroethane-d4 (S)	%				108	70-130	
4-Bromofluorobenzene (S)	%				107	70-130	
Toluene-d8 (S)	%				103	70-130	

SAMPLE DUPLICATE: 1593574

Parameter	Units	92273286007 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/50611
Pace Project No : 92273181

SAMPLE DUPLICATE 1593574

Parameter	Units	92273286007 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	109	109	0		
4-Bromofluorobenzene (S)	%	109	111	2		
Toluene-d8 (S)	%	108	108	0		

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/50611
Pace Project No 92273181

QC Batch OEXT/38660 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92273181002, 92273181031

METHOD BLANK: 1592247 Matrix Water
Associated Lab Samples: 92273181002, 92273181031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	0.020	10/27/15 19:50	
1-Chloro-2-bromopropane (S)	%	93	60-140		10/27/15 19:50	

LABORATORY CONTROL SAMPLE & LCSD 1592248 1592249

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	28	0.30	0.33	106	116	60-140	12	20	
1-Chloro-2-bromopropane (S)	%				105	108	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1592250 1592251

Parameter	Units	92273286001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
1,2-Dibromoethane (EDB)	ug/L	ND	28	.28	0.31	0.31	110	110	60-140	0	20		
1-Chloro-2-bromopropane (S)	%						100	103	60-140				

SAMPLE DUPLICATE: 1592252

Parameter	Units	92273286002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	102	104	1		

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QUALIFIERS

Project STEADY SIMMONS 18856/50611
Pace Project No 92273181

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected
Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes
TNI - The NELAC Institute.

LABORATORIES

PASI-A Pace Analytical Services - Asheville
PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits
L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias
M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
P5 The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project STEADY SIMMONS 18856/50611
Pace Project No.: 92273181

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92273181002	MW-2	EPA 8011	OEXT/38660	EPA 8011	GCSV/23032
92273181031	FIELD BLANK	EPA 8011	OEXT/38660	EPA 8011	GCSV/23032
92273181002	MW-2	EPA 3010	MPRP/19895	EPA 6010	ICP/17939
92273181005	MW-5	EPA 3010	MPRP/19895	EPA 6010	ICP/17939
92273181006	MW-6	EPA 3010	MPRP/19895	EPA 6010	ICP/17939
92273181007	MW-7	EPA 3010	MPRP/19895	EPA 6010	ICP/17939
92273181010	MW-10	EPA 3010	MPRP/19895	EPA 6010	ICP/17939
92273181012	MW-12	EPA 3010	MPRP/19895	EPA 6010	ICP/17939
92273181014	MW-14	EPA 3010	MPRP/19937	EPA 6010	ICP/17972
92273181015	MW-15	EPA 3010	MPRP/19937	EPA 6010	ICP/17972
92273181030	MW-15 DUP	EPA 3010	MPRP/19937	EPA 6010	ICP/17972
92273181024	WSW-1	EPA 8260	MSV/34065		
92273181025	WSW-2	EPA 8260	MSV/34065		
92273181026	WSW-3	EPA 8260	MSV/34065		
92273181027	WSW-4	EPA 8260	MSV/34065		
92273181028	SW-1	EPA 8260	MSV/34065		
92273181001	MW-1R	EPA 8260	MSV/33995		
92273181002	MW-2	EPA 8260	MSV/34028		
92273181003	MW-3	EPA 8260	MSV/33994		
92273181004	MW-4	EPA 8260	MSV/33994		
92273181005	MW-5	EPA 8260	MSV/33994		
92273181006	MW-6	EPA 8260	MSV/33994		
92273181007	MW-7	EPA 8260	MSV/33994		
92273181008	MW-8	EPA 8260	MSV/33994		
92273181009	MW-9	EPA 8260	MSV/33994		
92273181010	MW-10	EPA 8260	MSV/34009		
92273181011	MW-11	EPA 8260	MSV/33994		
92273181012	MW-12	EPA 8260	MSV/33994		
92273181013	MW-13	EPA 8260	MSV/33994		
92273181014	MW-14	EPA 8260	MSV/33994		
92273181015	MW-15	EPA 8260	MSV/33994		
92273181016	MW-16	EPA 8260	MSV/33994		
92273181017	DW-1	EPA 8260	MSV/33995		
92273181018	DW-2	EPA 8260	MSV/33995		
92273181019	DW-3	EPA 8260	MSV/33995		
92273181020	DW-4	EPA 8260	MSV/33995		
92273181021	DW-5	EPA 8260	MSV/33995		
92273181022	DW-6	EPA 8260	MSV/33995		
92273181023	DW-7	EPA 8260	MSV/33995		
92273181029	MW-1R DUP	EPA 8260	MSV/33995		
92273181030	MW-15 DUP	EPA 8260	MSV/33995		
92273181031	FIELD BLANK	EPA 8260	MSV/33994		
92273181032	TRIP BLANK	EPA 8260	MSV/33994		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt (SCUR)
 Document Number:
F-CHR-CS-003-rev.16

Document Revised: May 10, 2010
 Page 1 of 2*
 Issuing Authority:
 Pace Huntersville Quality Office

Client Name: SCHEC

* Page 2 of 2 is for Internal Use Only

Courier: Fed Ex UP USP Client Commercial Pace Other _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Optional
 Proj. Due Date:
 Proj. Name:

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used: IR Gun T1402 Type of Ice: Yes Blue None Samples on ice, cooling process has begun

Temp Correction Factor T1402 No Correction

Corrected Cooler Temp.: 4.4 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: AP 10/23/15

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>NO date or time metals bottle on</u>
-Includes date/time/ID/Analysis Matrix:	<u>WX</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>GP 10-23 H4 P. 2</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Samples checked for dechlorination:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: AMMB Date: 10-23-15
 SRF Review: TC Date: 10/23/15

WO#: 92273181



92273181

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



Pace Analytical Services, Inc.
9800 Kinsey Ave Suite 100
Huntersville, NC 28078
(704)875-9092



November 30, 2015

Mr. John Bryant
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201

RE: Project: STEADY SIMMONS 18856/CA#51541
Pace Project No.: 92277167

Dear Mr. Bryant:

Enclosed are the analytical results for sample(s) received by the laboratory on November 20, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Trey Carter
treycarter@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
9800 Kinsey Ave Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project STEADY SIMMONS 18856/CA#51541
Pace Project No 92277167

Charlotte Certification IDs

9800 Kinsey Ave Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification # 37706
North Carolina Field Services Certification # 5342
North Carolina Wastewater Certification # 12
South Carolina Certification #: 99006001

Florida/NELAP Certification # E87627
Kentucky UST Certification # 84
West Virginia Certification # 357
Virginia/VELAP Certification # 460221

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SAMPLE SUMMARY

Project: STEADY SIMMONS 18856/CA#51541
Pace Project No. 92277167

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92277167001	WSW	Water	11/19/15 11:15	11/20/15 11:40
92277167002	WSW-A	Water	11/19/15 11:30	11/20/15 11:40
92277167003	FIELD BLANK	Water	11/19/15 11:35	11/20/15 11:40
92277167004	TRIP BLANK	Water	11/19/15 00:00	11/20/15 11:40

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SAMPLE ANALYTE COUNT

Project: STEADY SIMMONS 18856/CA#51541
Pace Project No: 92277167

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92277167001	WSW	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92277167002	WSW-A	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92277167003	FIELD BLANK	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92277167004	TRIP BLANK	EPA 8260	CCL	20	PASI-C

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/CA#51541
Pace Project No. 92277167

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
Sample: WSW									
Lab ID: 92277167001 Collected: 11/19/15 11.15 Received: 11/20/15 11.40 Matrx: Water									
Analytical Method EPA 8011 Preparation Method: EPA 8011									
8011 GCS EDB and DBCP									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/23/15 21 24	11/24/15 15 50	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	94	%	60-140		1	11/23/15 21 24	11/24/15 15.50	301-79-56	
Analytical Method: EPA 8260									
8260 MSV Low Level SC									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		11/25/15 22:35	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		11/25/15 22:35	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		11/25/15 22:35	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		11/25/15 22:35	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		11/25/15 22:35	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		11/25/15 22:35	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/25/15 22:35	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		11/25/15 22:35	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		11/25/15 22:35	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		11/25/15 22:35	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		11/25/15 22:35	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		11/25/15 22:35	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		11/25/15 22:35	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		11/25/15 22:35	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		11/25/15 22:35	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		11/25/15 22:35	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		11/25/15 22:35	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		11/25/15 22:35	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		11/25/15 22:35	17060-07-0	
Toluene-d8 (S)	115	%	70-130		1		11/25/15 22:35	2037-26-5	

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/CA#51541
Pace Project No 92277167

Sample: WSW-A Lab ID: 92277167002 Collected: 11/19/15 11:30 Received: 11/20/15 11:40 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8011 GCS EDB and DBCP									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/23/15 21:24	11/24/15 16:09	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	85	%	60-140		1	11/23/15 21:24	11/24/15 16:09	301-79-56	
8260 MSV Low Level SC									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		11/26/15 02:34	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		11/26/15 02:34	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		11/26/15 02:34	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		11/26/15 02:34	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		11/26/15 02:34	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		11/26/15 02:34	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/26/15 02:34	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		11/26/15 02:34	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		11/26/15 02:34	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		11/26/15 02:34	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		11/26/15 02:34	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		11/26/15 02:34	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		11/26/15 02:34	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		11/26/15 02:34	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		11/26/15 02:34	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		11/26/15 02:34	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		11/26/15 02:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		11/26/15 02:34	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		11/26/15 02:34	17060-07-0	
Toluene-d8 (S)	111	%	70-130		1		11/26/15 02:34	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project STEADY SIMMONS 18856/CA#51541
Pace Project No 92277167

