DURHAM
1869
CITY OF MEDICINE

CITY OF DURHAM
DEPARTMENT OF WATER MANAGEMENT
101 CITY HALL PLAZA • DURHAM, NC 27701
919-560-4381 • FAX 919-560-4479
www.durhamnc.gov

Administration
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919-560-4381
Wastewater Treatment
North - 919- 560-4384
South - 919-560-4386
Water Supply & Treatment
Williams - 919-560-4348
Brown - 919-560-4362
Water & Sewer Maintenance
919-560-4344

Re: LF Liquid Breakout at the City of Durham Closed MSW Sanitary Landfill
Attn: Ervin Lane
Compliance Hydrogeologist
NC Department of Environment and Natural Resources (NCDENR)
Division of Waste Management - Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646
919-707-8288 (phone/fax)

Date: June 19, 2013

Dear Sir,

In our previous communication, the City of Durham has brought two events to your attention that could have been compliance issues regarding water discharged from the closed sanitary landfill site. I am pleased to present the following report of those two events. The City identified the discharges and quickly acted to stop them (see Appendix 1 – State Notifications of Events). The City, in coordination with the NCDENR Solid Waste Section developed sampling plans and executed the work to confirm no residual impacts were present at the sites.

1. Executive Summary:

The City Staff noted two potential unintended water discharges from the Landfill Boundary in two separate events on February 8, 2013 and February 22, 2013[1]. The first event, occurring on February 8 involved the inadvertent discharge of condensate from a condensate pump station to a swale near a surface water body on the Landfill site. The second event involved an unknown foam that emerged during stormwater repairs that disturbed the surface of the landfill. The City, in accordance with its permits and general obligations, determined it was necessary to bring these issues to the attention of the Solid Waste Section. The resulting investigations are summarized below. In both cases, the City staff has determined that to the best of our knowledge no detectable quantities of condensate or leachate left the site.

2. Background

2.1 Event 1:Potential Condensate discharge

The spill occurred within the landfill compliance boundary; however it entered an existing body of water that overflows to an unnamed tributary of Ellerbe Creek, triggering this report. The spill was discovered on Friday, February 8, 2013. Prompt action was taken to shut off all pumping operations and contain the spill. The spilled condensate entered a surface water body and diluted with the pond. The City

[1] Note in previous reports attached, the date was incorrectly stated as February 8. The Actual date was February 22nd as phone and written record indicates from inspector John Patrone's site visit

sampled up and downstream of the pond's overflow point with the stream, as shown in Figure 1.

2.2 Event 2: Unknown discharge showing high levels of Biological Activity at Storm Drain.

City of Durham personnel observed unknown foam present at the City's storm water discharge during construction activities that disturbed an area outside the edge of waste on February 22, 2013. After further inspection and testing of DO and conductivity, it became evident that the foam was a result of biological activity. By that afternoon, City staff had re-compacted the area that was allowing significant discharge. City Staff also pumped down all surface water that had accumulated in the plunge pool at the bottom of the Storm Drain and disposed of it in the Sanitary Sewer.

Staff obtained a sample of the liquid and tested it for Appendix 1 VOC's and found no indication of VOC's in the discharge. NCDENR Solid Waste Section reviewed the results and requested additional testing of the water and soil contacted by the unknown flow to determine if there had been in fact any residual contamination. Supplemental sampling was performed as shown in Figure 2.

3. **Purpose**:

3.1 Event 1:

The purpose of the up and downstream sampling was to determine if any residual condensate material was entering or had entered the stream. No material was found.

3.2 Event 2

The purpose of the soil and water sampling is to identify any contamination in the soil and water that may have been impacted by the unknown discharge from the landfill. The sampling sites and their purpose are as described in previous reports (attached in Appendix 1).

4. Sample Results:

4.1 Event 1 Results

The up and downstream stream sampling results are attached in Appendix 2.

The results showed no detectable level of landfill condensate constituents and only trace levels of BTEX compounds likely related to Storm water runoff from the nearby streams and storm sewers.

Identifier	Location	Purpose	Results
S – 1	Upstream of Pond Discharge	Background	Representative Background sample.
S – 2	Downstream of Pond Discharge	Determine if residual contamination is present	No constituents present indicated landfill condensate.

4.2 Event 2 Results

The results of all soil and surface water samples are attached in Appendix 3.

See Figure 1 and 2 for the sample locations. Contaminants of concern that were found above NCDENR Preliminary Soil Remediation Goals (PSRG) for soil samples and the NC and EPA criteria table as promulgated by NCDENR DWQ have been highlighted in the attached appendices. The only constituents found above the Surface Water Protection Standards or PSRG standards were also found in the native soils outside of the impacted area. Metals have been detected extensively in native soils in the area. The results showed metal concentrations in soil and water samples for a number of compounds including Arsenic, Chromium, Cobalt, Copper, Nickel, Lead, Silver, Thalllium and Zinc above standard levels. However, the levels were found at or above these concentrations in the background soils and surface water samples.

4.2.1 Soil Samples:

Identifier	Location	Purpose	Results
S – 1	20-25 ft outside of the plunge pool area, ~1" below surface	Background	Representative Background sample.
S – 2	From sediment in plunge pool	Determine if residual contamination is present	No constituents detected indicated landfill leacheate that were not found in similar levels in the background sampling.
S – 3	After confluence of surface drainage channels, from sediment	If contamination was present, determine the extent.	No constituents detected indicated landfill leacheate that were not found in similar levels in the background sampling.

4.2.2 Surface Water Samples

Identifier	Location	Purpose	Analyses
Plunge Pool	From Water in plunge pool	Determine if residual contamination is present	No constituents present indicated landfill leacheate.
Confluence	After confluence of surface drainage channels, from standing water	If contamination was present, determine the extent.	No constituents present indicated landfill leacheate.
Before Confluence	Before confluence of surface drainage channels, from	Background	Representative Background sample.

	standing water		

5. Discussion and Summary

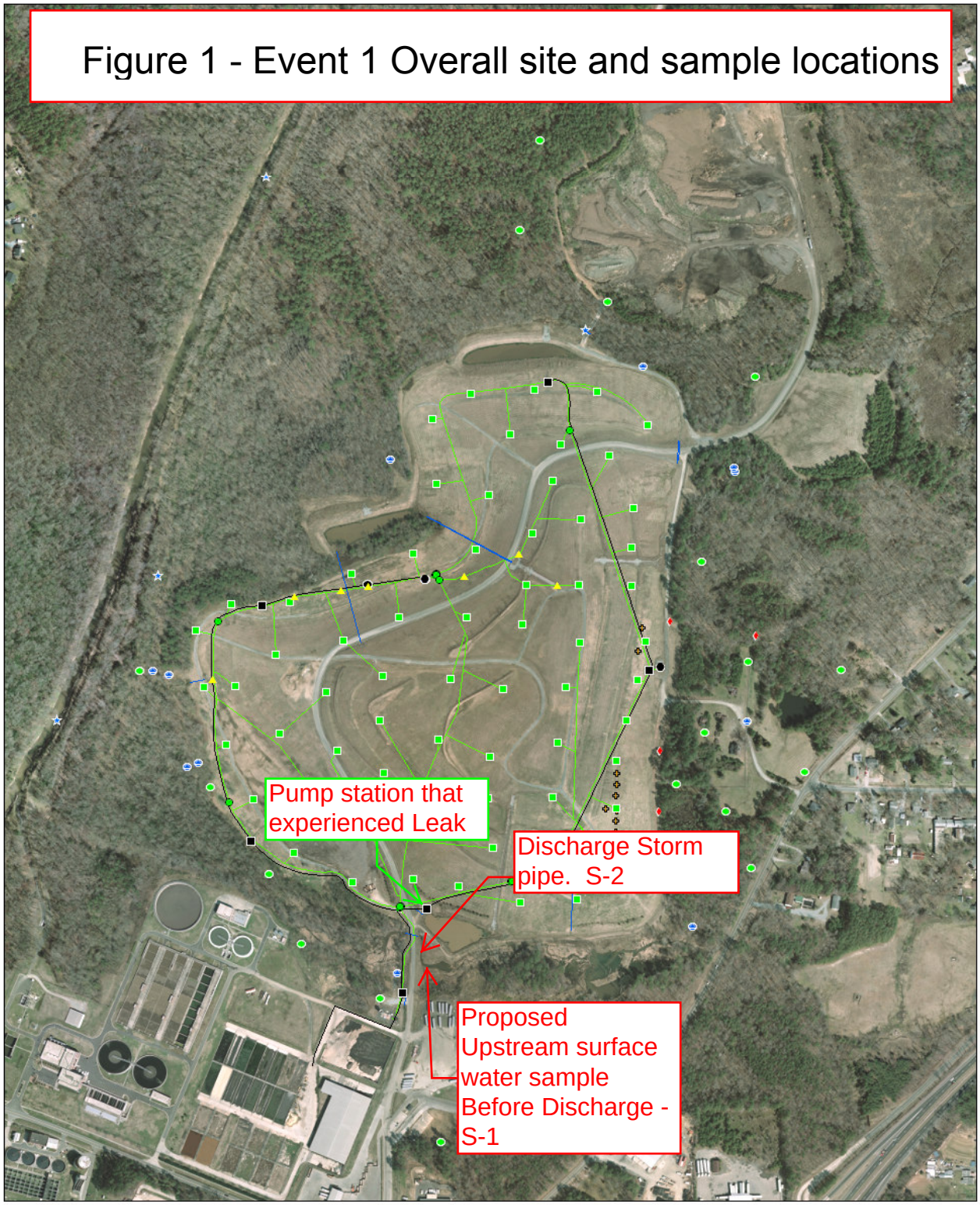
Based on the above findings, the City is hereby requesting this matter be considered closed as there is no indication of adverse impact beyond the landfill compliance boundary. Should you have any questions or further suggestions please call. Thank you for your work and continued assistance in maintaining compliance with our landfill closure permit.

Sincerely,

Simon Lobdell, PE
City of Durham, Department of Water Management.

Figures

City of Durham Landfill



Legend

- Extraction Well
- Gas Collection Pipe
- Isolation Valve
- Gas Line Marker
- Condensate Pump
- Condensate Trap
- Condensate Cleanout
- Condensate Pipe
- Drainage Pipe
- Gas Probe
- Piezometer
- Groundwater Well
- Surface Water Monitor
- Temperature Probe

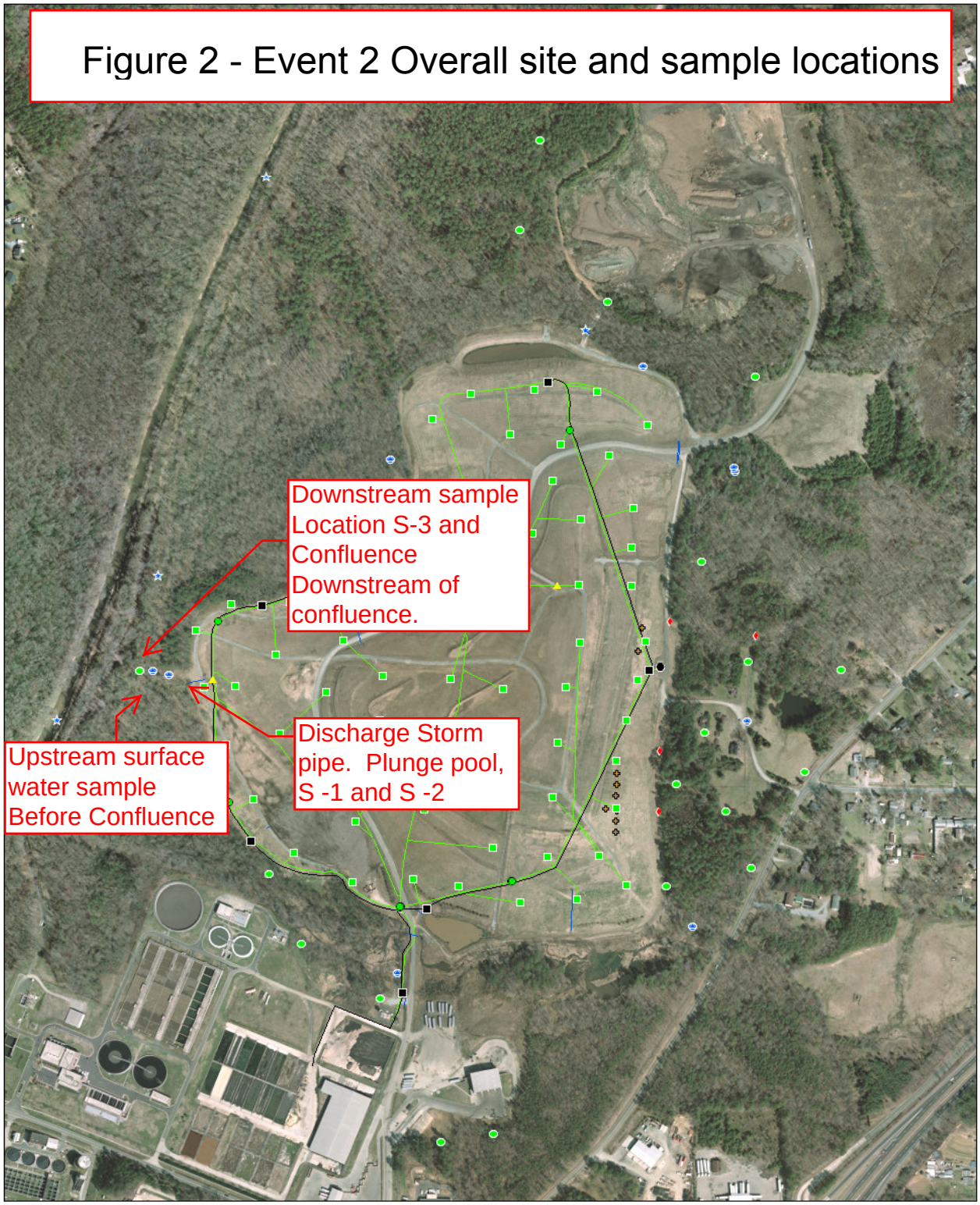
1 inch equals 416.666667 feet

500 250 0 500 Feet

The following features were collected with a Trimble GeoXH GPS receiver, and post-processed using data from the City of Durham Continuously Operating Reference Station: Condensate Cleanouts, Drainage Pipes, Extraction Wells, Gas Line Markers, Gas Probes, Isolation Valves, Manhole,Temperature Probes. Accuracy ranges from sub-foot to sub-meter in open areas, and sub-meter to more than a meter in wooded areas for these features.

The following features were collected with an unknown GPS receiver by S & ME Inc., and it is not known if differential correction was applied: Groundwater Wells, Piezometers, Surface Water Monitors.

City of Durham Landfill



Legend

- Extraction Well
- Gas Collection Pipe
- Isolation Valve
- Gas Line Marker
- Condensate Pump
- Condensate Trap
- Condensate Cleanout
- Condensate Pipe
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The following features were collected with an unknown GPS receiver by S & ME Inc., and it is not known if differential correction was applied: Groundwater Wells, Piezometers, Surface Water Monitors.

Appendix 1

Communication with the State regarding unknown water discharges from the Site

Date 1: Event 1

Date 2: Event 2

Event 1 - Closure Plan Approved

From: Lobdell, Simon
To: "Lane, Ervin"
Cc: Patrone, John; Gasper, Robert; Ian Moncrieff; dreedy@golder.com; Morrone, Jerry
Subject: RE: condensate spill report
Date: Monday, February 11, 2013 10:28:00 AM

Ervin,

Per our conversation. I will take 2 samples, 1 upstrem and 1 downstream of the Stormwater pond discharge point using the EPA 8260 method. I will send the results with a short letter report and figure showing the location of the discharge, the discharge path and an estimate of the flow.

Thank you for your guidance on this matter.

Simon

Simon Lobdell, PE
City of Durham
Department of Water Management, Utility Engineering Division
1600 Mist Lake Dr.
Durham, NC 27701
ph: 919.560.4381 x 35201
fax: 919.560.4479

From: Lane, Ervin [mailto:ervin.lane@ncdenr.gov]
Sent: Monday, February 11, 2013 8:48 AM
To: Lobdell, Simon
Cc: Patrone, John; Gasper, Robert; Ian Moncrieff; dreedy@golder.com; Morrone, Jerry
Subject: RE: condensate spill report

Simon,

Thank you for the update. Since the possibility exist that landfill gas condensate could have traveled off-site, Durham County should prepare and submit an assessment plan to determine if any residual contamination is present in areas where the condensate traveled. Feel free to contact me if you have any additional questions.

Ervin Lane
Compliance Hydrogeologist
NC Department of Environment and Natural Resources
Division of Waste Management - Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646
919-707-8288 (phone/fax)

From: Lobdell, Simon [mailto:Simon.Lobdell@durhamnc.gov]

Sent: Friday, February 08, 2013 4:30 PM
To: Lane, Ervin
Cc: Patrone, John; Gasper, Robert; Ian Moncrieff; dreedy@golder.com; Morrone, Jerry
Subject: condensate spill report

Ervin,

I wanted to make you aware of a situation that we just discovered at the landfill. A bypass line from the condensate system was inadvertently left open on our force main and one of the condensate traps was pumping onto the surface of the landfill. I wouldn't be contacting you with this except there was visual indications that some of the material traveled to a nearby stormwater pond and would have been mixed with the stormwater runoff and traveled to a nearby stream.

I immediately corrected the valve position and placed an absorbent sock on the path of the condensate where a sheen was visible.

Please tell me if there is any further action that needs to be taken at this time. I have attached annotated photographs to explain the situation.

Simon Lobdell, PE
City of Durham
Department of Water Management, Utility Engineering Division
1600 Mist Lake Dr.
Durham, NC 27701
ph: 919.560.4381 x 35201
fax: 919.560.4479

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

UNIT TYPE:												
Lined MSWLF		LCID		YW		Transfer		Compost		SLAS		COUNTY: **Durham**
Closed MSWLF	**X**	HHW		White goods		Incin		T&P		FIRM		PERMIT NO.: **32-01**
CDLF		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF		FILE TYPE: COMPLIANCE

Date of Site Visit: March 8, 2013 **Date of Last Site Visit:** February 14, 2013

FACILITY NAME AND ADDRESS:
City of Durham Closed MSW Landfill
2115 East Club Boulevard
Durham, NC 27704

GPS COORDINATES: **N**: 36.03265 **E**: -78.85495

FACILITY CONTACT NAME AND PHONE NUMBER:
Simon Lobdell, Civil Engineer III– City of Durham Dept. of Water Management, Utility Engineering Division

w. 919-560-4381 x35201
c. 919-200-8870
f. 919-560-4479
simon.lobdell@durhamnc.gov

FACILITY CONTACT ADDRESS:
Simon Lobdell, Civil Engineer III
City of Durham Dept. of Water Management
Utility Engineering Division
1600 Mist Lake Drive
Durham, NC 27704

PARTICIPANTS
John Patrone, Environmental Senior Specialist - Solid Waste Section (SWS)

STATUS OF PERMIT:
Closed

PURPOSE OF SITE VISIT:
Post Closure Site Visit

STATUS OF PAST NOTED VIOLATIONS:
None

OBSERVED VIOLATIONS

None

The item(s) listed above were observed by Section staff and require action on behalf of the facility in order to come into or maintain compliance with the Statutes, Rules, and/or other regulatory requirements applicable to this facility. Be advised that pursuant to N.C.G.S. 130A-22, an administrative penalty of up to $15,000 per day may be assessed for each violation of the Solid Waste Laws, Regulations, Conditions of a Permit, or Order under Article 9 of Chapter 130A of the N.C. General Statutes. Further, the facility and/or all responsible parties may be subject to enforcement actions including penalties, injunction from operation of a solid waste management facility or a solid waste collection service and any such further relief as may be necessary to achieve compliance with the North Carolina Solid Waste Management Act and Rules.

ADDITIONAL COMMENTS

On March 8, 2013, John Patrone conducted a post closure site visit of the City of Durham Closed MSW Landfill located on East Club Boulevard in Durham, Durham County.

1. The facility ceased operation/acceptance of municipal solid waste (MSW) on December 31, 1997
2. The closed landfill footprint is ~ 85 acres.
3. On February 22, 2013, the facility informed the SWS of a leachate release it discovered while repairing a stormwater drainpipe (see related file emails for additional information).
4. The leachate release was contained the same day, February 22, 2013.
5. On March 5, 2013, Mr. Lobdell informed SWS that the leachate outbreak has been repaired, the stormwater drainpipe has been replaced, and the landfill cap/area repaired.
6. On March 8, 2013, SWS conducted a site visit to verify the aforementioned.
7. Mr. Lobdell has stated that he plans to track-down the cause of the outbreak.
8. The facility is corresponding with SWS - Hydrogeology to ensure appropriate evaluation of the release is conducted.
9. The landfill cap, at the repaired area, is covered with straw.
10. There was no indication of erosion or runoff.

Please contact me if you have any questions or concerns regarding this inspection report.

John Patrone
Environmental Senior Specialist
Regional Representative

Phone: 336-771-5095 Fax: 336-771-4631

Sent on: March 11, 2013	X	Email		Hand delivery		US Mail		Certified No. [_]

Copies: Mark Poindexter, Field Operations Branch Head
Jason Watkins, Western District Supervisor
Jessica Montie, Compliance Officer
Ervin Lane, Compliance Hydrogeologist

Digital pictures taken March 8, 2013
by John Patrone, DWM-SWS

Side slope, repaired area – new drainpipe installed

Stormwater drainpipe basin

Stormwater drainpipe outlet

Area adjacent to stormwater drainpipe basin

Access road above/atop drainpipe repair

Stormwater drainpipe inlet

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Re: LF Liquid Breakout at the City of Durham Closed MSW Sanitary Landfill
Attn: Ervin Lane
Compliance Hydrogeologist
NC Department of Environment and Natural Resources
Division of Waste Management - Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646
919-707-8288 (phone/fax)

Date: March 21, 2013

Dear Sir,

The proposed Sampling Plan aimsto determine the presence or absence of any potential Landfill Leachate that may have left the compliance boundary of the City of Durham Closed Sanitary landfill.

Background;

City of Durham personnel observed an unknown foam present at the City's stormwater discharge during some construction activities that disturbed an area outside the edge of waste on February 8,2013. After further inspection and testing of DO and conductivity, it became evident that the foam was a result of biological activity. By that afternoon, City staff had re-compacted the area that was allowing significant discharge. City Staff also pumped down all surface water that had accumulated in the plunge pool at the bottom of the Storm Drain.

Staff obtained a sample of the liquid and tested it for Appendix 1 VOC's and found no indication of VOC's in the discharge. NCDENR Solid Waste Section reviewed the results and requested additional testing of the water and soil contacted by the unknown flow to determine if there had been in fact any residual contamination.

Purpose:

The purpose of the soil and water sampling is to identify any contamination in the soil and water that may have been impacted by the unknown discharge from the landfill. The sampling sites and their purpose are as follows.

Soil Samples:

Identifier	Location	Purpose	Analyses
S – 1	20-25 ft outside of the plunge pool area, ~1" below surface	Background	Nitrogen (TKN), phosphorous, sulfate, Appendix 1 VOC's and Metals
~~SW – 2~~ S-2	From sediment in	Determine if residual contamination is	Nitrogen (TKN), phosphorous, sulfate, Appendix 1 VOC's

	plunge pool	present	and Metals
~~SW – 3~~ S-3	After confluence of surface drainage channels, from sediment	If contamination was present, determine the extent.	Nitrogen (TKN), phosphorous, sulfate, Appendix 1 VOC's and Metals

Surface Water Samples

Identifier	Location	Purpose	Analyses
SW – 1	From Water in plunge pool	Determine if residual contamination is present	Nitrogen (TKN), phosphorous, sulfate, Appendix 1 Metals
SW – 2	After confluence of surface drainage channels, from standing water	If contamination was present, determine the extent.	Nitrogen (TKN), phosphorous, sulfate, Appendix 1 Metals
SW – 3	Before confluence of surface drainage channels, from standing water	Background	Nitrogen (TKN), phosphorous, sulfate, Appendix 1 Metals

See Figures 1 and 2 for locations and descriptions of the samples.

We look forward to your approval of the sampling plan. Should you have any questions or further suggestions for the plan, please don't hesitate to call. Thank you for your work and continued assistance in maintaining our compliance with our closure activities.

Sincerely,

Simon Lobdell, PE
City of Durham, Department of Water Management.

Figures

City of Durham Landfill

Legend

- Extraction Well
- Gas Collection Pipe
- Isolation Valve
- Gas Line Marker
- Condensate Pump
- Condensate Trap
- Condensate Cleanout
- Condensate Pipe
- Drainage Pipe
- Gas Probe
- Piezometer
- Groundwater Well
- Surface Water Monitor
- Temperature Probe

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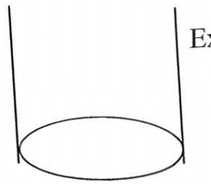
500 250 0 500 Feet

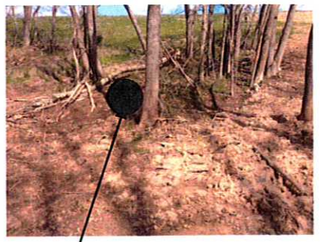
The following features were collected with a Trimble GeoXH GPS receiver, and post-processed using data from the City of Durham Continuously Operating Reference Station: Condensate Cleanouts, Drainage Pipes, Extraction Wells, Gas Line Markers, Gas Probes, Isolation Valves, Manhole,Temperature Probes. Accuracy ranges from sub-foot to sub-meter in open areas, and sub-meter to more than a meter in wooded areas for these features.

The following features were collected with an unknown GPS receiver by S & ME Inc., and it is not known if differential correction was applied: Groundwater Wells, Piezometers, Surface Water Monitors.

Figure 2—Sketch of sample locations.



Existing Storm Pipe



Background Soil Sample
S-1

SW - 1 - Discharge area surface water sample to be collected from water in pool

S –2 Discharge area soil sample to be collected from sediment in drainage channel

Appendix 2

Surface Water Sampling Results from Event 1

EVENT 1 - SAMPLE RESULTS

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

Tax I.D. 62-0814289

Est. 1970

Simon Lobdell
City of Durham, NC
1600 Mist Lake Drive
Durham, NC 27703

Report Summary

Monday February 18, 2013

Report Number: L620395
Samples Received: 02/14/13
Client Project:

Description: Closed Landfill-Condensate

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

Entire Report Reviewed By: Jimmy Hunt

Jimmy Hunt , ESC Representative

Laboratory Certification Numbers

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

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.
Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences.
Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

EVENT 1 - SAMPLE RESULTS

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

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Simon Lobdell
City of Durham, NC
1600 Mist Lake Drive
Durham, NC 27703

February 18, 2013

ESC Sample # : L620395-01

Date Received : February 14, 2013
Description : Closed Landfill-Condensate

Site ID : STREAM

Sample ID : UPSTREAM 1

Project # :

Collected By : Simon Lobdell
Collection Date : 02/12/13 09:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	02/16/13	1
Acrolein	BDL	0.050	mg/l	8260B	02/16/13	1
Acrylonitrile	BDL	0.010	mg/l	8260B	02/16/13	1
Benzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Bromobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	02/16/13	1
Bromoform	BDL	0.0010	mg/l	8260B	02/16/13	1
Bromomethane	BDL	0.0050	mg/l	8260B	02/16/13	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	02/16/13	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	02/16/13	1
Chloroethane	BDL	0.0050	mg/l	8260B	02/16/13	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	02/16/13	1
Chloroform	BDL	0.0050	mg/l	8260B	02/16/13	1
Chloromethane	BDL	0.0025	mg/l	8260B	02/16/13	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	02/16/13	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	02/16/13	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	02/16/13	1
Dibromomethane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	02/16/13	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	02/16/13	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	02/16/13	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	02/16/13	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	02/16/13	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	02/16/13	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	02/16/13	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	02/16/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	02/16/13	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	02/16/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

EVENT 1 - SAMPLE RESULTS

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

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Simon Lobdell
City of Durham, NC
1600 Mist Lake Drive
Durham, NC 27703

February 18, 2013

ESC Sample # : L620395-01

Date Received : February 14, 2013
Description : Closed Landfill-Condensate

Site ID : STREAM

Sample ID : UPSTREAM 1

Project # :

Collected By : Simon Lobdell
Collection Date : 02/12/13 09:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	02/16/13	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	02/16/13	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	02/16/13	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	02/16/13	1
Naphthalene	BDL	0.0050	mg/l	8260B	02/16/13	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Styrene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	02/16/13	1
Toluene	BDL	0.0050	mg/l	8260B	02/16/13	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
Trichloroethene	BDL	0.0010	mg/l	8260B	02/16/13	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	02/16/13	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	02/16/13	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	02/16/13	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	02/16/13	1
Surrogate Recovery						
Toluene-d8	110.		% Rec.	8260B	02/16/13	1
Dibromofluoromethane	111.		% Rec.	8260B	02/16/13	1
4-Bromofluorobenzene	100.		% Rec.	8260B	02/16/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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EVENT 1 - SAMPLE RESULTS

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REPORT OF ANALYSIS

Simon Lobdell
City of Durham, NC
1600 Mist Lake Drive
Durham, NC 27703

February 18, 2013

ESC Sample # : L620395-02

Date Received : February 14, 2013
Description : Closed Landfill-Condensate

Site ID : STREAM

Sample ID : DOWNSTREAM 1

Project # :

Collected By : Simon Lobdell
Collection Date : 02/12/13 09:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	02/16/13	1
Acrolein	BDL	0.050	mg/l	8260B	02/16/13	1
Acrylonitrile	BDL	0.010	mg/l	8260B	02/16/13	1
Benzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Bromobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	02/16/13	1
Bromoform	BDL	0.0010	mg/l	8260B	02/16/13	1
Bromomethane	BDL	0.0050	mg/l	8260B	02/16/13	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	02/16/13	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	02/16/13	1
Chloroethane	BDL	0.0050	mg/l	8260B	02/16/13	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	02/16/13	1
Chloroform	BDL	0.0050	mg/l	8260B	02/16/13	1
Chloromethane	BDL	0.0025	mg/l	8260B	02/16/13	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	02/16/13	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	02/16/13	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	02/16/13	1
Dibromomethane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	02/16/13	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	02/16/13	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	02/16/13	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	02/16/13	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	02/16/13	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	02/16/13	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	02/16/13	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	02/16/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	02/16/13	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	02/16/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

EVENT 1 - SAMPLE RESULTS

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REPORT OF ANALYSIS

Simon Lobdell
City of Durham, NC
1600 Mist Lake Drive
Durham, NC 27703

February 18, 2013

ESC Sample # : L620395-02

Date Received : February 14, 2013
Description : Closed Landfill-Condensate

Site ID : STREAM

Sample ID : DOWNSTREAM 1

Project # :

Collected By : Simon Lobdell
Collection Date : 02/12/13 09:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	02/16/13	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	02/16/13	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	02/16/13	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	02/16/13	1
Naphthalene	BDL	0.0050	mg/l	8260B	02/16/13	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Styrene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	02/16/13	1
Toluene	BDL	0.0050	mg/l	8260B	02/16/13	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	02/16/13	1
Trichloroethene	BDL	0.0010	mg/l	8260B	02/16/13	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	02/16/13	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	02/16/13	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	02/16/13	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	02/16/13	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	02/16/13	1
Surrogate Recovery						
Toluene-d8	108.		% Rec.	8260B	02/16/13	1
Dibromofluoromethane	110.		% Rec.	8260B	02/16/13	1
4-Bromofluorobenzene	96.2		% Rec.	8260B	02/16/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 02/18/13 14:48 Printed: 02/18/13 15:06

EVENT 1 - SAMPLE RESULTS

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L620395-01	WG637046	SAMP	1,3-Dichlorobenzene	R2545437	J4
	WG637046	SAMP	1,2,3-Trichlorobenzene	R2545437	J4
	WG637046	SAMP	1,2,4-Trichlorobenzene	R2545437	J4
L620395-02	WG637046	SAMP	1,3-Dichlorobenzene	R2545437	J4
	WG637046	SAMP	1,2,3-Trichlorobenzene	R2545437	J4
	WG637046	SAMP	1,2,4-Trichlorobenzene	R2545437	J4

EVENT 1 - SAMPLE RESULTS

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.

Qualifier Report Information

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

Definitions

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

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

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

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

Appendix 3

Sampling Results from Event 2 Including Soil and Surface Water Samples

EVENT 2 - PRELIMINARY SAMPLING EVENT RESULTS

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

Tax I.D. 62-0814289

Est. 1970

Simon Lobdell
City of Durham, NC
1600 Mist Lake Drive
Durham, NC 27703

Report Summary

Tuesday February 26, 2013

Report Number: L621727
Samples Received: 02/23/13
Client Project:

Description: Landfill Breakout

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

Entire Report Reviewed By: Jimmy Hunt

Jimmy Hunt , ESC Representative

Laboratory Certification Numbers

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

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.
Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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

EVENT 2 - PRELIMINARY SAMPLING EVENT RESULTS

12065 Lebanon Rd.
Mt. Juliet, TN 37122
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Simon Lobdell
City of Durham, NC
1600 Mist Lake Drive
Durham, NC 27703

February 26, 2013

ESC Sample # : L621727-01

Date Received : February 23, 2013
Description : Landfill Breakout

Site ID : DURHAM, NC

Sample ID : DISCHARGE 1

Project # :

Collected By : Simon Lobdell
Collection Date : 02/22/13 14:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	02/23/13	1
Acrylonitrile	BDL	0.010	mg/l	8260B	02/23/13	1
Benzene	BDL	0.0010	mg/l	8260B	02/23/13	1
Bromochloromethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Bromoform	BDL	0.0010	mg/l	8260B	02/23/13	1
Bromomethane	BDL	0.0050	mg/l	8260B	02/23/13	1
Carbon disulfide	BDL	0.0010	mg/l	8260B	02/23/13	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	02/23/13	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	02/23/13	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Chloroethane	BDL	0.0050	mg/l	8260B	02/23/13	1
Chloroform	BDL	0.0050	mg/l	8260B	02/23/13	1
Chloromethane	BDL	0.0025	mg/l	8260B	02/23/13	1
Dibromomethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	02/23/13	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	02/23/13	1
trans-1,4-Dichloro-2-butene	BDL	0.0025	mg/l	8260B	02/23/13	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	02/23/13	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	02/23/13	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	02/23/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	02/23/13	1
2-Hexanone	BDL	0.010	mg/l	8260B	02/23/13	1
Iodomethane	BDL	0.010	mg/l	8260B	02/23/13	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	02/23/13	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	02/23/13	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	02/23/13	1
Styrene	BDL	0.0010	mg/l	8260B	02/23/13	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
Toluene	BDL	0.0050	mg/l	8260B	02/23/13	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Trichloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	02/23/13	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	02/23/13	1
Vinyl acetate	BDL	0.010	mg/l	8260B	02/23/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

EVENT 2 - PRELIMINARY SAMPLING EVENT RESULTS

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Simon Lobdell
City of Durham, NC
1600 Mist Lake Drive
Durham, NC 27703