Sample: FIELD BLANK Lab ID: 92277167003 Collected: 11/19/15 11:35 Received: 11/20/15 11:40 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/23/15 21:24	11/24/15 16:28	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	103	%	60-140		1	11/23/15 21:24	11/24/15 16:28	301-79-56	
8260 MSV Low Level SC Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		11/26/15 02:51	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		11/26/15 02:51	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		11/26/15 02:51	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		11/26/15 02:51	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		11/26/15 02:51	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		11/26/15 02:51	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/26/15 02:51	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		11/26/15 02:51	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		11/26/15 02:51	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		11/26/15 02:51	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		11/26/15 02:51	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		11/26/15 02:51	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		11/26/15 02:51	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		11/26/15 02:51	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		11/26/15 02:51	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		11/26/15 02:51	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		11/26/15 02:51	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		11/26/15 02:51	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		11/26/15 02:51	17060-07-0	
Toluene-d8 (S)	108	%	70-130		1		11/26/15 02:51	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: STEADY SIMMONS 18856/CA#51541
Pace Project No. 92277167

Sample: TRIP BLANK		Lab ID: 92277167004		Collected	11/19/15 00.00	Received	11/20/15 11.40	Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV Low Level SC		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		11/26/15 03:08	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		11/26/15 03:08	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		11/26/15 03:08	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		11/26/15 03:08	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		11/26/15 03:08	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		11/26/15 03:08	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/26/15 03:08	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		11/26/15 03:08	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		11/26/15 03:08	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		11/26/15 03:08	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		11/26/15 03:08	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		11/26/15 03:08	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		11/26/15 03:08	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		11/26/15 03:08	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		11/26/15 03:08	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		11/26/15 03:08	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		11/26/15 03:08	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		11/26/15 03:08	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		11/26/15 03:08	17060-07-0	
Toluene-d8 (S)	108	%	70-130		1		11/26/15 03:08	2037-26-5	

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QUALITY CONTROL DATA

Project STEADY SIMMONS 18856/CA#51541
Pace Project No.. 92277167

QC Batch. MSV/34442 Analysis Method: EPA 8260
QC Batch Method EPA 8260 Analysis Description: 8260 MSV Low Level SC
Associated Lab Samples: 92277167001

METHOD BLANK 1615423 Matrix Water
Associated Lab Samples 92277167001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1.0	0.24	11/25/15 17.27	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	50.0	11/25/15 17.27	
Benzene	ug/L	ND	1.0	0.25	11/25/15 17.27	
Diisopropyl ether	ug/L	ND	1.0	0.12	11/25/15 17.27	
Ethanol	ug/L	ND	200	33.0	11/25/15 17.27	
Ethyl-tert-butyl ether	ug/L	ND	10.0	0.070	11/25/15 17.27	
Ethylbenzene	ug/L	ND	1.0	0.30	11/25/15 17.27	
m&p-Xylene	ug/L	ND	2.0	0.66	11/25/15 17.27	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	11/25/15 17.27	
Naphthalene	ug/L	ND	1.0	0.24	11/25/15 17.27	
o-Xylene	ug/L	ND	1.0	0.23	11/25/15 17.27	
tert-Amyl Alcohol	ug/L	ND	100	50.0	11/25/15 17.27	
tert-Amylmethyl ether	ug/L	ND	10.0	0.10	11/25/15 17.27	
tert-Butyl Alcohol	ug/L	ND	100	3.6	11/25/15 17.27	
tert-Butyl Formate	ug/L	ND	50.0	1.9	11/25/15 17.27	
Toluene	ug/L	ND	1.0	0.26	11/25/15 17.27	
Xylene (Total)	ug/L	ND	2.0	0.66	11/25/15 17.27	
1,2-Dichloroethane-d4 (S)	%	98	70-130		11/25/15 17.27	
4-Bromofluorobenzene (S)	%	92	70-130		11/25/15 17.27	
Toluene-d8 (S)	%	110	70-130		11/25/15 17.27	

LABORATORY CONTROL SAMPLE 1615424

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	46.4	93	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1080	108	70-130	
Benzene	ug/L	50	53.8	108	70-130	
Diisopropyl ether	ug/L	50	47.0	94	70-130	
Ethanol	ug/L	2000	2210	110	70-130	
Ethyl-tert-butyl ether	ug/L	100	93.9	94	70-130	
Ethylbenzene	ug/L	50	47.6	95	70-130	
m&p-Xylene	ug/L	100	99.5	100	70-130	
Methyl-tert-butyl ether	ug/L	50	49.2	98	70-130	
Naphthalene	ug/L	50	52.6	105	70-130	
o-Xylene	ug/L	50	49.0	98	70-130	
tert-Amyl Alcohol	ug/L	1000	960	96	70-130	
tert-Amylmethyl ether	ug/L	100	107	107	70-130	
tert-Butyl Alcohol	ug/L	500	483	97	70-130	
tert-Butyl Formate	ug/L	400	360	90	70-130	
Toluene	ug/L	50	47.6	95	70-130	

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/CA#51541
Pace Project No.: 92277167

LABORATORY CONTROL SAMPLE: 1615424

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	149	99	70-130	
1,2-Dichloroethane-d4 (S)	%			105	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE SAMPLE: 1615425

Parameter	Units	92277334001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	22.4	111	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	401	100	70-130	
Benzene	ug/L	ND	20	27.3	137	70-130	
Diisopropyl ether	ug/L	ND	20	21.4	107	70-130	
Ethanol	ug/L	ND	800	816	102	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	42.8	107	70-130	
Ethylbenzene	ug/L	ND	20	24.3	121	70-130	
m&p-Xylene	ug/L	ND	40	49.8	125	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	22.1	110	70-130	
Naphthalene	ug/L	ND	20	21.7	108	70-130	
o-Xylene	ug/L	ND	20	23.1	115	70-130	
tert-Amyl Alcohol	ug/L	ND	400	408	102	70-130	
tert-Amylmethyl ether	ug/L	ND	40	48.2	120	70-130	
tert-Butyl Alcohol	ug/L	ND	200	200	100	70-130	
tert-Butyl Formate	ug/L	ND	160	158	99	70-130	
Toluene	ug/L	ND	20	23.6	118	70-130	
1,2-Dichloroethane-d4 (S)	%				103	70-130	
4-Bromofluorobenzene (S)	%				103	70-130	
Toluene-d8 (S)	%				97	70-130	

SAMPLE DUPLICATE: 1615426

Parameter	Units	92277334002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project STEADY SIMMONS 18856/CA#51541
Pace Project No 92277167

SAMPLE DUPLICATE: 1615426

Parameter	Units	92277334002 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	99	99	0		
4-Bromofluorobenzene (S)	%	94	96	2		
Toluene-d8 (S)	%	109	109	0		

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/CA#51541
Pace Project No: 92277167

QC Batch: MSV/34447 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level SC
Associated Lab Samples: 92277167002, 92277167003, 92277167004

METHOD BLANK 1615866 Matrix Water

Associated Lab Samples: 92277167002, 92277167003, 92277167004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1.0	0.24	11/26/15 01:26	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	50.0	11/26/15 01:26	
Benzene	ug/L	ND	1.0	0.25	11/26/15 01:26	
Diisopropyl ether	ug/L	ND	1.0	0.12	11/26/15 01:26	
Ethanol	ug/L	118J	200	33.0	11/26/15 01:26	
Ethyl-tert-butyl ether	ug/L	ND	10.0	0.070	11/26/15 01:26	
Ethylbenzene	ug/L	ND	1.0	0.30	11/26/15 01:26	
m&p-Xylene	ug/L	ND	2.0	0.66	11/26/15 01:26	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	11/26/15 01:26	
Naphthalene	ug/L	0.26J	1.0	0.24	11/26/15 01:26	
o-Xylene	ug/L	ND	1.0	0.23	11/26/15 01:26	
tert-Amyl Alcohol	ug/L	ND	100	50.0	11/26/15 01:26	
tert-Amylmethyl ether	ug/L	ND	10.0	0.10	11/26/15 01:26	
tert-Butyl Alcohol	ug/L	49.2J	100	3.6	11/26/15 01:26	
tert-Butyl Formate	ug/L	ND	50.0	1.9	11/26/15 01:26	
Toluene	ug/L	ND	1.0	0.26	11/26/15 01:26	
Xylene (Total)	ug/L	ND	2.0	0.66	11/26/15 01:26	
1,2-Dichloroethane-d4 (S)	%	95	70-130		11/26/15 01:26	
4-Bromofluorobenzene (S)	%	96	70-130		11/26/15 01:26	
Toluene-d8 (S)	%	107	70-130		11/26/15 01:26	