February 26, 2013

ESC Sample # : L621727-01

Date Received : February 23, 2013
Description : Landfill Breakout

Site ID : DURHAM, NC

Sample ID : DISCHARGE 1

Project # :

Collected By : Simon Lobdell
Collection Date : 02/22/13 14:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Vinyl chloride	BDL	0.0010	mg/l	8260B	02/23/13	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	02/23/13	1
Surrogate Recovery						
Toluene-d8	96.6		% Rec.	8260B	02/23/13	1
Dibromofluoromethane	94.3		% Rec.	8260B	02/23/13	1
a,a,a-Trifluorotoluene	97.4		% Rec.	8260B	02/23/13	1
4-Bromofluorobenzene	108.		% Rec.	8260B	02/23/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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EVENT 2 - PRELIMINARY SAMPLING EVENT RESULTS

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Simon Lobdell
City of Durham, NC
1600 Mist Lake Drive
Durham, NC 27703

February 26, 2013

ESC Sample # : L621727-02

Date Received : February 23, 2013
Description : Landfill Breakout

Site ID : DURHAM, NC

Sample ID : UPSTREAM 1

Project # :

Collected By : Simon Lobdell
Collection Date : 02/22/13 15:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	02/23/13	1
Acrylonitrile	BDL	0.010	mg/l	8260B	02/23/13	1
Benzene	BDL	0.0010	mg/l	8260B	02/23/13	1
Bromochloromethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Bromoform	BDL	0.0010	mg/l	8260B	02/23/13	1
Bromomethane	BDL	0.0050	mg/l	8260B	02/23/13	1
Carbon disulfide	BDL	0.0010	mg/l	8260B	02/23/13	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	02/23/13	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	02/23/13	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Chloroethane	BDL	0.0050	mg/l	8260B	02/23/13	1
Chloroform	BDL	0.0050	mg/l	8260B	02/23/13	1
Chloromethane	BDL	0.0025	mg/l	8260B	02/23/13	1
Dibromomethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	02/23/13	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	02/23/13	1
trans-1,4-Dichloro-2-butene	BDL	0.0025	mg/l	8260B	02/23/13	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	02/23/13	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	02/23/13	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	02/23/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	02/23/13	1
2-Hexanone	BDL	0.010	mg/l	8260B	02/23/13	1
Iodomethane	BDL	0.010	mg/l	8260B	02/23/13	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	02/23/13	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	02/23/13	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	02/23/13	1
Styrene	BDL	0.0010	mg/l	8260B	02/23/13	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
Toluene	BDL	0.0050	mg/l	8260B	02/23/13	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Trichloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	02/23/13	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	02/23/13	1
Vinyl acetate	BDL	0.010	mg/l	8260B	02/23/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

EVENT 2 - PRELIMINARY SAMPLING EVENT RESULTS

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

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Simon Lobdell
City of Durham, NC
1600 Mist Lake Drive
Durham, NC 27703

February 26, 2013

ESC Sample # : L621727-02

Site ID : DURHAM, NC

Project # :

Date Received : February 23, 2013
Description : Landfill Breakout

Sample ID : UPSTREAM 1

Collected By : Simon Lobdell
Collection Date : 02/22/13 15:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Vinyl chloride	BDL	0.0010	mg/l	8260B	02/23/13	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	02/23/13	1
Surrogate Recovery						
Toluene-d8	95.4		% Rec.	8260B	02/23/13	1
Dibromofluoromethane	94.9		% Rec.	8260B	02/23/13	1
a,a,a-Trifluorotoluene	97.5		% Rec.	8260B	02/23/13	1
4-Bromofluorobenzene	109.		% Rec.	8260B	02/23/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 02/26/13 16:45 Printed: 02/26/13 16:45

EVENT 2 - PRELIMINARY SAMPLING EVENT RESULTS

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REPORT OF ANALYSIS

Simon Lobdell
City of Durham, NC
1600 Mist Lake Drive
Durham, NC 27703

February 26, 2013

ESC Sample # : L621727-03

Date Received : February 23, 2013
Description : Landfill Breakout

Site ID : DURHAM, NC

Sample ID : DOWNSTREAM 1

Project # :

Collected By : Simon Lobdell
Collection Date : 02/22/13 14:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	02/23/13	1
Acrylonitrile	BDL	0.010	mg/l	8260B	02/23/13	1
Benzene	BDL	0.0010	mg/l	8260B	02/23/13	1
Bromochloromethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Bromoform	BDL	0.0010	mg/l	8260B	02/23/13	1
Bromomethane	BDL	0.0050	mg/l	8260B	02/23/13	1
Carbon disulfide	BDL	0.0010	mg/l	8260B	02/23/13	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	02/23/13	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	02/23/13	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Chloroethane	BDL	0.0050	mg/l	8260B	02/23/13	1
Chloroform	BDL	0.0050	mg/l	8260B	02/23/13	1
Chloromethane	BDL	0.0025	mg/l	8260B	02/23/13	1
Dibromomethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	02/23/13	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	02/23/13	1
trans-1,4-Dichloro-2-butene	BDL	0.0025	mg/l	8260B	02/23/13	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	02/23/13	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	02/23/13	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	02/23/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	02/23/13	1
2-Hexanone	BDL	0.010	mg/l	8260B	02/23/13	1
Iodomethane	BDL	0.010	mg/l	8260B	02/23/13	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	02/23/13	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	02/23/13	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	02/23/13	1
Styrene	BDL	0.0010	mg/l	8260B	02/23/13	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
Toluene	BDL	0.0050	mg/l	8260B	02/23/13	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	02/23/13	1
Trichloroethene	BDL	0.0010	mg/l	8260B	02/23/13	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	02/23/13	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	02/23/13	1
Vinyl acetate	BDL	0.010	mg/l	8260B	02/23/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

EVENT 2 - PRELIMINARY SAMPLING EVENT RESULTS

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Simon Lobdell
City of Durham, NC
1600 Mist Lake Drive
Durham, NC 27703

February 26, 2013

ESC Sample # : L621727-03

Date Received : February 23, 2013
Description : Landfill Breakout

Site ID : DURHAM, NC

Sample ID : DOWNSTREAM 1

Project # :

Collected By : Simon Lobdell
Collection Date : 02/22/13 14:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Vinyl chloride	BDL	0.0010	mg/l	8260B	02/23/13	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	02/23/13	1
Surrogate Recovery						
Toluene-d8	97.0		% Rec.	8260B	02/23/13	1
Dibromofluoromethane	93.9		% Rec.	8260B	02/23/13	1
a,a,a-Trifluorotoluene	97.6		% Rec.	8260B	02/23/13	1
4-Bromofluorobenzene	111.		% Rec.	8260B	02/23/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 02/26/13 16:45 Printed: 02/26/13 16:45

EVENT 2 - PRELIMINARY SAMPLING EVENT RESULTS

Summary of Remarks For Samples Printed
02/26/13 at 16:45:30

TSR Signing Reports: 350
R3 - Rush: Two Day

Sample: L621727-01 Account: DURHAMNC Received: 02/23/13 09:20 Due Date: 02/27/13 00:00 RPT Date: 02/26/13 16:45

Sample: L621727-02 Account: DURHAMNC Received: 02/23/13 09:20 Due Date: 02/27/13 00:00 RPT Date: 02/26/13 16:45

Sample: L621727-03 Account: DURHAMNC Received: 02/23/13 09:20 Due Date: 02/27/13 00:00 RPT Date: 02/26/13 16:45

EVENT 2 - FINAL SAMPLE RESULTS

Environmental Conservation Laboratories, Inc.
102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515
www.encolabs.com

Tuesday, May 7, 2013

City of Durham (CI020)

Attn: Simon Lobdell

1600 Mist Lake

Durham, NC 27701

RE: Laboratory Results for
Project Number: [none], Project Name/Desc: Special Soil Event
ENCO Workorder(s): C304014

Dear Simon Lobdell,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, April 26, 2013.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Stephanie Franz

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 45.

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: Before Confluence | **Lab ID: C304014-01** | **Sampled: 04/26/13 15:10** | **Received: 04/26/13 16:35**

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 300.0	05/24/13		04/27/13	02:07	4/27/2013 02:07
EPA 351.2	05/24/13		05/02/13	12:49	5/6/2013 10:56
EPA 353.2	04/28/13	15:10	04/26/13	15:42	4/26/2013 17:36
EPA 353.2	05/24/13		04/30/13	07:15	4/30/2013 13:18
EPA 353.2	01/20/16		05/05/13	10:35	5/5/2013 10:50
EPA 365.4	05/24/13		05/02/13	12:49	5/6/2013 12:48
EPA 6010C	10/23/13		04/29/13	09:46	4/30/2013 14:39
EPA 6020A	10/23/13		04/30/13	09:52	5/3/2013 12:02

Client ID: Plunge Pool | **Lab ID: C304014-02** | **Sampled: 04/26/13 15:15** | **Received: 04/26/13 16:35**

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 300.0	05/24/13		04/27/13	02:24	4/27/2013 02:24
EPA 351.2	05/24/13		05/02/13	12:49	5/6/2013 11:03
EPA 353.2	04/28/13	15:15	04/26/13	15:42	4/26/2013 17:37
EPA 353.2	05/24/13		04/30/13	07:15	4/30/2013 13:49
EPA 353.2	01/20/16		05/05/13	10:35	5/5/2013 10:50
EPA 365.4	05/24/13		05/02/13	12:49	5/6/2013 12:53
EPA 6010C	10/23/13		04/29/13	09:46	4/30/2013 14:15
EPA 6020A	10/23/13		04/30/13	09:52	5/3/2013 11:42

Client ID: Confluence | **Lab ID: C304014-03** | **Sampled: 04/26/13 15:20** | **Received: 04/26/13 16:35**

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 300.0	05/24/13		04/27/13	02:40	4/27/2013 02:40
EPA 351.2	05/24/13		05/02/13	12:49	5/6/2013 11:05
EPA 353.2	04/28/13	15:20	04/26/13	15:42	4/26/2013 17:37
EPA 353.2	05/24/13		04/30/13	07:15	4/30/2013 13:51
EPA 353.2	01/20/16		05/05/13	10:35	5/5/2013 10:50
EPA 365.4	05/24/13		05/02/13	12:49	5/6/2013 12:55
EPA 6010C	10/23/13		04/29/13	09:46	4/30/2013 14:18
EPA 6020A	10/23/13		04/30/13	09:52	5/3/2013 12:06

Client ID: S-1-Outside PP | **Lab ID: C304014-04** | **Sampled: 04/26/13 14:45** | **Received: 04/26/13 16:35**

Parameter	Hold Date/Time(s)			Prep Date/Time(s)		Analysis Date/Time(s)
EPA 351.2	05/24/13			05/02/13	12:49	5/6/2013 16:59
EPA 6010C	10/23/13			04/30/13	09:55	5/1/2013 15:12
EPA 8260B	05/10/13			05/02/13	14:08	5/2/2013 14:08
EPA 9056A	05/24/13	05/03/13	14:56	05/01/13	14:56	5/1/2013 19:39
EPA 9056A	05/24/13	05/29/13		05/01/13	14:56	5/1/2013 19:39

Client ID: S-1-Outside PP | **Lab ID: C304014-04RE1** | **Sampled: 04/26/13 14:45** | **Received: 04/26/13 16:35**

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 365.4	05/24/13		05/02/13	12:49	5/6/2013 14:32

EVENT 2 - FINAL SAMPLE RESULTS

www.encolabs.com

Client ID: S-2-Sediment PP	Lab ID: C304014-05	Sampled: 04/26/13 14:55	Received: 04/26/13 16:35

Parameter	Hold Date/Time(s)			Prep Date/Time(s)		Analysis Date/Time(s)
EPA 351.2	05/24/13			05/02/13	12:49	5/6/2013 17:05
EPA 6010C	10/23/13			04/30/13	09:55	5/1/2013 15:24
EPA 8260B	05/10/13			05/02/13	14:39	5/2/2013 14:39
EPA 9056A	05/24/13	05/03/13	14:56	05/01/13	14:56	5/1/2013 19:55
EPA 9056A	05/24/13	05/29/13		05/01/13	14:56	5/1/2013 19:55

Client ID: S-2-Sediment PP	Lab ID: C304014-05RE1	Sampled: 04/26/13 14:55	Received: 04/26/13 16:35

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 365.4	05/24/13	05/02/13	12:49	5/6/2013 14:36

Client ID: S-3-Confluence	Lab ID: C304014-06	Sampled: 04/26/13 15:05	Received: 04/26/13 16:35

Parameter	Hold Date/Time(s)			Prep Date/Time(s)		Analysis Date/Time(s)
EPA 351.2	05/24/13			05/02/13	12:49	5/6/2013 17:07
EPA 6010C	10/23/13			04/30/13	09:55	5/1/2013 15:26
EPA 8260B	05/10/13			05/02/13	14:28	5/2/2013 15:10
EPA 9056A	05/24/13	05/03/13	14:56	05/01/13	14:56	5/1/2013 20:12
EPA 9056A	05/24/13	05/29/13		05/01/13	14:56	5/1/2013 20:12

Client ID: S-3-Confluence	Lab ID: C304014-06RE1	Sampled: 04/26/13 15:05	Received: 04/26/13 16:35

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 365.4	05/24/13	05/02/13	12:49	5/6/2013 14:37

Client ID: Trip Blank	Lab ID: C304014-07	Sampled: 04/26/13 14:45	Received: 04/26/13 16:35

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 8260B	05/10/13	04/28/13	15:58	4/30/2013 04:41
EPA 8260B	05/10/13	05/02/13	12:39	5/3/2013 01:16

EVENT 2 - FINAL SAMPLE RESULTS

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SAMPLE DETECTION SUMMARY

Client ID: Before Confluence — **Lab ID: C304014-01**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Antimony - Total	0.340	J	0.220	2.00	ug/L	EPA 6020A	
Arsenic - Total	7.02	J	2.80	10.0	ug/L	EPA 6010C	
Barium - Total	611		1.00	10.0	ug/L	EPA 6010C	
Beryllium - Total	0.709	J	0.100	1.00	ug/L	EPA 6010C	
Chromium - Total	8.62	J	1.40	10.0	ug/L	EPA 6010C	
Cobalt - Total	22.5		1.10	10.0	ug/L	EPA 6010C	
Copper - Total	21.1		1.60	10.0	ug/L	EPA 6010C	
Lead - Total	18.2		1.90	10.0	ug/L	EPA 6010C	
Nickel - Total	22.9		1.80	10.0	ug/L	EPA 6010C	
Nitrate as N	0.29		0.025	0.10	mg/L	EPA 353.2	
Nitrate/Nitrite as N	0.33		0.025	0.10	mg/L	EPA 353.2	
Nitrite as N	0.043	JB	0.0030	0.10	mg/L	EPA 353.2	J-01
Phosphorus	12	D	0.25	1.0	mg/L	EPA 365.4	
Selenium - Total	0.999	J	0.830	1.00	ug/L	EPA 6020A	
Silver - Total	5.28	J	1.90	10.0	ug/L	EPA 6010C	
Sulfate as SO4	5.2		0.04	5.0	mg/L	EPA 300.0	
Total Kjeldahl Nitrogen	120	D	1.3	2.4	mg/L	EPA 351.2	
Vanadium - Total	22.4		1.40	10.0	ug/L	EPA 6010C	
Zinc - Total	110		3.80	10.0	ug/L	EPA 6010C	

Client ID: Plunge Pool — **Lab ID: C304014-02**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Antimony - Total	1.14	J	0.220	2.00	ug/L	EPA 6020A	
Barium - Total	167		1.00	10.0	ug/L	EPA 6010C	
Cobalt - Total	3.64	J	1.10	10.0	ug/L	EPA 6010C	
Copper - Total	6.28	J	1.60	10.0	ug/L	EPA 6010C	
Nickel - Total	6.82	J	1.80	10.0	ug/L	EPA 6010C	
Nitrite as N	0.0045	JB	0.0030	0.10	mg/L	EPA 353.2	J-01
Phosphorus	0.20		0.025	0.10	mg/L	EPA 365.4	
Silver - Total	2.26	J	1.90	10.0	ug/L	EPA 6010C	
Sulfate as SO4	3.8	J	0.04	5.0	mg/L	EPA 300.0	
Total Kjeldahl Nitrogen	4.3		0.26	0.48	mg/L	EPA 351.2	
Zinc - Total	5.00	J	3.80	10.0	ug/L	EPA 6010C	

Client ID: Confluence — **Lab ID: C304014-03**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Barium - Total	165		1.00	10.0	ug/L	EPA 6010C	
Cobalt - Total	4.12	J	1.10	10.0	ug/L	EPA 6010C	
Copper - Total	3.76	J	1.60	10.0	ug/L	EPA 6010C	
Lead - Total	2.30	J	1.90	10.0	ug/L	EPA 6010C	
Nickel - Total	6.86	J	1.80	10.0	ug/L	EPA 6010C	
Nitrate as N	0.32		0.025	0.10	mg/L	EPA 353.2	
Nitrate/Nitrite as N	0.33		0.025	0.10	mg/L	EPA 353.2	
Nitrite as N	0.0050	JB	0.0030	0.10	mg/L	EPA 353.2	J-01
Phosphorus	1.5		0.025	0.10	mg/L	EPA 365.4	
Silver - Total	2.91	J	1.90	10.0	ug/L	EPA 6010C	
Sulfate as SO4	5.0		0.04	5.0	mg/L	EPA 300.0	
Total Kjeldahl Nitrogen	15		0.26	0.48	mg/L	EPA 351.2	
Vanadium - Total	3.46	J	1.40	10.0	ug/L	EPA 6010C	

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Client ID:	Confluence		Lab ID:	C304014-03			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**	**Notes**
Zinc - Total	13.4		3.80	10.0	ug/L	EPA 6010C	

Client ID:	S-1-Outside PP		Lab ID:	C304014-04			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**	**Notes**
2-Butanone	0.0032	J	0.0019	0.0052	mg/kg dry	EPA 8260B	
Acetone	0.023		0.0018	0.0052	mg/kg dry	EPA 8260B	
Antimony - Total	0.522	J	0.138	1.26	mg/kg dry	EPA 6010C	
Arsenic - Total	1.37		0.126	0.629	mg/kg dry	EPA 6010C	
Barium - Total	146		0.126	0.629	mg/kg dry	EPA 6010C	
Beryllium - Total	0.745		0.0151	0.0629	mg/kg dry	EPA 6010C	
Cadmium - Total	0.732		0.0121	0.0629	mg/kg dry	EPA 6010C	
Chromium - Total	20.9		0.126	0.629	mg/kg dry	EPA 6010C	
Cobalt - Total	7.81		0.126	0.629	mg/kg dry	EPA 6010C	
Copper - Total	45.1		0.239	0.629	mg/kg dry	EPA 6010C	
Lead - Total	22.4		0.151	0.629	mg/kg dry	EPA 6010C	
Nickel - Total	10.9		0.453	3.14	mg/kg dry	EPA 6010C	
Nitrate as N	3.8	J	0.86	13	mg/kg dry	EPA 9056A	
Selenium - Total	0.362	JB	0.126	0.629	mg/kg dry	EPA 6010C	J-01
Silver - Total	3.01		0.126	0.629	mg/kg dry	EPA 6010C	
Sulfate as SO4	23	J	0.5	63	mg/kg dry	EPA 9056A	
Thallium - Total	4.67		0.126	0.629	mg/kg dry	EPA 6010C	
Total Kjeldahl Nitrogen	1300		26	48	mg/kg dry	EPA 351.2	
Vanadium - Total	20.1		0.126	0.629	mg/kg dry	EPA 6010C	
Zinc - Total	202		1.38	3.14	mg/kg dry	EPA 6010C	

Speciation was not provided by the lab for lead, zinc and chromium.

Client ID:	S-1-Outside PP		Lab ID:	C304014-04RE1			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**	**Notes**
Phosphorus	700	D	36	100	mg/kg dry	EPA 365.4	

Client ID:	S-2-Sediment PP		Lab ID:	C304014-05			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**	**Notes**
2-Butanone	0.016		0.0028	0.0079	mg/kg dry	EPA 8260B	
Acetone	0.056		0.0027	0.0079	mg/kg dry	EPA 8260B	
Arsenic - Total	1.94		0.158	0.789	mg/kg dry	EPA 6010C	
Barium - Total	208		0.158	0.789	mg/kg dry	EPA 6010C	
Beryllium - Total	1.11		0.0189	0.0789	mg/kg dry	EPA 6010C	
Cadmium - Total	0.346		0.0151	0.0789	mg/kg dry	EPA 6010C	
Chromium - Total	31.1		0.158	0.789	mg/kg dry	EPA 6010C	
Cobalt - Total	10.5		0.158	0.789	mg/kg dry	EPA 6010C	
Copper - Total	43.6		0.300	0.789	mg/kg dry	EPA 6010C	
Lead - Total	27.7		0.189	0.789	mg/kg dry	EPA 6010C	
Nickel - Total	16.5		0.568	3.94	mg/kg dry	EPA 6010C	
Nitrate as N	3.4	J	1.1	16	mg/kg dry	EPA 9056A	
Selenium - Total	0.757	JB	0.158	0.789	mg/kg dry	EPA 6010C	J-01
Silver - Total	2.96		0.158	0.789	mg/kg dry	EPA 6010C	
Sulfate as SO4	42	J	0.6	79	mg/kg dry	EPA 9056A	
Thallium - Total	4.37		0.158	0.789	mg/kg dry	EPA 6010C	
Toluene	0.0076		0.0007	0.0016	mg/kg dry	EPA 8260B	
Total Kjeldahl Nitrogen	1500		33	61	mg/kg dry	EPA 351.2	
Vanadium - Total	31.3		0.158	0.789	mg/kg dry	EPA 6010C	
Zinc - Total	129		1.73	3.94	mg/kg dry	EPA 6010C	

EVENT 2 - FINAL SAMPLE RESULTS

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Client ID:	S-2-Sediment PP		Lab ID:	C304014-05RE1			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**	**Notes**
Phosphorus	1200	D	46	130	mg/kg dry	EPA 365.4	

Client ID:	S-3-Confluence		Lab ID:	C304014-06			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**	**Notes**
2-Butanone	0.026		0.0035	0.0097	mg/kg dry	EPA 8260B	
Acetone	0.083		0.0033	0.0097	mg/kg dry	EPA 8260B	
Arsenic - Total	3.26		0.193	0.966	mg/kg dry	EPA 6010C	
Barium - Total	193		0.193	0.966	mg/kg dry	EPA 6010C	
Beryllium - Total	1.08		0.0232	0.0966	mg/kg dry	EPA 6010C	
Cadmium - Total	0.105		0.0186	0.0966	mg/kg dry	EPA 6010C	
Chromium - Total	27.5		0.193	0.966	mg/kg dry	EPA 6010C	
Cobalt - Total	12.2		0.193	0.966	mg/kg dry	EPA 6010C	
Copper - Total	22.6		0.367	0.966	mg/kg dry	EPA 6010C	
Lead - Total	31.3		0.232	0.966	mg/kg dry	EPA 6010C	
Nickel - Total	17.5		0.696	4.83	mg/kg dry	EPA 6010C	
Sulfate as SO4	34	J	0.7	87	mg/kg dry	EPA 9056A	
Thallium - Total	7.35		0.193	0.966	mg/kg dry	EPA 6010C	
Toluene	0.016		0.0009	0.0019	mg/kg dry	EPA 8260B	
Total Kjeldahl Nitrogen	1800		41	74	mg/kg dry	EPA 351.2	
Vanadium - Total	39.6		0.193	0.966	mg/kg dry	EPA 6010C	
Zinc - Total	117		2.13	4.83	mg/kg dry	EPA 6010C	

Client ID:	S-3-Confluence		Lab ID:	C304014-06RE1			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**	**Notes**
Phosphorus	750	D	56	150	mg/kg dry	EPA 365.4	

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ANALYTICAL RESULTS

Description: Before Confluence
Matrix: Water
Project: Special Soil Event

Lab Sample ID: C304014-01
Sampled: 04/26/13 15:10
Sampled By:

Received: 04/26/13 16:35
Work Order: C304014

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	**0.340**	J	ug/L	1	0.220	2.00	3D30010	EPA 6020A	05/03/13 12:02	VLO	
Arsenic [7440-38-2] ^	**7.02**	J	ug/L	1	2.80	10.0	3D29008	EPA 6010C	04/30/13 14:39	JDH	
Barium [7440-39-3] ^	**611**		ug/L	1	1.00	10.0	3D29008	EPA 6010C	04/30/13 14:39	JDH	
Beryllium [7440-41-7] ^	**0.709**	J	ug/L	1	0.100	1.00	3D29008	EPA 6010C	04/30/13 14:39	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	3D29008	EPA 6010C	04/30/13 14:39	JDH	
Chromium [7440-47-3] ^	**8.62**	J	ug/L	1	1.40	10.0	3D29008	EPA 6010C	04/30/13 14:39	JDH	
Cobalt [7440-48-4] ^	**22.5**		ug/L	1	1.10	10.0	3D29008	EPA 6010C	04/30/13 14:39	JDH	
Copper [7440-50-8] ^	**21.1**		ug/L	1	1.60	10.0	3D29008	EPA 6010C	04/30/13 14:39	JDH	
Lead [7439-92-1] ^	**18.2**		ug/L	1	1.90	10.0	3D29008	EPA 6010C	04/30/13 14:39	JDH	
Nickel [7440-02-0] ^	**22.9**		ug/L	1	1.80	10.0	3D29008	EPA 6010C	04/30/13 14:39	JDH	
Selenium [7782-49-2] ^	**0.999**	J	ug/L	1	0.830	1.00	3D30010	EPA 6020A	05/03/13 12:02	VLO	
Silver [7440-22-4] ^	**5.28**	J	ug/L	1	1.90	10.0	3D29008	EPA 6010C	04/30/13 14:39	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	3D30010	EPA 6020A	05/03/13 12:02	VLO	
Vanadium [7440-62-2] ^	**22.4**		ug/L	1	1.40	10.0	3D29008	EPA 6010C	04/30/13 14:39	JDH	
Zinc [7440-66-6] ^	**110**		ug/L	1	3.80	10.0	3D29008	EPA 6010C	04/30/13 14:39	JDH	

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Description: Before Confluence
Matrix: Water
Project: Special Soil Event

Lab Sample ID: C304014-01
Sampled: 04/26/13 15:10
Sampled By:

Received: 04/26/13 16:35
Work Order: C304014

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Nitrate as N [14797-55-8] ^	**0.29**		mg/L	1	0.025	0.10	3E05004	EPA 353.2	05/05/13 10:50	JCS	
Nitrate/Nitrite as N [ECL-0010] ^	**0.33**		mg/L	1	0.025	0.10	3D30002	EPA 353.2	04/30/13 13:18	JCS	
Nitrite as N [14797-65-0] ^	**0.043**	JB	mg/L	1	0.0030	0.10	3D26035	EPA 353.2	04/26/13 17:36	AJB	J-01
Phosphorus [7723-14-0] ^	**12**	D	mg/L	10	0.25	1.0	3E02005	EPA 365.4	05/06/13 12:48	JCS	
Sulfate as SO4 [14808-79-8] ^	**5.2**		mg/L	1	0.04	5.0	3D26022	EPA 300.0	04/27/13 02:07	AJB	
Total Kjeldahl Nitrogen [ECL-0162] ^	**120**	D	mg/L	5	1.3	2.4	3E02007	EPA 351.2	05/06/13 10:56	JCS	

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Description: Plunge Pool
Matrix: Water
Project: Special Soil Event

Lab Sample ID: C304014-02
Sampled: 04/26/13 15:15
Sampled By: Client

Received: 04/26/13 16:35
Work Order: C304014

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	**1.14**	J	ug/L	1	0.220	2.00	3D30010	EPA 6020A	05/03/13 11:42	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	3D29008	EPA 6010C	04/30/13 14:15	JDH	
Barium [7440-39-3] ^	**167**		ug/L	1	1.00	10.0	3D29008	EPA 6010C	04/30/13 14:15	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	3D29008	EPA 6010C	04/30/13 14:15	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	3D29008	EPA 6010C	04/30/13 14:15	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	3D29008	EPA 6010C	04/30/13 14:15	JDH	
Cobalt [7440-48-4] ^	**3.64**	J	ug/L	1	1.10	10.0	3D29008	EPA 6010C	04/30/13 14:15	JDH	
Copper [7440-50-8] ^	**6.28**	J	ug/L	1	1.60	10.0	3D29008	EPA 6010C	04/30/13 14:15	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	3D29008	EPA 6010C	04/30/13 14:15	JDH	
Nickel [7440-02-0] ^	**6.82**	J	ug/L	1	1.80	10.0	3D29008	EPA 6010C	04/30/13 14:15	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	3D30010	EPA 6020A	05/03/13 11:42	VLO	
Silver [7440-22-4] ^	**2.26**	J	ug/L	1	1.90	10.0	3D29008	EPA 6010C	04/30/13 14:15	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	3D30010	EPA 6020A	05/03/13 11:42	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	3D29008	EPA 6010C	04/30/13 14:15	JDH	
Zinc [7440-66-6] ^	**5.00**	J	ug/L	1	3.80	10.0	3D29008	EPA 6010C	04/30/13 14:15	JDH	

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Description: Plunge Pool
Matrix: Water
Project: Special Soil Event

Lab Sample ID: C304014-02
Sampled: 04/26/13 15:15
Sampled By: Client

Received: 04/26/13 16:35
Work Order: C304014

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Nitrate as N [14797-55-8] ^	0.025	U	mg/L	1	0.025	0.10	3E05004	EPA 353.2	05/05/13 10:50	JCS	
Nitrate/Nitrite as N [ECL-0010] ^	0.025	U	mg/L	1	0.025	0.10	3D30002	EPA 353.2	04/30/13 13:49	AJB	
Nitrite as N [14797-65-0] ^	**0.0045**	JB	mg/L	1	0.0030	0.10	3D26035	EPA 353.2	04/26/13 17:37	AJB	J-01
Phosphorus [7723-14-0] ^	**0.20**		mg/L	1	0.025	0.10	3E02005	EPA 365.4	05/06/13 12:53	JCS	
Sulfate as SO4 [14808-79-8] ^	**3.8**	J	mg/L	1	0.04	5.0	3D26022	EPA 300.0	04/27/13 02:24	AJB	
Total Kjeldahl Nitrogen [ECL-0162] ^	**4.3**		mg/L	1	0.26	0.48	3E02007	EPA 351.2	05/06/13 11:03	JCS	

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Description: Confluence
Matrix: Water
Project: Special Soil Event

Lab Sample ID: C304014-03
Sampled: 04/26/13 15:20
Sampled By: Client

Received: 04/26/13 16:35
Work Order: C304014

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	3D30010	EPA 6020A	05/03/13 12:06	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	3D29008	EPA 6010C	04/30/13 14:18	JDH	
Barium [7440-39-3] ^	**165**		ug/L	1	1.00	10.0	3D29008	EPA 6010C	04/30/13 14:18	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	3D29008	EPA 6010C	04/30/13 14:18	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	3D29008	EPA 6010C	04/30/13 14:18	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	3D29008	EPA 6010C	04/30/13 14:18	JDH	
Cobalt [7440-48-4] ^	**4.12**	J	ug/L	1	1.10	10.0	3D29008	EPA 6010C	04/30/13 14:18	JDH	
Copper [7440-50-8] ^	**3.76**	J	ug/L	1	1.60	10.0	3D29008	EPA 6010C	04/30/13 14:18	JDH	
Lead [7439-92-1] ^	**2.30**	J	ug/L	1	1.90	10.0	3D29008	EPA 6010C	04/30/13 14:18	JDH	
Nickel [7440-02-0] ^	**6.86**	J	ug/L	1	1.80	10.0	3D29008	EPA 6010C	04/30/13 14:18	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	3D30010	EPA 6020A	05/03/13 12:06	VLO	
Silver [7440-22-4] ^	**2.91**	J	ug/L	1	1.90	10.0	3D29008	EPA 6010C	04/30/13 14:18	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	3D30010	EPA 6020A	05/03/13 12:06	VLO	
Vanadium [7440-62-2] ^	**3.46**	J	ug/L	1	1.40	10.0	3D29008	EPA 6010C	04/30/13 14:18	JDH	
Zinc [7440-66-6] ^	**13.4**		ug/L	1	3.80	10.0	3D29008	EPA 6010C	04/30/13 14:18	JDH	

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Description: Confluence
Matrix: Water
Project: Special Soil Event

Lab Sample ID: C304014-03
Sampled: 04/26/13 15:20
Sampled By: Client

Received: 04/26/13 16:35
Work Order: C304014

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Nitrate as N [14797-55-8] ^	**0.32**		mg/L	1	0.025	0.10	3E05004	EPA 353.2	05/05/13 10:50	JCS	
Nitrate/Nitrite as N [ECL-0010] ^	**0.33**		mg/L	1	0.025	0.10	3D30002	EPA 353.2	04/30/13 13:51	AJB	
Nitrite as N [14797-65-0] ^	**0.0050**	JB	mg/L	1	0.0030	0.10	3D26035	EPA 353.2	04/26/13 17:37	AJB	J-01
Phosphorus [7723-14-0] ^	**1.5**		mg/L	1	0.025	0.10	3E02005	EPA 365.4	05/06/13 12:55	JCS	
Sulfate as SO4 [14808-79-8] ^	**5.0**		mg/L	1	0.04	5.0	3D26022	EPA 300.0	04/27/13 02:40	AJB	
Total Kjeldahl Nitrogen [ECL-0162] ^	**15**		mg/L	1	0.26	0.48	3E02007	EPA 351.2	05/06/13 11:05	JCS	

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Description:	S-1-Outside PP	**Lab Sample ID:**	C304014-04	**Received:**	04/26/13 16:35
Matrix:	Soil	**Sampled:**	04/26/13 14:45	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	Client	**% Solids:**	79.5

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	**0.522**	J	mg/kg dry	1	0.138	1.26	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Arsenic [7440-38-2] ^	**1.37**		mg/kg dry	1	0.126	0.629	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Barium [7440-39-3] ^	**146**		mg/kg dry	1	0.126	0.629	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Beryllium [7440-41-7] ^	**0.745**		mg/kg dry	1	0.0151	0.0629	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Cadmium [7440-43-9] ^	**0.732**		mg/kg dry	1	0.0121	0.0629	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Chromium [7440-47-3] ^	**20.9**		mg/kg dry	1	0.126	0.629	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Cobalt [7440-48-4] ^	**7.81**		mg/kg dry	1	0.126	0.629	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Copper [7440-50-8] ^	**45.1**		mg/kg dry	1	0.239	0.629	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Lead [7439-92-1] ^	**22.4**		mg/kg dry	1	0.151	0.629	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Nickel [7440-02-0] ^	**10.9**		mg/kg dry	1	0.453	3.14	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Selenium [7782-49-2] ^	**0.362**	JB	mg/kg dry	1	0.126	0.629	3D30011	EPA 6010C	05/01/13 15:12	JDH	J-01
Silver [7440-22-4] ^	**3.01**		mg/kg dry	1	0.126	0.629	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Thallium [7440-28-0] ^	**4.67**		mg/kg dry	1	0.126	0.629	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Vanadium [7440-62-2] ^	**20.1**		mg/kg dry	1	0.126	0.629	3D30011	EPA 6010C	05/01/13 15:12	JDH	
Zinc [7440-66-6] ^	**202**		mg/kg dry	1	1.38	3.14	3D30011	EPA 6010C	05/01/13 15:12	JDH	