LABORATORY CONTROL SAMPLE: 1615867

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	51.2	102	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1170	117	70-130	
Benzene	ug/L	50	57.3	115	70-130	
Diisopropyl ether	ug/L	50	50.3	101	70-130	
Ethanol	ug/L	2000	2320	116	70-130	
Ethyl-tert-butyl ether	ug/L	100	99.4	99	70-130	
Ethylbenzene	ug/L	50	50.2	100	70-130	
m&p-Xylene	ug/L	100	106	106	70-130	
Methyl-tert-butyl ether	ug/L	50	52.4	105	70-130	
Naphthalene	ug/L	50	58.0	116	70-130	
o-Xylene	ug/L	50	52.3	105	70-130	
tert-Amyl Alcohol	ug/L	1000	1010	101	70-130	
tert-Amylmethyl ether	ug/L	100	116	116	70-130	
tert-Butyl Alcohol	ug/L	500	522	104	70-130	
tert-Butyl Formate	ug/L	400	368	92	70-130	
Toluene	ug/L	50	50.8	102	70-130	

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/CA#51541
Pace Project No.: 92277167

LABORATORY CONTROL SAMPLE: 1615867

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	158	105	70-130	
1,2-Dichloroethane-d4 (S)	%			105	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE SAMPLE: 1615868

Parameter	Units	92277206009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	21.4	107	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	397	99	70-130	
Benzene	ug/L	2.4	20	28.7	131	70-130	M1
Diisopropyl ether	ug/L	6.5	20	23.8	86	70-130	
Ethanol	ug/L	ND	800	837	105	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	39.7	99	70-130	
Ethylbenzene	ug/L	0.81J	20	23.6	114	70-130	
m&p-Xylene	ug/L	0.97J	40	47.8	117	70-130	
Methyl-tert-butyl ether	ug/L	17.6	20	43.5	129	70-130	
Naphthalene	ug/L	ND	20	22.1	109	70-130	
o-Xylene	ug/L	ND	20	21.7	108	70-130	
tert-Amyl Alcohol	ug/L	ND	400	400	100	70-130	
tert-Amylmethyl ether	ug/L	0.22J	40	43.5	108	70-130	
tert-Butyl Alcohol	ug/L	101	200	383	141	70-130	M1
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	P5
Toluene	ug/L	0.34J	20	23.4	116	70-130	
1,2-Dichloroethane-d4 (S)	%				99	70-130	
4-Bromofluorobenzene (S)	%				101	70-130	
Toluene-d8 (S)	%				97	70-130	

SAMPLE DUPLICATE: 1615869

Parameter	Units	92277206010 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	3.5	2.8	24	30	
Diisopropyl ether	ug/L	7.4	6.2	18	30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	1.3	0.93J		30	
m&p-Xylene	ug/L	1.4J	1.1J		30	
Methyl-tert-butyl ether	ug/L	23.6	17.5	30	30	
Naphthalene	ug/L	0.26J	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	88.0J	ND		30	
tert-Amylmethyl ether	ug/L	0.27J	0.19J		30	

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QUALITY CONTROL DATA

Project: STEADY SIMMONS 18856/CA#51541
Pace Project No 92277167

SAMPLE DUPLICATE: 1615869

Parameter	Units	92277206010 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	127	117	8	30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	0.43J	0.39J		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	101	98	3		
4-Bromofluorobenzene (S)	%	98	93	6		
Toluene-d8 (S)	%	104	123	17		

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QUALITY CONTROL DATA

Project STEADY SIMMONS 18856/CA#51541
Pace Project No 92277167

QC Batch OEXT/39268 Analysis Method: EPA 8011
QC Batch Method EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples 92277167001, 92277167002, 92277167003

METHOD BLANK: 1613343 Matrix: Water
Associated Lab Samples 92277167001, 92277167002, 92277167003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	0.020	11/24/15 08:48	
1-Chloro-2-bromopropane (S)	%	87	60-140		11/24/15 08:48	

LABORATORY CONTROL SAMPLE & LCSD 1613344 1613345

Parameter	Units	Spike Conc	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	29	0.34	0.26	118	90	60-140	28	20	R1
1-Chloro-2-bromopropane (S)	%				104	79	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1613346 1613347

Parameter	Units	92277060016 Result	MS Spike Conc	MSD Spike Conc	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	29	.29	0.34	0.31	118	106	60-140	11	20	
1-Chloro-2-bromopropane (S)	%						102	92	60-140			

SAMPLE DUPLICATE 1613348

Parameter	Units	92277060017 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	103	90	13		

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QUALIFIERS

Project STEADY SIMMONS 18856/CA#51541
Pace Project No.: 92277167

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

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

P5 The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

R1 RPD value was outside control limits

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: STEADY SIMMONS 18856/CA#51541
Pace Project No.: 92277167

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92277167001	WSW	EPA 8011	OEXT/39268	EPA 8011	GCSV/23317
92277167002	WSW-A	EPA 8011	OEXT/39268	EPA 8011	GCSV/23317
92277167003	FIELD BLANK	EPA 8011	OEXT/39268	EPA 8011	GCSV/23317
92277167001	WSW	EPA 8260	MSV/34442		
92277167002	WSW-A	EPA 8260	MSV/34447		
92277167003	FIELD BLANK	EPA 8260	MSV/34447		
92277167004	TRIP BLANK	EPA 8260	MSV/34447		

REPORT OF LABORATORY ANALYSIS

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	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: November 17, 2015
	Document Number: F-CHR-CS-003-rev.16.1	Page 1 of 2*
		Issuing Authority: Pace Huntersville Quality Office

Client Name: SCDHEC

* Page 2 of 2 is for Internal Use Only

Courier: Fed Ex UP USP Clier Commercial Race Other _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used: IR Gun T1505 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Temp Correction Factor No Correction

Corrected Cooler Temp.: 4.4 °C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: <u>AP 11-20-15</u>
--

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>but</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: TC Date: 11/20/15

SRF Review: TC Date: 11/23/15

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

Label here
WO#: 92277167





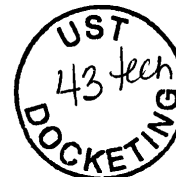
Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

TREY CARTER
PACE ANALYTICAL SERVICES
9800 KINCEY AVE STE 100
HUNTERSVILLE NC 28078

DEC 17 2015

Re: Laboratory Analyses Approval
Bid # IFB-5400007867-05/14/14-EMW; PO#4600445249



Dear Mr. Carter:

Under the terms and conditions of the referenced bid package, analytical sampling has been approved for the referenced facility. The facility has been assigned an individual Cost Agreement (CA) number as listed below. Please reference the CA number and Purchase Order #4600363417 on the appropriate invoice submitted for payment against the facility.

UST Permit #	Facility	Analyses-Groundwater	CA #
18856	Steady Simmons	full list 8260, full list 8270, 8 RCRA metals	51514

If you have any questions or need further assistance, please contact John Bryant at (803) 898-0606 or bryantjc@dhec.sc.gov.

Sincerely,

Minda Hornosky, Hydrogeologist
Assessment Section
UST Management Division
Bureau of Land & Waste Management

Enc: Approved Cost Agreement

cc: John Bryant, Corrective Action Section
✓ Technical File



Site-Specific Work Plan for Approved ACQAP
Underground Storage Tank Management Division

To: Bob Faller (SCDHEC Project Manager)
From: Minda Hornosky (Contractor Project Manager)
Contractor: Pace Analytical UST Contractor Certification Number:

Facility Name: Steady Simmons UST Permit #: 18856
Facility Address: 16661 Grays Hwy, Early Branch, SC
Responsible Party: Steady Simmons Phone: n/a
RP Address: orphaned release
Property Owner (if different): Wayne Thompson
Property Owner Address: 16657 Grays Hwy, Early Branch, SC 29916 (803) 398-7718
Current Use of Property: residence

Scope of Work (Please check all that apply)
[] IGWA [] Tier II [x] Groundwater Sampling [] GAC
[] Tier I [] Monitoring Well Installation [] Other

Analyses (Please check all that apply)
Groundwater/Surface Water:
[] BTEXNMDCA (8260B) [] Lead [] BOD [] Methane
[] Oxygenates (8260B) [] 8 RCRA Metals [] Nitrate [] Ethanol
[] EDB (8011) [] TPH [] Sulfate [] Dissolved Iron
[] PAH (8270D) [] pH [x] Other 8260 full scan, 8270 full scan, & RCRA metals
Soil:
[] BTEXNM [] Lead [] 8 RCRA Metals [] TPH-DRO (3550B/8015B) [] Grain Size
[] PAH [] Oil & Grease (9071) [] TPH-GRO (5030B/8015B) [] TOC
Air:
[] BTEXN

Sample Collection (Estimate the number of samples of each matrix that are expected to be collected.)
Soil 1 Water Supply Wells Air 1 Field Blank
Monitoring Wells Surface Water 1 Duplicate 1 Trip Blank

Field Screening Methodology
Estimate number and total completed depth for each point, and include their proposed locations on the attached map.
of shallow points proposed: Estimated Footage: feet per point
of deep points proposed: Estimated Footage: feet per point
Field Screening Methodology:

Permanent Monitoring Wells
Estimate number and total completed depth for each well, and include their proposed locations on the attached map.
of shallow wells: Estimated Footage: feet per point
of deep wells: Estimated Footage: feet per point
of recovery wells: Estimated Footage: feet per point
Monitoring Well development method (consistent with SOP):
Comments, if warranted:

UST Permit #: 18856 Facility Name: Steady Simmons

Implementation Schedule (Number of calendar days from approval)

Field Work Start-Up: 15 days from approval Field Work Completion: 7 days from start up

Report Submittal: 60 days after approval # of Copies Provided to Property Owners: 1

Aquifer Characterization

Pump Test: Slug Test: (Check one and provide explanation below for choice)

Investigation Derived Waste Disposal

Soil: _____ Tons Purge Water: _____ Gallons

Drilling Fluids: _____ Gallons Free-Phase Product: _____ Gallons

Additional Details For This Scope of Work

For example, list wells to be sampled, wells to be abandoned/repared, well pads/bolts/caps to replace, details of AFVR event, etc.