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Description:	S-1-Outside PP	**Lab Sample ID:**	C304014-04	**Received:**	04/26/13 16:35
Matrix:	Soil	**Sampled:**	04/26/13 14:45	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	Client	**% Solids:**	79.5

Classical Chemistry Parameters

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Nitrate as N [14797-55-8]	**3.8**	J	mg/kg dry	1	0.86	13	3E01034	EPA 9056A	05/01/13 19:39	AJB	
Phosphorus [7723-14-0]	**700**	D	mg/kg dry	10	36	100	3E02008	EPA 365.4	05/06/13 14:32	AJB	
Sulfate as SO4 [14808-79-8]	**23**	J	mg/kg dry	1	0.5	63	3E01034	EPA 9056A	05/01/13 19:39	AJB	
Total Kjeldahl Nitrogen [ECL-0162]	**1300**		mg/kg dry	1	26	48	3E02009	EPA 351.2	05/06/13 16:59	AJB	

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Description:	S-1-Outside PP	**Lab Sample ID:**	C304014-04	**Received:**	04/26/13 16:35
Matrix:	Soil	**Sampled:**	04/26/13 14:45	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	Client	**% Solids:**	79.5

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.0005	U	mg/kg dry	1	0.0005	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
1,1,1-Trichloroethane [71-55-6] ^	0.0004	U	mg/kg dry	1	0.0004	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.0003	U	mg/kg dry	1	0.0003	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
1,1,2-Trichloroethane [79-00-5] ^	0.0006	U	mg/kg dry	1	0.0006	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
1,1-Dichloroethane [75-34-3] ^	0.0006	U	mg/kg dry	1	0.0006	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
1,1-Dichloroethene [75-35-4] ^	0.0006	U	mg/kg dry	1	0.0006	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
1,2,3-Trichloropropane [96-18-4] ^	0.0003	U	mg/kg dry	1	0.0003	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.0006	U	mg/kg dry	1	0.0006	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
1,2-Dibromoethane [106-93-4] ^	0.0003	U	mg/kg dry	1	0.0003	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
1,2-Dichlorobenzene [95-50-1] ^	0.0005	U	mg/kg dry	1	0.0005	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
1,2-Dichloroethane [107-06-2] ^	0.0003	U	mg/kg dry	1	0.0003	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
1,2-Dichloropropane [78-87-5] ^	0.0006	U	mg/kg dry	1	0.0006	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
1,4-Dichlorobenzene [106-46-7] ^	0.0005	U	mg/kg dry	1	0.0005	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
2-Butanone [78-93-3] ^	**0.0032**	J	mg/kg dry	1	0.0019	0.0052	3E02009	EPA 8260B	05/02/13 14:08	kat	
2-Hexanone [591-78-6] ^	0.0009	U	mg/kg dry	1	0.0009	0.0052	3E02009	EPA 8260B	05/02/13 14:08	kat	
4-Methyl-2-pentanone [108-10-1] ^	0.0015	U	mg/kg dry	1	0.0015	0.0052	3E02009	EPA 8260B	05/02/13 14:08	kat	
Acetone [67-64-1] ^	**0.023**		mg/kg dry	1	0.0018	0.0052	3E02009	EPA 8260B	05/02/13 14:08	kat	
Acrylonitrile [107-13-1] ^	0.0015	U	mg/kg dry	1	0.0015	0.010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Benzene [71-43-2] ^	0.0004	U	mg/kg dry	1	0.0004	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Bromochloromethane [74-97-5] ^	0.0004	U	mg/kg dry	1	0.0004	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Bromodichloromethane [75-27-4] ^	0.0004	U	mg/kg dry	1	0.0004	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Bromoform [75-25-2] ^	0.0003	U	mg/kg dry	1	0.0003	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Bromomethane [74-83-9] ^	0.0009	U	mg/kg dry	1	0.0009	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Carbon disulfide [75-15-0] ^	0.0022	U	mg/kg dry	1	0.0022	0.0052	3E02009	EPA 8260B	05/02/13 14:08	kat	
Carbon tetrachloride [56-23-5] ^	0.0006	U	mg/kg dry	1	0.0006	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Chlorobenzene [108-90-7] ^	0.0005	U	mg/kg dry	1	0.0005	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Chloroethane [75-00-3] ^	0.0006	U	mg/kg dry	1	0.0006	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Chloroform [67-66-3] ^	0.0004	U	mg/kg dry	1	0.0004	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Chloromethane [74-87-3] ^	0.0007	U	mg/kg dry	1	0.0007	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
cis-1,2-Dichloroethene [156-59-2] ^	0.0006	U	mg/kg dry	1	0.0006	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
cis-1,3-Dichloropropene [10061-01-5] ^	0.0003	U	mg/kg dry	1	0.0003	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Dibromochloromethane [124-48-1] ^	0.0003	U	mg/kg dry	1	0.0003	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Dibromomethane [74-95-3] ^	0.0004	U	mg/kg dry	1	0.0004	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Ethylbenzene [100-41-4] ^	0.0006	U	mg/kg dry	1	0.0006	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Iodomethane [74-88-4] ^	0.0006	U	mg/kg dry	1	0.0006	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
m,p-Xylenes [108-38-3/106-42-3] ^	0.0010	U	mg/kg dry	1	0.0010	0.0021	3E02009	EPA 8260B	05/02/13 14:08	kat	
Methylene chloride [75-09-2] ^	0.0007	U	mg/kg dry	1	0.0007	0.0021	3E02009	EPA 8260B	05/02/13 14:08	kat	
o-Xylene [95-47-6] ^	0.0005	U	mg/kg dry	1	0.0005	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Styrene [100-42-5] ^	0.0005	U	mg/kg dry	1	0.0005	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Tetrachloroethene [127-18-4] ^	0.0005	U	mg/kg dry	1	0.0005	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Toluene [108-88-3] ^	0.0005	U	mg/kg dry	1	0.0005	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
trans-1,2-Dichloroethene [156-60-5] ^	0.0007	U	mg/kg dry	1	0.0007	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
trans-1,3-Dichloropropene [10061-02-6] ^	0.0003	U	mg/kg dry	1	0.0003	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.0005	U	mg/kg dry	1	0.0005	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Trichloroethene [79-01-6] ^	0.0005	U	mg/kg dry	1	0.0005	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Trichlorofluoromethane [75-69-4] ^	0.0006	U	mg/kg dry	1	0.0006	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Vinyl acetate [108-05-4] ^	0.0003	U	mg/kg dry	1	0.0003	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Vinyl chloride [75-01-4] ^	0.0005	U	mg/kg dry	1	0.0005	0.0010	3E02009	EPA 8260B	05/02/13 14:08	kat	
Xylenes (Total) [1330-20-7] ^	0.0010	U	mg/kg dry	1	0.0010	0.0021	3E02009	EPA 8260B	05/02/13 14:08	kat	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**

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Description:	S-1-Outside PP	**Lab Sample ID:**	C304014-04	**Received:**	04/26/13 16:35
Matrix:	Soil	**Sampled:**	04/26/13 14:45	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	Client	**% Solids:**	79.5

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
4-Bromofluorobenzene	*0.043*	*1*	*0.0520*	*83 %*	*71-126*	*3E02009*	*EPA 8260B*	*05/02/13 14:08*	*kat*	
Dibromofluoromethane	*0.046*	*1*	*0.0520*	*89 %*	*72-133*	*3E02009*	*EPA 8260B*	*05/02/13 14:08*	*kat*	
Toluene-d8	*0.047*	*1*	*0.0520*	*91 %*	*80-123*	*3E02009*	*EPA 8260B*	*05/02/13 14:08*	*kat*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description:	S-2-Sediment PP	**Lab Sample ID:**	C304014-05	**Received:**	04/26/13 16:35
Matrix:	Soil	**Sampled:**	04/26/13 14:55	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	Client	**% Solids:**	63.4

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.173	U	mg/kg dry	1	0.173	1.58	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Arsenic [7440-38-2] ^	**1.94**		mg/kg dry	1	0.158	0.789	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Barium [7440-39-3] ^	**208**		mg/kg dry	1	0.158	0.789	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Beryllium [7440-41-7] ^	**1.11**		mg/kg dry	1	0.0189	0.0789	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Cadmium [7440-43-9] ^	**0.346**		mg/kg dry	1	0.0151	0.0789	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Chromium [7440-47-3] ^	**31.1**		mg/kg dry	1	0.158	0.789	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Cobalt [7440-48-4] ^	**10.5**		mg/kg dry	1	0.158	0.789	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Copper [7440-50-8] ^	**43.6**		mg/kg dry	1	0.300	0.789	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Lead [7439-92-1] ^	**27.7**		mg/kg dry	1	0.189	0.789	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Nickel [7440-02-0] ^	**16.5**		mg/kg dry	1	0.568	3.94	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Selenium [7782-49-2] ^	**0.757**	JB	mg/kg dry	1	0.158	0.789	3D30011	EPA 6010C	05/01/13 15:24	JDH	J-01
Silver [7440-22-4] ^	**2.96**		mg/kg dry	1	0.158	0.789	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Thallium [7440-28-0] ^	**4.37**		mg/kg dry	1	0.158	0.789	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Vanadium [7440-62-2] ^	**31.3**		mg/kg dry	1	0.158	0.789	3D30011	EPA 6010C	05/01/13 15:24	JDH	
Zinc [7440-66-6] ^	**129**		mg/kg dry	1	1.73	3.94	3D30011	EPA 6010C	05/01/13 15:24	JDH	

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Description:	S-2-Sediment PP	**Lab Sample ID:**	C304014-05	**Received:**	04/26/13 16:35
Matrix:	Soil	**Sampled:**	04/26/13 14:55	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	Client	**% Solids:**	63.4

Classical Chemistry Parameters

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Nitrate as N [14797-55-8]	**3.4**	J	mg/kg dry	1	1.1	16	3E01034	EPA 9056A	05/01/13 19:55	AJB	
Phosphorus [7723-14-0]	**1200**	D	mg/kg dry	10	46	130	3E02008	EPA 365.4	05/06/13 14:36	AJB	
Sulfate as SO4 [14808-79-8]	**42**	J	mg/kg dry	1	0.6	79	3E01034	EPA 9056A	05/01/13 19:55	AJB	
Total Kjeldahl Nitrogen [ECL-0162]	**1500**		mg/kg dry	1	33	61	3E02009	EPA 351.2	05/06/13 17:05	AJB	

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Description:	S-2-Sediment PP	**Lab Sample ID:**	C304014-05	**Received:**	04/26/13 16:35
Matrix:	Soil	**Sampled:**	04/26/13 14:55	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	Client	**% Solids:**	63.4

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.0007	U	mg/kg dry	1	0.0007	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
1,1,1-Trichloroethane [71-55-6] ^	0.0006	U	mg/kg dry	1	0.0006	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.0005	U	mg/kg dry	1	0.0005	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
1,1,2-Trichloroethane [79-00-5] ^	0.0009	U	mg/kg dry	1	0.0009	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
1,1-Dichloroethane [75-34-3] ^	0.0009	U	mg/kg dry	1	0.0009	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
1,1-Dichloroethene [75-35-4] ^	0.0010	U	mg/kg dry	1	0.0010	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
1,2,3-Trichloropropane [96-18-4] ^	0.0004	U	mg/kg dry	1	0.0004	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.0009	U	mg/kg dry	1	0.0009	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
1,2-Dibromoethane [106-93-4] ^	0.0005	U	mg/kg dry	1	0.0005	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
1,2-Dichlorobenzene [95-50-1] ^	0.0007	U	mg/kg dry	1	0.0007	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
1,2-Dichloroethane [107-06-2] ^	0.0005	U	mg/kg dry	1	0.0005	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
1,2-Dichloropropane [78-87-5] ^	0.0009	U	mg/kg dry	1	0.0009	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
1,4-Dichlorobenzene [106-46-7] ^	0.0007	U	mg/kg dry	1	0.0007	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
2-Butanone [78-93-3] ^	**0.016**		mg/kg dry	1	0.0028	0.0079	3E02009	EPA 8260B	05/02/13 14:39	kat	
2-Hexanone [591-78-6] ^	0.0014	U	mg/kg dry	1	0.0014	0.0079	3E02009	EPA 8260B	05/02/13 14:39	kat	
4-Methyl-2-pentanone [108-10-1] ^	0.0022	U	mg/kg dry	1	0.0022	0.0079	3E02009	EPA 8260B	05/02/13 14:39	kat	
Acetone [67-64-1] ^	**0.056**		mg/kg dry	1	0.0027	0.0079	3E02009	EPA 8260B	05/02/13 14:39	kat	
Acrylonitrile [107-13-1] ^	0.0022	U	mg/kg dry	1	0.0022	0.016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Benzene [71-43-2] ^	0.0006	U	mg/kg dry	1	0.0006	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Bromochloromethane [74-97-5] ^	0.0006	U	mg/kg dry	1	0.0006	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Bromodichloromethane [75-27-4] ^	0.0006	U	mg/kg dry	1	0.0006	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Bromoform [75-25-2] ^	0.0005	U	mg/kg dry	1	0.0005	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Bromomethane [74-83-9] ^	0.0014	U	mg/kg dry	1	0.0014	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Carbon disulfide [75-15-0] ^	0.0033	U	mg/kg dry	1	0.0033	0.0079	3E02009	EPA 8260B	05/02/13 14:39	kat	
Carbon tetrachloride [56-23-5] ^	0.0009	U	mg/kg dry	1	0.0009	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Chlorobenzene [108-90-7] ^	0.0008	U	mg/kg dry	1	0.0008	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Chloroethane [75-00-3] ^	0.0009	U	mg/kg dry	1	0.0009	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Chloroform [67-66-3] ^	0.0007	U	mg/kg dry	1	0.0007	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Chloromethane [74-87-3] ^	0.0010	U	mg/kg dry	1	0.0010	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
cis-1,2-Dichloroethene [156-59-2] ^	0.0008	U	mg/kg dry	1	0.0008	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
cis-1,3-Dichloropropene [10061-01-5] ^	0.0005	U	mg/kg dry	1	0.0005	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Dibromochloromethane [124-48-1] ^	0.0004	U	mg/kg dry	1	0.0004	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Dibromomethane [74-95-3] ^	0.0006	U	mg/kg dry	1	0.0006	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Ethylbenzene [100-41-4] ^	0.0009	U	mg/kg dry	1	0.0009	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Iodomethane [74-88-4] ^	0.0009	U	mg/kg dry	1	0.0009	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
m,p-Xylenes [108-38-3/106-42-3] ^	0.0016	U	mg/kg dry	1	0.0016	0.0032	3E02009	EPA 8260B	05/02/13 14:39	kat	
Methylene chloride [75-09-2] ^	0.0011	U	mg/kg dry	1	0.0011	0.0032	3E02009	EPA 8260B	05/02/13 14:39	kat	
o-Xylene [95-47-6] ^	0.0008	U	mg/kg dry	1	0.0008	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Styrene [100-42-5] ^	0.0007	U	mg/kg dry	1	0.0007	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Tetrachloroethene [127-18-4] ^	0.0008	U	mg/kg dry	1	0.0008	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Toluene [108-88-3] ^	**0.0076**		mg/kg dry	1	0.0007	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
trans-1,2-Dichloroethene [156-60-5] ^	0.0011	U	mg/kg dry	1	0.0011	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
trans-1,3-Dichloropropene [10061-02-6] ^	0.0005	U	mg/kg dry	1	0.0005	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.0008	U	mg/kg dry	1	0.0008	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Trichloroethene [79-01-6] ^	0.0008	U	mg/kg dry	1	0.0008	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Trichlorofluoromethane [75-69-4] ^	0.0009	U	mg/kg dry	1	0.0009	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Vinyl acetate [108-05-4] ^	0.0004	U	mg/kg dry	1	0.0004	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Vinyl chloride [75-01-4] ^	0.0007	U	mg/kg dry	1	0.0007	0.0016	3E02009	EPA 8260B	05/02/13 14:39	kat	
Xylenes (Total) [1330-20-7] ^	0.0016	U	mg/kg dry	1	0.0016	0.0032	3E02009	EPA 8260B	05/02/13 14:39	kat	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**

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Description:	S-2-Sediment PP	**Lab Sample ID:**	C304014-05	**Received:**	04/26/13 16:35
Matrix:	Soil	**Sampled:**	04/26/13 14:55	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	Client	**% Solids:**	63.4

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
4-Bromofluorobenzene	*0.066*	*1*	*0.0813*	*81 %*	*71-126*	*3E02009*	*EPA 8260B*	*05/02/13 14:39*	*kat*	
Dibromofluoromethane	*0.073*	*1*	*0.0813*	*90 %*	*72-133*	*3E02009*	*EPA 8260B*	*05/02/13 14:39*	*kat*	
Toluene-d8	*0.073*	*1*	*0.0813*	*90 %*	*80-123*	*3E02009*	*EPA 8260B*	*05/02/13 14:39*	*kat*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description:	S-3-Confluence	**Lab Sample ID:**	C304014-06	**Received:**	04/26/13 16:35
Matrix:	Soil	**Sampled:**	04/26/13 15:05	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	Client	**% Solids:**	51.7

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.213	U	mg/kg dry	1	0.213	1.93	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Arsenic [7440-38-2] ^	**3.26**		mg/kg dry	1	0.193	0.966	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Barium [7440-39-3] ^	**193**		mg/kg dry	1	0.193	0.966	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Beryllium [7440-41-7] ^	**1.08**		mg/kg dry	1	0.0232	0.0966	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Cadmium [7440-43-9] ^	**0.105**		mg/kg dry	1	0.0186	0.0966	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Chromium [7440-47-3] ^	**27.5**		mg/kg dry	1	0.193	0.966	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Cobalt [7440-48-4] ^	**12.2**		mg/kg dry	1	0.193	0.966	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Copper [7440-50-8] ^	**22.6**		mg/kg dry	1	0.367	0.966	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Lead [7439-92-1] ^	**31.3**		mg/kg dry	1	0.232	0.966	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Nickel [7440-02-0] ^	**17.5**		mg/kg dry	1	0.696	4.83	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Selenium [7782-49-2] ^	0.193	U	mg/kg dry	1	0.193	0.966	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Silver [7440-22-4] ^	0.193	U	mg/kg dry	1	0.193	0.966	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Thallium [7440-28-0] ^	**7.35**		mg/kg dry	1	0.193	0.966	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Vanadium [7440-62-2] ^	**39.6**		mg/kg dry	1	0.193	0.966	3D30011	EPA 6010C	05/01/13 15:26	JDH	
Zinc [7440-66-6] ^	**117**		mg/kg dry	1	2.13	4.83	3D30011	EPA 6010C	05/01/13 15:26	JDH	

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Description:	S-3-Confluence	**Lab Sample ID:**	C304014-06	**Received:**	04/26/13 16:35
Matrix:	Soil	**Sampled:**	04/26/13 15:05	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	Client	**% Solids:**	51.7

Classical Chemistry Parameters

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Nitrate as N [14797-55-8]	1.2	U	mg/kg dry	1	1.2	17	3E01034	EPA 9056A	05/01/13 20:12	AJB	
Phosphorus [7723-14-0]	**750**	D	mg/kg dry	10	56	150	3E02008	EPA 365.4	05/06/13 14:37	AJB	
Sulfate as SO4 [14808-79-8]	**34**	J	mg/kg dry	1	0.7	87	3E01034	EPA 9056A	05/01/13 20:12	AJB	
Total Kjeldahl Nitrogen [ECL-0162]	**1800**		mg/kg dry	1	41	74	3E02009	EPA 351.2	05/06/13 17:07	AJB	

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Description:	S-3-Confluence	**Lab Sample ID:**	C304014-06	**Received:**	04/26/13 16:35
Matrix:	Soil	**Sampled:**	04/26/13 15:05	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	Client	**% Solids:**	51.7

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.0009	U	mg/kg dry	1	0.0009	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
1,1,1-Trichloroethane [71-55-6] ^	0.0007	U	mg/kg dry	1	0.0007	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.0006	U	mg/kg dry	1	0.0006	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
1,1,2-Trichloroethane [79-00-5] ^	0.0012	U	mg/kg dry	1	0.0012	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
1,1-Dichloroethane [75-34-3] ^	0.0011	U	mg/kg dry	1	0.0011	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
1,1-Dichloroethene [75-35-4] ^	0.0012	U	mg/kg dry	1	0.0012	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
1,2,3-Trichloropropane [96-18-4] ^	0.0005	U	mg/kg dry	1	0.0005	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.0011	U	mg/kg dry	1	0.0011	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
1,2-Dibromoethane [106-93-4] ^	0.0006	U	mg/kg dry	1	0.0006	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
1,2-Dichlorobenzene [95-50-1] ^	0.0009	U	mg/kg dry	1	0.0009	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
1,2-Dichloroethane [107-06-2] ^	0.0006	U	mg/kg dry	1	0.0006	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
1,2-Dichloropropane [78-87-5] ^	0.0011	U	mg/kg dry	1	0.0011	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
1,4-Dichlorobenzene [106-46-7] ^	0.0009	U	mg/kg dry	1	0.0009	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
2-Butanone [78-93-3] ^	**0.026**		mg/kg dry	1	0.0035	0.0097	3E02009	EPA 8260B	05/02/13 15:10	kat	
2-Hexanone [591-78-6] ^	0.0018	U	mg/kg dry	1	0.0018	0.0097	3E02009	EPA 8260B	05/02/13 15:10	kat	
4-Methyl-2-pentanone [108-10-1] ^	0.0027	U	mg/kg dry	1	0.0027	0.0097	3E02009	EPA 8260B	05/02/13 15:10	kat	
Acetone [67-64-1] ^	**0.083**		mg/kg dry	1	0.0033	0.0097	3E02009	EPA 8260B	05/02/13 15:10	kat	
Acrylonitrile [107-13-1] ^	0.0027	U	mg/kg dry	1	0.0027	0.019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Benzene [71-43-2] ^	0.0008	U	mg/kg dry	1	0.0008	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Bromochloromethane [74-97-5] ^	0.0007	U	mg/kg dry	1	0.0007	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Bromodichloromethane [75-27-4] ^	0.0007	U	mg/kg dry	1	0.0007	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Bromoform [75-25-2] ^	0.0006	U	mg/kg dry	1	0.0006	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Bromomethane [74-83-9] ^	0.0017	U	mg/kg dry	1	0.0017	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Carbon disulfide [75-15-0] ^	0.0041	U	mg/kg dry	1	0.0041	0.0097	3E02009	EPA 8260B	05/02/13 15:10	kat	
Carbon tetrachloride [56-23-5] ^	0.0012	U	mg/kg dry	1	0.0012	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Chlorobenzene [108-90-7] ^	0.0009	U	mg/kg dry	1	0.0009	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Chloroethane [75-00-3] ^	0.0010	U	mg/kg dry	1	0.0010	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Chloroform [67-66-3] ^	0.0008	U	mg/kg dry	1	0.0008	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Chloromethane [74-87-3] ^	0.0013	U	mg/kg dry	1	0.0013	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
cis-1,2-Dichloroethene [156-59-2] ^	0.0010	U	mg/kg dry	1	0.0010	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
cis-1,3-Dichloropropene [10061-01-5] ^	0.0006	U	mg/kg dry	1	0.0006	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Dibromochloromethane [124-48-1] ^	0.0005	U	mg/kg dry	1	0.0005	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Dibromomethane [74-95-3] ^	0.0008	U	mg/kg dry	1	0.0008	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Ethylbenzene [100-41-4] ^	0.0011	U	mg/kg dry	1	0.0011	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Iodomethane [74-88-4] ^	0.0011	U	mg/kg dry	1	0.0011	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
m,p-Xylenes [108-38-3/106-42-3] ^	0.0019	U	mg/kg dry	1	0.0019	0.0039	3E02009	EPA 8260B	05/02/13 15:10	kat	
Methylene chloride [75-09-2] ^	0.0013	U	mg/kg dry	1	0.0013	0.0039	3E02009	EPA 8260B	05/02/13 15:10	kat	
o-Xylene [95-47-6] ^	0.0010	U	mg/kg dry	1	0.0010	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Styrene [100-42-5] ^	0.0009	U	mg/kg dry	1	0.0009	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Tetrachloroethene [127-18-4] ^	0.0009	U	mg/kg dry	1	0.0009	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Toluene [108-88-3] ^	**0.016**		mg/kg dry	1	0.0009	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
trans-1,2-Dichloroethene [156-60-5] ^	0.0013	U	mg/kg dry	1	0.0013	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
trans-1,3-Dichloropropene [10061-02-6] ^	0.0006	U	mg/kg dry	1	0.0006	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.0010	U	mg/kg dry	1	0.0010	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Trichloroethene [79-01-6] ^	0.0010	U	mg/kg dry	1	0.0010	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Trichlorofluoromethane [75-69-4] ^	0.0010	U	mg/kg dry	1	0.0010	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Vinyl acetate [108-05-4] ^	0.0005	U	mg/kg dry	1	0.0005	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Vinyl chloride [75-01-4] ^	0.0009	U	mg/kg dry	1	0.0009	0.0019	3E02009	EPA 8260B	05/02/13 15:10	kat	
Xylenes (Total) [1330-20-7] ^	0.0019	U	mg/kg dry	1	0.0019	0.0039	3E02009	EPA 8260B	05/02/13 15:10	kat	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**

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Description:	S-3-Confluence	**Lab Sample ID:**	C304014-06	**Received:**	04/26/13 16:35
Matrix:	Soil	**Sampled:**	04/26/13 15:05	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	Client	**% Solids:**	51.7

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
4-Bromofluorobenzene	*0.085*	*1*	*0.106*	*80 %*	*71-126*	*3E02009*	*EPA 8260B*	*05/02/13 15:10*	*kat*	
Dibromofluoromethane	*0.092*	*1*	*0.106*	*87 %*	*72-133*	*3E02009*	*EPA 8260B*	*05/02/13 15:10*	*kat*	
Toluene-d8	*0.096*	*1*	*0.106*	*91 %*	*80-123*	*3E02009*	*EPA 8260B*	*05/02/13 15:10*	*kat*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: Trip Blank | **Lab Sample ID:** C304014-07 | **Received:** 04/26/13 16:35

Matrix: Water | **Sampled:** 04/26/13 14:45 | **Work Order:** C304014

Project: Special Soil Event | **Sampled By:** ENCO

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	3D29031	EPA 8260B	04/30/13 04:41	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
m,p-Xylenes [108-38-3/106-42-3] ^	0.17	U	ug/L	1	0.17	2.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
o-Xylene [95-47-6] ^	0.065	U	ug/L	1	0.065	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	3D29031	EPA 8260B	04/30/13 04:41	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	3D29031	EPA 8260B	04/30/13 04:41	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes

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Description: Trip Blank
Matrix: Water
Project: Special Soil Event

Lab Sample ID: C304014-07
Sampled: 04/26/13 14:45
Sampled By: ENCO

Received: 04/26/13 16:35
Work Order: C304014

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
4-Bromofluorobenzene	*38*	*1*	*50.0*	*76 %*	*51-122*	*3D29031*	*EPA 8260B*	*04/30/13 04:41*	*REF*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*68-117*	*3D29031*	*EPA 8260B*	*04/30/13 04:41*	*REF*	
Toluene-d8	*41*	*1*	*50.0*	*82 %*	*67-127*	*3D29031*	*EPA 8260B*	*04/30/13 04:41*	*REF*	

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Description: Trip Blank
Matrix: Water
Project: Special Soil Event

Lab Sample ID: C304014-07
Sampled: 04/26/13 14:45
Sampled By: ENCO

Received: 04/26/13 16:35
Work Order: C304014

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.61	U	ug/L	1	0.61	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
1,1,1-Trichloroethane [71-55-6] ^	0.80	U	ug/L	1	0.80	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.54	U	ug/L	1	0.54	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
1,1,2-Trichloroethane [79-00-5] ^	0.76	U	ug/L	1	0.76	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
1,1-Dichloroethane [75-34-3] ^	0.62	U	ug/L	1	0.62	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
1,1-Dichloroethene [75-35-4] ^	0.94	U	ug/L	1	0.94	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
1,2,3-Trichloropropane [96-18-4] ^	0.64	U	ug/L	1	0.64	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.96	U	ug/L	1	0.96	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
1,2-Dibromoethane [106-93-4] ^	0.78	U	ug/L	1	0.78	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
1,2-Dichlorobenzene [95-50-1] ^	0.73	U	ug/L	1	0.73	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
1,2-Dichloroethane [107-06-2] ^	0.63	U	ug/L	1	0.63	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
1,2-Dichloropropane [78-87-5] ^	0.80	U	ug/L	1	0.80	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
1,4-Dichlorobenzene [106-46-7] ^	0.76	U	ug/L	1	0.76	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
2-Butanone [78-93-3] ^	4.5	U	ug/L	1	4.5	5.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
2-Hexanone [591-78-6] ^	1.4	U	ug/L	1	1.4	5.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
4-Methyl-2-pentanone [108-10-1] ^	0.79	U	ug/L	1	0.79	5.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Acetone [67-64-1] ^	1.8	U	ug/L	1	1.8	5.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Acrylonitrile [107-13-1] ^	3.2	U	ug/L	1	3.2	10	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Benzene [71-43-2] ^	0.71	U	ug/L	1	0.71	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Bromochloromethane [74-97-5] ^	0.94	U	ug/L	1	0.94	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Bromodichloromethane [75-27-4] ^	0.52	U	ug/L	1	0.52	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Bromoform [75-25-2] ^	0.75	U	ug/L	1	0.75	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Bromomethane [74-83-9] ^	0.95	U	ug/L	1	0.95	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Carbon disulfide [75-15-0] ^	2.6	U	ug/L	1	2.6	5.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Carbon tetrachloride [56-23-5] ^	0.94	U	ug/L	1	0.94	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Chlorobenzene [108-90-7] ^	0.72	U	ug/L	1	0.72	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Chloroethane [75-00-3] ^	0.98	U	ug/L	1	0.98	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Chloroform [67-66-3] ^	0.80	U	ug/L	1	0.80	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Chloromethane [74-87-3] ^	0.82	U	ug/L	1	0.82	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
cis-1,2-Dichloroethene [156-59-2] ^	0.53	U	ug/L	1	0.53	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
cis-1,3-Dichloropropene [10061-01-5] ^	0.59	U	ug/L	1	0.59	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Dibromochloromethane [124-48-1] ^	0.44	U	ug/L	1	0.44	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Dibromomethane [74-95-3] ^	0.84	U	ug/L	1	0.84	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Ethylbenzene [100-41-4] ^	0.69	U	ug/L	1	0.69	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Iodomethane [74-88-4] ^	0.72	U	ug/L	1	0.72	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
m,p-Xylenes [108-38-3/106-42-3] ^	1.3	U	ug/L	1	1.3	2.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Methylene chloride [75-09-2] ^	0.71	U	ug/L	1	0.71	2.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
o-Xylene [95-47-6] ^	0.53	U	ug/L	1	0.53	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Styrene [100-42-5] ^	0.61	U	ug/L	1	0.61	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Tetrachloroethene [127-18-4] ^	0.76	U	ug/L	1	0.76	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Toluene [108-88-3] ^	0.72	U	ug/L	1	0.72	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
trans-1,2-Dichloroethene [156-60-5] ^	0.73	U	ug/L	1	0.73	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
trans-1,3-Dichloropropene [10061-02-6] ^	0.73	U	ug/L	1	0.73	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.79	U	ug/L	1	0.79	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Trichloroethene [79-01-6] ^	0.89	U	ug/L	1	0.89	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Trichlorofluoromethane [75-69-4] ^	0.94	U	ug/L	1	0.94	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Vinyl acetate [108-05-4] ^	0.60	U	ug/L	1	0.60	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Vinyl chloride [75-01-4] ^	0.71	U	ug/L	1	0.71	1.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	
Xylenes (Total) [1330-20-7] ^	1.3	U	ug/L	1	1.3	2.0	3E02018	EPA 8260B	05/03/13 01:16	kwb	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes

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Description:	Trip Blank	**Lab Sample ID:**	C304014-07	**Received:**	04/26/13 16:35
Matrix:	Water	**Sampled:**	04/26/13 14:45	**Work Order:**	C304014
Project:	Special Soil Event	**Sampled By:**	ENCO		

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
4-Bromofluorobenzene	*45*	*1*	*50.0*	*89 %*	*41-142*	*3E02018*	*EPA 8260B*	*05/03/13 01:16*	*kwb*	
Dibromofluoromethane	*45*	*1*	*50.0*	*89 %*	*53-146*	*3E02018*	*EPA 8260B*	*05/03/13 01:16*	*kwb*	
Toluene-d8	*48*	*1*	*50.0*	*97 %*	*41-146*	*3E02018*	*EPA 8260B*	*05/03/13 01:16*	*kwb*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3D29031 - EPA 5030B_MS

Blank (3D29031-BLK1) Prepared: 04/29/2013 18:09 Analyzed: 04/29/2013 18:20

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
m,p-Xylenes	0.17	U	2.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
o-Xylene	0.065	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3D29031 - EPA 5030B_MS

Blank (3D29031-BLK1) Continued Prepared: 04/29/2013 18:09 Analyzed: 04/29/2013 18:20

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*38*			*ug/L*	*50.0*		*76*	*51-122*			
Surrogate: Dibromofluoromethane	*49*			*ug/L*	*50.0*		*98*	*68-117*			
Surrogate: Toluene-d8	*41*			*ug/L*	*50.0*		*81*	*67-127*			

LCS (3D29031-BS1) Prepared: 04/29/2013 18:09 Analyzed: 04/29/2013 18:49

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	24		1.0	ug/L	20.0		120	75-133			
Benzene	24		1.0	ug/L	20.0		120	81-134			
Chlorobenzene	21		1.0	ug/L	20.0		105	83-117			
Toluene	20		1.0	ug/L	20.0		99	71-118			
Trichloroethene	22		1.0	ug/L	20.0		109	74-119			
Surrogate: 4-Bromofluorobenzene	*38*			*ug/L*	*50.0*		*77*	*51-122*			
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*92*	*68-117*			
Surrogate: Toluene-d8	*42*			*ug/L*	*50.0*		*85*	*67-127*			

Matrix Spike (3D29031-MS1) Prepared: 04/29/2013 18:09 Analyzed: 04/29/2013 19:19

Source: C304927-06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	24		1.0	ug/L	20.0	0.21 U	119	75-133			
Benzene	24		1.0	ug/L	20.0	0.15 U	119	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	105	83-117			
Toluene	20		1.0	ug/L	20.0	0.14 U	101	71-118			
Trichloroethene	21		1.0	ug/L	20.0	0.15 U	107	74-119			
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*78*	*51-122*			
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*92*	*68-117*			
Surrogate: Toluene-d8	*42*			*ug/L*	*50.0*		*84*	*67-127*			