Compliance With Annual Contractor Quality Assurance Plan (ACQAP)

Yes Laboratory as indicated in ACQAP? (Yes/No) If no, indicate laboratory information below.

Name of Laboratory: Pace Analytical Services, 9800 Kincey Ave, Ste 100, Huntersville, NC, 28078

SCDHEC Certification Number: _____

Name of Laboratory Director: Trey Carter

____ Well Driller as indicated in ACQAP? (Yes/No) If no, indicate driller information below.

Name of Well Driller: _____

SCLLR Certification Number: _____

____ Other variations from ACQAP. Please describe below.

none

Attachments

1. Attach a copy of the relevant portion of the USGS topographic map showing the site location.
2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following:

North Arrow	Proposed monitoring well locations
Location of property lines	Legend with facility name and address, UST permit number, and bar scale
Location of buildings	Streets or highways (indicate names and numbers)
Previous soil sampling locations	Location of all present and former ASTs and USTs
Previous monitoring well locations	Location of all potential receptors
Proposed soil boring locations	
3. Assessment Component Cost Agreement, SCDHEC Form D-3664

Approved Cost Agreement 51541

Facility 18856 STEADY SIMMONS

HORNOSMS

PO Number

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
11 ANALYSES	GW GROUNDWATER	G1 8 RCRA METALS	2 0000	44.00	88 00
18 MISCELLANEOUS		FULL LIST 8260	4 0000	45.00	180 00
		FULL LIST 8270	4.0000	100.00	400 00
			Total Amount		668.00



Pace Analytical Services, Inc.
9800 Kinsey Ave Suite 100
Huntersville, NC 28078
(704)875-9092



February 12, 2016

Mr. John Bryant
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201

RE: Project: 18856/51541 STEADY SIMMONS
Pace Project No.: 92285073

Dear Mr. Bryant:

Enclosed are the analytical results for sample(s) received by the laboratory on February 03, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Trey Carter
treycarter@pacelabs.com
Project Manager

Enclosures

cc Ashleigh Thrash, SCHDEC



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project 18856/51541 STEADY SIMMONS
Pace Project No. 92285073

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification # 37706
North Carolina Field Services Certification # 5342
North Carolina Wastewater Certification # 12

South Carolina Certification # 99006001
Florida/NELAP Certification # E87627
Kentucky UST Certification # 84
Virginia/VELAP Certification # 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification # E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification # 37712

North Carolina Wastewater Certification # 40
South Carolina Certification # 99030001
Virginia/VELAP Certification # 460222

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SAMPLE SUMMARY

Project: 18856/51541 STEADY SIMMONS

Pace Project No.: 92285073

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92285073001	WSW-1	Water	02/02/16 11:15	02/03/16 08:52
92285073002	WSW-1 DUP	Water	02/02/16 11:25	02/03/16 08:52
92285073003	FIELD BLANK	Water	02/02/16 11:35	02/03/16 08:52
92285073004	TRIP BLANK	Water	02/02/16 00:00	02/03/16 08:52

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SAMPLE ANALYTE COUNT

Project: 18856/51541 STEADY SIMMONS
 Pace Project No 92285073

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92285073001	WSW-1	EPA 6010	CDF	7	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8270	RES	74	PASI-C
		EPA 8260	GAW	62	PASI-C
92285073002	WSW-1 DUP	EPA 6010	CDF	7	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8270	RES	74	PASI-C
		EPA 8260	GAW	62	PASI-C
92285073003	FIELD BLANK	EPA 6010	CDF	7	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8270	RES	74	PASI-C
		EPA 8260	CCL	70	PASI-C
92285073004	TRIP BLANK	EPA 8260	CCL	70	PASI-C

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 18856/51541 STEADY SIMMONS
 Pace Project No 92285073

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92285073001 EPA 6010	WSW-1 Barium	20.5	ug/L	5.0	02/06/16 17:06	
92285073002 EPA 6010	WSW-1 DUP Barium	19.3	ug/L	5.0	02/06/16 17:15	
92285073003 EPA 6010	FIELD BLANK Barium	3.6J	ug/L	5.0	02/06/16 17:18	
92285073004 EPA 8260	TRIP BLANK Methylene Chloride	3.6J	ug/L	5.0	02/05/16 16:08	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 18856/51541 STEADY SIMMONS
 Pace Project No.: 92285073

Sample: WSW-1		Lab ID: 92285073001		Collected: 02/02/16 11:15		Received 02/03/16 08:52		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3010A									
Arsenic	ND	ug/L	10.0	5.0	1	02/05/16 18:00	02/06/16 17:06	7440-38-2	
Barium	20.5	ug/L	5.0	2.5	1	02/05/16 18:00	02/06/16 17:06	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	02/05/16 18:00	02/06/16 17:06	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	02/05/16 18:00	02/06/16 17:06	7440-47-3	
Lead	ND	ug/L	5.0	2.5	1	02/05/16 18:00	02/06/16 17:06	7439-92-1	
Selenium	ND	ug/L	10.0	5.0	1	02/05/16 18:00	02/06/16 17:06	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	02/05/16 18:00	02/06/16 17:06	7440-22-4	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	ND	ug/L	0.20	0.10	1	02/10/16 14:00	02/10/16 16:22	7439-97-6	
8270 MSSV Semivolatile Org SC									
Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	10.0	0.25	1	02/09/16 13:17	02/09/16 17:08	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	02/09/16 13:17	02/09/16 17:08	208-96-8	
Aniline	ND	ug/L	10.0	2.0	1	02/09/16 13:17	02/09/16 17:08	62-53-3	
Anthracene	ND	ug/L	10.0	0.14	1	02/09/16 13:17	02/09/16 17:08	120-12-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	02/09/16 13:17	02/09/16 17:08	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	02/09/16 13:17	02/09/16 17:08	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	02/09/16 13:17	02/09/16 17:08	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	02/09/16 13:17	02/09/16 17:08	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	02/09/16 13:17	02/09/16 17:08	207-08-9	
Benzoic Acid	ND	ug/L	50.0	11.5	1	02/09/16 13:17	02/09/16 17:08	65-85-0	
Benzyl alcohol	ND	ug/L	20.0	2.4	1	02/09/16 13:17	02/09/16 17:08	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	10.0	0.82	1	02/09/16 13:17	02/09/16 17:08	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.79	1	02/09/16 13:17	02/09/16 17:08	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	20.0	3.7	1	02/09/16 13:17	02/09/16 17:08	59-50-7	
4-Chloroaniline	ND	ug/L	50.0	2.8	1	02/09/16 13:17	02/09/16 17:08	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	0.92	1	02/09/16 13:17	02/09/16 17:08	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.0	1	02/09/16 13:17	02/09/16 17:08	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	0.95	1	02/09/16 13:17	02/09/16 17:08	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	0.98	1	02/09/16 13:17	02/09/16 17:08	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.3	1	02/09/16 13:17	02/09/16 17:08	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	0.87	1	02/09/16 13:17	02/09/16 17:08	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	02/09/16 13:17	02/09/16 17:08	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	02/09/16 13:17	02/09/16 17:08	53-70-3	
Dibenzofuran	ND	ug/L	10.0	0.89	1	02/09/16 13:17	02/09/16 17:08	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	10.0	0.88	1	02/09/16 13:17	02/09/16 17:08	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	0.81	1	02/09/16 13:17	02/09/16 17:08	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	0.95	1	02/09/16 13:17	02/09/16 17:08	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	50.0	2.1	1	02/09/16 13:17	02/09/16 17:08	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	02/09/16 13:17	02/09/16 17:08	120-83-2	
Diethylphthalate	ND	ug/L	10.0	0.58	1	02/09/16 13:17	02/09/16 17:08	84-86-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1.2	1	02/09/16 13:17	02/09/16 17:08	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	0.76	1	02/09/16 13:17	02/09/16 17:08	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	0.75	1	02/09/16 13:17	02/09/16 17:08	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	2.6	1	02/09/16 13:17	02/09/16 17:08	534-52-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 18856/51541 STEADY SIMMONS
Pace Project No.: 92285073

Sample: WSW-1	Lab ID: 92285073001	Collected: 02/02/16 11:15	Received: 02/03/16 08:52	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8270 MSSV Semivolatile Org SC									
Analytical Method: EPA 8270 Preparation Method: EPA 3510									
2,4-Dinitrophenol	ND	ug/L	50.0	9.0	1	02/09/16 13:17	02/09/16 17:08	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	0.90	1	02/09/16 13:17	02/09/16 17:08	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	0.98	1	02/09/16 13:17	02/09/16 17:08	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.66	1	02/09/16 13:17	02/09/16 17:08	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.79	1	02/09/16 13:17	02/09/16 17:08	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	02/09/16 13:17	02/09/16 17:08	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	02/09/16 13:17	02/09/16 17:08	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	0.94	1	02/09/16 13:17	02/09/16 17:08	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	0.72	1	02/09/16 13:17	02/09/16 17:08	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	0.88	1	02/09/16 13:17	02/09/16 17:08	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.1	1	02/09/16 13:17	02/09/16 17:08	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	02/09/16 13:17	02/09/16 17:08	193-39-5	
Isophorone	ND	ug/L	10.0	0.89	1	02/09/16 13:17	02/09/16 17:08	78-59-1	
1-Methylnaphthalene	ND	ug/L	10.0	0.32	1	02/09/16 13:17	02/09/16 17:08	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	02/09/16 13:17	02/09/16 17:08	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.6	1	02/09/16 13:17	02/09/16 17:08	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	2.0	1	02/09/16 13:17	02/09/16 17:08		
Naphthalene	ND	ug/L	10.0	0.34	1	02/09/16 13:17	02/09/16 17:08	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.0	1	02/09/16 13:17	02/09/16 17:08	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.0	1	02/09/16 13:17	02/09/16 17:08	99-09-2	
4-Nitroaniline	ND	ug/L	50.0	2.1	1	02/09/16 13:17	02/09/16 17:08	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.1	1	02/09/16 13:17	02/09/16 17:08	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	0.91	1	02/09/16 13:17	02/09/16 17:08	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	4.1	1	02/09/16 13:17	02/09/16 17:08	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	10.0	0.91	1	02/09/16 13:17	02/09/16 17:08	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	0.99	1	02/09/16 13:17	02/09/16 17:08	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.0	1	02/09/16 13:17	02/09/16 17:08	86-30-6	
Pentachlorophenol	ND	ug/L	50.0	4.6	1	02/09/16 13:17	02/09/16 17:08	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	02/09/16 13:17	02/09/16 17:08	85-01-8	
Phenol	ND	ug/L	10.0	1.9	1	02/09/16 13:17	02/09/16 17:08	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	02/09/16 13:17	02/09/16 17:08	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	0.98	1	02/09/16 13:17	02/09/16 17:08	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0	0.92	1	02/09/16 13:17	02/09/16 17:08	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.3	1	02/09/16 13:17	02/09/16 17:08	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	77	%	21-110		1	02/09/16 13:17	02/09/16 17:08	4165-60-0	3g
2-Fluorobiphenyl (S)	78	%	27-110		1	02/09/16 13:17	02/09/16 17:08	321-60-8	
Terphenyl-d14 (S)	77	%	31-107		1	02/09/16 13:17	02/09/16 17:08	1718-51-0	
Phenol-d6 (S)	23	%	10-110		1	02/09/16 13:17	02/09/16 17:08	13127-88-3	
2-Fluorophenol (S)	34	%	12-110		1	02/09/16 13:17	02/09/16 17:08	367-12-4	
2,4,6-Tribromophenol (S)	87	%	27-110		1	02/09/16 13:17	02/09/16 17:08	118-79-6	
8260 MSV Low Level SC									
Analytical Method: EPA 8260									
Acetone	ND	ug/L	25.0	10.0	1		02/04/16 21:01	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		02/04/16 21:01	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.30	1		02/04/16 21:01	108-86-1	

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ANALYTICAL RESULTS

Project 18856/51541 STEADY SIMMONS
 Pace Project No 92285073

Sample: WSW-1 Lab ID: 92285073001 Collected: 02/02/16 11:15 Received: 02/03/16 08:52 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV Low Level SC Analytical Method: EPA 8260									
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/04/16 21:01	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/04/16 21:01	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/04/16 21:01	75-25-2	
Bromomethane	ND	ug/L	5.0	0.29	1		02/04/16 21:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/04/16 21:01	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/04/16 21:01	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/04/16 21:01	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/04/16 21:01	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/04/16 21:01	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/04/16 21:01	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.35	1		02/04/16 21:01	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.31	1		02/04/16 21:01	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		02/04/16 21:01	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/04/16 21:01	124-48-1	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/04/16 21:01	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/04/16 21:01	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/04/16 21:01	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/04/16 21:01	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/04/16 21:01	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/04/16 21:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		02/04/16 21:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/04/16 21:01	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/04/16 21:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/04/16 21:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/04/16 21:01	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/04/16 21:01	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/04/16 21:01	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/04/16 21:01	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/04/16 21:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/04/16 21:01	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		02/04/16 21:01	108-20-3	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/04/16 21:01	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.71	1		02/04/16 21:01	87-68-3	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/04/16 21:01	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	0.31	1		02/04/16 21:01	99-87-6	
Methylene Chloride	ND	ug/L	2.0	0.97	1		02/04/16 21:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/04/16 21:01	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		02/04/16 21:01	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		02/04/16 21:01	91-20-3	
Styrene	ND	ug/L	1.0	0.26	1		02/04/16 21:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/04/16 21:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/04/16 21:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/04/16 21:01	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/04/16 21:01	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		02/04/16 21:01	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		02/04/16 21:01	120-82-1	

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ANALYTICAL RESULTS

Project: 18856/51541 STEADY SIMMONS

Pace Project No 92285073

Sample: WSW-1 Lab ID: 92285073001 Collected 02/02/16 11:15 Received: 02/03/16 08:52 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8260 MSV Low Level SC Analytical Method: EPA 8260									
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/04/16 21:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/04/16 21:01	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/04/16 21:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/04/16 21:01	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/04/16 21:01	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/04/16 21:01	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/04/16 21:01	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/04/16 21:01	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/04/16 21:01	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/04/16 21:01	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		02/04/16 21:01	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		02/04/16 21:01	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		02/04/16 21:01	2037-26-5	

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ANALYTICAL RESULTS

Project: 18856/51541 STEADY SIMMONS
 Pace Project No. 92285073

Sample: WSW-1 DUP Lab ID: 92285073002 Collected: 02/02/16 11:25 Received: 02/03/16 08:52 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3010A									
Arsenic	ND	ug/L	10.0	5.0	1	02/05/16 18:00	02/06/16 17:15	7440-38-2	
Barium	19.3	ug/L	5.0	2.5	1	02/05/16 18:00	02/06/16 17:15	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	02/05/16 18:00	02/06/16 17:15	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	02/05/16 18:00	02/06/16 17:15	7440-47-3	
Lead	ND	ug/L	5.0	2.5	1	02/05/16 18:00	02/06/16 17:15	7439-92-1	
Selenium	ND	ug/L	10.0	5.0	1	02/05/16 18:00	02/06/16 17:15	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	02/05/16 18:00	02/06/16 17:15	7440-22-4	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	ND	ug/L	0.20	0.10	1	02/10/16 14:00	02/10/16 16:29	7439-97-6	
8270 MSSV Semivolatile Org SC									
Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	10.0	0.25	1	02/09/16 13:17	02/09/16 17:35	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	02/09/16 13:17	02/09/16 17:35	208-96-8	
Aniline	ND	ug/L	10.0	2.0	1	02/09/16 13:17	02/09/16 17:35	62-53-3	
Anthracene	ND	ug/L	10.0	0.14	1	02/09/16 13:17	02/09/16 17:35	120-12-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	02/09/16 13:17	02/09/16 17:35	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	02/09/16 13:17	02/09/16 17:35	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	02/09/16 13:17	02/09/16 17:35	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	02/09/16 13:17	02/09/16 17:35	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	02/09/16 13:17	02/09/16 17:35	207-08-9	
Benzoic Acid	ND	ug/L	50.0	11.5	1	02/09/16 13:17	02/09/16 17:35	65-85-0	
Benzyl alcohol	ND	ug/L	20.0	2.4	1	02/09/16 13:17	02/09/16 17:35	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	10.0	0.82	1	02/09/16 13:17	02/09/16 17:35	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.79	1	02/09/16 13:17	02/09/16 17:35	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	20.0	3.7	1	02/09/16 13:17	02/09/16 17:35	59-50-7	
4-Chloroaniline	ND	ug/L	50.0	2.8	1	02/09/16 13:17	02/09/16 17:35	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	0.92	1	02/09/16 13:17	02/09/16 17:35	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.0	1	02/09/16 13:17	02/09/16 17:35	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	0.95	1	02/09/16 13:17	02/09/16 17:35	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	0.98	1	02/09/16 13:17	02/09/16 17:35	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.3	1	02/09/16 13:17	02/09/16 17:35	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	0.87	1	02/09/16 13:17	02/09/16 17:35	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	02/09/16 13:17	02/09/16 17:35	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	02/09/16 13:17	02/09/16 17:35	53-70-3	
Dibenzofuran	ND	ug/L	10.0	0.89	1	02/09/16 13:17	02/09/16 17:35	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	10.0	0.88	1	02/09/16 13:17	02/09/16 17:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	0.81	1	02/09/16 13:17	02/09/16 17:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	0.95	1	02/09/16 13:17	02/09/16 17:35	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	50.0	2.1	1	02/09/16 13:17	02/09/16 17:35	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	02/09/16 13:17	02/09/16 17:35	120-83-2	
Diethylphthalate	ND	ug/L	10.0	0.58	1	02/09/16 13:17	02/09/16 17:35	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1.2	1	02/09/16 13:17	02/09/16 17:35	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	0.76	1	02/09/16 13:17	02/09/16 17:35	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	0.75	1	02/09/16 13:17	02/09/16 17:35	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	2.6	1	02/09/16 13:17	02/09/16 17:35	534-52-1	

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ANALYTICAL RESULTS

Project: 18856/51541 STEADY SIMMONS
 Pace Project No 92285073

Sample: **WSW-1 DUP** Lab ID: **92285073002** Collected: 02/02/16 11:25 Received: 02/03/16 08:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8270 MSSV Semivolatile Org SC									
Analytical Method EPA 8270 Preparation Method EPA 3510									
2,4-Dinitrophenol	ND	ug/L	50.0	9.0	1	02/09/16 13:17	02/09/16 17:35	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	0.90	1	02/09/16 13:17	02/09/16 17:35	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	0.98	1	02/09/16 13:17	02/09/16 17:35	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.66	1	02/09/16 13:17	02/09/16 17:35	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.79	1	02/09/16 13:17	02/09/16 17:35	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	02/09/16 13:17	02/09/16 17:35	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	02/09/16 13:17	02/09/16 17:35	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	0.94	1	02/09/16 13:17	02/09/16 17:35	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	0.72	1	02/09/16 13:17	02/09/16 17:35	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	0.88	1	02/09/16 13:17	02/09/16 17:35	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.1	1	02/09/16 13:17	02/09/16 17:35	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	02/09/16 13:17	02/09/16 17:35	193-39-5	
Isophorone	ND	ug/L	10.0	0.89	1	02/09/16 13:17	02/09/16 17:35	78-59-1	
1-Methylnaphthalene	ND	ug/L	10.0	0.32	1	02/09/16 13:17	02/09/16 17:35	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	02/09/16 13:17	02/09/16 17:35	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.6	1	02/09/16 13:17	02/09/16 17:35	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	2.0	1	02/09/16 13:17	02/09/16 17:35		
Naphthalene	ND	ug/L	10.0	0.34	1	02/09/16 13:17	02/09/16 17:35	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.0	1	02/09/16 13:17	02/09/16 17:35	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.0	1	02/09/16 13:17	02/09/16 17:35	99-09-2	
4-Nitroaniline	ND	ug/L	50.0	2.1	1	02/09/16 13:17	02/09/16 17:35	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.1	1	02/09/16 13:17	02/09/16 17:35	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	0.91	1	02/09/16 13:17	02/09/16 17:35	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	4.1	1	02/09/16 13:17	02/09/16 17:35	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	10.0	0.91	1	02/09/16 13:17	02/09/16 17:35	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	0.99	1	02/09/16 13:17	02/09/16 17:35	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.0	1	02/09/16 13:17	02/09/16 17:35	86-30-6	
Pentachlorophenol	ND	ug/L	50.0	4.6	1	02/09/16 13:17	02/09/16 17:35	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	02/09/16 13:17	02/09/16 17:35	85-01-8	
Phenol	ND	ug/L	10.0	1.9	1	02/09/16 13:17	02/09/16 17:35	108-95-2	
Pyrene	ND	ug/L	10.0	0.19	1	02/09/16 13:17	02/09/16 17:35	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	0.98	1	02/09/16 13:17	02/09/16 17:35	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0	0.92	1	02/09/16 13:17	02/09/16 17:35	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.3	1	02/09/16 13:17	02/09/16 17:35	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	78	%	21-110		1	02/09/16 13:17	02/09/16 17:35	4165-60-0	3g
2-Fluorobiphenyl (S)	75	%	27-110		1	02/09/16 13:17	02/09/16 17:35	321-60-8	
Terphenyl-d14 (S)	91	%	31-107		1	02/09/16 13:17	02/09/16 17:35	1718-51-0	
Phenol-d6 (S)	25	%	10-110		1	02/09/16 13:17	02/09/16 17:35	13127-88-3	
2-Fluorophenol (S)	34	%	12-110		1	02/09/16 13:17	02/09/16 17:35	367-12-4	
2,4,6-Tribromophenol (S)	83	%	27-110		1	02/09/16 13:17	02/09/16 17:35	118-79-6	
8260 MSV Low Level SC									
Analytical Method EPA 8260									
Acetone	ND	ug/L	25.0	10.0	1		02/04/16 21:18	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		02/04/16 21:18	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.30	1		02/04/16 21:18	108-86-1	

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ANALYTICAL RESULTS

Project: 18856/51541 STEADY SIMMONS
 Pace Project No.: 92285073

Sample: WSW-1 DUP Lab ID: 92285073002 Collected: 02/02/16 11:25 Received: 02/03/16 08:52 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
8260 MSV Low Level SC									
Analytical Method: EPA 8260									
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/04/16 21:18	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/04/16 21:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/04/16 21:18	75-25-2	
Bromomethane	ND	ug/L	5.0	0.29	1		02/04/16 21:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/04/16 21:18	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/04/16 21:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/04/16 21:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/04/16 21:18	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/04/16 21:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/04/16 21:18	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.35	1		02/04/16 21:18	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.31	1		02/04/16 21:18	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		02/04/16 21:18	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/04/16 21:18	124-48-1	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/04/16 21:18	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/04/16 21:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/04/16 21:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/04/16 21:18	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/04/16 21:18	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/04/16 21:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		02/04/16 21:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/04/16 21:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/04/16 21:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/04/16 21:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/04/16 21:18	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/04/16 21:18	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/04/16 21:18	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/04/16 21:18	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/04/16 21:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/04/16 21:18	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		02/04/16 21:18	108-20-3	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/04/16 21:18	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.71	1		02/04/16 21:18	87-68-3	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/04/16 21:18	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	0.31	1		02/04/16 21:18	99-87-6	
Methylene Chloride	ND	ug/L	2.0	0.97	1		02/04/16 21:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/04/16 21:18	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		02/04/16 21:18	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		02/04/16 21:18	91-20-3	
Styrene	ND	ug/L	1.0	0.26	1		02/04/16 21:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/04/16 21:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/04/16 21:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/04/16 21:18	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/04/16 21:18	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		02/04/16 21:18	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		02/04/16 21:18	120-82-1	

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ANALYTICAL RESULTS

Project 18856/51541 STEADY SIMMONS
 Pace Project No.: 92285073

Sample: **WSW-1 DUP** Lab ID: **92285073002** Collected 02/02/16 11:25 Received: 02/03/16 08 52 Matrix Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level SC		Analytical Method EPA 8260							
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/04/16 21 18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/04/16 21:18	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/04/16 21.18	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/04/16 21.18	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/04/16 21 18	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/04/16 21 18	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/04/16 21 18	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/04/16 21:18	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/04/16 21:18	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/04/16 21.18	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		02/04/16 21.18	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		02/04/16 21 18	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		02/04/16 21:18	2037-26-5	

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ANALYTICAL RESULTS

Project 18856/51541 STEADY SIMMONS
Pace Project No. 92285073

Sample: FIELD BLANK Lab ID: 92285073003 Collected: 02/02/16 11:35 Received: 02/03/16 08:52 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3010A									
Arsenic	ND	ug/L	10.0	5.0	1	02/05/16 18:00	02/06/16 17:18	7440-38-2	
Barium	3.6J	ug/L	5.0	2.5	1	02/05/16 18:00	02/06/16 17:18	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	02/05/16 18:00	02/06/16 17:18	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	02/05/16 18:00	02/06/16 17:18	7440-47-3	
Lead	ND	ug/L	5.0	2.5	1	02/05/16 18:00	02/06/16 17:18	7439-92-1	
Selenium	ND	ug/L	10.0	5.0	1	02/05/16 18:00	02/06/16 17:18	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	02/05/16 18:00	02/06/16 17:18	7440-22-4	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	ND	ug/L	0.20	0.10	1	02/10/16 14:00	02/10/16 16:32	7439-97-6	
8270 MSSV Semivolatile Org SC									
Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	20.0	0.50	1	02/09/16 13:17	02/09/16 18:02	83-32-9	
Acenaphthylene	ND	ug/L	20.0	0.42	1	02/09/16 13:17	02/09/16 18:02	208-96-8	
Aniline	ND	ug/L	20.0	4.0	1	02/09/16 13:17	02/09/16 18:02	62-53-3	
Anthracene	ND	ug/L	20.0	0.28	1	02/09/16 13:17	02/09/16 18:02	120-12-7	
Benzo(a)anthracene	ND	ug/L	20.0	0.66	1	02/09/16 13:17	02/09/16 18:02	56-55-3	
Benzo(a)pyrene	ND	ug/L	20.0	0.60	1	02/09/16 13:17	02/09/16 18:02	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	20.0	0.56	1	02/09/16 13:17	02/09/16 18:02	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	20.0	0.76	1	02/09/16 13:17	02/09/16 18:02	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	20.0	0.86	1	02/09/16 13:17	02/09/16 18:02	207-08-9	
Benzoic Acid	ND	ug/L	100	23.0	1	02/09/16 13:17	02/09/16 18:02	65-85-0	
Benzyl alcohol	ND	ug/L	40.0	4.8	1	02/09/16 13:17	02/09/16 18:02	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	20.0	1.6	1	02/09/16 13:17	02/09/16 18:02	101-55-3	
Butylbenzylphthalate	ND	ug/L	20.0	1.6	1	02/09/16 13:17	02/09/16 18:02	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	40.0	7.4	1	02/09/16 13:17	02/09/16 18:02	59-50-7	
4-Chloroaniline	ND	ug/L	100	5.6	1	02/09/16 13:17	02/09/16 18:02	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	20.0	1.8	1	02/09/16 13:17	02/09/16 18:02	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	20.0	2.0	1	02/09/16 13:17	02/09/16 18:02	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	20.0	1.9	1	02/09/16 13:17	02/09/16 18:02	108-60-1	
2-Chloronaphthalene	ND	ug/L	20.0	2.0	1	02/09/16 13:17	02/09/16 18:02	91-58-7	
2-Chlorophenol	ND	ug/L	20.0	2.6	1	02/09/16 13:17	02/09/16 18:02	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	20.0	1.7	1	02/09/16 13:17	02/09/16 18:02	7005-72-3	
Chrysene	ND	ug/L	20.0	0.42	1	02/09/16 13:17	02/09/16 18:02	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	20.0	1.1	1	02/09/16 13:17	02/09/16 18:02	53-70-3	
Dibenzofuran	ND	ug/L	20.0	1.8	1	02/09/16 13:17	02/09/16 18:02	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	20.0	1.8	1	02/09/16 13:17	02/09/16 18:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	20.0	1.6	1	02/09/16 13:17	02/09/16 18:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	20.0	1.9	1	02/09/16 13:17	02/09/16 18:02	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	100	4.2	1	02/09/16 13:17	02/09/16 18:02	91-94-1	
2,4-Dichlorophenol	ND	ug/L	20.0	3.4	1	02/09/16 13:17	02/09/16 18:02	120-83-2	
Diethylphthalate	ND	ug/L	20.0	1.2	1	02/09/16 13:17	02/09/16 18:02	84-66-2	
2,4-Dimethylphenol	ND	ug/L	20.0	2.4	1	02/09/16 13:17	02/09/16 18:02	105-67-9	
Dimethylphthalate	ND	ug/L	20.0	1.5	1	02/09/16 13:17	02/09/16 18:02	131-11-3	
Di-n-butylphthalate	ND	ug/L	20.0	1.5	1	02/09/16 13:17	02/09/16 18:02	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	40.0	5.2	1	02/09/16 13:17	02/09/16 18:02	534-52-1	

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ANALYTICAL RESULTS

Project 18856/51541 STEADY SIMMONS
Pace Project No 92285073

Sample: FIELD BLANK Lab ID: 92285073003 Collected 02/02/16 11:35 Received: 02/03/16 08.52 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC									
Analytical Method EPA 8270 Preparation Method: EPA 3510									
2,4-Dinitrophenol	ND	ug/L	100	18.0	1	02/09/16 13:17	02/09/16 18:02	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	20.0	1.8	1	02/09/16 13:17	02/09/16 18:02	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	20.0	2.0	1	02/09/16 13:17	02/09/16 18:02	606-20-2	
Di-n-octylphthalate	ND	ug/L	20.0	1.3	1	02/09/16 13:17	02/09/16 18:02	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	12.0	1.6	1	02/09/16 13:17	02/09/16 18:02	117-81-7	
Fluoranthene	ND	ug/L	20.0	0.42	1	02/09/16 13:17	02/09/16 18:02	206-44-0	
Fluorene	ND	ug/L	20.0	0.42	1	02/09/16 13:17	02/09/16 18:02	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	20.0	1.9	1	02/09/16 13:17	02/09/16 18:02	87-68-3	
Hexachlorobenzene	ND	ug/L	20.0	1.4	1	02/09/16 13:17	02/09/16 18:02	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	20.0	1.8	1	02/09/16 13:17	02/09/16 18:02	77-47-4	
Hexachloroethane	ND	ug/L	20.0	2.2	1	02/09/16 13:17	02/09/16 18:02	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	20.0	0.58	1	02/09/16 13:17	02/09/16 18:02	193-39-5	
Isophorone	ND	ug/L	20.0	1.8	1	02/09/16 13:17	02/09/16 18:02	78-59-1	
1-Methylnaphthalene	ND	ug/L	20.0	0.64	1	02/09/16 13:17	02/09/16 18:02	90-12-0	
2-Methylnaphthalene	ND	ug/L	20.0	0.56	1	02/09/16 13:17	02/09/16 18:02	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	20.0	3.2	1	02/09/16 13:17	02/09/16 18:02	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	20.0	4.0	1	02/09/16 13:17	02/09/16 18:02		
Naphthalene	ND	ug/L	20.0	0.68	1	02/09/16 13:17	02/09/16 18:02	91-20-3	
2-Nitroaniline	ND	ug/L	100	4.0	1	02/09/16 13:17	02/09/16 18:02	88-74-4	
3-Nitroaniline	ND	ug/L	100	4.0	1	02/09/16 13:17	02/09/16 18:02	99-09-2	
4-Nitroaniline	ND	ug/L	100	4.2	1	02/09/16 13:17	02/09/16 18:02	100-01-6	
Nitrobenzene	ND	ug/L	20.0	2.2	1	02/09/16 13:17	02/09/16 18:02	98-95-3	
2-Nitrophenol	ND	ug/L	20.0	1.8	1	02/09/16 13:17	02/09/16 18:02	88-75-5	
4-Nitrophenol	ND	ug/L	100	8.2	1	02/09/16 13:17	02/09/16 18:02	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	20.0	1.8	1	02/09/16 13:17	02/09/16 18:02	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	20.0	2.0	1	02/09/16 13:17	02/09/16 18:02	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	20.0	2.0	1	02/09/16 13:17	02/09/16 18:02	86-30-6	
Pentachlorophenol	ND	ug/L	100	9.2	1	02/09/16 13:17	02/09/16 18:02	87-86-5	
Phenanthrene	ND	ug/L	20.0	0.44	1	02/09/16 13:17	02/09/16 18:02	85-01-8	
Phenol	ND	ug/L	20.0	3.8	1	02/09/16 13:17	02/09/16 18:02	108-95-2	
Pyrene	ND	ug/L	20.0	0.38	1	02/09/16 13:17	02/09/16 18:02	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	20.0	2.0	1	02/09/16 13:17	02/09/16 18:02	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	20.0	1.8	1	02/09/16 13:17	02/09/16 18:02	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	20.0	2.6	1	02/09/16 13:17	02/09/16 18:02	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	60	%	21-110		1	02/09/16 13:17	02/09/16 18:02	4165-60-0	3g
2-Fluorobiphenyl (S)	59	%	27-110		1	02/09/16 13:17	02/09/16 18:02	321-60-8	
Terphenyl-d14 (S)	76	%	31-107		1	02/09/16 13:17	02/09/16 18:02	1718-51-0	
Phenol-d6 (S)	39	%	10-110		1	02/09/16 13:17	02/09/16 18:02	13127-88-3	
2-Fluorophenol (S)	44	%	12-110		1	02/09/16 13:17	02/09/16 18:02	367-12-4	
2,4,6-Tribromophenol (S)	62	%	27-110		1	02/09/16 13:17	02/09/16 18:02	118-79-6	
8260 MSV									
Analytical Method: EPA 8260									
Acetone	ND	ug/L	25.0	10.0	1		02/05/16 15:50	67-64-1	L3
Benzene	ND	ug/L	5.0	1.7	1		02/05/16 15:50	71-43-2	
Bromobenzene	ND	ug/L	5.0	1.5	1		02/05/16 15:50	108-86-1	

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ANALYTICAL RESULTS

Project: 18856/51541 STEADY SIMMONS
 Pace Project No : 92285073

Sample: FIELD BLANK Lab ID: 92285073003 Collected 02/02/16 11:35 Received: 02/03/16 08:52 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8260 MSV Analytical Method EPA 8260									
Bromochloromethane	ND	ug/L	5.0	2.2	1		02/05/16 15:50	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1.7	1		02/05/16 15:50	75-27-4	
Bromoform	ND	ug/L	5.0	1.5	1		02/05/16 15:50	75-25-2	
Bromomethane	ND	ug/L	10.0	2.5	1		02/05/16 15:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	4.9	1		02/05/16 15:50	78-93-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/05/16 15:50	75-65-0	
n-Butylbenzene	ND	ug/L	5.0	1.9	1		02/05/16 15:50	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1.7	1		02/05/16 15:50	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1.6	1		02/05/16 15:50	98-06-6	
Carbon tetrachloride	ND	ug/L	5.0	1.9	1		02/05/16 15:50	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1.7	1		02/05/16 15:50	108-90-7	
Chloroethane	ND	ug/L	10.0	1.6	1		02/05/16 15:50	75-00-3	
Chloroform	ND	ug/L	5.0	1.9	1		02/05/16 15:50	67-66-3	
Chloromethane	ND	ug/L	5.0	1.5	1		02/05/16 15:50	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1.5	1		02/05/16 15:50	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1.6	1		02/05/16 15:50	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1.7	1		02/05/16 15:50	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1.8	1		02/05/16 15:50	124-48-1	
Dibromomethane	ND	ug/L	5.0	2.0	1		02/05/16 15:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1.5	1		02/05/16 15:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1.5	1		02/05/16 15:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1.5	1		02/05/16 15:50	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1.6	1		02/05/16 15:50	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1.8	1		02/05/16 15:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/05/16 15:50	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	4.4	1		02/05/16 15:50	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	1.9	1		02/05/16 15:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1.8	1		02/05/16 15:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1.8	1		02/05/16 15:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1.7	1		02/05/16 15:50	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1.7	1		02/05/16 15:50	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1.6	1		02/05/16 15:50	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1.7	1		02/05/16 15:50	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1.6	1		02/05/16 15:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1.6	1		02/05/16 15:50	10061-02-6	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/05/16 15:50	108-20-3	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/05/16 15:50	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1.8	1		02/05/16 15:50	87-68-3	
2-Hexanone	ND	ug/L	10.0	3.8	1		02/05/16 15:50	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1.6	1		02/05/16 15:50	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1.6	1		02/05/16 15:50	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1.9	1		02/05/16 15:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	3.6	1		02/05/16 15:50	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/05/16 15:50	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/05/16 15:50	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1.5	1		02/05/16 15:50	103-65-1	

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ANALYTICAL RESULTS

Project: 18856/51541 STEADY SIMMONS
 Pace Project No 92285073

Sample: FIELD BLANK Lab ID: 92285073003 Collected: 02/02/16 11:35 Received: 02/03/16 08 52 Matrx Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8260 MSV Analytical Method EPA 8260									
Styrene	ND	ug/L	5.0	1.6	1		02/05/16 15:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1.7	1		02/05/16 15 50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1.5	1		02/05/16 15:50	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1.8	1		02/05/16 15:50	127-18-4	
Toluene	ND	ug/L	5.0	1.6	1		02/05/16 15:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	2.0	1		02/05/16 15:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1.7	1		02/05/16 15:50	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1.9	1		02/05/16 15:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1.7	1		02/05/16 15 50	79-00-5	
Trichloroethene	ND	ug/L	5.0	1.8	1		02/05/16 15 50	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1.7	1		02/05/16 15 50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1.5	1		02/05/16 15 50	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1.5	1		02/05/16 15 50	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1.3	1		02/05/16 15 50	108-67-8	
Vinyl acetate	ND	ug/L	10.0	2.3	1		02/05/16 15 50	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1.5	1		02/05/16 15.50	75-01-4	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/05/16 15:50	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/05/16 15 50	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		02/05/16 15 50	460-00-4	
1,2-Dichloroethane-d4 (S)	144	%	70-130		1		02/05/16 15:50	17060-07-0	S3
Toluene-d8 (S)	104	%	70-130		1		02/05/16 15:50	2037-26-5	

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ANALYTICAL RESULTS

Project 18856/51541 STEADY SIMMONS
 Pace Project No : 92285073

Sample: TRIP BLANK Lab ID: 92285073004 Collected: 02/02/16 00 00 Received: 02/03/16 08 52 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
8260 MSV	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/05/16 16 08	67-64-1	L3
Benzene	ND	ug/L	5.0	1.7	1		02/05/16 16 08	71-43-2	
Bromobenzene	ND	ug/L	5.0	1.5	1		02/05/16 16 08	108-86-1	
Bromochloromethane	ND	ug/L	5.0	2.2	1		02/05/16 16 08	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1.7	1		02/05/16 16 08	75-27-4	
Bromoform	ND	ug/L	5.0	1.5	1		02/05/16 16 08	75-25-2	
Bromomethane	ND	ug/L	10.0	2.5	1		02/05/16 16 08	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	4.9	1		02/05/16 16 08	78-93-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		02/05/16 16 08	75-65-0	
n-Butylbenzene	ND	ug/L	5.0	1.9	1		02/05/16 16 08	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1.7	1		02/05/16 16 08	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1.6	1		02/05/16 16 08	98-06-6	
Carbon tetrachloride	ND	ug/L	5.0	1.9	1		02/05/16 16 08	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1.7	1		02/05/16 16 08	108-90-7	
Chloroethane	ND	ug/L	10.0	1.6	1		02/05/16 16 08	75-00-3	
Chloroform	ND	ug/L	5.0	1.9	1		02/05/16 16 08	67-66-3	
Chloromethane	ND	ug/L	5.0	1.5	1		02/05/16 16 08	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1.5	1		02/05/16 16 08	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1.6	1		02/05/16 16 08	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1.7	1		02/05/16 16 08	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1.8	1		02/05/16 16 08	124-48-1	
Dibromomethane	ND	ug/L	5.0	2.0	1		02/05/16 16 08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1.5	1		02/05/16 16 08	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1.5	1		02/05/16 16 08	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1.5	1		02/05/16 16 08	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1.6	1		02/05/16 16 08	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1.8	1		02/05/16 16 08	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		02/05/16 16 08	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	4.4	1		02/05/16 16 08	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	1.9	1		02/05/16 16 08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1.8	1		02/05/16 16 08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1.8	1		02/05/16 16 08	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1.7	1		02/05/16 16 08	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1.7	1		02/05/16 16 08	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1.6	1		02/05/16 16 08	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1.7	1		02/05/16 16 08	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1.6	1		02/05/16 16 08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1.6	1		02/05/16 16 08	10061-02-6	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		02/05/16 16 08	108-20-3	
Ethylbenzene	ND	ug/L	5.0	1.6	1		02/05/16 16 08	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1.8	1		02/05/16 16 08	87-68-3	
2-Hexanone	ND	ug/L	10.0	3.8	1		02/05/16 16 08	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1.6	1		02/05/16 16 08	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1.6	1		02/05/16 16 08	99-87-6	
Methylene Chloride	3.6J	ug/L	5.0	1.9	1		02/05/16 16 08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	3.6	1		02/05/16 16 08	108-10-1	

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ANALYTICAL RESULTS

Project 18856/51541 STEADY SIMMONS
Pace Project No.. 92285073

Sample: TRIP BLANK									
Lab ID: 92285073004 Collected: 02/02/16 00:00 Received: 02/03/16 08:52 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8260 MSV Analytical Method EPA 8260									
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		02/05/16 16:08	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		02/05/16 16:08	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1.5	1		02/05/16 16:08	103-65-1	
Styrene	ND	ug/L	5.0	1.6	1		02/05/16 16:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1.7	1		02/05/16 16:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1.5	1		02/05/16 16:08	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1.8	1		02/05/16 16:08	127-18-4	
Toluene	ND	ug/L	5.0	1.6	1		02/05/16 16:08	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	2.0	1		02/05/16 16:08	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1.7	1		02/05/16 16:08	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1.9	1		02/05/16 16:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1.7	1		02/05/16 16:08	79-00-5	
Trichloroethene	ND	ug/L	5.0	1.8	1		02/05/16 16:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1.7	1		02/05/16 16:08	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1.5	1		02/05/16 16:08	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1.5	1		02/05/16 16:08	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1.3	1		02/05/16 16:08	108-67-8	
Vinyl acetate	ND	ug/L	10.0	2.3	1		02/05/16 16:08	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1.5	1		02/05/16 16:08	75-01-4	
m&p-Xylene	ND	ug/L	10.0	3.1	1		02/05/16 16:08	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		02/05/16 16:08	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		02/05/16 16:08	460-00-4	
1,2-Dichloroethane-d4 (S)	144	%	70-130		1		02/05/16 16:08	17060-07-0	S3
Toluene-d8 (S)	105	%	70-130		1		02/05/16 16:08	2037-26-5	

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QUALITY CONTROL DATA

Project 18856/51541 STEADY SIMMONS
 Pace Project No 92285073

QC Batch	MERP/8931	Analysis Method	EPA 7470
QC Batch Method	EPA 7470	Analysis Description	7470 Mercury
Associated Lab Samples	92285073001, 92285073002, 92285073003		

METHOD BLANK: 1662778 Matrix Water
 Associated Lab Samples: 92285073001, 92285073002, 92285073003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.10	02/10/16 16 15	

LABORATORY CONTROL SAMPLE: 1662779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE 1662780 1662781

Parameter	Units	1662780		1662781		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Mercury	ug/L	ND	2.5	2.5	2.2	2.4	88	94	75-125	6	25

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project 18856/51541 STEADY SIMMONS
Pace Project No 92285073

QC Batch: MPRP/20624 Analysis Method: EPA 6010
QC Batch Method: EPA 3010A Analysis Description: 6010 MET
Associated Lab Samples: 92285073001, 92285073002, 92285073003

METHOD BLANK: 1660911 Matrix: Water
Associated Lab Samples: 92285073001, 92285073002, 92285073003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	5.0	02/06/16 16:51	
Barium	ug/L	ND	5.0	2.5	02/06/16 16:51	
Cadmium	ug/L	ND	1.0	0.50	02/06/16 16:51	
Chromium	ug/L	ND	5.0	2.5	02/06/16 16:51	
Lead	ug/L	ND	5.0	2.5	02/06/16 16:51	
Selenium	ug/L	ND	10.0	5.0	02/06/16 16:51	
Silver	ug/L	ND	5.0	2.5	02/06/16 16:51	

LABORATORY CONTROL SAMPLE: 1660912

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	453	91	80-120	
Barium	ug/L	500	463	93	80-120	
Cadmium	ug/L	500	466	93	80-120	
Chromium	ug/L	500	452	90	80-120	
Lead	ug/L	500	461	92	80-120	
Selenium	ug/L	500	461	92	80-120	
Silver	ug/L	250	233	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE 1660913 1660914

Parameter	Units	1660913		1660914		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		MS Spike Conc	MSD Spike Conc	MS Result	MSD Result							
Arsenic	ug/L	ND	500	500	458	457	92	91	75-125	0	20	
Barium	ug/L	20.5	500	500	500	488	96	94	75-125	2	20	
Cadmium	ug/L	ND	500	500	468	471	94	94	75-125	1	20	
Chromium	ug/L	ND	500	500	457	459	91	92	75-125	0	20	
Lead	ug/L	ND	500	500	454	460	91	92	75-125	1	20	
Selenium	ug/L	ND	500	500	463	463	92	92	75-125	0	20	
Silver	ug/L	ND	250	250	237	238	95	95	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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