Matrix Spike Dup (3D29031-MSD1) Prepared: 04/29/2013 18:09 Analyzed: 04/29/2013 19:48

Source: C304927-06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	23		1.0	ug/L	20.0	0.21 U	114	75-133	5	20	
Benzene	23		1.0	ug/L	20.0	0.15 U	113	81-134	5	17	
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	103	83-117	3	16	
Toluene	20		1.0	ug/L	20.0	0.14 U	98	71-118	3	17	
Trichloroethene	21		1.0	ug/L	20.0	0.15 U	104	74-119	3	22	
Surrogate: 4-Bromofluorobenzene	*40*			*ug/L*	*50.0*		*80*	*51-122*			
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*92*	*68-117*			
Surrogate: Toluene-d8	*42*			*ug/L*	*50.0*		*83*	*67-127*			

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 3D30011 - EPA 3050B

Blank (3D30011-BLK1) Prepared: 04/30/2013 09:55 Analyzed: 05/01/2013 15:04

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 3D30011 - EPA 3050B

Blank (3D30011-BLK1) Continued Prepared: 04/30/2013 09:55 Analyzed: 05/01/2013 15:04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.110	U	1.00	mg/kg wet							
Arsenic	0.100	U	0.500	mg/kg wet							
Barium	0.100	U	0.500	mg/kg wet							
Beryllium	0.0120	U	0.0500	mg/kg wet							
Cadmium	0.00960	U	0.0500	mg/kg wet							
Chromium	0.100	U	0.500	mg/kg wet							
Cobalt	0.100	U	0.500	mg/kg wet							
Copper	0.190	U	0.500	mg/kg wet							
Lead	0.120	U	0.500	mg/kg wet							
Nickel	0.360	U	2.50	mg/kg wet							
Selenium	**0.119**	**J**	0.500	mg/kg wet							
Silver	0.100	U	0.500	mg/kg wet							
Thallium	0.100	U	0.500	mg/kg wet							
Vanadium	0.100	U	0.500	mg/kg wet							
Zinc	1.10	U	2.50	mg/kg wet							

LCS (3D30011-BS1) Prepared: 04/30/2013 09:55 Analyzed: 05/01/2013 15:08

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	8.87		1.00	mg/kg wet	10.0		89	80-120			
Arsenic	8.80		0.500	mg/kg wet	10.0		88	80-120			
Barium	9.46		0.500	mg/kg wet	10.0		95	80-120			
Beryllium	0.927		0.0500	mg/kg wet	1.00		93	80-120			
Cadmium	0.925		0.0500	mg/kg wet	1.00		92	80-120			
Chromium	9.42		0.500	mg/kg wet	10.0		94	80-120			
Cobalt	9.65		0.500	mg/kg wet	10.0		97	80-120			
Copper	9.47		0.500	mg/kg wet	10.0		95	80-120			
Lead	9.31		0.500	mg/kg wet	10.0		93	80-120			
Nickel	9.37		2.50	mg/kg wet	10.0		94	80-120			
Selenium	9.19	B	0.500	mg/kg wet	10.0		92	80-120			
Silver	9.45		0.500	mg/kg wet	10.0		94	80-120			
Thallium	9.43		0.500	mg/kg wet	10.0		94	80-120			
Vanadium	9.25		0.500	mg/kg wet	10.0		92	80-120			
Zinc	9.07		2.50	mg/kg wet	10.0		91	80-120			

Matrix Spike (3D30011-MS1) Prepared: 04/30/2013 09:55 Analyzed: 05/01/2013 15:15

Source: C304014-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	4.03		1.26	mg/kg dry	12.7	0.522	28	75-125			QM-07
Arsenic	12.2		0.629	mg/kg dry	12.7	1.37	85	75-125			
Barium	148		0.629	mg/kg dry	12.7	146	13	75-125			QM-07
Beryllium	1.90		0.0629	mg/kg dry	1.27	0.745	91	75-125			
Cadmium	1.83		0.0629	mg/kg dry	1.27	0.732	87	75-125			
Chromium	32.2		0.629	mg/kg dry	12.7	20.9	89	75-125			
Cobalt	19.5		0.629	mg/kg dry	12.7	7.81	92	75-125			
Copper	59.5		0.629	mg/kg dry	12.7	45.1	113	75-125			
Lead	31.4		0.629	mg/kg dry	12.7	22.4	71	75-125			QM-07

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 3D30011 - EPA 3050B

Matrix Spike (3D30011-MS1) Continued Prepared: 04/30/2013 09:55 Analyzed: 05/01/2013 15:15

Source: C304014-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nickel	22.2		3.14	mg/kg dry	12.7	10.9	89	75-125			
Selenium	11.2	B	0.629	mg/kg dry	12.7	0.362	86	75-125			
Silver	14.7		0.629	mg/kg dry	12.7	3.01	92	75-125			
Thallium	17.1		0.629	mg/kg dry	12.7	4.67	98	75-125			
Vanadium	31.8		0.629	mg/kg dry	12.7	20.1	92	75-125			
Zinc	213		3.14	mg/kg dry	12.7	202	86	75-125			

Matrix Spike Dup (3D30011-MSD1) Prepared: 04/30/2013 09:55 Analyzed: 05/01/2013 15:17

Source: C304014-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	4.21		1.26	mg/kg dry	12.5	0.522	30	75-125	4	20	QM-07
Arsenic	12.4		0.629	mg/kg dry	12.5	1.37	89	75-125	2	20	
Barium	151		0.629	mg/kg dry	12.5	146	36	75-125	2	20	QM-07
Beryllium	1.96		0.0629	mg/kg dry	1.25	0.745	98	75-125	3	20	
Cadmium	1.72		0.0629	mg/kg dry	1.25	0.732	79	75-125	6	20	
Chromium	34.2		0.629	mg/kg dry	12.5	20.9	107	75-125	6	20	
Cobalt	19.5		0.629	mg/kg dry	12.5	7.81	94	75-125	0.01	20	
Copper	60.3		0.629	mg/kg dry	12.5	45.1	122	75-125	1	20	
Lead	31.6		0.629	mg/kg dry	12.5	22.4	74	75-125	0.7	20	QM-07
Nickel	22.8		3.14	mg/kg dry	12.5	10.9	96	75-125	3	20	
Selenium	11.1	B	0.629	mg/kg dry	12.5	0.362	87	75-125	0.9	20	
Silver	14.6		0.629	mg/kg dry	12.5	3.01	93	75-125	0.9	20	
Thallium	16.5		0.629	mg/kg dry	12.5	4.67	95	75-125	3	20	
Vanadium	34.4		0.629	mg/kg dry	12.5	20.1	115	75-125	8	20	
Zinc	209		3.14	mg/kg dry	12.5	202	58	75-125	2	20	QM-07

Post Spike (3D30011-PS1) Prepared: 04/30/2013 09:55 Analyzed: 05/01/2013 15:19

Source: C304014-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.194		0.0200	mg/L	0.200	0.00830	93	80-120			
Arsenic	0.214		0.0100	mg/L	0.200	0.0217	96	80-120			
Barium	2.48		0.0100	mg/L	0.200	2.33	77	80-120			QM-08
Beryllium	0.0315		0.00100	mg/L	0.0200	0.0118	98	80-120			
Cadmium	0.0305		0.00100	mg/L	0.0200	0.0116	94	80-120			
Chromium	0.527		0.0100	mg/L	0.200	0.333	97	80-120			
Cobalt	0.320		0.0100	mg/L	0.200	0.124	98	80-120			
Copper	0.913		0.0100	mg/L	0.200	0.718	98	80-120			
Lead	0.541		0.0100	mg/L	0.200	0.356	93	80-120			
Nickel	0.359		0.0500	mg/L	0.200	0.174	93	80-120			
Selenium	0.203	B	0.0100	mg/L	0.200	0.00576	99	80-120			
Silver	0.241		0.0100	mg/L	0.200	0.0479	97	80-120			
Thallium	0.274		0.0100	mg/L	0.200	0.0743	100	80-120			
Vanadium	0.513		0.0100	mg/L	0.200	0.320	97	80-120			
Zinc	3.37		0.0500	mg/L	0.200	3.21	80	80-120			

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 3D30011 - EPA 3050B

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 3D29008 - EPA 3005A

Blank (3D29008-BLK1) Prepared: 04/29/2013 09:46 Analyzed: 04/30/2013 13:09

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	2.80	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.40	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Lead	1.90	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

LCS (3D29008-BS1) Prepared: 04/29/2013 09:46 Analyzed: 04/30/2013 13:12

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	204		10.0	ug/L	200		102	80-120			
Barium	207		10.0	ug/L	200		104	80-120			
Beryllium	21.1		1.00	ug/L	20.0		106	80-120			
Cadmium	20.8		1.00	ug/L	20.0		104	80-120			
Chromium	207		10.0	ug/L	200		104	80-120			
Cobalt	212		10.0	ug/L	200		106	80-120			
Copper	204		10.0	ug/L	200		102	80-120			
Lead	206		10.0	ug/L	200		103	80-120			
Nickel	207		10.0	ug/L	200		104	80-120			
Silver	213		10.0	ug/L	200		107	80-120			
Vanadium	203		10.0	ug/L	200		101	80-120			
Zinc	204		10.0	ug/L	200		102	80-120			

Matrix Spike (3D29008-MS1) Prepared: 04/29/2013 09:46 Analyzed: 04/30/2013 13:25

Source: C303338-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	202		10.0	ug/L	200	2.80 U	101	75-125			
Barium	229		10.0	ug/L	200	24.0	102	75-125			
Beryllium	21.1		1.00	ug/L	20.0	0.100 U	106	75-125			
Cadmium	20.8		1.00	ug/L	20.0	0.360 U	104	75-125			
Chromium	208		10.0	ug/L	200	1.40 U	104	75-125			
Cobalt	209		10.0	ug/L	200	1.10 U	105	75-125			
Copper	206		10.0	ug/L	200	1.60 U	103	75-125			
Lead	204		10.0	ug/L	200	1.90 U	102	75-125			
Nickel	207		10.0	ug/L	200	2.00	103	75-125			
Silver	212		10.0	ug/L	200	1.91	105	75-125			
Vanadium	205		10.0	ug/L	200	1.69	102	75-125			

QUALITY CONTROL

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 3D29008 - EPA 3005A

Matrix Spike (3D29008-MS1) Continued Prepared: 04/29/2013 09:46 Analyzed: 04/30/2013 13:25

Source: C303338-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Zinc	217		10.0	ug/L	200	13.9	102	75-125			

Matrix Spike Dup (3D29008-MSD1) Prepared: 04/29/2013 09:46 Analyzed: 04/30/2013 13:27

Source: C303338-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	205		10.0	ug/L	200	2.80 U	102	75-125	2	20	
Barium	232		10.0	ug/L	200	24.0	104	75-125	1	20	
Beryllium	20.9		1.00	ug/L	20.0	0.100 U	105	75-125	0.9	20	
Cadmium	20.9		1.00	ug/L	20.0	0.360 U	104	75-125	0.5	20	
Chromium	208		10.0	ug/L	200	1.40 U	104	75-125	0.007	20	
Cobalt	213		10.0	ug/L	200	1.10 U	107	75-125	2	20	
Copper	205		10.0	ug/L	200	1.60 U	102	75-125	0.4	20	
Lead	208		10.0	ug/L	200	1.90 U	104	75-125	2	20	
Nickel	209		10.0	ug/L	200	2.00	104	75-125	0.9	20	
Silver	208		10.0	ug/L	200	1.91	103	75-125	2	20	
Vanadium	204		10.0	ug/L	200	1.69	101	75-125	0.4	20	
Zinc	220		10.0	ug/L	200	13.9	103	75-125	1	20	

Post Spike (3D29008-PS1) Prepared: 04/29/2013 09:46 Analyzed: 04/30/2013 13:29

Source: C303338-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.205		0.0100	mg/L	0.200	-0.00245	104	80-120			
Barium	0.230		0.0100	mg/L	0.200	0.0240	103	80-120			
Beryllium	0.0210		0.00100	mg/L	0.0200	-1.10E-5	105	80-120			
Cadmium	0.0210		0.00100	mg/L	0.0200	7.49E-5	105	80-120			
Chromium	0.209		0.0100	mg/L	0.200	0.000652	104	80-120			
Cobalt	0.215		0.0100	mg/L	0.200	0.000528	107	80-120			
Copper	0.203		0.0100	mg/L	0.200	0.00145	101	80-120			
Lead	0.211		0.0100	mg/L	0.200	0.000207	106	80-120			
Nickel	0.211		0.0100	mg/L	0.200	0.00200	104	80-120			
Silver	0.201		0.0100	mg/L	0.200	0.00191	99	80-120			
Vanadium	0.204		0.0100	mg/L	0.200	0.00169	101	80-120			
Zinc	0.224		0.0100	mg/L	0.200	0.0139	105	80-120			

Batch 3D30010 - EPA 3005A

Blank (3D30010-BLK1) Prepared: 04/30/2013 09:52 Analyzed: 05/03/2013 11:34

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.830	U	1.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (3D30010-BS1) Prepared: 04/30/2013 09:52 Analyzed: 05/03/2013 11:38

QUALITY CONTROL

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 3D30010 - EPA 3005A

LCS (3D30010-BS1) Continued Prepared: 04/30/2013 09:52 Analyzed: 05/03/2013 11:38

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	194		2.00	ug/L	200		97	80-120			
Selenium	219		1.00	ug/L	200		109	80-120			
Thallium	204		1.00	ug/L	200		102	80-120			

Matrix Spike (3D30010-MS1) Prepared: 04/30/2013 09:52 Analyzed: 05/03/2013 11:46

Source: C304014-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	196		2.00	ug/L	200	1.14	97	75-125			
Selenium	218		1.00	ug/L	200	0.830 U	109	75-125			
Thallium	184		1.00	ug/L	200	0.110 U	92	75-125			

Matrix Spike Dup (3D30010-MSD1) Prepared: 04/30/2013 09:52 Analyzed: 05/03/2013 11:50

Source: C304014-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	200		2.00	ug/L	200	1.14	99	75-125	2	20	
Selenium	223		1.00	ug/L	200	0.830 U	111	75-125	2	20	
Thallium	190		1.00	ug/L	200	0.110 U	95	75-125	3	20	

Post Spike (3D30010-PS1) Prepared: 04/30/2013 09:52 Analyzed: 05/03/2013 11:54

Source: C304014-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	205		2.00	ug/L	200	1.14	102	80-120			
Selenium	237		1.00	ug/L	200	0.614	118	80-120			
Thallium	194		1.00	ug/L	200	0.0441	97	80-120			

Classical Chemistry Parameters - Quality Control

Batch 3D26022 - NO PREP

Blank (3D26022-BLK1) Prepared & Analyzed: 04/26/2013 18:41

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	0.04	U	5.0	mg/L							

LCS (3D26022-BS1) Prepared & Analyzed: 04/26/2013 18:25

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	47		5.0	mg/L	50.0		93	90-110			

Matrix Spike (3D26022-MS1) Prepared & Analyzed: 04/26/2013 19:14

Source: C303336-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	26		5.0	mg/L	20.0	7.7	89	90-110			QM-05

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3D26022 - NO PREP

Matrix Spike Dup (3D26022-MSD1) Prepared & Analyzed: 04/26/2013 19:31

Source: C303336-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	26		5.0	mg/L	20.0	7.7	89	90-110	0.07	10	QM-05

Batch 3D26035 - NO PREP

Blank (3D26035-BLK1) Prepared: 04/26/2013 15:42 Analyzed: 04/26/2013 16:31

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	**0.0061**	**J**	0.10	mg/L							

LCS (3D26035-BS1) Prepared: 04/26/2013 15:42 Analyzed: 04/26/2013 16:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.99	B	0.10	mg/L	1.00		99	90-110			

Matrix Spike (3D26035-MS1) Prepared: 04/26/2013 15:42 Analyzed: 04/26/2013 16:32

Source: C304636-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.96	B	0.10	mg/L	1.00	0.015	94	90-110			

Matrix Spike Dup (3D26035-MSD1) Prepared: 04/26/2013 15:42 Analyzed: 04/26/2013 16:33

Source: C304636-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.96	B	0.10	mg/L	1.00	0.015	95	90-110	0.3	10	

Batch 3D30002 - NO PREP

Blank (3D30002-BLK1) Prepared: 04/30/2013 07:15 Analyzed: 04/30/2013 13:05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	0.025	U	0.10	mg/L							

LCS (3D30002-BS1) Prepared: 04/30/2013 07:15 Analyzed: 04/30/2013 12:54

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	1.3		0.10	mg/L	1.25		102	90-110			

Matrix Spike (3D30002-MS1) Prepared: 04/30/2013 07:15 Analyzed: 04/30/2013 13:10

Source: C303328-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	0.55		0.10	mg/L	0.513	0.18	73	90-110			QM-05

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3D30002 - NO PREP

Matrix Spike Dup (3D30002-MSD1) Prepared: 04/30/2013 07:15 Analyzed: 04/30/2013 13:12

Source: C303328-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	0.44		0.10	mg/L	0.513	0.18	51	90-110	22	10	QM-05, QM-11

Batch 3E01034 - WETS-88 Soil Leaching

Blank (3E01034-BLK1) Prepared: 05/01/2013 14:56 Analyzed: 05/01/2013 18:33

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate as N	0.68	U	10	mg/kg wet							
Sulfate as SO4	0.4	U	50	mg/kg wet							

LCS (3E01034-BS1) Prepared: 05/01/2013 14:56 Analyzed: 05/01/2013 18:49

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate as N	45		10	mg/kg wet	50.0		91	80-120			
Sulfate as SO4	460		50	mg/kg wet	500		93	80-120			

Matrix Spike (3E01034-MS1) Prepared: 05/01/2013 14:56 Analyzed: 05/01/2013 19:06

Source: C304014-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate as N	23		13	mg/kg dry	23.0	3.8	84	80-120			
Sulfate as SO4	200		63	mg/kg dry	230	23	77	80-120			QM-05

Matrix Spike Dup (3E01034-MSD1) Prepared: 05/01/2013 14:56 Analyzed: 05/01/2013 19:22

Source: C304014-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate as N	24		13	mg/kg dry	24.3	3.8	85	80-120	5	15	
Sulfate as SO4	210		63	mg/kg dry	243	23	76	80-120	4	15	QM-05

Batch 3E02005 - Same

Blank (3E02005-BLK1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 12:45

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	0.025	U	0.10	mg/L							

LCS (3E02005-BS1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 12:46

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	1.5		0.10	mg/L	1.60		96	80-120			

Matrix Spike (3E02005-MS1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 12:50

Source: C304014-01

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3E02005 - Same

Matrix Spike (3E02005-MS1) Continued Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 12:50

Source: C304014-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	14	D	1.0	mg/L	0.640	12	232	80-120			QM-17

Matrix Spike Dup (3E02005-MSD1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 12:52

Source: C304014-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	13	D	1.0	mg/L	0.640	12	156	80-120	4	25	QM-17

Batch 3E02007 - Same

Blank (3E02007-BLK1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 10:52

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	0.26	U	0.48	mg/L							

LCS (3E02007-BS1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 10:54

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	12		0.48	mg/L	12.0		99	90-110			

Matrix Spike (3E02007-MS1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 16:01

Source: C304014-01RE1

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	120	D	4.8	mg/L	4.80	120	85	90-110			QM-17

Matrix Spike Dup (3E02007-MSD1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 16:03

Source: C304014-01RE1

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	130	D	4.8	mg/L	4.80	120	239	90-110	6	10	QM-17

Batch 3E02008 - Same

Blank (3E02008-BLK1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 13:20

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	2.9	U	8.0	mg/kg wet							

LCS (3E02008-BS1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 13:25

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	120		8.0	mg/kg wet	125		98	80-120			

Matrix Spike (3E02008-MS1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 14:34

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3E02008 - Same

Matrix Spike (3E02008-MS1) Continued Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 14:34

Source: C304014-04RE1

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	780	D	100	mg/kg dry	64.3	700	122	80-120			QM-17

Matrix Spike Dup (3E02008-MSD1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 14:35

Source: C304014-04RE1

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	800	D	100	mg/kg dry	64.2	700	150	80-120	2	25	QM-17

Batch 3E02009 - Same

Blank (3E02009-BLK1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 16:55

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	21	U	38	mg/kg wet							

LCS (3E02009-BS1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 16:58

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	940		38	mg/kg wet	939		100	90-110			

Matrix Spike (3E02009-MS1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 17:01

Source: C304014-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	2200		48	mg/kg dry	483	1300	182	90-110			QM-05

Matrix Spike Dup (3E02009-MSD1) Prepared: 05/02/2013 12:49 Analyzed: 05/06/2013 17:03

Source: C304014-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	2000		48	mg/kg dry	482	1300	144	90-110	9	10	QM-05

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3E02009 - EPA 5030B_MS

Blank (3E02009-BLK1) Prepared & Analyzed: 05/02/2013 13:37

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.0004	U	0.0010	mg/kg wet							
1,1,1-Trichloroethane	0.0004	U	0.0010	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.0003	U	0.0010	mg/kg wet							
1,1,2-Trichloroethane	0.0006	U	0.0010	mg/kg wet							
1,1-Dichloroethane	0.0006	U	0.0010	mg/kg wet							
1,1-Dichloroethene	0.0006	U	0.0010	mg/kg wet							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3E02009 - EPA 5030B_MS

Blank (3E02009-BLK1) Continued Prepared & Analyzed: 05/02/2013 13:37

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2,3-Trichloropropane	0.0003	U	0.0010	mg/kg wet							
1,2-Dibromo-3-chloropropane	0.0006	U	0.0010	mg/kg wet							
1,2-Dibromoethane	0.0003	U	0.0010	mg/kg wet							
1,2-Dichlorobenzene	0.0004	U	0.0010	mg/kg wet							
1,2-Dichloroethane	0.0003	U	0.0010	mg/kg wet							
1,2-Dichloropropane	0.0006	U	0.0010	mg/kg wet							
1,4-Dichlorobenzene	0.0004	U	0.0010	mg/kg wet							
2-Butanone	0.0018	U	0.0050	mg/kg wet							
2-Hexanone	0.0009	U	0.0050	mg/kg wet							
4-Methyl-2-pentanone	0.0014	U	0.0050	mg/kg wet							
Acetone	0.0017	U	0.0050	mg/kg wet							
Acrylonitrile	0.0014	U	0.010	mg/kg wet							
Benzene	0.0004	U	0.0010	mg/kg wet							
Bromochloromethane	0.0004	U	0.0010	mg/kg wet							
Bromodichloromethane	0.0004	U	0.0010	mg/kg wet							
Bromoform	0.0003	U	0.0010	mg/kg wet							
Bromomethane	0.0009	U	0.0010	mg/kg wet							
Carbon disulfide	0.0021	U	0.0050	mg/kg wet							
Carbon tetrachloride	0.0006	U	0.0010	mg/kg wet							
Chlorobenzene	0.0005	U	0.0010	mg/kg wet							
Chloroethane	0.0005	U	0.0010	mg/kg wet							
Chloroform	0.0004	U	0.0010	mg/kg wet							
Chloromethane	0.0006	U	0.0010	mg/kg wet							
cis-1,2-Dichloroethene	0.0005	U	0.0010	mg/kg wet							
cis-1,3-Dichloropropene	0.0003	U	0.0010	mg/kg wet							
Dibromochloromethane	0.0003	U	0.0010	mg/kg wet							
Dibromomethane	0.0004	U	0.0010	mg/kg wet							
Ethylbenzene	0.0006	U	0.0010	mg/kg wet							
Iodomethane	0.0006	U	0.0010	mg/kg wet							
m,p-Xylenes	0.0010	U	0.0020	mg/kg wet							
Methylene chloride	0.0007	U	0.0020	mg/kg wet							
o-Xylene	0.0005	U	0.0010	mg/kg wet							
Styrene	0.0004	U	0.0010	mg/kg wet							
Tetrachloroethene	0.0005	U	0.0010	mg/kg wet							
Toluene	0.0005	U	0.0010	mg/kg wet							
trans-1,2-Dichloroethene	0.0007	U	0.0010	mg/kg wet							
trans-1,3-Dichloropropene	0.0003	U	0.0010	mg/kg wet							
trans-1,4-Dichloro-2-butene	0.0005	U	0.0010	mg/kg wet							
Trichloroethene	0.0005	U	0.0010	mg/kg wet							
Trichlorofluoromethane	0.0005	U	0.0010	mg/kg wet							
Vinyl acetate	0.0003	U	0.0010	mg/kg wet							
Vinyl chloride	0.0004	U	0.0010	mg/kg wet							
Xylenes (Total)	0.0010	U	0.0020	mg/kg wet							
Surrogate: 4-Bromofluorobenzene	*0.044*			*mg/kg wet*	*0.0500*		*87*	*71-126*			
Surrogate: Dibromofluoromethane	*0.047*			*mg/kg wet*	*0.0500*		*94*	*72-133*			
Surrogate: Toluene-d8	*0.047*			*mg/kg wet*	*0.0500*		*94*	*80-123*			

LCS (3E02009-BS1) Prepared & Analyzed: 05/02/2013 12:04

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3E02009 - EPA 5030B_MS

LCS (3E02009-BS1) Continued Prepared & Analyzed: 05/02/2013 12:04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.025		0.0010	mg/kg wet	0.0200		124	61-124			
Benzene	0.024		0.0010	mg/kg wet	0.0200		120	59-133			
Chlorobenzene	0.021		0.0010	mg/kg wet	0.0200		107	69-121			
Toluene	0.022		0.0010	mg/kg wet	0.0200		112	66-119			
Trichloroethene	0.022		0.0010	mg/kg wet	0.0200		109	71-122			
Surrogate: 4-Bromofluorobenzene	*0.043*			*mg/kg wet*	*0.0500*		*87*	*71-126*			
Surrogate: Dibromofluoromethane	*0.045*			*mg/kg wet*	*0.0500*		*90*	*72-133*			
Surrogate: Toluene-d8	*0.047*			*mg/kg wet*	*0.0500*		*94*	*80-123*			

LCS Dup (3E02009-BSD1) Prepared & Analyzed: 05/02/2013 12:36

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.024		0.0010	mg/kg wet	0.0200		121	61-124	2	23	
Benzene	0.024		0.0010	mg/kg wet	0.0200		120	59-133	0.4	19	
Chlorobenzene	0.021		0.0010	mg/kg wet	0.0200		105	69-121	2	18	
Toluene	0.022		0.0010	mg/kg wet	0.0200		109	66-119	3	21	
Trichloroethene	0.022		0.0010	mg/kg wet	0.0200		109	71-122	0.3	26	
Surrogate: 4-Bromofluorobenzene	*0.046*			*mg/kg wet*	*0.0500*		*92*	*71-126*			
Surrogate: Dibromofluoromethane	*0.047*			*mg/kg wet*	*0.0500*		*93*	*72-133*			
Surrogate: Toluene-d8	*0.049*			*mg/kg wet*	*0.0500*		*98*	*80-123*			

Batch 3E02018 - EPA 5030B_MS

Blank (3E02018-BLK1) Prepared: 05/02/2013 12:39 Analyzed: 05/02/2013 16:17

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.61	U	1.0	ug/L							
1,1,1-Trichloroethane	0.80	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	1.0	ug/L							
1,1,2-Trichloroethane	0.76	U	1.0	ug/L							
1,1-Dichloroethane	0.62	U	1.0	ug/L							
1,1-Dichloroethene	0.94	U	1.0	ug/L							
1,2,3-Trichloropropane	0.64	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	1.0	ug/L							
1,2-Dibromoethane	0.78	U	1.0	ug/L							
1,2-Dichlorobenzene	0.73	U	1.0	ug/L							
1,2-Dichloroethane	0.63	U	1.0	ug/L							
1,2-Dichloropropane	0.80	U	1.0	ug/L							
1,4-Dichlorobenzene	0.76	U	1.0	ug/L							
2-Butanone	4.5	U	5.0	ug/L							
2-Hexanone	1.4	U	5.0	ug/L							
4-Methyl-2-pentanone	0.79	U	5.0	ug/L							
Acetone	1.8	U	5.0	ug/L							
Acrylonitrile	3.2	U	10	ug/L							
Benzene	0.71	U	1.0	ug/L							
Bromochloromethane	0.94	U	1.0	ug/L							
Bromodichloromethane	0.52	U	1.0	ug/L							
Bromoform	0.75	U	1.0	ug/L							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3E02018 - EPA 5030B_MS

Blank (3E02018-BLK1) Continued Prepared: 05/02/2013 12:39 Analyzed: 05/02/2013 16:17

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Bromomethane	0.95	U	1.0	ug/L							
Carbon disulfide	2.6	U	5.0	ug/L							
Carbon tetrachloride	0.94	U	1.0	ug/L							
Chlorobenzene	0.72	U	1.0	ug/L							
Chloroethane	0.98	U	1.0	ug/L							
Chloroform	0.80	U	1.0	ug/L							
Chloromethane	0.82	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.53	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.59	U	1.0	ug/L							
Dibromochloromethane	0.44	U	1.0	ug/L							
Dibromomethane	0.84	U	1.0	ug/L							
Ethylbenzene	0.69	U	1.0	ug/L							
Iodomethane	0.72	U	1.0	ug/L							
m,p-Xylenes	1.3	U	2.0	ug/L							
Methylene chloride	0.71	U	2.0	ug/L							
o-Xylene	0.53	U	1.0	ug/L							
Styrene	0.61	U	1.0	ug/L							
Tetrachloroethene	0.76	U	1.0	ug/L							
Toluene	0.72	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.73	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.73	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.79	U	1.0	ug/L							
Trichloroethene	0.89	U	1.0	ug/L							
Trichlorofluoromethane	0.94	U	1.0	ug/L							
Vinyl acetate	0.60	U	1.0	ug/L							
Vinyl chloride	0.71	U	1.0	ug/L							
Xylenes (Total)	1.3	U	2.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*46*			*ug/L*	*50.0*		*92*	*41-142*			
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*88*	*53-146*			
Surrogate: Toluene-d8	*50*			*ug/L*	*50.0*		*100*	*41-146*			

LCS (3E02018-BS1) Prepared: 05/02/2013 12:39 Analyzed: 05/02/2013 15:47

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	15		1.0	ug/L	20.0		77	65-144			
Benzene	17		1.0	ug/L	20.0		85	73-138			
Chlorobenzene	17		1.0	ug/L	20.0		85	77-127			
Toluene	17		1.0	ug/L	20.0		86	71-123			
Trichloroethene	19		1.0	ug/L	20.0		94	83-133			
Surrogate: 4-Bromofluorobenzene	*44*			*ug/L*	*50.0*		*88*	*41-142*			
Surrogate: Dibromofluoromethane	*41*			*ug/L*	*50.0*		*82*	*53-146*			
Surrogate: Toluene-d8	*48*			*ug/L*	*50.0*		*95*	*41-146*			

Matrix Spike (3E02018-MS1) Prepared: 05/02/2013 12:39 Analyzed: 05/02/2013 16:47

Source: A302471-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3E02018 - EPA 5030B_MS

Matrix Spike (3E02018-MS1) Continued Prepared: 05/02/2013 12:39 Analyzed: 05/02/2013 16:47

Source: A302471-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	15		1.0	ug/L	20.0	0.94 U	73	65-144			
Benzene	18		1.0	ug/L	20.0	0.71 U	89	73-138			
Chlorobenzene	17		1.0	ug/L	20.0	0.72 U	84	77-127			
Toluene	17		1.0	ug/L	20.0	0.72 U	86	71-123			
Trichloroethene	19		1.0	ug/L	20.0	0.89 U	96	83-133			
Surrogate: 4-Bromofluorobenzene	*42*			*ug/L*	*50.0*		*84*	*41-142*			
Surrogate: Dibromofluoromethane	*41*			*ug/L*	*50.0*		*82*	*53-146*			
Surrogate: Toluene-d8	*49*			*ug/L*	*50.0*		*98*	*41-146*			

Matrix Spike Dup (3E02018-MSD1) Prepared: 05/02/2013 12:39 Analyzed: 05/02/2013 17:17

Source: A302471-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	16		1.0	ug/L	20.0	0.94 U	82	65-144	11	16	
Benzene	19		1.0	ug/L	20.0	0.71 U	93	73-138	4	14	
Chlorobenzene	16		1.0	ug/L	20.0	0.72 U	81	77-127	4	13	
Toluene	16		1.0	ug/L	20.0	0.72 U	81	71-123	6	16	
Trichloroethene	20		1.0	ug/L	20.0	0.89 U	101	83-133	4	20	
Surrogate: 4-Bromofluorobenzene	*42*			*ug/L*	*50.0*		*83*	*41-142*			
Surrogate: Dibromofluoromethane	*42*			*ug/L*	*50.0*		*83*	*53-146*			
Surrogate: Toluene-d8	*48*			*ug/L*	*50.0*		*96*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
J-01	Result is estimated due to positive results in the associated method blank.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-08	Post-digestion spike did not meet method requirements due to confirmed matrix effects (dilution test).
QM-11	Precision between duplicate matrix spikes of the same sample was outside acceptance limits.
QM-17	Matrix spike recovery was outside acceptance limits due to high concentrations of analyte in source sample.

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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Cary, NC 27511
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Page ____ of ____

Client Name: City of Durham (CI020)	Project Number: [none]
Address: 1600 Mist Lake	Project Name/Desc: Special Soil Event
City/ST/Zip: Durham, NC 27701	PO # / Billing Info:
Tel: (919) 560-4381 Fax:	Reporting Contact: Simon Lobdell
Sampler(s) Name, Affiliation (Print):	Billing Contact: Accounts Payable
Sampler(s) Signature:	Site Location / Time Zone:

Requested Analyses: 8260B Appendix 1; Ag,As,Ba,Be,Cd,Ca,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn; Nitrate Calc 353.2; Nitrite as N 353.2; NOX 353.2,P,TKN 351.2; Sulfate 300

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C304014

Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1	Ag,As,Ba,Be,Cd,Ca,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn	Nitrate Calc 353.2	Nitrite as N 353.2	NOX 353.2,P,TKN 351.2	Sulfate 300	Sample Comments
	Before ~~SW-1 PP~~	4/26/13	~~2:45pm~~ 3:10pm	G	WA	3		X	X	X	X	X	
	PP ~~SW-2 Influence~~	4/26/13	3:15pm	G	WA	3		X	X	X	X	X	
	Conf ~~SW-3 Before conf~~	4/26/13	3:20pm	G	WA	3		X	X	X	X	X	
	S-1 - Outside PP	4/26/13	2:45pm	G	SO	5	X	X					
	S-2 - Sediment PP	4/26/13	2:55pm	G	SO	5	X	X					
	S-3 Confluence	4/26/13	3:05pm	G	SO	5	X	X					
	Trip Blank				WA	2		X					

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
		Simon Lobdell	3:45 4-26-2013	[signature]	4/26/13 1635
		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time

Comments/Special Reporting Requirements:
SW-1 = Before confluence
SW-2 = Plunge pool
SW-3 = Confluence

Cooler #'s & Temps on Receipt: 2.0°C

Condition Upon Receipt: ✓ Acceptable ___ Unacceptable

Matrix : GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments) Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist