Analytical Laboratory

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Phone: 980-875-5245 Fax: 980-875-4349

Order Summary Report

Order Number: **J12090210**

Customer Name(s): AMEC

Customer Address:

,

Lab Contact: Jason C Perkins Phone: 980-875-5348

Report Authorized By: (Signature) Digitally signed by jay perkins DN: cn=jay perkins, o=Analytical Lab, ou, email=jay.perkins@duke-energy.com, c=US Date: 2012.09.26 15:16:06 -04'00' **Date:** 9/26/2012

Program Comments:

Please contact the Program Manager (Jason C Perkins) with any questions regarding this report.

Data Flags & Calculations:

Any analytical tests or individual analytes within a test flagged with a Qualifier indicate a deviation from the method quality system or quality control requirement. The qualifier description is found at the end of the Certificate of Analysis (sample results) under the qualifiers heading. All results are reported on a dry weight basis unless otherwise noted. Subcontracted data included on the Duke Certificate of Analysis is to be used as information only. Certified vendor results can be found in the subcontracted lab final report. Duke Energy Analytical Laboratory subcontracts analyses to other vendor laboratories that have been qualified by Duke Energy to perform these analyses except where noted.

Data Package:

This data package includes analytical results that are applicable only to the samples described in this narrative. An estimation of the uncertainty of measurement for the results in the report is available upon request. This report shall not be reproduced, except in full, without the written consent of the Analytical Laboratory. Please contact the Analytical laboratory with any questions. The order of individual sections within this report is as follows:

Job Summary Report, Sample Identification, Technical Validation of Data Package, Analytical Laboratory Certificate of Analysis, Analytical Laboratory QC Reports, Sub-contracted Laboratory Results, Customer Specific Data Sheets, Reports & Documentation, Customer Database Entries, Test Case Narratives, Chain of Custody (COC)

Certification:

The Analytical Laboratory holds the following State Certifications : North Carolina (DENR) Certificate #248, South Carolina (DHEC) Laboratory ID # 99005. Contact the Analytical Laboratory for definitive information about the certification status of specific methods.

Sample ID's & Descriptions:

Sample ID	Plant/Station	Collection Date and Time	Collected By	Sample Description
2012019857	SPARTANBURG	07-Sep-12 1:20 PM	AMEC	490-6194 MW-6
2012019864	SPARTANBURG	07-Sep-12 2:00 PM	AMEC	490-6194 MW-5
2012019865	SPARTANBURG	07-Sep-12 2:40 PM	AMEC	490-6194 MW-4

3 Total Samples

Technical Validation Review

Checklist:

COC and .pdf report are in agreement with sample totals and analyses (compliance programs and procedures).	☑ Yes	☐ No
All Results are less than the laboratory reporting limits.	☐ Yes	☑ No
All laboratory QA/QC requirements are acceptable.	☑ Yes	☐ No

Report Sections Included:

- ☑ Job Summary Report
- ☑ Sample Identification
- ☑ Technical Validation of Data Package
- ☑ Analytical Laboratory Certificate of Analysis
- ☐ Analytical Laboratory QC Report
- ☑ Sub-contracted Laboratory Results
- ☐ Customer Specific Data Sheets, Reports, & Documentation
- ☐ Customer Database Entries
- ☑ Chain of Custody
- ☑ Electronic Data Deliverable (EDD) Sent Separately

Reviewed By: Mary Ann Ogle Date: 9/26/2012

Certificate of Laboratory Analysis

This report shall not be reproduced, except in full.

Order # J12090210

Site: 490-6194 MW-6 **Sample #: 2012019857**
Collection Date: 07-Sep-12 1:20 PM Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
SEMIVOLATILES - (Analysis Performed by Test America)								
Naphthalene	**Complete**					Vendor Method		V_T. America
TOTAL PETROLEUM HYDROCARBONS - (Analysis Performed by Test America)								
DROs	**Complete**					Vendor Method		V_T. America
GROs	**Complete**					Vendor Method		V_T. America
VOLATILES - (Analysis Performed by Test America)								
Vendor Parameter	**Complete**					Vendor Method		V_T. America

Site: 490-6194 MW-5 **Sample #: 2012019864**
Collection Date: 07-Sep-12 2:00 PM Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
SEMIVOLATILES - (Analysis Performed by Test America)								
Naphthalene	**Complete**					Vendor Method		V_T. America
TOTAL PETROLEUM HYDROCARBONS - (Analysis Performed by Test America)								
DROs	**Complete**					Vendor Method		V_T. America
GROs	**Complete**					Vendor Method		V_T. America
VOLATILES - (Analysis Performed by Test America)								
Vendor Parameter	**Complete**					Vendor Method		V_T. America

Site: 490-6194 MW-4 **Sample #: 2012019865**
Collection Date: 07-Sep-12 2:40 PM Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
SEMIVOLATILES - (Analysis Performed by Test America)								
Naphthalene	**Complete**					Vendor Method		V_T. America
TOTAL PETROLEUM HYDROCARBONS - (Analysis Performed by Test America)								
DROs	**Complete**					Vendor Method		V_T. America
GROs	**Complete**					Vendor Method		V_T. America
VOLATILES - (Analysis Performed by Test America)								
Vendor Parameter	**Complete**					Vendor Method		V_T. America

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-6194-1
Client Project/Site: Pine Street MGP J12090210

For:
Duke Energy Corporation
13339 Hagers Ferry Road
Huntersville, North Carolina 28078

Attn: Lab Customer

Authorized for release by:
9/26/2012 10:34:20 AM

Shali Brown
Project Manager I
shali.brown@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-6194-1	TPH-6	Solid	09/07/12 13:20	09/11/12 08:35
490-6194-2	VOC-6	Solid	09/07/12 13:20	09/11/12 08:35
490-6194-3	SVOC-6	Solid	09/07/12 13:20	09/11/12 08:35
490-6194-4	TPH-5	Solid	09/07/12 14:00	09/11/12 08:35
490-6194-5	VOC-5	Solid	09/07/12 14:00	09/11/12 08:35
490-6194-6	SVOC-5	Solid	09/07/12 14:00	09/11/12 08:35
490-6194-7	TPH-4	Solid	09/07/12 14:40	09/11/12 08:35
490-6194-8	VOC-4	Solid	09/07/12 14:40	09/11/12 08:35
490-6194-9	SVOC-4	Solid	09/07/12 14:40	09/11/12 08:35

Job ID: 490-6194-1

Laboratory: TestAmerica Nashville

Narrative

CASE NARRATIVE

Client: Duke Energy Corporation

Project: Pine Street MGP J12090210

Report Number: 490-6194-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Nashville attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 09/11/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.1 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples VOC-6 (490-6194-2), VOC-5 (490-6194-5) and VOC-4 (490-6194-8) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 09/12/2012 and analyzed on 09/13/2012, 09/14/2012 and 09/18/2012.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 19868. See LCS/LCSD

4-Bromofluorobenzene (Surr) failed the surrogate recovery criteria high for VOC-4 (490-6194-8). Evidence of matrix interference is present.

Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample(s): VOC-5 (490-6194-5), VOC-4 (490-6194-8, VOC-6 (490-6194-2). Elevated reporting limits are provided.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC MS)

Case Narrative

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Job ID: 490-6194-1 (Continued)

Laboratory: TestAmerica Nashville (Continued)

Samples SVOC-6 (490-6194-3), SVOC-5 (490-6194-6) and SVOC-4 (490-6194-9) were analyzed for Semivolatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 09/13/2012 and analyzed on 09/14/2012, 09/15/2012 and 09/16/2012.

Hexachlorocyclopentadiene failed the recovery criteria low for the MS of sample 490-6232-1 in batch 490-19725. Bis(2-chloroethyl)ether failed the recovery criteria high.

For the MSD of sample 490-6232-1 in batch 490-19725, Hexachlorocyclopentadiene failed the recovery criteria low. Bis(2-chloroethyl)ether and Bis(2-ethylhexyl) phthalate failed the recovery criteria high. Also, Bis(2-ethylhexyl) phthalate exceeded the rpd limit.

Samples SVOC-6 (490-6194-3)[10X], SVOC-6 (490-6194-3)[250X], SVOC-6 (490-6194-3)[5X], SVOC-6 (490-6194-3)[50X], SVOC-5 (490-6194-6)[10X], SVOC-5 (490-6194-6)[100X] and SVOC-4 (490-6194-9)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples TPH-6 (490-6194-1), TPH-5 (490-6194-4) and TPH-4 (490-6194-7) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared on 09/12/2012 and analyzed on 09/18/2012.

No difficulties were encountered during the GRO analyses. All quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples TPH-6 (490-6194-1), TPH-5 (490-6194-4) and TPH-4 (490-6194-7) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 09/13/2012 and analyzed on 09/16/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

o-Terphenyl (Surr) failed the surrogate recovery criteria low for TPH-6 (490-6194-1). o-Terphenyl (Surr) failed the surrogate recovery criteria low for TPH-5 (490-6194-4). Due to the level of dilution required for the following sample, surrogate recoveries are not reported. o-Terphenyl (Surr) failed the surrogate recovery criteria high for TPH-4 (490-6194-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8015C: The following sample(s) contained a hydrocarbon pattern which most closely resembles the Motor oil pattern used by the laboratory for quantitative purposes: TPH-4 (490-6194-7), TPH-5 (490-6194-4), TPH-6 (490-6194-1).

Method(s) 8015C: The following sample(s) contained a hydrocarbon pattern which most closely resembles the Diesel Fuel #2 pattern used by the laboratory for quantitative purposes: TPH-4 (490-6194-7), TPH-5 (490-6194-4), TPH-6 (490-6194-1).

Samples TPH-6 (490-6194-1)[100X], TPH-6 (490-6194-1)[200X], TPH-5 (490-6194-4)[20X], TPH-5 (490-6194-4)[40X] and TPH-4 (490-6194-7)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the DRO analyses. All other quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Samples TPH-6 (490-6194-1), VOC-6 (490-6194-2), SVOC-6 (490-6194-3), TPH-5 (490-6194-4), VOC-5 (490-6194-5), SVOC-5 (490-6194-6), TPH-4 (490-6194-7), VOC-4 (490-6194-8) and SVOC-4 (490-6194-9) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 09/12/2012.

No difficulties were encountered during the % solids analyses. All quality control parameters were within the acceptance limits.

Case Narrative

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Job ID: 490-6194-1 (Continued)

Laboratory: TestAmerica Nashville (Continued)

Definitions/Glossary

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
F	RPD of the MS and MSD exceeds the control limits

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: TPH-6

Date Collected: 09/07/12 13:20
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-1

Matrix: Solid
Percent Solids: 85.7

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	137		30.6	mg/Kg	☼	09/12/12 12:51	09/18/12 04:19	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*94*		*50 - 150*	*09/12/12 12:51*	*09/18/12 04:19*	*5*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	41500		2270	mg/Kg	☼	09/13/12 09:57	09/16/12 21:56	200
C24-C40	13800		1130	mg/Kg	☼	09/13/12 09:57	09/16/12 17:15	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*0*	*X*	*50 - 150*	*09/13/12 09:57*	*09/16/12 17:15*	*100*

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86		0.10	%			09/12/12 11:18	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: VOC-6

Date Collected: 09/07/12 13:20
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-2

Matrix: Solid
Percent Solids: 89.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,1,1-Trichloroethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,1,2,2-Tetrachloroethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,1,2-Trichloroethane	ND		4.83	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,1-Dichloroethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Diisopropyl ether	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,1-Dichloroethene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,1-Dichloropropene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,2,3-Trichlorobenzene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,2,3-Trichloropropane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,2,4-Trichlorobenzene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,2,4-Trimethylbenzene	**118**		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,2-Dibromo-3-Chloropropane	ND		4.83	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,2-Dibromoethane (EDB)	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,2-Dichlorobenzene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,2-Dichloroethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,2-Dichloropropane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,3,5-Trimethylbenzene	**41.9**		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,3-Dichlorobenzene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,3-Dichloropropane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
1,4-Dichlorobenzene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
2,2-Dichloropropane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
2-Butanone (MEK)	ND		48.3	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
2-Chlorotoluene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
2-Hexanone	ND		48.3	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
4-Chlorotoluene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
4-Methyl-2-pentanone (MIBK)	ND		48.3	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Acetone	ND		48.3	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Benzene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Bromobenzene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Bromochloromethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Bromodichloromethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Bromoform	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Bromomethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Carbon disulfide	ND		4.83	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Carbon tetrachloride	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Chlorobenzene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Chlorodibromomethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Chloroethane	ND		4.83	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Chloroform	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Chloromethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
cis-1,2-Dichloroethene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
cis-1,3-Dichloropropene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Dibromomethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Dichlorodifluoromethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Ethylbenzene	**69.6**		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Hexachlorobutadiene	ND		4.83	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Isopropylbenzene	**14.2**		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Methyl tert-butyl ether	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Methylene Chloride	ND		9.66	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Naphthalene	**2050**		96.6	mg/Kg	☼	09/12/12 13:03	09/14/12 14:56	400

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: VOC-6

Date Collected: 09/07/12 13:20
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-2

Matrix: Solid
Percent Solids: 89.1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	**9.25**		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
N-Propylbenzene	**5.85**		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
p-Isopropyltoluene	**7.66**		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
sec-Butylbenzene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Styrene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
tert-Butylbenzene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Tetrachloroethene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Toluene	**22.1**		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
trans-1,2-Dichloroethene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
trans-1,3-Dichloropropene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Trichloroethene	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Trichlorofluoromethane	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Vinyl chloride	ND		1.93	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20
Xylenes, Total	**122**		4.83	mg/Kg	☼	09/12/12 13:03	09/13/12 18:54	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*81*		*70 - 130*	*09/12/12 13:03*	*09/13/12 18:54*	*20*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*	*09/12/12 13:03*	*09/14/12 14:56*	*400*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*09/12/12 13:03*	*09/13/12 18:54*	*20*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*09/12/12 13:03*	*09/14/12 14:56*	*400*
Dibromofluoromethane (Surr)	*89*		*70 - 130*	*09/12/12 13:03*	*09/13/12 18:54*	*20*
Dibromofluoromethane (Surr)	*92*		*70 - 130*	*09/12/12 13:03*	*09/14/12 14:56*	*400*
Toluene-d8 (Surr)	*98*		*70 - 130*	*09/12/12 13:03*	*09/13/12 18:54*	*20*
Toluene-d8 (Surr)	*98*		*70 - 130*	*09/12/12 13:03*	*09/14/12 14:56*	*400*

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**11**		0.10	%			09/12/12 11:18	1
Percent Solids	**89**		0.10	%			09/12/12 11:18	1
Percent Solids	**89**		0.10	%			09/12/12 11:18	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: SVOC-6

Date Collected: 09/07/12 13:20
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-3

Matrix: Solid
Percent Solids: 82.0

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
1,2-Dichlorobenzene	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
1,3-Dichlorobenzene	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
1,4-Dichlorobenzene	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
1-Methylnaphthalene	**28.6**		0.809	mg/Kg	☼	09/13/12 10:58	09/15/12 22:45	10
2,4,5-Trichlorophenol	ND		5.03	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
2,4,6-Trichlorophenol	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
2,4-Dichlorophenol	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
2,4-Dimethylphenol	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
2,4-Dinitrophenol	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
2,4-Dinitrotoluene	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
2,6-Dinitrotoluene	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
2-Chloronaphthalene	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
2-Chlorophenol	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
2-Methylnaphthalene	**18.8**		0.405	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
2-Methylphenol	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
2-Nitroaniline	ND		5.03	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
2-Nitrophenol	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
3,3'-Dichlorobenzidine	ND		4.03	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
3 & 4 Methylphenol	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
3-Nitroaniline	ND		5.03	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
4,6-Dinitro-2-methylphenol	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
4-Bromophenyl phenyl ether	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
4-Chloro-3-methylphenol	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
4-Chlorophenyl phenyl ether	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
4-Chloroaniline	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
4-Nitroaniline	ND		5.03	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
4-Nitrophenol	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Acenaphthylene	**30.1**		0.809	mg/Kg	☼	09/13/12 10:58	09/15/12 22:45	10
Acenaphthene	**46.3**		4.05	mg/Kg	☼	09/13/12 10:58	09/15/12 23:08	50
Benzo[a]anthracene	**90.1**		4.05	mg/Kg	☼	09/13/12 10:58	09/15/12 23:08	50
Benzo[a]pyrene	**87.2**		4.05	mg/Kg	☼	09/13/12 10:58	09/15/12 23:08	50
Benzo[b]fluoranthene	**73.7**		4.05	mg/Kg	☼	09/13/12 10:58	09/15/12 23:08	50
Benzo[g,h,i]perylene	**39.8**		4.05	mg/Kg	☼	09/13/12 10:58	09/15/12 23:08	50
Benzo[k]fluoranthene	**54.3**		4.05	mg/Kg	☼	09/13/12 10:58	09/15/12 23:08	50
Anthracene	**102**		4.05	mg/Kg	☼	09/13/12 10:58	09/15/12 23:08	50
Bis(2-chloroethoxy)methane	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Bis(2-chloroethyl)ether	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Bis(2-ethylhexyl) phthalate	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
bis (2-chloroisopropyl) ether	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Butyl benzyl phthalate	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Carbazole	**3.22**		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Chrysene	**71.8**		4.05	mg/Kg	☼	09/13/12 10:58	09/15/12 23:08	50
Cresols	ND		4.02	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Dibenz(a,h)anthracene	**13.4**		0.405	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Dibenzofuran	**57.9**		20.1	mg/Kg	☼	09/13/12 10:58	09/15/12 23:08	50
Diethyl phthalate	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Dimethyl phthalate	ND		10.1	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Di-n-butyl phthalate	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Di-n-octyl phthalate	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Fluoranthene	**275**		20.2	mg/Kg	☼	09/13/12 10:58	09/16/12 15:57	250

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: SVOC-6

Date Collected: 09/07/12 13:20
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-3
Matrix: Solid
Percent Solids: 82.0

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	**94.0**		4.05	mg/Kg	☼	09/13/12 10:58	09/15/12 23:08	50
Hexachlorobenzene	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Hexachlorobutadiene	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Hexachlorocyclopentadiene	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Hexachloroethane	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Indeno[1,2,3-cd]pyrene	**36.5**		0.809	mg/Kg	☼	09/13/12 10:58	09/15/12 22:45	10
Isophorone	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Naphthalene	**30.7**		0.809	mg/Kg	☼	09/13/12 10:58	09/15/12 22:45	10
Nitrobenzene	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
N-Nitrosodi-n-propylamine	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
n-Nitrosodiphenylamine(as diphenylamine)	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Pentachlorophenol	ND		5.03	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Phenanthrene	**284**		20.2	mg/Kg	☼	09/13/12 10:58	09/16/12 15:57	250
Phenol	ND		2.01	mg/Kg	☼	09/13/12 10:58	09/14/12 04:05	5
Pyrene	**189**		4.05	mg/Kg	☼	09/13/12 10:58	09/15/12 23:08	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*65*		*10 - 120*	*09/13/12 10:58*	*09/14/12 04:05*	*5*
2-Fluorobiphenyl (Surr)	*58*		*29 - 120*	*09/13/12 10:58*	*09/14/12 04:05*	*5*
2-Fluorophenol (Surr)	*54*		*10 - 120*	*09/13/12 10:58*	*09/14/12 04:05*	*5*
Nitrobenzene-d5 (Surr)	*52*		*27 - 120*	*09/13/12 10:58*	*09/14/12 04:05*	*5*
Phenol-d5 (Surr)	*55*		*10 - 120*	*09/13/12 10:58*	*09/14/12 04:05*	*5*
Terphenyl-d14 (Surr)	*89*		*13 - 120*	*09/13/12 10:58*	*09/14/12 04:05*	*5*

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**18**		0.10	%			09/12/12 11:18	1
Percent Solids	**82**		0.10	%			09/12/12 11:18	1
Percent Solids	**82**		0.10	%			09/12/12 11:18	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: TPH-5

Date Collected: 09/07/12 14:00
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-4

Matrix: Solid
Percent Solids: 82.9

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	33.2		7.33	mg/Kg	☼	09/12/12 12:51	09/18/12 04:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*95*		*50 - 150*	*09/12/12 12:51*	*09/18/12 04:00*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	2650		235	mg/Kg	☼	09/13/12 11:07	09/16/12 21:36	40
C24-C40	465		118	mg/Kg	☼	09/13/12 11:07	09/16/12 17:37	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*0*	*X*	*50 - 150*	*09/13/12 11:07*	*09/16/12 17:37*	*20*

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17		0.10	%			09/12/12 11:18	1
Percent Solids	83		0.10	%			09/12/12 11:18	1
Percent Solids	83		0.10	%			09/12/12 11:18	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: VOC-5

Date Collected: 09/07/12 14:00
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-5

Matrix: Solid
Percent Solids: 79.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
1,1,1-Trichloroethane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
1,1,2,2-Tetrachloroethane	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
1,1,2-Trichloroethane	ND		0.00577	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
1,1-Dichloroethane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Diisopropyl ether	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
1,1-Dichloroethene	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
1,1-Dichloropropene	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
1,2,3-Trichlorobenzene	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
1,2,3-Trichloropropane	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
1,2,4-Trichlorobenzene	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
1,2,4-Trimethylbenzene	**4.57**		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
1,2-Dibromo-3-Chloropropane	ND		0.360	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
1,2-Dibromoethane (EDB)	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
1,2-Dichlorobenzene	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
1,2-Dichloroethane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
1,2-Dichloropropane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
1,3,5-Trimethylbenzene	**1.49**		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
1,3-Dichlorobenzene	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
1,3-Dichloropropane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
1,4-Dichlorobenzene	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
2,2-Dichloropropane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
2-Butanone (MEK)	ND		0.0577	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
2-Chlorotoluene	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
2-Hexanone	ND		0.0577	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
4-Chlorotoluene	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
4-Methyl-2-pentanone (MIBK)	ND		0.0577	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Acetone	ND		0.0577	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Benzene	**0.150**		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Bromobenzene	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
Bromochloromethane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Bromodichloromethane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Bromoform	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Bromomethane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Carbon disulfide	ND		0.00577	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Carbon tetrachloride	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Chlorobenzene	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Chlorodibromomethane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Chloroethane	ND		0.00577	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Chloroform	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Chloromethane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
cis-1,2-Dichloroethene	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
cis-1,3-Dichloropropene	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Dibromomethane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Dichlorodifluoromethane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Ethylbenzene	**1.64**		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
Hexachlorobutadiene	ND		0.360	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
Isopropylbenzene	**0.468**		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
Methyl tert-butyl ether	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Methylene Chloride	ND		0.0115	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Naphthalene	**45.6**		3.60	mg/Kg	☼	09/12/12 13:03	09/18/12 12:23	10

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: VOC-5

Date Collected: 09/07/12 14:00
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-5

Matrix: Solid
Percent Solids: 79.9

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
N-Propylbenzene	**0.335**		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
p-Isopropyltoluene	**0.413**		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
sec-Butylbenzene	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
Styrene	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
tert-Butylbenzene	ND		0.144	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1
Tetrachloroethene	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Toluene	**0.0110**		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
trans-1,2-Dichloroethene	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
trans-1,3-Dichloropropene	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Trichloroethene	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Trichlorofluoromethane	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Vinyl chloride	ND		0.00231	mg/Kg	☼	09/12/12 12:59	09/13/12 17:21	1
Xylenes, Total	**1.69**		0.360	mg/Kg	☼	09/12/12 13:03	09/14/12 13:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*	*09/12/12 12:59*	*09/13/12 17:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*	*09/12/12 13:03*	*09/14/12 13:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*	*09/12/12 13:03*	*09/18/12 12:23*	*10*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*09/12/12 12:59*	*09/13/12 17:21*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*09/12/12 13:03*	*09/14/12 13:23*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*09/12/12 13:03*	*09/18/12 12:23*	*10*
Dibromofluoromethane (Surr)	*97*		*70 - 130*	*09/12/12 12:59*	*09/13/12 17:21*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*	*09/12/12 13:03*	*09/14/12 13:23*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*	*09/12/12 13:03*	*09/18/12 12:23*	*10*
Toluene-d8 (Surr)	*114*		*70 - 130*	*09/12/12 12:59*	*09/13/12 17:21*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*	*09/12/12 13:03*	*09/14/12 13:23*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*	*09/12/12 13:03*	*09/18/12 12:23*	*10*

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**20**		0.10	%			09/12/12 11:18	1
Percent Solids	**80**		0.10	%			09/12/12 11:18	1
Percent Solids	**80**		0.10	%			09/12/12 11:18	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: SVOC-5

Date Collected: 09/07/12 14:00
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-6

Matrix: Solid
Percent Solids: 78.8

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
1,2-Dichlorobenzene	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
1,3-Dichlorobenzene	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
1,4-Dichlorobenzene	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
1-Methylnaphthalene	**130**		8.41	mg/Kg	☼	09/13/12 10:58	09/15/12 23:53	100
2,4,5-Trichlorophenol	ND		1.05	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
2,4,6-Trichlorophenol	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
2,4-Dichlorophenol	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
2,4-Dimethylphenol	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
2,4-Dinitrophenol	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
2,4-Dinitrotoluene	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
2,6-Dinitrotoluene	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
2-Chloronaphthalene	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
2-Chlorophenol	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
2-Methylnaphthalene	**114**		8.41	mg/Kg	☼	09/13/12 10:58	09/15/12 23:53	100
2-Methylphenol	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
2-Nitroaniline	ND		1.05	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
2-Nitrophenol	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
3,3'-Dichlorobenzidine	ND		0.837	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
3 & 4 Methylphenol	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
3-Nitroaniline	ND		1.05	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
4,6-Dinitro-2-methylphenol	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
4-Bromophenyl phenyl ether	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
4-Chloro-3-methylphenol	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
4-Chlorophenyl phenyl ether	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
4-Chloroaniline	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
4-Nitroaniline	ND		1.05	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
4-Nitrophenol	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Acenaphthylene	**3.92**		0.0841	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Acenaphthene	**54.5**		8.41	mg/Kg	☼	09/13/12 10:58	09/15/12 23:53	100
Benzo[a]anthracene	**9.15**		0.841	mg/Kg	☼	09/13/12 10:58	09/15/12 23:31	10
Benzo[a]pyrene	**7.39**		0.841	mg/Kg	☼	09/13/12 10:58	09/15/12 23:31	10
Benzo[b]fluoranthene	**3.18**		0.0841	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Benzo[g,h,i]perylene	**1.64**		0.0841	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Benzo[k]fluoranthene	**3.07**		0.0841	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Anthracene	**23.8**		0.841	mg/Kg	☼	09/13/12 10:58	09/15/12 23:31	10
Bis(2-chloroethoxy)methane	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Bis(2-chloroethyl)ether	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Bis(2-ethylhexyl) phthalate	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
bis (2-chloroisopropyl) ether	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Butyl benzyl phthalate	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Carbazole	**2.01**		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Chrysene	**6.74**		0.841	mg/Kg	☼	09/13/12 10:58	09/15/12 23:31	10
Cresols	ND		0.836	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Dibenz(a,h)anthracene	**0.552**		0.0841	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Dibenzofuran	**11.6**		4.18	mg/Kg	☼	09/13/12 10:58	09/15/12 23:31	10
Diethyl phthalate	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Dimethyl phthalate	ND		2.10	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Di-n-butyl phthalate	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Di-n-octyl phthalate	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Fluoranthene	**23.0**		0.841	mg/Kg	☼	09/13/12 10:58	09/15/12 23:31	10

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: SVOC-5

Date Collected: 09/07/12 14:00
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-6

Matrix: Solid
Percent Solids: 78.8

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	**25.8**		0.841	mg/Kg	☼	09/13/12 10:58	09/15/12 23:31	10
Hexachlorobenzene	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Hexachlorobutadiene	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Hexachlorocyclopentadiene	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Hexachloroethane	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Indeno[1,2,3-cd]pyrene	**1.61**		0.0841	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Isophorone	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Naphthalene	**126**		8.41	mg/Kg	☼	09/13/12 10:58	09/15/12 23:53	100
Nitrobenzene	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
N-Nitrosodi-n-propylamine	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Pentachlorophenol	ND		1.05	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Phenanthrene	**90.9**		8.41	mg/Kg	☼	09/13/12 10:58	09/15/12 23:53	100
Phenol	ND		0.418	mg/Kg	☼	09/13/12 10:58	09/14/12 04:28	1
Pyrene	**29.2**		0.841	mg/Kg	☼	09/13/12 10:58	09/15/12 23:31	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*80*		*10 - 120*	*09/13/12 10:58*	*09/14/12 04:28*	*1*
2-Fluorobiphenyl (Surr)	*51*		*29 - 120*	*09/13/12 10:58*	*09/14/12 04:28*	*1*
2-Fluorophenol (Surr)	*62*		*10 - 120*	*09/13/12 10:58*	*09/14/12 04:28*	*1*
Nitrobenzene-d5 (Surr)	*62*		*27 - 120*	*09/13/12 10:58*	*09/14/12 04:28*	*1*
Phenol-d5 (Surr)	*60*		*10 - 120*	*09/13/12 10:58*	*09/14/12 04:28*	*1*
Terphenyl-d14 (Surr)	*91*		*13 - 120*	*09/13/12 10:58*	*09/14/12 04:28*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**21**		0.10	%			09/12/12 11:18	1
Percent Solids	**79**		0.10	%			09/12/12 11:18	1
Percent Solids	**79**		0.10	%			09/12/12 11:18	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: TPH-4

Date Collected: 09/07/12 14:40
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-7

Matrix: Solid
Percent Solids: 79.0

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	30.9		8.21	mg/Kg	☼	09/12/12 12:51	09/18/12 03:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*95*		*50 - 150*	*09/12/12 12:51*	*09/18/12 03:38*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	1760		62.6	mg/Kg	☼	09/13/12 11:07	09/16/12 18:00	10
C24-C40	352		62.6	mg/Kg	☼	09/13/12 11:07	09/16/12 18:00	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*2671*	*X*	*50 - 150*	*09/13/12 11:07*	*09/16/12 18:00*	*10*

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		0.10	%			09/12/12 11:18	1
Percent Solids	79		0.10	%			09/12/12 11:18	1
Percent Solids	79		0.10	%			09/12/12 11:18	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: VOC-4

Date Collected: 09/07/12 14:40
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-8

Matrix: Solid
Percent Solids: 83.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
1,1,1-Trichloroethane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
1,1,2,2-Tetrachloroethane	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
1,1,2-Trichloroethane	ND		0.00479	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
1,1-Dichloroethane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Diisopropyl ether	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
1,1-Dichloroethene	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
1,1-Dichloropropene	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
1,2,3-Trichlorobenzene	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
1,2,3-Trichloropropane	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
1,2,4-Trichlorobenzene	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
1,2,4-Trimethylbenzene	**20.8**		2.38	mg/Kg	☼	09/12/12 13:03	09/18/12 12:52	20
1,2-Dibromo-3-Chloropropane	ND		0.297	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
1,2-Dibromoethane (EDB)	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
1,2-Dichlorobenzene	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
1,2-Dichloroethane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
1,2-Dichloropropane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
1,3,5-Trimethylbenzene	**8.26**		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
1,3-Dichlorobenzene	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
1,3-Dichloropropane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
1,4-Dichlorobenzene	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
2,2-Dichloropropane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
2-Butanone (MEK)	ND		0.0479	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
2-Chlorotoluene	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
2-Hexanone	ND		0.0479	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
4-Chlorotoluene	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
4-Methyl-2-pentanone (MIBK)	ND		0.0479	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Acetone	ND		0.0479	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Benzene	**0.105**		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Bromobenzene	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
Bromochloromethane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Bromodichloromethane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Bromoform	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Bromomethane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Carbon disulfide	**0.00896**		0.00479	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Carbon tetrachloride	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Chlorobenzene	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Chlorodibromomethane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Chloroethane	ND		0.00479	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Chloroform	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Chloromethane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
cis-1,2-Dichloroethene	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
cis-1,3-Dichloropropene	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Dibromomethane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Dichlorodifluoromethane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Ethylbenzene	**7.17**		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
Hexachlorobutadiene	ND		0.297	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
Isopropylbenzene	**2.71**		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
Methyl tert-butyl ether	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Methylene Chloride	ND		0.00957	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Naphthalene	**178**		5.95	mg/Kg	☼	09/12/12 13:03	09/18/12 12:52	20

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: VOC-4

Date Collected: 09/07/12 14:40
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-8

Matrix: Solid
Percent Solids: 83.8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
N-Propylbenzene	**1.70**		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
p-Isopropyltoluene	**1.90**		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
sec-Butylbenzene	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
Styrene	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
tert-Butylbenzene	ND		0.119	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1
Tetrachloroethene	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Toluene	**0.0330**		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
trans-1,2-Dichloroethene	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
trans-1,3-Dichloropropene	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Trichloroethene	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Trichlorofluoromethane	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Vinyl chloride	ND		0.00191	mg/Kg	☼	09/12/12 12:59	09/13/12 17:52	1
Xylenes, Total	**4.80**		0.297	mg/Kg	☼	09/12/12 13:03	09/14/12 13:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 130*	*09/12/12 12:59*	*09/13/12 17:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*	*09/12/12 13:03*	*09/14/12 13:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*	*09/12/12 13:03*	*09/18/12 12:52*	*20*
4-Bromofluorobenzene (Surr)	*136*	*X*	*70 - 130*	*09/12/12 12:59*	*09/13/12 17:52*	*1*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*09/12/12 13:03*	*09/14/12 13:54*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*09/12/12 13:03*	*09/18/12 12:52*	*20*
Dibromofluoromethane (Surr)	*95*		*70 - 130*	*09/12/12 12:59*	*09/13/12 17:52*	*1*
Dibromofluoromethane (Surr)	*87*		*70 - 130*	*09/12/12 13:03*	*09/14/12 13:54*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*	*09/12/12 13:03*	*09/18/12 12:52*	*20*
Toluene-d8 (Surr)	*112*		*70 - 130*	*09/12/12 12:59*	*09/13/12 17:52*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*	*09/12/12 13:03*	*09/14/12 13:54*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*	*09/12/12 13:03*	*09/18/12 12:52*	*20*

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**16**		0.10	%			09/12/12 11:18	1
Percent Solids	**84**		0.10	%			09/12/12 11:18	1
Percent Solids	**84**		0.10	%			09/12/12 11:18	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: SVOC-4

Date Collected: 09/07/12 14:40
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-9

Matrix: Solid
Percent Solids: 80.9

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
1,2-Dichlorobenzene	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
1,3-Dichlorobenzene	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
1,4-Dichlorobenzene	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
1-Methylnaphthalene	**37.2**		0.819	mg/Kg	☼	09/13/12 10:58	09/16/12 00:16	10
2,4,5-Trichlorophenol	ND		1.02	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
2,4,6-Trichlorophenol	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
2,4-Dichlorophenol	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
2,4-Dimethylphenol	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
2,4-Dinitrophenol	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
2,4-Dinitrotoluene	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
2,6-Dinitrotoluene	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
2-Chloronaphthalene	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
2-Chlorophenol	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
2-Methylnaphthalene	**3.53**		0.0819	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
2-Methylphenol	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
2-Nitroaniline	ND		1.02	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
2-Nitrophenol	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
3,3'-Dichlorobenzidine	ND		0.815	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
3 & 4 Methylphenol	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
3-Nitroaniline	ND		1.02	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
4,6-Dinitro-2-methylphenol	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
4-Bromophenyl phenyl ether	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
4-Chloro-3-methylphenol	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
4-Chlorophenyl phenyl ether	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
4-Chloroaniline	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
4-Nitroaniline	ND		1.02	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
4-Nitrophenol	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Acenaphthylene	**1.69**		0.0819	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Acenaphthene	**18.9**		0.819	mg/Kg	☼	09/13/12 10:58	09/16/12 00:16	10
Benzo[a]anthracene	**2.89**		0.0819	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Benzo[a]pyrene	**2.46**		0.0819	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Benzo[b]fluoranthene	**1.28**		0.0819	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Benzo[g,h,i]perylene	**0.819**		0.0819	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Benzo[k]fluoranthene	**1.45**		0.0819	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Anthracene	**8.38**		0.819	mg/Kg	☼	09/13/12 10:58	09/16/12 00:16	10
Bis(2-chloroethoxy)methane	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Bis(2-chloroethyl)ether	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Bis(2-ethylhexyl) phthalate	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
bis (2-chloroisopropyl) ether	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Butyl benzyl phthalate	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Carbazole	**0.454**		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Chrysene	**2.20**		0.0819	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Cresols	ND		0.814	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Dibenz(a,h)anthracene	**0.256**		0.0819	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Dibenzofuran	**2.91**		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Diethyl phthalate	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Dimethyl phthalate	ND		2.04	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Di-n-butyl phthalate	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Di-n-octyl phthalate	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Fluoranthene	**8.58**		0.819	mg/Kg	☼	09/13/12 10:58	09/16/12 00:16	10

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: SVOC-4

Date Collected: 09/07/12 14:40
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-9

Matrix: Solid
Percent Solids: 80.9

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	**10.7**		0.819	mg/Kg	☼	09/13/12 10:58	09/16/12 00:16	10
Hexachlorobenzene	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Hexachlorobutadiene	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Hexachlorocyclopentadiene	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Hexachloroethane	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Indeno[1,2,3-cd]pyrene	**0.689**		0.0819	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Isophorone	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Naphthalene	**28.7**		0.819	mg/Kg	☼	09/13/12 10:58	09/16/12 00:16	10
Nitrobenzene	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
N-Nitrosodi-n-propylamine	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Pentachlorophenol	ND		1.02	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Phenanthrene	**31.7**		0.819	mg/Kg	☼	09/13/12 10:58	09/16/12 00:16	10
Phenol	ND		0.407	mg/Kg	☼	09/13/12 10:58	09/14/12 04:50	1
Pyrene	**11.5**		0.819	mg/Kg	☼	09/13/12 10:58	09/16/12 00:16	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*80*		*10 - 120*	*09/13/12 10:58*	*09/14/12 04:50*	*1*
2-Fluorobiphenyl (Surr)	*56*		*29 - 120*	*09/13/12 10:58*	*09/14/12 04:50*	*1*
2-Fluorophenol (Surr)	*59*		*10 - 120*	*09/13/12 10:58*	*09/14/12 04:50*	*1*
Nitrobenzene-d5 (Surr)	*59*		*27 - 120*	*09/13/12 10:58*	*09/14/12 04:50*	*1*
Phenol-d5 (Surr)	*59*		*10 - 120*	*09/13/12 10:58*	*09/14/12 04:50*	*1*
Terphenyl-d14 (Surr)	*87*		*13 - 120*	*09/13/12 10:58*	*09/14/12 04:50*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**81**		0.10	%			09/12/12 11:18	1

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-19575/6
Matrix: Solid
Analysis Batch: 19575

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,1,1-Trichloroethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,1,2,2-Tetrachloroethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,1,2-Trichloroethane	ND		0.00500	mg/Kg			09/13/12 11:42	1
1,1-Dichloroethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
Diisopropyl ether	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,1-Dichloroethene	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,1-Dichloropropene	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,2,3-Trichlorobenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,2,3-Trichloropropane	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,2,4-Trichlorobenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,2,4-Trimethylbenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,2-Dibromo-3-Chloropropane	ND		0.00500	mg/Kg			09/13/12 11:42	1
1,2-Dibromoethane (EDB)	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,2-Dichlorobenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,2-Dichloroethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,2-Dichloropropane	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,3,5-Trimethylbenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,3-Dichlorobenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,3-Dichloropropane	ND		0.00200	mg/Kg			09/13/12 11:42	1
1,4-Dichlorobenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
2,2-Dichloropropane	ND		0.00200	mg/Kg			09/13/12 11:42	1
2-Butanone (MEK)	ND		0.0500	mg/Kg			09/13/12 11:42	1
2-Chlorotoluene	ND		0.00200	mg/Kg			09/13/12 11:42	1
2-Hexanone	ND		0.0500	mg/Kg			09/13/12 11:42	1
4-Chlorotoluene	ND		0.00200	mg/Kg			09/13/12 11:42	1
4-Methyl-2-pentanone (MIBK)	ND		0.0500	mg/Kg			09/13/12 11:42	1
Acetone	ND		0.0500	mg/Kg			09/13/12 11:42	1
Benzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
Bromobenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
Bromochloromethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
Bromodichloromethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
Bromoform	ND		0.00200	mg/Kg			09/13/12 11:42	1
Bromomethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
Carbon disulfide	ND		0.00500	mg/Kg			09/13/12 11:42	1
Carbon tetrachloride	ND		0.00200	mg/Kg			09/13/12 11:42	1
Chlorobenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
Chlorodibromomethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
Chloroethane	ND		0.00500	mg/Kg			09/13/12 11:42	1
Chloroform	ND		0.00200	mg/Kg			09/13/12 11:42	1
Chloromethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
cis-1,2-Dichloroethene	ND		0.00200	mg/Kg			09/13/12 11:42	1
cis-1,3-Dichloropropene	ND		0.00200	mg/Kg			09/13/12 11:42	1
Dibromomethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
Dichlorodifluoromethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
Ethylbenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
Hexachlorobutadiene	ND		0.00500	mg/Kg			09/13/12 11:42	1
Isopropylbenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
Methyl tert-butyl ether	ND		0.00200	mg/Kg			09/13/12 11:42	1

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-19575/6
Matrix: Solid
Analysis Batch: 19575

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		0.0100	mg/Kg			09/13/12 11:42	1
Naphthalene	ND		0.00500	mg/Kg			09/13/12 11:42	1
n-Butylbenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
N-Propylbenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
p-Isopropyltoluene	ND		0.00200	mg/Kg			09/13/12 11:42	1
sec-Butylbenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
Styrene	ND		0.00200	mg/Kg			09/13/12 11:42	1
tert-Butylbenzene	ND		0.00200	mg/Kg			09/13/12 11:42	1
Tetrachloroethene	ND		0.00200	mg/Kg			09/13/12 11:42	1
Toluene	ND		0.00200	mg/Kg			09/13/12 11:42	1
trans-1,2-Dichloroethene	ND		0.00200	mg/Kg			09/13/12 11:42	1
trans-1,3-Dichloropropene	ND		0.00200	mg/Kg			09/13/12 11:42	1
Trichloroethene	ND		0.00200	mg/Kg			09/13/12 11:42	1
Trichlorofluoromethane	ND		0.00200	mg/Kg			09/13/12 11:42	1
Vinyl chloride	ND		0.00200	mg/Kg			09/13/12 11:42	1
Xylenes, Total	ND		0.00500	mg/Kg			09/13/12 11:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*09/13/12 11:42*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*09/13/12 11:42*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*09/13/12 11:42*	*1*
Toluene-d8 (Surr)	*111*		*70 - 130*		*09/13/12 11:42*	*1*

Lab Sample ID: MB 490-19575/7
Matrix: Solid
Analysis Batch: 19575

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.100	mg/Kg			09/13/12 12:13	1
1,1,1-Trichloroethane	ND		0.100	mg/Kg			09/13/12 12:13	1
1,1,2,2-Tetrachloroethane	ND		0.100	mg/Kg			09/13/12 12:13	1
1,1,2-Trichloroethane	ND		0.250	mg/Kg			09/13/12 12:13	1
1,1-Dichloroethane	ND		0.100	mg/Kg			09/13/12 12:13	1
Diisopropyl ether	ND		0.100	mg/Kg			09/13/12 12:13	1
1,1-Dichloroethene	ND		0.100	mg/Kg			09/13/12 12:13	1
1,1-Dichloropropene	ND		0.100	mg/Kg			09/13/12 12:13	1
1,2,3-Trichlorobenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
1,2,3-Trichloropropane	ND		0.100	mg/Kg			09/13/12 12:13	1
1,2,4-Trichlorobenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
1,2,4-Trimethylbenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
1,2-Dibromo-3-Chloropropane	ND		0.250	mg/Kg			09/13/12 12:13	1
1,2-Dibromoethane (EDB)	ND		0.100	mg/Kg			09/13/12 12:13	1
1,2-Dichlorobenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
1,2-Dichloroethane	ND		0.100	mg/Kg			09/13/12 12:13	1
1,2-Dichloropropane	ND		0.100	mg/Kg			09/13/12 12:13	1
1,3,5-Trimethylbenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
1,3-Dichlorobenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
1,3-Dichloropropane	ND		0.100	mg/Kg			09/13/12 12:13	1
1,4-Dichlorobenzene	ND		0.100	mg/Kg			09/13/12 12:13	1

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-19575/7
Matrix: Solid
Analysis Batch: 19575

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		0.100	mg/Kg			09/13/12 12:13	1
2-Butanone (MEK)	ND		2.50	mg/Kg			09/13/12 12:13	1
2-Chlorotoluene	ND		0.100	mg/Kg			09/13/12 12:13	1
2-Hexanone	ND		2.50	mg/Kg			09/13/12 12:13	1
4-Chlorotoluene	ND		0.100	mg/Kg			09/13/12 12:13	1
4-Methyl-2-pentanone (MIBK)	ND		2.50	mg/Kg			09/13/12 12:13	1
Acetone	ND		2.50	mg/Kg			09/13/12 12:13	1
Benzene	ND		0.100	mg/Kg			09/13/12 12:13	1
Bromobenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
Bromochloromethane	ND		0.100	mg/Kg			09/13/12 12:13	1
Bromodichloromethane	ND		0.100	mg/Kg			09/13/12 12:13	1
Bromoform	ND		0.100	mg/Kg			09/13/12 12:13	1
Bromomethane	ND		0.100	mg/Kg			09/13/12 12:13	1
Carbon disulfide	ND		0.250	mg/Kg			09/13/12 12:13	1
Carbon tetrachloride	ND		0.100	mg/Kg			09/13/12 12:13	1
Chlorobenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
Chlorodibromomethane	ND		0.100	mg/Kg			09/13/12 12:13	1
Chloroethane	ND		0.250	mg/Kg			09/13/12 12:13	1
Chloroform	ND		0.100	mg/Kg			09/13/12 12:13	1
Chloromethane	ND		0.100	mg/Kg			09/13/12 12:13	1
cis-1,2-Dichloroethene	ND		0.100	mg/Kg			09/13/12 12:13	1
cis-1,3-Dichloropropene	ND		0.100	mg/Kg			09/13/12 12:13	1
Dibromomethane	ND		0.100	mg/Kg			09/13/12 12:13	1
Dichlorodifluoromethane	ND		0.100	mg/Kg			09/13/12 12:13	1
Ethylbenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
Hexachlorobutadiene	ND		0.250	mg/Kg			09/13/12 12:13	1
Isopropylbenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
Methyl tert-butyl ether	ND		0.100	mg/Kg			09/13/12 12:13	1
Methylene Chloride	ND		0.500	mg/Kg			09/13/12 12:13	1
Naphthalene	ND		0.250	mg/Kg			09/13/12 12:13	1
n-Butylbenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
N-Propylbenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
p-Isopropyltoluene	ND		0.100	mg/Kg			09/13/12 12:13	1
sec-Butylbenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
Styrene	ND		0.100	mg/Kg			09/13/12 12:13	1
tert-Butylbenzene	ND		0.100	mg/Kg			09/13/12 12:13	1
Tetrachloroethene	ND		0.100	mg/Kg			09/13/12 12:13	1
Toluene	ND		0.100	mg/Kg			09/13/12 12:13	1
trans-1,2-Dichloroethene	ND		0.100	mg/Kg			09/13/12 12:13	1
trans-1,3-Dichloropropene	ND		0.100	mg/Kg			09/13/12 12:13	1
Trichloroethene	ND		0.100	mg/Kg			09/13/12 12:13	1
Trichlorofluoromethane	ND		0.100	mg/Kg			09/13/12 12:13	1
Vinyl chloride	ND		0.100	mg/Kg			09/13/12 12:13	1
Xylenes, Total	ND		0.250	mg/Kg			09/13/12 12:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*09/13/12 12:13*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*		*09/13/12 12:13*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 130*		*09/13/12 12:13*	*1*

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-19575/7
Matrix: Solid
Analysis Batch: 19575

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		09/13/12 12:13	1

Lab Sample ID: LCS 490-19575/3
Matrix: Solid
Analysis Batch: 19575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.0500	0.05222		mg/Kg		104	80 - 136
1,1,1-Trichloroethane	0.0500	0.05359		mg/Kg		107	72 - 140
1,1,2,2-Tetrachloroethane	0.0500	0.04923		mg/Kg		98	66 - 134
1,1,2-Trichloroethane	0.0500	0.05513		mg/Kg		110	78 - 128
1,1-Dichloroethane	0.0500	0.05598		mg/Kg		112	75 - 124
Diisopropyl ether	0.0500	0.04924		mg/Kg		98	68 - 124
1,1-Dichloroethene	0.0500	0.05773		mg/Kg		115	75 - 131
1,1-Dichloropropene	0.0500	0.05338		mg/Kg		107	79 - 127
1,2,3-Trichlorobenzene	0.0500	0.05087		mg/Kg		102	70 - 150
1,2,3-Trichloropropane	0.0500	0.04757		mg/Kg		95	65 - 139
1,2,4-Trichlorobenzene	0.0500	0.05070		mg/Kg		101	62 - 150
1,2,4-Trimethylbenzene	0.0500	0.04995		mg/Kg		100	77 - 139
1,2-Dibromo-3-Chloropropane	0.0500	0.03345		mg/Kg		67	49 - 142
1,2-Dibromoethane (EDB)	0.0500	0.05296		mg/Kg		106	80 - 135
1,2-Dichlorobenzene	0.0500	0.05533		mg/Kg		111	80 - 134
1,2-Dichloroethane	0.0500	0.05396		mg/Kg		108	65 - 134
1,2-Dichloropropane	0.0500	0.04980		mg/Kg		100	69 - 120
1,3,5-Trimethylbenzene	0.0500	0.05106		mg/Kg		102	78 - 138
1,3-Dichlorobenzene	0.0500	0.05703		mg/Kg		114	79 - 137
1,3-Dichloropropane	0.0500	0.05253		mg/Kg		105	78 - 126
1,4-Dichlorobenzene	0.0500	0.05829		mg/Kg		117	77 - 139
2,2-Dichloropropane	0.0500	0.05023		mg/Kg		100	68 - 145
2-Butanone (MEK)	0.250	0.2678		mg/Kg		107	61 - 132
2-Chlorotoluene	0.0500	0.04995		mg/Kg		100	78 - 132
2-Hexanone	0.250	0.2478		mg/Kg		99	57 - 148
4-Chlorotoluene	0.0500	0.05508		mg/Kg		110	77 - 138
4-Methyl-2-pentanone (MIBK)	0.250	0.2488		mg/Kg		100	59 - 138
Acetone	0.250	0.2497		mg/Kg		100	51 - 149
Benzene	0.0500	0.05722		mg/Kg		114	75 - 127
Bromobenzene	0.0500	0.04734		mg/Kg		95	75 - 130
Bromochloromethane	0.0500	0.05974		mg/Kg		119	70 - 132
Bromodichloromethane	0.0500	0.04781		mg/Kg		96	68 - 135
Bromoform	0.0500	0.04088		mg/Kg		82	36 - 150
Bromomethane	0.0500	0.05985		mg/Kg		120	43 - 142
Carbon disulfide	0.0500	0.04905		mg/Kg		98	74 - 135
Carbon tetrachloride	0.0500	0.05375		mg/Kg		107	70 - 141
Chlorobenzene	0.0500	0.05694		mg/Kg		114	84 - 125
Chlorodibromomethane	0.0500	0.04642		mg/Kg		93	66 - 134
Chloroethane	0.0500	0.05834		mg/Kg		117	53 - 144
Chloroform	0.0500	0.05705		mg/Kg		114	76 - 130
Chloromethane	0.0500	0.04058		mg/Kg		81	23 - 150
cis-1,2-Dichloroethene	0.0500	0.05274		mg/Kg		105	75 - 125

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-19575/3
Matrix: Solid
Analysis Batch: 19575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	0.0500	0.04768		mg/Kg		95	73 - 148
Dibromomethane	0.0500	0.05302		mg/Kg		106	71 - 130
Dichlorodifluoromethane	0.0500	0.04530		mg/Kg		91	12 - 144
Ethylbenzene	0.0500	0.05451		mg/Kg		109	80 - 134
Hexachlorobutadiene	0.0500	0.04731		mg/Kg		95	65 - 148
Isopropylbenzene	0.0500	0.05860		mg/Kg		117	80 - 150
Methyl tert-butyl ether	0.0500	0.04636		mg/Kg		93	70 - 136
Methylene Chloride	0.0500	0.05325		mg/Kg		107	68 - 144
Naphthalene	0.0500	0.04548		mg/Kg		91	69 - 150
n-Butylbenzene	0.0500	0.05072		mg/Kg		101	72 - 152
N-Propylbenzene	0.0500	0.04918		mg/Kg		98	75 - 137
p-Isopropyltoluene	0.0500	0.05102		mg/Kg		102	77 - 141
sec-Butylbenzene	0.0500	0.05063		mg/Kg		101	79 - 141
Styrene	0.0500	0.05994		mg/Kg		120	82 - 137
tert-Butylbenzene	0.0500	0.04961		mg/Kg		99	80 - 132
Tetrachloroethene	0.0500	0.05985		mg/Kg		120	78 - 140
Toluene	0.0500	0.05653		mg/Kg		113	80 - 132
trans-1,2-Dichloroethene	0.0500	0.05531		mg/Kg		111	76 - 128
trans-1,3-Dichloropropene	0.0500	0.04291		mg/Kg		86	62 - 139
Trichloroethene	0.0500	0.05746		mg/Kg		115	77 - 127
Trichlorofluoromethane	0.0500	0.05046		mg/Kg		101	50 - 140
Vinyl chloride	0.0500	0.04531		mg/Kg		91	47 - 136
Xylenes, Total	0.150	0.1691		mg/Kg		113	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
Dibromofluoromethane (Surr)	*104*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 490-19575/4
Matrix: Solid
Analysis Batch: 19575

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.0500	0.05601		mg/Kg		112	80 - 136	7	50
1,1,1-Trichloroethane	0.0500	0.05627		mg/Kg		113	72 - 140	5	50
1,1,2,2-Tetrachloroethane	0.0500	0.05313		mg/Kg		106	66 - 134	8	50
1,1,2-Trichloroethane	0.0500	0.05854		mg/Kg		117	78 - 128	6	50
1,1-Dichloroethane	0.0500	0.05883		mg/Kg		118	75 - 124	5	50
Diisopropyl ether	0.0500	0.05245		mg/Kg		105	68 - 124	6	45
1,1-Dichloroethene	0.0500	0.05984		mg/Kg		120	75 - 131	4	50
1,1-Dichloropropene	0.0500	0.05580		mg/Kg		112	79 - 127	4	50
1,2,3-Trichlorobenzene	0.0500	0.05814		mg/Kg		116	70 - 150	13	50
1,2,3-Trichloropropane	0.0500	0.04732		mg/Kg		95	65 - 139	1	50
1,2,4-Trichlorobenzene	0.0500	0.05825		mg/Kg		117	62 - 150	14	50
1,2,4-Trimethylbenzene	0.0500	0.05172		mg/Kg		103	77 - 139	3	50
1,2-Dibromo-3-Chloropropane	0.0500	0.03851		mg/Kg		77	49 - 142	14	50
1,2-Dibromoethane (EDB)	0.0500	0.05768		mg/Kg		115	80 - 135	9	50

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-19575/4
Matrix: Solid
Analysis Batch: 19575

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichlorobenzene	0.0500	0.05886		mg/Kg		118	80 - 134	6	50
1,2-Dichloroethane	0.0500	0.05790		mg/Kg		116	65 - 134	7	50
1,2-Dichloropropane	0.0500	0.05269		mg/Kg		105	69 - 120	6	50
1,3,5-Trimethylbenzene	0.0500	0.05240		mg/Kg		105	78 - 138	3	50
1,3-Dichlorobenzene	0.0500	0.06085		mg/Kg		122	79 - 137	6	50
1,3-Dichloropropane	0.0500	0.05656		mg/Kg		113	78 - 126	7	42
1,4-Dichlorobenzene	0.0500	0.06193		mg/Kg		124	77 - 139	6	50
2,2-Dichloropropane	0.0500	0.05204		mg/Kg		104	68 - 145	4	50
2-Butanone (MEK)	0.250	0.2909		mg/Kg		116	61 - 132	8	50
2-Chlorotoluene	0.0500	0.05140		mg/Kg		103	78 - 132	3	50
2-Hexanone	0.250	0.2668		mg/Kg		107	57 - 148	7	50
4-Chlorotoluene	0.0500	0.05514		mg/Kg		110	77 - 138	0	50
4-Methyl-2-pentanone (MIBK)	0.250	0.2684		mg/Kg		107	59 - 138	8	50
Acetone	0.250	0.2642		mg/Kg		106	51 - 149	6	50
Benzene	0.0500	0.05944		mg/Kg		119	75 - 127	4	50
Bromobenzene	0.0500	0.04961		mg/Kg		99	75 - 130	5	50
Bromochloromethane	0.0500	0.06353		mg/Kg		127	70 - 132	6	50
Bromodichloromethane	0.0500	0.05071		mg/Kg		101	68 - 135	6	50
Bromoform	0.0500	0.04676		mg/Kg		94	36 - 150	13	50
Bromomethane	0.0500	0.06710		mg/Kg		134	43 - 142	11	50
Carbon disulfide	0.0500	0.05131		mg/Kg		103	74 - 135	4	50
Carbon tetrachloride	0.0500	0.05549		mg/Kg		111	70 - 141	3	50
Chlorobenzene	0.0500	0.05945		mg/Kg		119	84 - 125	4	50
Chlorodibromomethane	0.0500	0.05086		mg/Kg		102	66 - 134	9	50
Chloroethane	0.0500	0.06096		mg/Kg		122	53 - 144	4	50
Chloroform	0.0500	0.06014		mg/Kg		120	76 - 130	5	49
Chloromethane	0.0500	0.05047		mg/Kg		101	23 - 150	22	50
cis-1,2-Dichloroethene	0.0500	0.05567		mg/Kg		111	75 - 125	5	50
cis-1,3-Dichloropropene	0.0500	0.05184		mg/Kg		104	73 - 148	8	50
Dibromomethane	0.0500	0.05695		mg/Kg		114	71 - 130	7	50
Dichlorodifluoromethane	0.0500	0.04742		mg/Kg		95	12 - 144	5	50
Ethylbenzene	0.0500	0.05587		mg/Kg		112	80 - 134	2	50
Hexachlorobutadiene	0.0500	0.05264		mg/Kg		105	65 - 148	11	50
Isopropylbenzene	0.0500	0.06036		mg/Kg		121	80 - 150	3	50
Methyl tert-butyl ether	0.0500	0.05114		mg/Kg		102	70 - 136	10	50
Methylene Chloride	0.0500	0.05706		mg/Kg		114	68 - 144	7	50
Naphthalene	0.0500	0.05347		mg/Kg		107	69 - 150	16	50
n-Butylbenzene	0.0500	0.05305		mg/Kg		106	72 - 152	4	50
N-Propylbenzene	0.0500	0.05088		mg/Kg		102	75 - 137	3	50
p-Isopropyltoluene	0.0500	0.05310		mg/Kg		106	77 - 141	4	50
sec-Butylbenzene	0.0500	0.05243		mg/Kg		105	79 - 141	4	50
Styrene	0.0500	0.06121		mg/Kg		122	82 - 137	2	50
tert-Butylbenzene	0.0500	0.05168		mg/Kg		103	80 - 132	4	50
Tetrachloroethene	0.0500	0.06238		mg/Kg		125	78 - 140	4	50
Toluene	0.0500	0.05820		mg/Kg		116	80 - 132	3	50
trans-1,2-Dichloroethene	0.0500	0.05809		mg/Kg		116	76 - 128	5	50
trans-1,3-Dichloropropene	0.0500	0.04630		mg/Kg		93	62 - 139	8	50
Trichloroethene	0.0500	0.06004		mg/Kg		120	77 - 127	4	50
Trichlorofluoromethane	0.0500	0.05332		mg/Kg		107	50 - 140	6	50
Vinyl chloride	0.0500	0.04792		mg/Kg		96	47 - 136	6	50

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-19575/4
Matrix: Solid
Analysis Batch: 19575

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Xylenes, Total			0.150	0.1726		mg/Kg		115	80 - 137	2	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*
Dibromofluoromethane (Surr)	*104*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 490-19868/7
Matrix: Solid
Analysis Batch: 19868

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.100		mg/Kg			09/14/12 11:51	1
1,1,1-Trichloroethane	ND		0.100		mg/Kg			09/14/12 11:51	1
1,1,2,2-Tetrachloroethane	ND		0.100		mg/Kg			09/14/12 11:51	1
1,1,2-Trichloroethane	ND		0.250		mg/Kg			09/14/12 11:51	1
1,1-Dichloroethane	ND		0.100		mg/Kg			09/14/12 11:51	1
Diisopropyl ether	ND		0.100		mg/Kg			09/14/12 11:51	1
1,1-Dichloroethene	ND		0.100		mg/Kg			09/14/12 11:51	1
1,1-Dichloropropene	ND		0.100		mg/Kg			09/14/12 11:51	1
1,2,3-Trichlorobenzene	ND		0.100		mg/Kg			09/14/12 11:51	1
1,2,3-Trichloropropane	ND		0.100		mg/Kg			09/14/12 11:51	1
1,2,4-Trichlorobenzene	ND		0.100		mg/Kg			09/14/12 11:51	1
1,2,4-Trimethylbenzene	ND		0.100		mg/Kg			09/14/12 11:51	1
1,2-Dibromo-3-Chloropropane	ND		0.250		mg/Kg			09/14/12 11:51	1
1,2-Dibromoethane (EDB)	ND		0.100		mg/Kg			09/14/12 11:51	1
1,2-Dichlorobenzene	ND		0.100		mg/Kg			09/14/12 11:51	1
1,2-Dichloroethane	ND		0.100		mg/Kg			09/14/12 11:51	1
1,2-Dichloropropane	ND		0.100		mg/Kg			09/14/12 11:51	1
1,3,5-Trimethylbenzene	ND		0.100		mg/Kg			09/14/12 11:51	1
1,3-Dichlorobenzene	ND		0.100		mg/Kg			09/14/12 11:51	1
1,3-Dichloropropane	ND		0.100		mg/Kg			09/14/12 11:51	1
1,4-Dichlorobenzene	ND		0.100		mg/Kg			09/14/12 11:51	1
2,2-Dichloropropane	ND		0.100		mg/Kg			09/14/12 11:51	1
2-Butanone (MEK)	ND		2.50		mg/Kg			09/14/12 11:51	1
2-Chlorotoluene	ND		0.100		mg/Kg			09/14/12 11:51	1
2-Hexanone	ND		2.50		mg/Kg			09/14/12 11:51	1
4-Chlorotoluene	ND		0.100		mg/Kg			09/14/12 11:51	1
4-Methyl-2-pentanone (MIBK)	ND		2.50		mg/Kg			09/14/12 11:51	1
Acetone	ND		2.50		mg/Kg			09/14/12 11:51	1
Benzene	ND		0.100		mg/Kg			09/14/12 11:51	1
Bromobenzene	ND		0.100		mg/Kg			09/14/12 11:51	1
Bromochloromethane	ND		0.100		mg/Kg			09/14/12 11:51	1
Bromodichloromethane	ND		0.100		mg/Kg			09/14/12 11:51	1
Bromoform	ND		0.100		mg/Kg			09/14/12 11:51	1
Bromomethane	ND		0.100		mg/Kg			09/14/12 11:51	1
Carbon disulfide	ND		0.250		mg/Kg			09/14/12 11:51	1
Carbon tetrachloride	ND		0.100		mg/Kg			09/14/12 11:51	1

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-19868/7
Matrix: Solid
Analysis Batch: 19868

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.100	mg/Kg			09/14/12 11:51	1
Chlorodibromomethane	ND		0.100	mg/Kg			09/14/12 11:51	1
Chloroethane	ND		0.250	mg/Kg			09/14/12 11:51	1
Chloroform	ND		0.100	mg/Kg			09/14/12 11:51	1
Chloromethane	ND		0.100	mg/Kg			09/14/12 11:51	1
cis-1,2-Dichloroethene	ND		0.100	mg/Kg			09/14/12 11:51	1
cis-1,3-Dichloropropene	ND		0.100	mg/Kg			09/14/12 11:51	1
Dibromomethane	ND		0.100	mg/Kg			09/14/12 11:51	1
Dichlorodifluoromethane	ND		0.100	mg/Kg			09/14/12 11:51	1
Ethylbenzene	ND		0.100	mg/Kg			09/14/12 11:51	1
Hexachlorobutadiene	ND		0.250	mg/Kg			09/14/12 11:51	1
Isopropylbenzene	ND		0.100	mg/Kg			09/14/12 11:51	1
Methyl tert-butyl ether	ND		0.100	mg/Kg			09/14/12 11:51	1
Methylene Chloride	ND		0.500	mg/Kg			09/14/12 11:51	1
Naphthalene	ND		0.250	mg/Kg			09/14/12 11:51	1
n-Butylbenzene	ND		0.100	mg/Kg			09/14/12 11:51	1
N-Propylbenzene	ND		0.100	mg/Kg			09/14/12 11:51	1
p-Isopropyltoluene	ND		0.100	mg/Kg			09/14/12 11:51	1
sec-Butylbenzene	ND		0.100	mg/Kg			09/14/12 11:51	1
Styrene	ND		0.100	mg/Kg			09/14/12 11:51	1
tert-Butylbenzene	ND		0.100	mg/Kg			09/14/12 11:51	1
Tetrachloroethene	ND		0.100	mg/Kg			09/14/12 11:51	1
Toluene	ND		0.100	mg/Kg			09/14/12 11:51	1
trans-1,2-Dichloroethene	ND		0.100	mg/Kg			09/14/12 11:51	1
trans-1,3-Dichloropropene	ND		0.100	mg/Kg			09/14/12 11:51	1
Trichloroethene	ND		0.100	mg/Kg			09/14/12 11:51	1
Trichlorofluoromethane	ND		0.100	mg/Kg			09/14/12 11:51	1
Vinyl chloride	ND		0.100	mg/Kg			09/14/12 11:51	1
Xylenes, Total	ND		0.250	mg/Kg			09/14/12 11:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 130*		*09/14/12 11:51*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*09/14/12 11:51*	*1*
Dibromofluoromethane (Surr)	*86*		*70 - 130*		*09/14/12 11:51*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/14/12 11:51*	*1*

Lab Sample ID: LCS 490-19868/3
Matrix: Solid
Analysis Batch: 19868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.0500	0.05182		mg/Kg		104	80 - 136
1,1,1-Trichloroethane	0.0500	0.05267		mg/Kg		105	72 - 140
1,1,2,2-Tetrachloroethane	0.0500	0.05293		mg/Kg		106	66 - 134
1,1,2-Trichloroethane	0.0500	0.05335		mg/Kg		107	78 - 128
1,1-Dichloroethane	0.0500	0.05397		mg/Kg		108	75 - 124
Diisopropyl ether	0.0500	0.04938		mg/Kg		99	68 - 124
1,1-Dichloroethene	0.0500	0.05806		mg/Kg		116	75 - 131
1,1-Dichloropropene	0.0500	0.05453		mg/Kg		109	79 - 127

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-19868/3
Matrix: Solid
Analysis Batch: 19868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichlorobenzene	0.0500	0.06136		mg/Kg		123	70 - 150
1,2,3-Trichloropropane	0.0500	0.05242		mg/Kg		105	65 - 139
1,2,4-Trichlorobenzene	0.0500	0.06530		mg/Kg		131	62 - 150
1,2,4-Trimethylbenzene	0.0500	0.05524		mg/Kg		110	77 - 139
1,2-Dibromo-3-Chloropropane	0.0500	0.03967		mg/Kg		79	49 - 142
1,2-Dibromoethane (EDB)	0.0500	0.05391		mg/Kg		108	80 - 135
1,2-Dichlorobenzene	0.0500	0.05973		mg/Kg		119	80 - 134
1,2-Dichloroethane	0.0500	0.04935		mg/Kg		99	65 - 134
1,2-Dichloropropane	0.0500	0.05075		mg/Kg		102	69 - 120
1,3,5-Trimethylbenzene	0.0500	0.05614		mg/Kg		112	78 - 138
1,3-Dichlorobenzene	0.0500	0.06053		mg/Kg		121	79 - 137
1,3-Dichloropropane	0.0500	0.05280		mg/Kg		106	78 - 126
1,4-Dichlorobenzene	0.0500	0.06148		mg/Kg		123	77 - 139
2,2-Dichloropropane	0.0500	0.05001		mg/Kg		100	68 - 145
2-Butanone (MEK)	0.250	0.2694		mg/Kg		108	61 - 132
2-Chlorotoluene	0.0500	0.05597		mg/Kg		112	78 - 132
2-Hexanone	0.250	0.2544		mg/Kg		102	57 - 148
4-Chlorotoluene	0.0500	0.05751		mg/Kg		115	77 - 138
4-Methyl-2-pentanone (MIBK)	0.250	0.2500		mg/Kg		100	59 - 138
Acetone	0.250	0.2455		mg/Kg		98	51 - 149
Benzene	0.0500	0.05716		mg/Kg		114	75 - 127
Bromobenzene	0.0500	0.05574		mg/Kg		111	75 - 130
Bromochloromethane	0.0500	0.05906		mg/Kg		118	70 - 132
Bromodichloromethane	0.0500	0.04778		mg/Kg		96	68 - 135
Bromoform	0.0500	0.04199		mg/Kg		84	36 - 150
Bromomethane	0.0500	0.05149		mg/Kg		103	43 - 142
Carbon disulfide	0.0500	0.05015		mg/Kg		100	74 - 135
Carbon tetrachloride	0.0500	0.05182		mg/Kg		104	70 - 141
Chlorobenzene	0.0500	0.05753		mg/Kg		115	84 - 125
Chlorodibromomethane	0.0500	0.04662		mg/Kg		93	66 - 134
Chloroethane	0.0500	0.05440		mg/Kg		109	53 - 144
Chloroform	0.0500	0.05466		mg/Kg		109	76 - 130
Chloromethane	0.0500	0.05386		mg/Kg		108	23 - 150
cis-1,2-Dichloroethene	0.0500	0.05255		mg/Kg		105	75 - 125
cis-1,3-Dichloropropene	0.0500	0.05195		mg/Kg		104	73 - 148
Dibromomethane	0.0500	0.05136		mg/Kg		103	71 - 130
Dichlorodifluoromethane	0.0500	0.04801		mg/Kg		96	12 - 144
Ethylbenzene	0.0500	0.05584		mg/Kg		112	80 - 134
Hexachlorobutadiene	0.0500	0.05516		mg/Kg		110	65 - 148
Isopropylbenzene	0.0500	0.06065		mg/Kg		121	80 - 150
Methyl tert-butyl ether	0.0500	0.04930		mg/Kg		99	70 - 136
Methylene Chloride	0.0500	0.05420		mg/Kg		108	68 - 144
Naphthalene	0.0500	0.06493		mg/Kg		130	69 - 150
n-Butylbenzene	0.0500	0.05625		mg/Kg		112	72 - 152
N-Propylbenzene	0.0500	0.05477		mg/Kg		110	75 - 137
p-Isopropyltoluene	0.0500	0.05481		mg/Kg		110	77 - 141
sec-Butylbenzene	0.0500	0.05565		mg/Kg		111	79 - 141
Styrene	0.0500	0.05913		mg/Kg		118	82 - 137
tert-Butylbenzene	0.0500	0.05635		mg/Kg		113	80 - 132
Tetrachloroethene	0.0500	0.05840		mg/Kg		117	78 - 140

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-19868/3
Matrix: Solid
Analysis Batch: 19868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	0.0500	0.05654		mg/Kg		113	80 - 132
trans-1,2-Dichloroethene	0.0500	0.05365		mg/Kg		107	76 - 128
trans-1,3-Dichloropropene	0.0500	0.04575		mg/Kg		91	62 - 139
Trichloroethene	0.0500	0.05902		mg/Kg		118	77 - 127
Trichlorofluoromethane	0.0500	0.04810		mg/Kg		96	50 - 140
Vinyl chloride	0.0500	0.05066		mg/Kg		101	47 - 136
Xylenes, Total	0.150	0.1659		mg/Kg		111	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 490-19868/4
Matrix: Solid
Analysis Batch: 19868

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.0500	0.04949		mg/Kg		99	80 - 136	5	50
1,1,1-Trichloroethane	0.0500	0.05021		mg/Kg		100	72 - 140	5	50
1,1,2,2-Tetrachloroethane	0.0500	0.05041		mg/Kg		101	66 - 134	5	50
1,1,2-Trichloroethane	0.0500	0.05181		mg/Kg		104	78 - 128	3	50
1,1-Dichloroethane	0.0500	0.05167		mg/Kg		103	75 - 124	4	50
Diisopropyl ether	0.0500	0.04650		mg/Kg		93	68 - 124	6	45
1,1-Dichloroethene	0.0500	0.05531		mg/Kg		111	75 - 131	5	50
1,1-Dichloropropene	0.0500	0.05181		mg/Kg		104	79 - 127	5	50
1,2,3-Trichlorobenzene	0.0500	0.05861		mg/Kg		117	70 - 150	5	50
1,2,3-Trichloropropane	0.0500	0.04977		mg/Kg		100	65 - 139	5	50
1,2,4-Trichlorobenzene	0.0500	0.06011		mg/Kg		120	62 - 150	8	50
1,2,4-Trimethylbenzene	0.0500	0.05239		mg/Kg		105	77 - 139	5	50
1,2-Dibromo-3-Chloropropane	0.0500	0.03935		mg/Kg		79	49 - 142	1	50
1,2-Dibromoethane (EDB)	0.0500	0.05165		mg/Kg		103	80 - 135	4	50
1,2-Dichlorobenzene	0.0500	0.05572		mg/Kg		111	80 - 134	7	50
1,2-Dichloroethane	0.0500	0.04705		mg/Kg		94	65 - 134	5	50
1,2-Dichloropropane	0.0500	0.04800		mg/Kg		96	69 - 120	6	50
1,3,5-Trimethylbenzene	0.0500	0.05293		mg/Kg		106	78 - 138	6	50
1,3-Dichlorobenzene	0.0500	0.05682		mg/Kg		114	79 - 137	6	50
1,3-Dichloropropane	0.0500	0.05163		mg/Kg		103	78 - 126	2	42
1,4-Dichlorobenzene	0.0500	0.05789		mg/Kg		116	77 - 139	6	50
2,2-Dichloropropane	0.0500	0.04722		mg/Kg		94	68 - 145	6	50
2-Butanone (MEK)	0.250	0.2563		mg/Kg		103	61 - 132	5	50
2-Chlorotoluene	0.0500	0.05244		mg/Kg		105	78 - 132	7	50
2-Hexanone	0.250	0.2498		mg/Kg		100	57 - 148	2	50
4-Chlorotoluene	0.0500	0.05400		mg/Kg		108	77 - 138	6	50
4-Methyl-2-pentanone (MIBK)	0.250	0.2531		mg/Kg		101	59 - 138	1	50
Acetone	0.250	0.2393		mg/Kg		96	51 - 149	3	50
Benzene	0.0500	0.05454		mg/Kg		109	75 - 127	5	50
Bromobenzene	0.0500	0.04983		mg/Kg		100	75 - 130	11	50

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-19868/4
Matrix: Solid
Analysis Batch: 19868

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromochloromethane	0.0500	0.05576		mg/Kg		112	70 - 132	6	50
Bromodichloromethane	0.0500	0.04506		mg/Kg		90	68 - 135	6	50
Bromoform	0.0500	0.04006		mg/Kg		80	36 - 150	5	50
Bromomethane	0.0500	0.04728		mg/Kg		95	43 - 142	9	50
Carbon disulfide	0.0500	0.04693		mg/Kg		94	74 - 135	7	50
Carbon tetrachloride	0.0500	0.04899		mg/Kg		98	70 - 141	6	50
Chlorobenzene	0.0500	0.05504		mg/Kg		110	84 - 125	4	50
Chlorodibromomethane	0.0500	0.04398		mg/Kg		88	66 - 134	6	50
Chloroethane	0.0500	0.05026		mg/Kg		101	53 - 144	8	50
Chloroform	0.0500	0.05217		mg/Kg		104	76 - 130	5	49
Chloromethane	0.0500	0.03494		mg/Kg		70	23 - 150	43	50
cis-1,2-Dichloroethene	0.0500	0.04955		mg/Kg		99	75 - 125	6	50
cis-1,3-Dichloropropene	0.0500	0.04750		mg/Kg		95	73 - 148	9	50
Dibromomethane	0.0500	0.04875		mg/Kg		98	71 - 130	5	50
Dichlorodifluoromethane	0.0500	0.04388		mg/Kg		88	12 - 144	9	50
Ethylbenzene	0.0500	0.05292		mg/Kg		106	80 - 134	5	50
Hexachlorobutadiene	0.0500	0.05317		mg/Kg		106	65 - 148	4	50
Isopropylbenzene	0.0500	0.05684		mg/Kg		114	80 - 150	6	50
Methyl tert-butyl ether	0.0500	0.04696		mg/Kg		94	70 - 136	5	50
Methylene Chloride	0.0500	0.05032		mg/Kg		101	68 - 144	7	50
Naphthalene	0.0500	0.06094		mg/Kg		122	69 - 150	6	50
n-Butylbenzene	0.0500	0.05148		mg/Kg		103	72 - 152	9	50
N-Propylbenzene	0.0500	0.05157		mg/Kg		103	75 - 137	6	50
p-Isopropyltoluene	0.0500	0.05287		mg/Kg		106	77 - 141	4	50
sec-Butylbenzene	0.0500	0.05332		mg/Kg		107	79 - 141	4	50
Styrene	0.0500	0.05540		mg/Kg		111	82 - 137	7	50
tert-Butylbenzene	0.0500	0.05339		mg/Kg		107	80 - 132	5	50
Tetrachloroethene	0.0500	0.05523		mg/Kg		110	78 - 140	6	50
Toluene	0.0500	0.05537		mg/Kg		111	80 - 132	2	50
trans-1,2-Dichloroethene	0.0500	0.05131		mg/Kg		103	76 - 128	4	50
trans-1,3-Dichloropropene	0.0500	0.04337		mg/Kg		87	62 - 139	5	50
Trichloroethene	0.0500	0.05604		mg/Kg		112	77 - 127	5	50
Trichlorofluoromethane	0.0500	0.04626		mg/Kg		93	50 - 140	4	50
Vinyl chloride	0.0500	0.04713		mg/Kg		94	47 - 136	7	50
Xylenes, Total	0.150	0.1566		mg/Kg		104	80 - 137	6	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: 490-6490-A-31-B MS
Matrix: Solid
Analysis Batch: 20787

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20311

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		0.0717	0.06383		mg/Kg	☼	89	19 - 158
1,1,1-Trichloroethane	ND		0.0717	0.06967		mg/Kg	☼	97	35 - 149

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-6490-A-31-B MS
Matrix: Solid
Analysis Batch: 20787

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20311

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	ND		0.0717	0.06901		mg/Kg	☼	96	10 - 162
1,1,2-Trichloroethane	ND		0.0717	0.07105		mg/Kg	☼	99	19 - 157
1,1-Dichloroethane	ND		0.0717	0.07016		mg/Kg	☼	98	42 - 136
Diisopropyl ether	ND		0.0717	0.07248		mg/Kg	☼	101	35 - 135
1,1-Dichloroethene	ND		0.0717	0.06747		mg/Kg	☼	94	41 - 143
1,1-Dichloropropene	ND		0.0717	0.06981		mg/Kg	☼	97	38 - 145
1,2,3-Trichlorobenzene	ND		0.0717	0.03187		mg/Kg	☼	44	10 - 157
1,2,3-Trichloropropane	ND		0.0717	0.06733		mg/Kg	☼	94	10 - 157
1,2,4-Trichlorobenzene	ND		0.0717	0.03763		mg/Kg	☼	52	10 - 167
1,2,4-Trimethylbenzene	ND		0.0717	0.06737		mg/Kg	☼	94	14 - 165
1,2-Dibromo-3-Chloropropane	ND		0.0717	0.04564		mg/Kg	☼	64	10 - 147
1,2-Dibromoethane (EDB)	ND		0.0717	0.07013		mg/Kg	☼	98	18 - 156
1,2-Dichlorobenzene	ND		0.0717	0.05613		mg/Kg	☼	78	10 - 160
1,2-Dichloroethane	ND		0.0717	0.07049		mg/Kg	☼	98	28 - 138
1,2-Dichloropropane	ND		0.0717	0.06817		mg/Kg	☼	95	20 - 146
1,3,5-Trimethylbenzene	ND		0.0717	0.06927		mg/Kg	☼	97	18 - 164
1,3-Dichlorobenzene	ND		0.0717	0.05820		mg/Kg	☼	81	10 - 162
1,3-Dichloropropane	ND		0.0717	0.06980		mg/Kg	☼	97	22 - 148
1,4-Dichlorobenzene	ND		0.0717	0.05851		mg/Kg	☼	82	11 - 159
2,2-Dichloropropane	ND		0.0717	0.07761		mg/Kg	☼	108	33 - 148
2-Butanone (MEK)	ND		0.359	0.2752		mg/Kg	☼	77	18 - 153
2-Chlorotoluene	ND		0.0717	0.06729		mg/Kg	☼	94	20 - 156
2-Hexanone	ND		0.359	0.3009		mg/Kg	☼	84	10 - 169
4-Chlorotoluene	ND		0.0717	0.06550		mg/Kg	☼	91	17 - 159
4-Methyl-2-pentanone (MIBK)	ND		0.359	0.3375		mg/Kg	☼	94	10 - 168
Acetone	ND		0.359	0.3385		mg/Kg	☼	79	19 - 175
Benzene	ND		0.0717	0.06711		mg/Kg	☼	94	31 - 143
Bromobenzene	ND		0.0717	0.06453		mg/Kg	☼	90	12 - 157
Bromochloromethane	ND		0.0717	0.07578		mg/Kg	☼	106	31 - 141
Bromodichloromethane	ND		0.0717	0.06728		mg/Kg	☼	94	19 - 148
Bromoform	ND		0.0717	0.05835		mg/Kg	☼	81	10 - 165
Bromomethane	ND		0.0717	0.05383		mg/Kg	☼	75	10 - 164
Carbon disulfide	ND		0.0717	0.07130		mg/Kg	☼	99	32 - 144
Carbon tetrachloride	ND		0.0717	0.06324		mg/Kg	☼	88	31 - 149
Chlorobenzene	ND		0.0717	0.06209		mg/Kg	☼	87	25 - 152
Chlorodibromomethane	ND		0.0717	0.06700		mg/Kg	☼	93	14 - 146
Chloroethane	ND		0.0717	0.06486		mg/Kg	☼	90	10 - 151
Chloroform	ND		0.0717	0.06457		mg/Kg	☼	90	34 - 160
Chloromethane	ND		0.0717	0.05052		mg/Kg	☼	70	10 - 156
cis-1,2-Dichloroethene	ND		0.0717	0.06855		mg/Kg	☼	96	36 - 139
cis-1,3-Dichloropropene	ND		0.0717	0.07523		mg/Kg	☼	105	15 - 166
Dibromomethane	ND		0.0717	0.07005		mg/Kg	☼	98	20 - 146
Dichlorodifluoromethane	ND		0.0717	0.05864		mg/Kg	☼	82	10 - 143
Ethylbenzene	ND		0.0717	0.06605		mg/Kg	☼	92	23 - 161
Hexachlorobutadiene	ND		0.0717	0.04487		mg/Kg	☼	63	10 - 171
Isopropylbenzene	ND		0.0717	0.07346		mg/Kg	☼	102	23 - 181
Methyl tert-butyl ether	ND		0.0717	0.08331		mg/Kg	☼	116	28 - 141
Methylene Chloride	ND		0.0717	0.06688		mg/Kg	☼	93	24 - 182
Naphthalene	ND		0.0717	0.02633		mg/Kg	☼	37	10 - 176
n-Butylbenzene	ND		0.0717	0.06446		mg/Kg	☼	90	10 - 175

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-6490-A-31-B MS
Matrix: Solid
Analysis Batch: 20787

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20311

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Propylbenzene	ND		0.0717	0.07111		mg/Kg	☼	99	19 - 162
p-Isopropyltoluene	ND		0.0717	0.08571		mg/Kg	☼	120	12 - 168
sec-Butylbenzene	ND		0.0717	0.06947		mg/Kg	☼	97	12 - 170
Styrene	ND		0.0717	0.05509		mg/Kg	☼	77	10 - 165
tert-Butylbenzene	ND		0.0717	0.07202		mg/Kg	☼	100	20 - 164
Tetrachloroethene	ND		0.0717	0.06879		mg/Kg	☼	96	33 - 161
Toluene	ND		0.0717	0.06631		mg/Kg	☼	92	30 - 155
trans-1,2-Dichloroethene	ND		0.0717	0.06890		mg/Kg	☼	96	39 - 140
trans-1,3-Dichloropropene	ND		0.0717	0.07468		mg/Kg	☼	104	10 - 157
Trichloroethene	ND		0.0717	0.06610		mg/Kg	☼	92	27 - 153
Trichlorofluoromethane	ND		0.0717	0.06549		mg/Kg	☼	91	25 - 140
Vinyl chloride	ND		0.0717	0.06369		mg/Kg	☼	89	20 - 141
Xylenes, Total	ND		0.215	0.1948		mg/Kg	☼	91	25 - 162

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: 490-6490-A-31-C MSD
Matrix: Solid
Analysis Batch: 20787

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 20311

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		0.0701	0.06854		mg/Kg	☼	98	19 - 158	7	50
1,1,1-Trichloroethane	ND		0.0701	0.07063		mg/Kg	☼	101	35 - 149	1	50
1,1,2,2-Tetrachloroethane	ND		0.0701	0.07316		mg/Kg	☼	104	10 - 162	6	50
1,1,2-Trichloroethane	ND		0.0701	0.07419		mg/Kg	☼	106	19 - 157	4	50
1,1-Dichloroethane	ND		0.0701	0.07262		mg/Kg	☼	104	42 - 136	3	50
Diisopropyl ether	ND		0.0701	0.07475		mg/Kg	☼	107	35 - 135	3	45
1,1-Dichloroethene	ND		0.0701	0.06876		mg/Kg	☼	98	41 - 143	2	50
1,1-Dichloropropene	ND		0.0701	0.06982		mg/Kg	☼	100	38 - 145	0	50
1,2,3-Trichlorobenzene	ND		0.0701	0.03235		mg/Kg	☼	46	10 - 157	1	50
1,2,3-Trichloropropane	ND		0.0701	0.07311		mg/Kg	☼	104	10 - 157	8	50
1,2,4-Trichlorobenzene	ND		0.0701	0.03834		mg/Kg	☼	55	10 - 167	2	50
1,2,4-Trimethylbenzene	ND		0.0701	0.07150		mg/Kg	☼	102	14 - 165	6	50
1,2-Dibromo-3-Chloropropane	ND		0.0701	0.04848		mg/Kg	☼	69	10 - 147	6	50
1,2-Dibromoethane (EDB)	ND		0.0701	0.07170		mg/Kg	☼	102	18 - 156	2	50
1,2-Dichlorobenzene	ND		0.0701	0.05972		mg/Kg	☼	85	10 - 160	6	50
1,2-Dichloroethane	ND		0.0701	0.07161		mg/Kg	☼	102	28 - 138	2	50
1,2-Dichloropropane	ND		0.0701	0.06859		mg/Kg	☼	98	20 - 146	1	50
1,3,5-Trimethylbenzene	ND		0.0701	0.07360		mg/Kg	☼	105	18 - 164	6	50
1,3-Dichlorobenzene	ND		0.0701	0.06340		mg/Kg	☼	90	10 - 162	9	50
1,3-Dichloropropane	ND		0.0701	0.07356		mg/Kg	☼	105	22 - 148	5	42
1,4-Dichlorobenzene	ND		0.0701	0.06248		mg/Kg	☼	89	11 - 159	7	50
2,2-Dichloropropane	ND		0.0701	0.07862		mg/Kg	☼	112	33 - 148	1	50
2-Butanone (MEK)	ND		0.351	0.2625		mg/Kg	☼	75	18 - 153	5	50
2-Chlorotoluene	ND		0.0701	0.07306		mg/Kg	☼	104	20 - 156	8	50

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-6490-A-31-C MSD
Matrix: Solid
Analysis Batch: 20787

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 20311

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	ND		0.351	0.3018		mg/Kg	☼	86	10 - 169	0	50
4-Chlorotoluene	ND		0.0701	0.07119		mg/Kg	☼	102	17 - 159	8	50
4-Methyl-2-pentanone (MIBK)	ND		0.351	0.3427		mg/Kg	☼	98	10 - 168	2	50
Acetone	ND		0.351	0.2883		mg/Kg	☼	66	19 - 175	16	50
Benzene	ND		0.0701	0.06833		mg/Kg	☼	97	31 - 143	2	50
Bromobenzene	ND		0.0701	0.06940		mg/Kg	☼	99	12 - 157	7	50
Bromochloromethane	ND		0.0701	0.07674		mg/Kg	☼	109	31 - 141	1	50
Bromodichloromethane	ND		0.0701	0.06966		mg/Kg	☼	99	19 - 148	3	50
Bromoform	ND		0.0701	0.06088		mg/Kg	☼	87	10 - 165	4	50
Bromomethane	ND		0.0701	0.06050		mg/Kg	☼	86	10 - 164	12	50
Carbon disulfide	ND		0.0701	0.07575		mg/Kg	☼	108	32 - 144	6	50
Carbon tetrachloride	ND		0.0701	0.06553		mg/Kg	☼	93	31 - 149	4	50
Chlorobenzene	ND		0.0701	0.06633		mg/Kg	☼	95	25 - 152	7	50
Chlorodibromomethane	ND		0.0701	0.07038		mg/Kg	☼	100	14 - 146	5	50
Chloroethane	ND		0.0701	0.06577		mg/Kg	☼	94	10 - 151	1	50
Chloroform	ND		0.0701	0.06607		mg/Kg	☼	94	34 - 160	2	49
Chloromethane	ND		0.0701	0.04985		mg/Kg	☼	71	10 - 156	1	50
cis-1,2-Dichloroethene	ND		0.0701	0.07096		mg/Kg	☼	101	36 - 139	3	50
cis-1,3-Dichloropropene	ND		0.0701	0.07916		mg/Kg	☼	113	15 - 166	5	50
Dibromomethane	ND		0.0701	0.07174		mg/Kg	☼	102	20 - 146	2	50
Dichlorodifluoromethane	ND		0.0701	0.05819		mg/Kg	☼	83	10 - 143	1	50
Ethylbenzene	ND		0.0701	0.06957		mg/Kg	☼	99	23 - 161	5	50
Hexachlorobutadiene	ND		0.0701	0.04111		mg/Kg	☼	59	10 - 171	9	50
Isopropylbenzene	ND		0.0701	0.07358		mg/Kg	☼	105	23 - 181	0	50
Methyl tert-butyl ether	ND		0.0701	0.08488		mg/Kg	☼	121	28 - 141	2	50
Methylene Chloride	ND		0.0701	0.06857		mg/Kg	☼	98	24 - 182	3	50
Naphthalene	ND		0.0701	0.02717		mg/Kg	☼	39	10 - 176	3	50
n-Butylbenzene	ND		0.0701	0.06445		mg/Kg	☼	92	10 - 175	0	50
N-Propylbenzene	ND		0.0701	0.07491		mg/Kg	☼	107	19 - 162	5	50
p-Isopropyltoluene	ND		0.0701	0.07019		mg/Kg	☼	100	12 - 168	20	50
sec-Butylbenzene	ND		0.0701	0.07121		mg/Kg	☼	102	12 - 170	2	50
Styrene	ND		0.0701	0.05678		mg/Kg	☼	81	10 - 165	3	50
tert-Butylbenzene	ND		0.0701	0.07611		mg/Kg	☼	109	20 - 164	6	50
Tetrachloroethene	ND		0.0701	0.07037		mg/Kg	☼	100	33 - 161	2	50
Toluene	ND		0.0701	0.07004		mg/Kg	☼	100	30 - 155	5	50
trans-1,2-Dichloroethene	ND		0.0701	0.07149		mg/Kg	☼	102	39 - 140	4	50
trans-1,3-Dichloropropene	ND		0.0701	0.07937		mg/Kg	☼	113	10 - 157	6	50
Trichloroethene	ND		0.0701	0.06856		mg/Kg	☼	98	27 - 153	4	50
Trichlorofluoromethane	ND		0.0701	0.06669		mg/Kg	☼	95	25 - 140	2	50
Vinyl chloride	ND		0.0701	0.06475		mg/Kg	☼	92	20 - 141	2	50
Xylenes, Total	ND		0.210	0.2036		mg/Kg	☼	97	25 - 162	4	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
Dibromofluoromethane (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-20787/7
Matrix: Solid
Analysis Batch: 20787

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.100	mg/Kg			09/18/12 11:54	1
1,1,1-Trichloroethane	ND		0.100	mg/Kg			09/18/12 11:54	1
1,1,2,2-Tetrachloroethane	ND		0.100	mg/Kg			09/18/12 11:54	1
1,1,2-Trichloroethane	ND		0.250	mg/Kg			09/18/12 11:54	1
1,1-Dichloroethane	ND		0.100	mg/Kg			09/18/12 11:54	1
Diisopropyl ether	ND		0.100	mg/Kg			09/18/12 11:54	1
1,1-Dichloroethene	ND		0.100	mg/Kg			09/18/12 11:54	1
1,1-Dichloropropene	ND		0.100	mg/Kg			09/18/12 11:54	1
1,2,3-Trichlorobenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
1,2,3-Trichloropropane	ND		0.100	mg/Kg			09/18/12 11:54	1
1,2,4-Trichlorobenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
1,2,4-Trimethylbenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
1,2-Dibromo-3-Chloropropane	ND		0.250	mg/Kg			09/18/12 11:54	1
1,2-Dibromoethane (EDB)	ND		0.100	mg/Kg			09/18/12 11:54	1
1,2-Dichlorobenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
1,2-Dichloroethane	ND		0.100	mg/Kg			09/18/12 11:54	1
1,2-Dichloropropane	ND		0.100	mg/Kg			09/18/12 11:54	1
1,3,5-Trimethylbenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
1,3-Dichlorobenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
1,3-Dichloropropane	ND		0.100	mg/Kg			09/18/12 11:54	1
1,4-Dichlorobenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
2,2-Dichloropropane	ND		0.100	mg/Kg			09/18/12 11:54	1
2-Butanone (MEK)	ND		2.50	mg/Kg			09/18/12 11:54	1
2-Chlorotoluene	ND		0.100	mg/Kg			09/18/12 11:54	1
2-Hexanone	ND		2.50	mg/Kg			09/18/12 11:54	1
4-Chlorotoluene	ND		0.100	mg/Kg			09/18/12 11:54	1
4-Methyl-2-pentanone (MIBK)	ND		2.50	mg/Kg			09/18/12 11:54	1
Acetone	ND		2.50	mg/Kg			09/18/12 11:54	1
Benzene	ND		0.100	mg/Kg			09/18/12 11:54	1
Bromobenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
Bromochloromethane	ND		0.100	mg/Kg			09/18/12 11:54	1
Bromodichloromethane	ND		0.100	mg/Kg			09/18/12 11:54	1
Bromoform	ND		0.100	mg/Kg			09/18/12 11:54	1
Bromomethane	ND		0.100	mg/Kg			09/18/12 11:54	1
Carbon disulfide	ND		0.250	mg/Kg			09/18/12 11:54	1
Carbon tetrachloride	ND		0.100	mg/Kg			09/18/12 11:54	1
Chlorobenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
Chlorodibromomethane	ND		0.100	mg/Kg			09/18/12 11:54	1
Chloroethane	ND		0.250	mg/Kg			09/18/12 11:54	1
Chloroform	ND		0.100	mg/Kg			09/18/12 11:54	1
Chloromethane	ND		0.100	mg/Kg			09/18/12 11:54	1
cis-1,2-Dichloroethene	ND		0.100	mg/Kg			09/18/12 11:54	1
cis-1,3-Dichloropropene	ND		0.100	mg/Kg			09/18/12 11:54	1
Dibromomethane	ND		0.100	mg/Kg			09/18/12 11:54	1
Dichlorodifluoromethane	ND		0.100	mg/Kg			09/18/12 11:54	1
Ethylbenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
Hexachlorobutadiene	ND		0.250	mg/Kg			09/18/12 11:54	1
Isopropylbenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
Methyl tert-butyl ether	ND		0.100	mg/Kg			09/18/12 11:54	1

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-20787/7
Matrix: Solid
Analysis Batch: 20787

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		0.500	mg/Kg			09/18/12 11:54	1
Naphthalene	ND		0.250	mg/Kg			09/18/12 11:54	1
n-Butylbenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
N-Propylbenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
p-Isopropyltoluene	ND		0.100	mg/Kg			09/18/12 11:54	1
sec-Butylbenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
Styrene	ND		0.100	mg/Kg			09/18/12 11:54	1
tert-Butylbenzene	ND		0.100	mg/Kg			09/18/12 11:54	1
Tetrachloroethene	ND		0.100	mg/Kg			09/18/12 11:54	1
Toluene	ND		0.100	mg/Kg			09/18/12 11:54	1
trans-1,2-Dichloroethene	ND		0.100	mg/Kg			09/18/12 11:54	1
trans-1,3-Dichloropropene	ND		0.100	mg/Kg			09/18/12 11:54	1
Trichloroethene	ND		0.100	mg/Kg			09/18/12 11:54	1
Trichlorofluoromethane	ND		0.100	mg/Kg			09/18/12 11:54	1
Vinyl chloride	ND		0.100	mg/Kg			09/18/12 11:54	1
Xylenes, Total	ND		0.250	mg/Kg			09/18/12 11:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*09/18/12 11:54*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*09/18/12 11:54*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*09/18/12 11:54*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/18/12 11:54*	*1*

Lab Sample ID: LCS 490-20787/3
Matrix: Solid
Analysis Batch: 20787

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.0500	0.05145		mg/Kg		103	80 - 136
1,1,1-Trichloroethane	0.0500	0.05543		mg/Kg		111	72 - 140
1,1,2,2-Tetrachloroethane	0.0500	0.04874		mg/Kg		97	66 - 134
1,1,2-Trichloroethane	0.0500	0.05226		mg/Kg		105	78 - 128
1,1-Dichloroethane	0.0500	0.05504		mg/Kg		110	75 - 124
Diisopropyl ether	0.0500	0.05347		mg/Kg		107	68 - 124
1,1-Dichloroethene	0.0500	0.05499		mg/Kg		110	75 - 131
1,1-Dichloropropene	0.0500	0.05495		mg/Kg		110	79 - 127
1,2,3-Trichlorobenzene	0.0500	0.05559		mg/Kg		111	70 - 150
1,2,3-Trichloropropane	0.0500	0.04805		mg/Kg		96	65 - 139
1,2,4-Trichlorobenzene	0.0500	0.05697		mg/Kg		114	62 - 150
1,2,4-Trimethylbenzene	0.0500	0.05502		mg/Kg		110	77 - 139
1,2-Dibromo-3-Chloropropane	0.0500	0.04726		mg/Kg		95	49 - 142
1,2-Dibromoethane (EDB)	0.0500	0.05237		mg/Kg		105	80 - 135
1,2-Dichlorobenzene	0.0500	0.05412		mg/Kg		108	80 - 134
1,2-Dichloroethane	0.0500	0.05123		mg/Kg		102	65 - 134
1,2-Dichloropropane	0.0500	0.05120		mg/Kg		102	69 - 120
1,3,5-Trimethylbenzene	0.0500	0.05469		mg/Kg		109	78 - 138
1,3-Dichlorobenzene	0.0500	0.05466		mg/Kg		109	79 - 137
1,3-Dichloropropane	0.0500	0.05110		mg/Kg		102	78 - 126
1,4-Dichlorobenzene	0.0500	0.05436		mg/Kg		109	77 - 139

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-20787/3
Matrix: Solid
Analysis Batch: 20787

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,2-Dichloropropane	0.0500	0.06260		mg/Kg		125	68 - 145
2-Butanone (MEK)	0.250	0.2268		mg/Kg		91	61 - 132
2-Chlorotoluene	0.0500	0.05376		mg/Kg		108	78 - 132
2-Hexanone	0.250	0.2424		mg/Kg		97	57 - 148
4-Chlorotoluene	0.0500	0.05402		mg/Kg		108	77 - 138
4-Methyl-2-pentanone (MIBK)	0.250	0.2432		mg/Kg		97	59 - 138
Acetone	0.250	0.2228		mg/Kg		89	51 - 149
Benzene	0.0500	0.05334		mg/Kg		107	75 - 127
Bromobenzene	0.0500	0.05385		mg/Kg		108	75 - 130
Bromochloromethane	0.0500	0.05578		mg/Kg		112	70 - 132
Bromodichloromethane	0.0500	0.05191		mg/Kg		104	68 - 135
Bromoform	0.0500	0.04747		mg/Kg		95	36 - 150
Bromomethane	0.0500	0.04893		mg/Kg		98	43 - 142
Carbon disulfide	0.0500	0.05230		mg/Kg		105	74 - 135
Carbon tetrachloride	0.0500	0.05224		mg/Kg		104	70 - 141
Chlorobenzene	0.0500	0.05287		mg/Kg		106	84 - 125
Chlorodibromomethane	0.0500	0.05245		mg/Kg		105	66 - 134
Chloroethane	0.0500	0.05068		mg/Kg		101	53 - 144
Chloroform	0.0500	0.04899		mg/Kg		98	76 - 130
Chloromethane	0.0500	0.04332		mg/Kg		87	23 - 150
cis-1,2-Dichloroethene	0.0500	0.05372		mg/Kg		107	75 - 125
cis-1,3-Dichloropropene	0.0500	0.05895		mg/Kg		118	73 - 148
Dibromomethane	0.0500	0.05039		mg/Kg		101	71 - 130
Dichlorodifluoromethane	0.0500	0.04631		mg/Kg		93	12 - 144
Ethylbenzene	0.0500	0.05459		mg/Kg		109	80 - 134
Hexachlorobutadiene	0.0500	0.05127		mg/Kg		103	65 - 148
Isopropylbenzene	0.0500	0.05877		mg/Kg		118	80 - 150
Methyl tert-butyl ether	0.0500	0.05734		mg/Kg		115	70 - 136
Methylene Chloride	0.0500	0.05230		mg/Kg		105	68 - 144
Naphthalene	0.0500	0.05350		mg/Kg		107	69 - 150
n-Butylbenzene	0.0500	0.05623		mg/Kg		112	72 - 152
N-Propylbenzene	0.0500	0.05370		mg/Kg		107	75 - 137
p-Isopropyltoluene	0.0500	0.05390		mg/Kg		108	77 - 141
sec-Butylbenzene	0.0500	0.05438		mg/Kg		109	79 - 141
Styrene	0.0500	0.05675		mg/Kg		113	82 - 137
tert-Butylbenzene	0.0500	0.05454		mg/Kg		109	80 - 132
Tetrachloroethene	0.0500	0.05562		mg/Kg		111	78 - 140
Toluene	0.0500	0.05296		mg/Kg		106	80 - 132
trans-1,2-Dichloroethene	0.0500	0.05591		mg/Kg		112	76 - 128
trans-1,3-Dichloropropene	0.0500	0.05986		mg/Kg		120	62 - 139
Trichloroethene	0.0500	0.05352		mg/Kg		107	77 - 127
Trichlorofluoromethane	0.0500	0.04876		mg/Kg		98	50 - 140
Vinyl chloride	0.0500	0.05183		mg/Kg		104	47 - 136
Xylenes, Total	0.150	0.1631		mg/Kg		109	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-20787/3
Matrix: Solid
Analysis Batch: 20787

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCSD 490-20787/4
Matrix: Solid
Analysis Batch: 20787

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.0500	0.05056		mg/Kg		101	80 - 136	2	50
1,1,1-Trichloroethane	0.0500	0.05199		mg/Kg		104	72 - 140	6	50
1,1,2,2-Tetrachloroethane	0.0500	0.04933		mg/Kg		99	66 - 134	1	50
1,1,2-Trichloroethane	0.0500	0.05201		mg/Kg		104	78 - 128	0	50
1,1-Dichloroethane	0.0500	0.05203		mg/Kg		104	75 - 124	6	50
Diisopropyl ether	0.0500	0.05204		mg/Kg		104	68 - 124	3	45
1,1-Dichloroethene	0.0500	0.05147		mg/Kg		103	75 - 131	7	50
1,1-Dichloropropene	0.0500	0.05158		mg/Kg		103	79 - 127	6	50
1,2,3-Trichlorobenzene	0.0500	0.05383		mg/Kg		108	70 - 150	3	50
1,2,3-Trichloropropane	0.0500	0.04897		mg/Kg		98	65 - 139	2	50
1,2,4-Trichlorobenzene	0.0500	0.05514		mg/Kg		110	62 - 150	3	50
1,2,4-Trimethylbenzene	0.0500	0.05231		mg/Kg		105	77 - 139	5	50
1,2-Dibromo-3-Chloropropane	0.0500	0.04840		mg/Kg		97	49 - 142	2	50
1,2-Dibromoethane (EDB)	0.0500	0.05193		mg/Kg		104	80 - 135	1	50
1,2-Dichlorobenzene	0.0500	0.05190		mg/Kg		104	80 - 134	4	50
1,2-Dichloroethane	0.0500	0.05046		mg/Kg		101	65 - 134	2	50
1,2-Dichloropropane	0.0500	0.04959		mg/Kg		99	69 - 120	3	50
1,3,5-Trimethylbenzene	0.0500	0.05206		mg/Kg		104	78 - 138	5	50
1,3-Dichlorobenzene	0.0500	0.05233		mg/Kg		105	79 - 137	4	50
1,3-Dichloropropane	0.0500	0.05105		mg/Kg		102	78 - 126	0	42
1,4-Dichlorobenzene	0.0500	0.05148		mg/Kg		103	77 - 139	5	50
2,2-Dichloropropane	0.0500	0.05749		mg/Kg		115	68 - 145	9	50
2-Butanone (MEK)	0.250	0.2114		mg/Kg		85	61 - 132	7	50
2-Chlorotoluene	0.0500	0.05062		mg/Kg		101	78 - 132	6	50
2-Hexanone	0.250	0.2418		mg/Kg		97	57 - 148	0	50
4-Chlorotoluene	0.0500	0.05120		mg/Kg		102	77 - 138	5	50
4-Methyl-2-pentanone (MIBK)	0.250	0.2479		mg/Kg		99	59 - 138	2	50
Acetone	0.250	0.1971		mg/Kg		79	51 - 149	12	50
Benzene	0.0500	0.05060		mg/Kg		101	75 - 127	5	50
Bromobenzene	0.0500	0.05170		mg/Kg		103	75 - 130	4	50
Bromochloromethane	0.0500	0.05506		mg/Kg		110	70 - 132	1	50
Bromodichloromethane	0.0500	0.04958		mg/Kg		99	68 - 135	5	50
Bromoform	0.0500	0.04905		mg/Kg		98	36 - 150	3	50
Bromomethane	0.0500	0.04493		mg/Kg		90	43 - 142	9	50
Carbon disulfide	0.0500	0.04913		mg/Kg		98	74 - 135	6	50
Carbon tetrachloride	0.0500	0.04802		mg/Kg		96	70 - 141	8	50
Chlorobenzene	0.0500	0.05008		mg/Kg		100	84 - 125	5	50
Chlorodibromomethane	0.0500	0.05201		mg/Kg		104	66 - 134	1	50
Chloroethane	0.0500	0.04696		mg/Kg		94	53 - 144	8	50
Chloroform	0.0500	0.04750		mg/Kg		95	76 - 130	3	49
Chloromethane	0.0500	0.04292		mg/Kg		86	23 - 150	1	50
cis-1,2-Dichloroethene	0.0500	0.05171		mg/Kg		103	75 - 125	4	50

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-20787/4
Matrix: Solid
Analysis Batch: 20787

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	0.0500	0.05867		mg/Kg		117	73 - 148	0	50
Dibromomethane	0.0500	0.05085		mg/Kg		102	71 - 130	1	50
Dichlorodifluoromethane	0.0500	0.04161		mg/Kg		83	12 - 144	11	50
Ethylbenzene	0.0500	0.05177		mg/Kg		104	80 - 134	5	50
Hexachlorobutadiene	0.0500	0.05093		mg/Kg		102	65 - 148	1	50
Isopropylbenzene	0.0500	0.05771		mg/Kg		115	80 - 150	2	50
Methyl tert-butyl ether	0.0500	0.05759		mg/Kg		115	70 - 136	0	50
Methylene Chloride	0.0500	0.04860		mg/Kg		97	68 - 144	7	50
Naphthalene	0.0500	0.05325		mg/Kg		106	69 - 150	0	50
n-Butylbenzene	0.0500	0.05358		mg/Kg		107	72 - 152	5	50
N-Propylbenzene	0.0500	0.05089		mg/Kg		102	75 - 137	5	50
p-Isopropyltoluene	0.0500	0.05204		mg/Kg		104	77 - 141	4	50
sec-Butylbenzene	0.0500	0.05183		mg/Kg		104	79 - 141	5	50
Styrene	0.0500	0.05438		mg/Kg		109	82 - 137	4	50
tert-Butylbenzene	0.0500	0.05201		mg/Kg		104	80 - 132	5	50
Tetrachloroethene	0.0500	0.05189		mg/Kg		104	78 - 140	7	50
Toluene	0.0500	0.05042		mg/Kg		101	80 - 132	5	50
trans-1,2-Dichloroethene	0.0500	0.05228		mg/Kg		105	76 - 128	7	50
trans-1,3-Dichloropropene	0.0500	0.05919		mg/Kg		118	62 - 139	1	50
Trichloroethene	0.0500	0.05066		mg/Kg		101	77 - 127	5	50
Trichlorofluoromethane	0.0500	0.04607		mg/Kg		92	50 - 140	6	50
Vinyl chloride	0.0500	0.04712		mg/Kg		94	47 - 136	10	50
Xylenes, Total	0.150	0.1548		mg/Kg		103	80 - 137	5	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Dibromofluoromethane (Surr)	*99*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-19587/1-A
Matrix: Solid
Analysis Batch: 19727

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19587

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
1,2-Dichlorobenzene	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
1,3-Dichlorobenzene	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
1,4-Dichlorobenzene	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
1-Methylnaphthalene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
2,4,5-Trichlorophenol	ND		0.833	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
2,4,6-Trichlorophenol	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
2,4-Dichlorophenol	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
2,4-Dimethylphenol	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
2,4-Dinitrophenol	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
2,4-Dinitrotoluene	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
2,6-Dinitrotoluene	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-19587/1-A
Matrix: Solid
Analysis Batch: 19727

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19587

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
2-Chlorophenol	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
2-Methylnaphthalene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
2-Methylphenol	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
2-Nitroaniline	ND		0.833	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
2-Nitrophenol	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
3,3'-Dichlorobenzidine	ND		0.667	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
3 & 4 Methylphenol	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
3-Nitroaniline	ND		0.833	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
4,6-Dinitro-2-methylphenol	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
4-Bromophenyl phenyl ether	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
4-Chloro-3-methylphenol	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
4-Chlorophenyl phenyl ether	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
4-Chloroaniline	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
4-Nitroaniline	ND		0.833	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
4-Nitrophenol	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Acenaphthylene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Acenaphthene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Benzo[a]anthracene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Benzo[a]pyrene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Benzo[b]fluoranthene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Benzo[g,h,i]perylene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Benzo[k]fluoranthene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Anthracene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Bis(2-chloroethoxy)methane	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Bis(2-chloroethyl)ether	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Bis(2-ethylhexyl) phthalate	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
bis (2-chloroisopropyl) ether	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Butyl benzyl phthalate	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Carbazole	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Chrysene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Cresols	ND		0.666	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Dibenz(a,h)anthracene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Dibenzofuran	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Diethyl phthalate	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Dimethyl phthalate	ND		1.67	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Di-n-butyl phthalate	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Di-n-octyl phthalate	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Fluoranthene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Fluorene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Hexachlorobenzene	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Hexachlorobutadiene	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Hexachlorocyclopentadiene	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Hexachloroethane	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Indeno[1,2,3-cd]pyrene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Isophorone	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Naphthalene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Nitrobenzene	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
N-Nitrosodi-n-propylamine	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-19587/1-A
Matrix: Solid
Analysis Batch: 19727

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19587

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Pentachlorophenol	ND		0.833	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Phenanthrene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Phenol	ND		0.333	mg/Kg		09/13/12 09:16	09/13/12 21:38	1
Pyrene	ND		0.0670	mg/Kg		09/13/12 09:16	09/13/12 21:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*57*		*10 - 120*	*09/13/12 09:16*	*09/13/12 21:38*	*1*
2-Fluorobiphenyl (Surr)	*49*		*29 - 120*	*09/13/12 09:16*	*09/13/12 21:38*	*1*
2-Fluorophenol (Surr)	*46*		*10 - 120*	*09/13/12 09:16*	*09/13/12 21:38*	*1*
Nitrobenzene-d5 (Surr)	*46*		*27 - 120*	*09/13/12 09:16*	*09/13/12 21:38*	*1*
Phenol-d5 (Surr)	*45*		*10 - 120*	*09/13/12 09:16*	*09/13/12 21:38*	*1*
Terphenyl-d14 (Surr)	*71*		*13 - 120*	*09/13/12 09:16*	*09/13/12 21:38*	*1*

Lab Sample ID: LCS 490-19587/2-A
Matrix: Solid
Analysis Batch: 19727

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19587

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1.67	0.8991		mg/Kg		54	29 - 120
1,2-Dichlorobenzene	1.67	0.9875		mg/Kg		59	33 - 120
1,3-Dichlorobenzene	1.67	0.9911		mg/Kg		59	32 - 120
1,4-Dichlorobenzene	1.67	0.9719		mg/Kg		58	32 - 120
1-Methylnaphthalene	1.67	0.9596		mg/Kg		58	32 - 120
2,4,5-Trichlorophenol	1.67	1.205		mg/Kg		72	39 - 120
2,4,6-Trichlorophenol	1.67	1.207		mg/Kg		72	39 - 120
2,4-Dichlorophenol	1.67	0.9819		mg/Kg		59	32 - 120
2,4-Dimethylphenol	1.67	1.081		mg/Kg		65	32 - 120
2,4-Dinitrophenol	1.67	1.227		mg/Kg		74	23 - 142
2,4-Dinitrotoluene	1.67	1.256		mg/Kg		75	43 - 120
2,6-Dinitrotoluene	1.67	1.307		mg/Kg		78	43 - 120
2-Chloronaphthalene	1.67	1.112		mg/Kg		67	34 - 120
2-Chlorophenol	1.67	1.023		mg/Kg		61	32 - 120
2-Methylnaphthalene	1.67	0.9804		mg/Kg		59	28 - 120
2-Methylphenol	1.67	1.189		mg/Kg		71	36 - 120
2-Nitroaniline	1.67	1.249		mg/Kg		75	40 - 120
2-Nitrophenol	1.67	1.001		mg/Kg		60	29 - 120
3,3'-Dichlorobenzidine	1.67	1.217		mg/Kg		73	39 - 120
3 & 4 Methylphenol	1.67	1.126		mg/Kg		68	37 - 120
3-Nitroaniline	1.67	1.298		mg/Kg		78	42 - 120
4,6-Dinitro-2-methylphenol	1.67	1.158		mg/Kg		69	27 - 134
4-Bromophenyl phenyl ether	1.67	1.148		mg/Kg		69	40 - 120
4-Chloro-3-methylphenol	1.67	1.078		mg/Kg		65	38 - 120
4-Chlorophenyl phenyl ether	1.67	1.164		mg/Kg		70	42 - 120
4-Chloroaniline	1.67	1.098		mg/Kg		66	35 - 120
4-Nitroaniline	1.67	1.213		mg/Kg		73	43 - 120
4-Nitrophenol	1.67	1.216		mg/Kg		73	32 - 136
Acenaphthylene	1.67	1.219		mg/Kg		73	38 - 120
Acenaphthene	1.67	1.125		mg/Kg		67	36 - 120

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-19587/2-A
Matrix: Solid
Analysis Batch: 19727

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19587

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	1.67	1.209		mg/Kg		73	45 - 120
Benzo[a]pyrene	1.67	1.240		mg/Kg		74	45 - 120
Benzo[b]fluoranthene	1.67	1.147		mg/Kg		69	42 - 120
Benzo[g,h,i]perylene	1.67	1.174		mg/Kg		70	38 - 120
Benzo[k]fluoranthene	1.67	1.215		mg/Kg		73	42 - 120
Anthracene	1.67	1.188		mg/Kg		71	46 - 124
Bis(2-chloroethoxy)methane	1.67	0.9879		mg/Kg		59	32 - 120
Bis(2-chloroethyl)ether	1.67	0.9772		mg/Kg		59	31 - 120
Bis(2-ethylhexyl) phthalate	1.67	1.310		mg/Kg		79	43 - 120
bis (2-chloroisopropyl) ether	1.67	1.027		mg/Kg		62	32 - 120
Butyl benzyl phthalate	1.67	1.254		mg/Kg		75	43 - 133
Carbazole	1.67	1.265		mg/Kg		76	44 - 120
Chrysene	1.67	1.154		mg/Kg		69	43 - 120
Cresols	3.33	2.315		mg/Kg		69	49 - 129
Dibenz(a,h)anthracene	1.67	1.142		mg/Kg		69	32 - 128
Dibenzofuran	1.67	1.208		mg/Kg		73	41 - 120
Diethyl phthalate	1.67	1.211		mg/Kg		73	41 - 122
Dimethyl phthalate	1.67	ND		mg/Kg		69	55 - 120
Di-n-butyl phthalate	1.67	1.204		mg/Kg		72	46 - 127
Di-n-octyl phthalate	1.67	1.325		mg/Kg		80	40 - 130
Fluoranthene	1.67	1.204		mg/Kg		72	46 - 120
Fluorene	1.67	1.184		mg/Kg		71	42 - 120
Hexachlorobenzene	1.67	1.162		mg/Kg		70	44 - 120
Hexachlorobutadiene	1.67	0.9634		mg/Kg		58	31 - 120
Hexachlorocyclopentadiene	1.67	0.9410		mg/Kg		56	24 - 120
Hexachloroethane	1.67	0.9591		mg/Kg		58	33 - 120
Indeno[1,2,3-cd]pyrene	1.67	1.159		mg/Kg		70	41 - 121
Isophorone	1.67	0.9608		mg/Kg		58	33 - 120
Naphthalene	1.67	1.010		mg/Kg		61	32 - 120
Nitrobenzene	1.67	0.9668		mg/Kg		58	26 - 120
N-Nitrosodi-n-propylamine	1.67	1.130		mg/Kg		68	35 - 120
n-Nitrosodiphenylamine(as diphenylamine)	1.67	1.444		mg/Kg		87	52 - 140
Pentachlorophenol	1.67	1.187		mg/Kg		71	44 - 134
Phenanthrene	1.67	1.174		mg/Kg		70	45 - 120
Phenol	1.67	0.9797		mg/Kg		59	30 - 120
Pyrene	1.67	1.232		mg/Kg		74	43 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*68*		*10 - 120*
2-Fluorobiphenyl (Surr)	*55*		*29 - 120*
2-Fluorophenol (Surr)	*48*		*10 - 120*
Nitrobenzene-d5 (Surr)	*47*		*27 - 120*
Phenol-d5 (Surr)	*54*		*10 - 120*
Terphenyl-d14 (Surr)	*74*		*13 - 120*

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-6232-B-1-C MS
Matrix: Solid
Analysis Batch: 19725

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 19587

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND		1.65	0.9208		mg/Kg		56	14 - 120
1,2-Dichlorobenzene	ND		1.65	0.9481		mg/Kg		57	10 - 120
1,3-Dichlorobenzene	ND		1.65	0.9362		mg/Kg		57	10 - 120
1,4-Dichlorobenzene	ND		1.65	0.9087		mg/Kg		55	10 - 120
1-Methylnaphthalene	ND		1.65	0.9797		mg/Kg		59	10 - 120
2,4,5-Trichlorophenol	ND		1.65	1.010		mg/Kg		61	27 - 120
2,4,6-Trichlorophenol	ND		1.65	1.207		mg/Kg		73	24 - 122
2,4-Dichlorophenol	ND		1.65	0.9788		mg/Kg		59	17 - 120
2,4-Dimethylphenol	ND		1.65	1.147		mg/Kg		69	17 - 120
2,4-Dinitrophenol	ND		1.65	ND		mg/Kg		16	10 - 150
2,4-Dinitrotoluene	ND		1.65	1.033		mg/Kg		62	24 - 121
2,6-Dinitrotoluene	ND		1.65	1.201		mg/Kg		73	24 - 120
2-Chloronaphthalene	ND		1.65	1.138		mg/Kg		69	24 - 120
2-Chlorophenol	ND		1.65	1.032		mg/Kg		62	25 - 120
2-Methylnaphthalene	ND		1.65	1.033		mg/Kg		63	13 - 120
2-Methylphenol	ND		1.65	1.182		mg/Kg		72	23 - 120
2-Nitroaniline	ND		1.65	1.221		mg/Kg		74	31 - 120
2-Nitrophenol	ND		1.65	1.003		mg/Kg		61	23 - 120
3,3'-Dichlorobenzidine	ND		1.65	0.9639		mg/Kg		58	10 - 120
3 & 4 Methylphenol	ND		1.65	1.155		mg/Kg		70	19 - 120
3-Nitroaniline	ND		1.65	1.109		mg/Kg		67	31 - 120
4,6-Dinitro-2-methylphenol	ND		1.65	0.4058		mg/Kg		25	10 - 134
4-Bromophenyl phenyl ether	ND		1.65	1.115		mg/Kg		67	31 - 120
4-Chloro-3-methylphenol	ND		1.65	1.101		mg/Kg		67	21 - 120
4-Chlorophenyl phenyl ether	ND		1.65	1.092		mg/Kg		66	26 - 120
4-Chloroaniline	ND		1.65	1.069		mg/Kg		65	26 - 120
4-Nitroaniline	ND		1.65	0.9705		mg/Kg		59	28 - 120
4-Nitrophenol	ND		1.65	0.6820		mg/Kg		41	16 - 139
Acenaphthylene	ND		1.65	1.150		mg/Kg		70	25 - 120
Acenaphthene	ND		1.65	1.065		mg/Kg		64	19 - 120
Benzo[a]anthracene	ND		1.65	1.179		mg/Kg		71	23 - 120
Benzo[a]pyrene	ND		1.65	1.140		mg/Kg		69	15 - 128
Benzo[b]fluoranthene	ND		1.65	1.046		mg/Kg		63	12 - 133
Benzo[g,h,i]perylene	ND		1.65	0.9601		mg/Kg		58	22 - 120
Benzo[k]fluoranthene	ND		1.65	1.112		mg/Kg		67	28 - 120
Anthracene	ND		1.65	1.142		mg/Kg		69	28 - 125
Bis(2-chloroethoxy)methane	ND		1.65	0.9992		mg/Kg		60	24 - 120
Bis(2-chloroethyl)ether	ND		1.65	2.099	F	mg/Kg		127	22 - 120
Bis(2-ethylhexyl) phthalate	ND		1.65	1.325		mg/Kg		77	26 - 120
bis (2-chloroisopropyl) ether	ND		1.65	0.9798		mg/Kg		59	20 - 120
Butyl benzyl phthalate	ND		1.65	1.258		mg/Kg		76	24 - 133
Carbazole	ND		1.65	1.171		mg/Kg		71	25 - 123
Chrysene	ND		1.65	1.064		mg/Kg		64	20 - 120
Cresols	ND		3.31	2.337		mg/Kg		71	10 - 200
Dibenz(a,h)anthracene	ND		1.65	1.001		mg/Kg		61	12 - 128
Dibenzofuran	ND		1.65	1.130		mg/Kg		68	21 - 120
Diethyl phthalate	ND		1.65	1.076		mg/Kg		65	29 - 122
Dimethyl phthalate	ND		1.65	ND		mg/Kg		67	30 - 120
Di-n-butyl phthalate	ND		1.65	1.156		mg/Kg		70	29 - 126

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-6232-B-1-C MS
Matrix: Solid
Analysis Batch: 19725

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 19587

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Di-n-octyl phthalate	ND		1.65	1.357		mg/Kg		82	27 - 130
Fluoranthene	ND		1.65	1.090		mg/Kg		66	10 - 143
Fluorene	ND		1.65	1.094		mg/Kg		66	20 - 120
Hexachlorobenzene	ND		1.65	1.233		mg/Kg		70	25 - 120
Hexachlorobutadiene	ND		1.65	0.9971		mg/Kg		60	10 - 120
Hexachlorocyclopentadiene	ND		1.65	ND	F	mg/Kg		0	10 - 120
Hexachloroethane	ND		1.65	0.8644		mg/Kg		52	10 - 120
Indeno[1,2,3-cd]pyrene	ND		1.65	1.013		mg/Kg		61	22 - 121
Isophorone	ND		1.65	0.9241		mg/Kg		56	24 - 120
Naphthalene	ND		1.65	1.028		mg/Kg		62	10 - 120
Nitrobenzene	ND		1.65	0.9398		mg/Kg		57	19 - 120
N-Nitrosodi-n-propylamine	ND		1.65	1.047		mg/Kg		63	24 - 120
n-Nitrosodiphenylamine(as diphenylamine)	ND		1.65	1.399		mg/Kg		85	26 - 150
Pentachlorophenol	ND		1.65	ND		mg/Kg		33	19 - 145
Phenanthrene	ND		1.65	1.124		mg/Kg		68	21 - 122
Phenol	ND		1.65	1.063		mg/Kg		64	15 - 120
Pyrene	ND		1.65	1.199		mg/Kg		73	20 - 123

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*57*		*10 - 120*
2-Fluorobiphenyl (Surr)	*37*		*29 - 120*
2-Fluorophenol (Surr)	*47*		*10 - 120*
Nitrobenzene-d5 (Surr)	*41*		*27 - 120*
Phenol-d5 (Surr)	*52*		*10 - 120*
Terphenyl-d14 (Surr)	*64*		*13 - 120*

Lab Sample ID: 490-6232-B-1-D MSD
Matrix: Solid
Analysis Batch: 19725

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 19587

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND		1.65	0.9570		mg/Kg		58	14 - 120	4	50
1,2-Dichlorobenzene	ND		1.65	1.016		mg/Kg		62	10 - 120	7	50
1,3-Dichlorobenzene	ND		1.65	1.007		mg/Kg		61	10 - 120	7	50
1,4-Dichlorobenzene	ND		1.65	0.9954		mg/Kg		61	10 - 120	9	50
1-Methylnaphthalene	ND		1.65	1.031		mg/Kg		63	10 - 120	5	50
2,4,5-Trichlorophenol	ND		1.65	1.208		mg/Kg		73	27 - 120	18	50
2,4,6-Trichlorophenol	ND		1.65	1.346		mg/Kg		82	24 - 122	11	50
2,4-Dichlorophenol	ND		1.65	1.022		mg/Kg		62	17 - 120	4	50
2,4-Dimethylphenol	ND		1.65	1.182		mg/Kg		72	17 - 120	3	50
2,4-Dinitrophenol	ND		1.65	ND		mg/Kg		14	10 - 150	12	50
2,4-Dinitrotoluene	ND		1.65	1.135		mg/Kg		69	24 - 121	9	50
2,6-Dinitrotoluene	ND		1.65	1.293		mg/Kg		79	24 - 120	7	50
2-Chloronaphthalene	ND		1.65	1.190		mg/Kg		72	24 - 120	5	50
2-Chlorophenol	ND		1.65	1.103		mg/Kg		67	25 - 120	7	50
2-Methylnaphthalene	ND		1.65	1.066		mg/Kg		65	13 - 120	3	50
2-Methylphenol	ND		1.65	1.289		mg/Kg		78	23 - 120	9	50
2-Nitroaniline	ND		1.65	1.296		mg/Kg		79	31 - 120	6	50
2-Nitrophenol	ND		1.65	1.024		mg/Kg		62	23 - 120	2	50

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-6232-B-1-D MSD
Matrix: Solid
Analysis Batch: 19725

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 19587

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
3,3'-Dichlorobenzidine	ND		1.65	1.082		mg/Kg		66	10 - 120	12	50
3 & 4 Methylphenol	ND		1.65	1.252		mg/Kg		76	19 - 120	8	50
3-Nitroaniline	ND		1.65	1.286		mg/Kg		78	31 - 120	15	49
4,6-Dinitro-2-methylphenol	ND		1.65	ND		mg/Kg		18	10 - 134	29	50
4-Bromophenyl phenyl ether	ND		1.65	1.187		mg/Kg		72	31 - 120	6	37
4-Chloro-3-methylphenol	ND		1.65	1.175		mg/Kg		71	21 - 120	6	49
4-Chlorophenyl phenyl ether	ND		1.65	1.193		mg/Kg		73	26 - 120	9	50
4-Chloroaniline	ND		1.65	1.116		mg/Kg		68	26 - 120	4	50
4-Nitroaniline	ND		1.65	1.094		mg/Kg		66	28 - 120	12	49
4-Nitrophenol	ND		1.65	0.6446		mg/Kg		39	16 - 139	6	45
Acenaphthylene	ND		1.65	1.249		mg/Kg		76	25 - 120	8	50
Acenaphthene	ND		1.65	1.133		mg/Kg		69	19 - 120	6	50
Benzo[a]anthracene	ND		1.65	1.251		mg/Kg		76	23 - 120	6	50
Benzo[a]pyrene	ND		1.65	1.255		mg/Kg		76	15 - 128	10	50
Benzo[b]fluoranthene	ND		1.65	1.171		mg/Kg		71	12 - 133	11	50
Benzo[g,h,i]perylene	ND		1.65	1.032		mg/Kg		63	22 - 120	7	50
Benzo[k]fluoranthene	ND		1.65	1.222		mg/Kg		74	28 - 120	9	45
Anthracene	ND		1.65	1.211		mg/Kg		74	28 - 125	6	49
Bis(2-chloroethoxy)methane	ND		1.65	1.010		mg/Kg		61	24 - 120	1	50
Bis(2-chloroethyl)ether	ND		1.65	2.257	F	mg/Kg		137	22 - 120	7	50
Bis(2-ethylhexyl) phthalate	ND		1.65	2.276	F	mg/Kg		135	26 - 120	53	50
bis (2-chloroisopropyl) ether	ND		1.65	1.065		mg/Kg		65	20 - 120	8	50
Butyl benzyl phthalate	ND		1.65	1.327		mg/Kg		81	24 - 133	5	50
Carbazole	ND		1.65	1.255		mg/Kg		76	25 - 123	7	46
Chrysene	ND		1.65	1.151		mg/Kg		70	20 - 120	8	49
Cresols	ND		3.29	2.540		mg/Kg		77	10 - 200	8	50
Dibenz(a,h)anthracene	ND		1.65	1.067		mg/Kg		65	12 - 128	6	50
Dibenzofuran	ND		1.65	1.237		mg/Kg		75	21 - 120	9	50
Diethyl phthalate	ND		1.65	1.165		mg/Kg		71	29 - 122	8	45
Dimethyl phthalate	ND		1.65	ND		mg/Kg		70	30 - 120	4	46
Di-n-butyl phthalate	ND		1.65	1.178		mg/Kg		72	29 - 126	2	49
Di-n-octyl phthalate	ND		1.65	1.456		mg/Kg		88	27 - 130	7	50
Fluoranthene	ND		1.65	1.163		mg/Kg		71	10 - 143	6	50
Fluorene	ND		1.65	1.196		mg/Kg		73	20 - 120	9	50
Hexachlorobenzene	ND		1.65	1.304		mg/Kg		75	25 - 120	6	50
Hexachlorobutadiene	ND		1.65	1.015		mg/Kg		62	10 - 120	2	50
Hexachlorocyclopentadiene	ND		1.65	ND	F	mg/Kg		0	10 - 120	NC	50
Hexachloroethane	ND		1.65	0.9323		mg/Kg		57	10 - 120	8	50
Indeno[1,2,3-cd]pyrene	ND		1.65	1.081		mg/Kg		66	22 - 121	7	50
Isophorone	ND		1.65	0.9353		mg/Kg		57	24 - 120	1	50
Naphthalene	ND		1.65	1.058		mg/Kg		64	10 - 120	3	50
Nitrobenzene	ND		1.65	0.9843		mg/Kg		60	19 - 120	5	50
N-Nitrosodi-n-propylamine	ND		1.65	1.130		mg/Kg		69	24 - 120	8	50
n-Nitrosodiphenylamine(as diphenylamine)	ND		1.65	1.479		mg/Kg		90	26 - 150	6	50
Pentachlorophenol	ND		1.65	ND		mg/Kg		28	19 - 145	15	50
Phenanthrene	ND		1.65	1.194		mg/Kg		73	21 - 122	6	50
Phenol	ND		1.65	1.139		mg/Kg		69	15 - 120	7	50
Pyrene	ND		1.65	1.286		mg/Kg		78	20 - 123	7	50

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-6232-B-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19725 — **Prep Batch: 19587**

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	63		10 - 120
2-Fluorobiphenyl (Surr)	43		29 - 120
2-Fluorophenol (Surr)	51		10 - 120
Nitrobenzene-d5 (Surr)	45		27 - 120
Phenol-d5 (Surr)	58		10 - 120
Terphenyl-d14 (Surr)	70		13 - 120

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: 490-6490-D-31-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 20614 — **Prep Batch: 20326**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	10.9		1040	980.4		mg/Kg	☼	94	56 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
a,a,a-Trifluorotoluene	109		50 - 150

Lab Sample ID: 490-6490-D-31-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 20614 — **Prep Batch: 20326**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	10.9		1010	1059		mg/Kg	☼	104	56 - 130	8	21

Surrogate	MSD %Recovery	MSD Qualifier	Limits
a,a,a-Trifluorotoluene	106		50 - 150

Lab Sample ID: MB 490-20614/19 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 20614

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND		5.00	mg/Kg			09/17/12 17:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	113		50 - 150		09/17/12 17:43	1

Lab Sample ID: MB 490-20614/20 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 20614

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND		5.00	mg/Kg			09/17/12 18:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	98		50 - 150		09/17/12 18:02	1

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: LCS 490-20614/13
Matrix: Solid
Analysis Batch: 20614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10			10.0	9.788		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*110*		*50 - 150*

Lab Sample ID: LCSD 490-20614/14
Matrix: Solid
Analysis Batch: 20614

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10			10.0	11.27		mg/Kg		113	70 - 130	14	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*116*		*50 - 150*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 490-19580/1-A
Matrix: Solid
Analysis Batch: 19647

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19580

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	ND		5.00		mg/Kg		09/13/12 09:12	09/13/12 21:49	1
C24-C40	ND		5.00		mg/Kg		09/13/12 09:12	09/13/12 21:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*53*		*50 - 150*	*09/13/12 09:12*	*09/13/12 21:49*	*1*

Lab Sample ID: LCS 490-19580/2-A
Matrix: Solid
Analysis Batch: 19647

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19580

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28			40.0	35.58		mg/Kg		89	54 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*65*		*50 - 150*

Method: Moisture - Percent Moisture

Lab Sample ID: 490-6194-1 DU
Matrix: Solid
Analysis Batch: 19343

Client Sample ID: TPH-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	14			15		%				4	20
Percent Moisture	14			15		%				4	20

QC Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method: Moisture - Percent Moisture (Continued)

Lab Sample ID: 490-6194-1 DU
Matrix: Solid
Analysis Batch: 19343

Client Sample ID: TPH-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	86			85		%				0.6	20
Percent Solids	86			85		%				0.6	20

QC Association Summary

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

GC/MS VOA

Prep Batch: 19378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-5	VOC-5	Total/NA	Solid	5035	
490-6194-8	VOC-4	Total/NA	Solid	5035	

Prep Batch: 19381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-2	VOC-6	Total/NA	Solid	5035	
490-6194-5	VOC-5	Total/NA	Solid	5035	
490-6194-8	VOC-4	Total/NA	Solid	5035	

Analysis Batch: 19575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-2	VOC-6	Total/NA	Solid	8260B	19381
490-6194-5	VOC-5	Total/NA	Solid	8260B	19378
490-6194-8	VOC-4	Total/NA	Solid	8260B	19378
LCS 490-19575/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-19575/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-19575/6	Method Blank	Total/NA	Solid	8260B	
MB 490-19575/7	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 19868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-2	VOC-6	Total/NA	Solid	8260B	19381
490-6194-5	VOC-5	Total/NA	Solid	8260B	19381
490-6194-8	VOC-4	Total/NA	Solid	8260B	19381
LCS 490-19868/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-19868/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-19868/7	Method Blank	Total/NA	Solid	8260B	

Prep Batch: 20311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6490-A-31-B MS	Matrix Spike	Total/NA	Solid	5035	
490-6490-A-31-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 20787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-5	VOC-5	Total/NA	Solid	8260B	19381
490-6194-8	VOC-4	Total/NA	Solid	8260B	19381
490-6490-A-31-B MS	Matrix Spike	Total/NA	Solid	8260B	20311
490-6490-A-31-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B	20311
LCS 490-20787/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-20787/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-20787/7	Method Blank	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 19587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-3	SVOC-6	Total/NA	Solid	3550C	
490-6194-6	SVOC-5	Total/NA	Solid	3550C	
490-6194-9	SVOC-4	Total/NA	Solid	3550C	
490-6232-B-1-C MS	Matrix Spike	Total/NA	Solid	3550C	
490-6232-B-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	3550C	

QC Association Summary

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

GC/MS Semi VOA (Continued)

Prep Batch: 19587 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 490-19587/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 490-19587/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 19725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6232-B-1-C MS	Matrix Spike	Total/NA	Solid	8270D	19587
490-6232-B-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8270D	19587

Analysis Batch: 19727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-3	SVOC-6	Total/NA	Solid	8270D	19587
490-6194-6	SVOC-5	Total/NA	Solid	8270D	19587
490-6194-9	SVOC-4	Total/NA	Solid	8270D	19587
LCS 490-19587/2-A	Lab Control Sample	Total/NA	Solid	8270D	19587
MB 490-19587/1-A	Method Blank	Total/NA	Solid	8270D	19587

Analysis Batch: 20323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-3	SVOC-6	Total/NA	Solid	8270D	19587
490-6194-3	SVOC-6	Total/NA	Solid	8270D	19587
490-6194-6	SVOC-5	Total/NA	Solid	8270D	19587
490-6194-6	SVOC-5	Total/NA	Solid	8270D	19587
490-6194-9	SVOC-4	Total/NA	Solid	8270D	19587

Analysis Batch: 20395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-3	SVOC-6	Total/NA	Solid	8270D	19587

GC VOA

Prep Batch: 19373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-1	TPH-6	Total/NA	Solid	5035	
490-6194-4	TPH-5	Total/NA	Solid	5035	
490-6194-7	TPH-4	Total/NA	Solid	5035	

Prep Batch: 20326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6490-D-31-B MS	Matrix Spike	Total/NA	Solid	5035	
490-6490-D-31-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 20614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-1	TPH-6	Total/NA	Solid	8015C	19373
490-6194-4	TPH-5	Total/NA	Solid	8015C	19373
490-6194-7	TPH-4	Total/NA	Solid	8015C	19373
490-6490-D-31-B MS	Matrix Spike	Total/NA	Solid	8015C	20326
490-6490-D-31-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015C	20326
LCS 490-20614/13	Lab Control Sample	Total/NA	Solid	8015C	
LCSD 490-20614/14	Lab Control Sample Dup	Total/NA	Solid	8015C	
MB 490-20614/19	Method Blank	Total/NA	Solid	8015C	
MB 490-20614/20	Method Blank	Total/NA	Solid	8015C	

QC Association Summary

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

GC Semi VOA

Prep Batch: 19580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-1	TPH-6	Total/NA	Solid	3550C	
490-6194-4	TPH-5	Total/NA	Solid	3550C	
490-6194-7	TPH-4	Total/NA	Solid	3550C	
LCS 490-19580/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 490-19580/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 19647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 490-19580/2-A	Lab Control Sample	Total/NA	Solid	8015C	19580
MB 490-19580/1-A	Method Blank	Total/NA	Solid	8015C	19580

Analysis Batch: 20392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-1	TPH-6	Total/NA	Solid	8015C	19580
490-6194-1	TPH-6	Total/NA	Solid	8015C	19580
490-6194-4	TPH-5	Total/NA	Solid	8015C	19580
490-6194-4	TPH-5	Total/NA	Solid	8015C	19580
490-6194-7	TPH-4	Total/NA	Solid	8015C	19580

General Chemistry

Analysis Batch: 19343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-6194-1	TPH-6	Total/NA	Solid	Moisture	
490-6194-1 DU	TPH-6	Total/NA	Solid	Moisture	
490-6194-2	VOC-6	Total/NA	Solid	Moisture	
490-6194-3	SVOC-6	Total/NA	Solid	Moisture	
490-6194-4	TPH-5	Total/NA	Solid	Moisture	
490-6194-5	VOC-5	Total/NA	Solid	Moisture	
490-6194-6	SVOC-5	Total/NA	Solid	Moisture	
490-6194-7	TPH-4	Total/NA	Solid	Moisture	
490-6194-8	VOC-4	Total/NA	Solid	Moisture	
490-6194-9	SVOC-4	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: TPH-6

Lab Sample ID: 490-6194-1
Date Collected: 09/07/12 13:20
Matrix: Solid
Date Received: 09/11/12 08:35
Percent Solids: 85.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19373	09/12/12 12:51	TP	TAL NSH
Total/NA	Analysis	8015C		5	20614	09/18/12 04:19	BH	TAL NSH
Total/NA	Prep	3550C			19580	09/13/12 09:57	AK	TAL NSH
Total/NA	Analysis	8015C		100	20392	09/16/12 17:15	JF	TAL NSH
Total/NA	Analysis	8015C		200	20392	09/16/12 21:56	JF	TAL NSH
Total/NA	Analysis	Moisture		1	19343	09/12/12 11:18	RS	TAL NSH

Client Sample ID: VOC-6

Lab Sample ID: 490-6194-2
Date Collected: 09/07/12 13:20
Matrix: Solid
Date Received: 09/11/12 08:35
Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19381	09/12/12 13:03	TP	TAL NSH
Total/NA	Analysis	8260B		20	19575	09/13/12 18:54	KK	TAL NSH
Total/NA	Analysis	8260B		400	19868	09/14/12 14:56	KK	TAL NSH
Total/NA	Analysis	Moisture		1	19343	09/12/12 11:18	RS	TAL NSH

Client Sample ID: SVOC-6

Lab Sample ID: 490-6194-3
Date Collected: 09/07/12 13:20
Matrix: Solid
Date Received: 09/11/12 08:35
Percent Solids: 82.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			19587	09/13/12 10:58	AK	TAL NSH
Total/NA	Analysis	8270D		5	19727	09/14/12 04:05	BS	TAL NSH
Total/NA	Analysis	8270D		10	20323	09/15/12 22:45	KP	TAL NSH
Total/NA	Analysis	8270D		50	20323	09/15/12 23:08	KP	TAL NSH
Total/NA	Analysis	8270D		250	20395	09/16/12 15:57	KP	TAL NSH
Total/NA	Analysis	Moisture		1	19343	09/12/12 11:18	RS	TAL NSH

Client Sample ID: TPH-5

Lab Sample ID: 490-6194-4
Date Collected: 09/07/12 14:00
Matrix: Solid
Date Received: 09/11/12 08:35
Percent Solids: 82.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19373	09/12/12 12:51	TP	TAL NSH
Total/NA	Analysis	8015C		1	20614	09/18/12 04:00	BH	TAL NSH
Total/NA	Prep	3550C			19580	09/13/12 11:07	AK	TAL NSH
Total/NA	Analysis	8015C		20	20392	09/16/12 17:37	JF	TAL NSH
Total/NA	Analysis	8015C		40	20392	09/16/12 21:36	JF	TAL NSH
Total/NA	Analysis	Moisture		1	19343	09/12/12 11:18	RS	TAL NSH

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: VOC-5
Lab Sample ID: 490-6194-5
Date Collected: 09/07/12 14:00
Matrix: Solid
Date Received: 09/11/12 08:35
Percent Solids: 79.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19378	09/12/12 12:59	TP	TAL NSH
Total/NA	Analysis	8260B		1	19575	09/13/12 17:21	KK	TAL NSH
Total/NA	Prep	5035			19381	09/12/12 13:03	TP	TAL NSH
Total/NA	Analysis	8260B		1	19868	09/14/12 13:23	KK	TAL NSH
Total/NA	Analysis	8260B		10	20787	09/18/12 12:23	KK	TAL NSH
Total/NA	Analysis	Moisture		1	19343	09/12/12 11:18	RS	TAL NSH

Client Sample ID: SVOC-5
Lab Sample ID: 490-6194-6
Date Collected: 09/07/12 14:00
Matrix: Solid
Date Received: 09/11/12 08:35
Percent Solids: 78.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			19587	09/13/12 10:58	AK	TAL NSH
Total/NA	Analysis	8270D		1	19727	09/14/12 04:28	BS	TAL NSH
Total/NA	Analysis	8270D		10	20323	09/15/12 23:31	KP	TAL NSH
Total/NA	Analysis	8270D		100	20323	09/15/12 23:53	KP	TAL NSH
Total/NA	Analysis	Moisture		1	19343	09/12/12 11:18	RS	TAL NSH

Client Sample ID: TPH-4
Lab Sample ID: 490-6194-7
Date Collected: 09/07/12 14:40
Matrix: Solid
Date Received: 09/11/12 08:35
Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19373	09/12/12 12:51	TP	TAL NSH
Total/NA	Analysis	8015C		1	20614	09/18/12 03:38	BH	TAL NSH
Total/NA	Prep	3550C			19580	09/13/12 11:07	AK	TAL NSH
Total/NA	Analysis	8015C		10	20392	09/16/12 18:00	JF	TAL NSH
Total/NA	Analysis	Moisture		1	19343	09/12/12 11:18	RS	TAL NSH

Client Sample ID: VOC-4
Lab Sample ID: 490-6194-8
Date Collected: 09/07/12 14:40
Matrix: Solid
Date Received: 09/11/12 08:35
Percent Solids: 83.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19378	09/12/12 12:59	TP	TAL NSH
Total/NA	Analysis	8260B		1	19575	09/13/12 17:52	KK	TAL NSH
Total/NA	Prep	5035			19381	09/12/12 13:03	TP	TAL NSH
Total/NA	Analysis	8260B		1	19868	09/14/12 13:54	KK	TAL NSH
Total/NA	Analysis	8260B		20	20787	09/18/12 12:52	KK	TAL NSH
Total/NA	Analysis	Moisture		1	19343	09/12/12 11:18	RS	TAL NSH

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Client Sample ID: SVOC-4

Date Collected: 09/07/12 14:40
Date Received: 09/11/12 08:35

Lab Sample ID: 490-6194-9

Matrix: Solid
Percent Solids: 80.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			19587	09/13/12 10:58	AK	TAL NSH
Total/NA	Analysis	8270D		1	19727	09/14/12 04:50	BS	TAL NSH
Total/NA	Analysis	8270D		10	20323	09/16/12 00:16	KP	TAL NSH
Total/NA	Analysis	Moisture		1	19343	09/12/12 11:18	RS	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NSH
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL NSH
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL NSH
Moisture	Percent Moisture	EPA	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12090210

TestAmerica Job ID: 490-6194-1

Laboratory: TestAmerica Nashville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	ACIL		393	10-30-12
A2LA	ISO/IEC 17025		0453.07	12-31-13
Alabama	State Program	4	41150	05-31-13
Alaska (UST)	State Program	10	UST-087	07-24-13
Arizona	State Program	9	AZ0473	05-05-13
Arkansas DEQ	State Program	6	88-0737	04-25-13
California	NELAC	9	1168CA	10-31-12
Canadian Assoc Lab Accred (CALA)	Canada		3744	03-08-14
Colorado	State Program	8	N/A	02-28-13
Connecticut	State Program	1	PH-0220	12-31-13
Florida	NELAC	4	E87358	06-30-13
Illinois	NELAC	5	200010	12-09-12
Iowa	State Program	7	131	05-01-14
Kansas	NELAC	7	E-10229	10-31-12
Kentucky	State Program	4	90038	12-31-12
Kentucky (UST)	State Program	4	19	09-15-13
Louisiana	NELAC	6	LA110014	12-31-12
Louisiana	NELAC	6	30613	06-30-13
Maryland	State Program	3	316	03-31-13
Massachusetts	State Program	1	M-TN032	06-30-13
Minnesota	NELAC	5	047-999-345	12-31-12
Mississippi	State Program	4	N/A	06-30-13
Montana (UST)	State Program	8	NA	01-01-15
Nevada	State Program	9	TN00032	09-30-13
New Hampshire	NELAC	1	2963	10-09-12
New Jersey	NELAC	2	TN965	06-30-13
New York	NELAC	2	11342	04-01-13
North Carolina DENR	State Program	4	387	12-31-12
North Dakota	State Program	8	R-146	06-30-13
Ohio VAP	State Program	5	CL0033	01-19-14
Oklahoma	State Program	6	9412	08-31-13
Oregon	NELAC	10	TN200001	04-30-13
Pennsylvania	NELAC	3	68-00585	06-30-13
Rhode Island	State Program	1	LAO00268	12-30-12
South Carolina	State Program	4	84009 (001)	02-28-13
South Carolina	State Program	4	84009 (002)	02-23-14
Tennessee	State Program	4	2008	02-23-14
Texas	NELAC	6	T104704077-09-TX	08-31-13
USDA	Federal		S-48469	11-02-13
Utah	NELAC	8	TAN	06-30-13
Virginia	NELAC	3	460152	06-14-13
Washington	State Program	10	C789	07-19-13
West Virginia DEP	State Program	3	219	02-28-13
Wisconsin	State Program	5	998020430	08-31-13
Wyoming (UST)	A2LA	8	453.07	12-31-13

Analytical Laboratory Request Form (ARF)

(1) Complete all yellow sections of this form. Move through by striking the "TAB" key.	
(2) Save the file & e-mail to:	labcustomer@duke-energy.com
Questions / Problems Call:	704-875-5245

Customer Information

Name	Office Phone	Cell Phone
Andy Clark	704-357-5630	704-953-6833
Fax	e-Mail Address	
	andy.clark@amec.com	

Accounting Fields

** Only complete if specific charging to capital or other special projects is needed. Include field type and specific field entry. **	Field Type	Specific Field

Sampling Information

Sampling Personnel / Contractor	Scheduled Sampling Date	Date Sample Kit Needed
AMEC	9/7/2012	9/6/2012

Shipping Address for Kit

Name	Phone	Mail Code
Mike Flanik	704-357-5617	704-659-1232
Street Address - street address and town needed	State	Zip Code
2801 Yorkmont Rd, Charlotte	NC	28208

Reporting

Report Due Date	Additional Reports - .pdf file w/ Basic QC and EDD (spreadsheet) is Standard	
9/28/2012	.pdf and excel	
Report To (e-Mail Address 1)	Report To (e-Mail Address 2)	Report to (e-Mail Address 3)
andy.clark@amec.com	angela.adams@amec.com	

Project Specifics

Project Name		Program Type
Spartanburg MGP		
Site, Location or Station	State	Approximate Number of Days Sampling is Scheduled
Pine Street, Spartanburg	SC	1

Notes, Special Requests, Required Contract Lab to use, etc. **(LIMS Job Number-Duke Lab Provides)**

AMEC can pick sample jars up from Duke. TPH, VOC, and SVOC analysis. Also, request 24 x 16 oz jars to collect additional soil for bench scale testing. The 16 oz jars will be sent to FMC Corporation for the bench testing.

Bottles	Matrix	Variables, Methods
4	Soil	TPH - 5035/8015M
4	Soil	VOCs - 8260 (Prep 5035) - Encore kits
4	Soil	SVOCs - 8260
24 x 16 oz jars	Soil	For bench testing (see note above)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-6194 Chain of

Cooler Received/Opened On 9/11/2012 @ 8:35

1. Tracking # 5448 (last 4 digits, FedEx)

Courier: Fed-ex IR Gun ID_95610068

2. Temperature of rep. sample or temp blank when opened: 1.1 *Degrees Celsius*

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

4. Were custody seals on cutside of cooler? YES...NO...NA

If yes, how many and where: 1 Front

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

6. Were custody papers inside cooler? YES...NO...NA

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

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

Were these signed and dated correctly? YES...NO...NA

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

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

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

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

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

13a. Were VOA vials received? YES...NO...NA

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

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

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

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

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

16. Was residual chlorine present? YES...NO...NA

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

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

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

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

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

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

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

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

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 6/24/09

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes☐ No☐

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Analytical Lab Page 65 of 66

TA-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
AMEC	Shali Brown - Nashville lab	9/7/12	194095
Address: Yorkmont	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1
City: Clt; State: NC; Zip Code:	Site Contact: M. Plank	Lab Contact	
Project Name and Location (State): Pine Street, Spartanburg	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.: 225674			

Loc: 490
6194

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	TPH Quantitation Fingerprint	VOC	SVOC
1 TPH-6	9/7/12	1320				X							X		
2 VOC-6		1326												X	
3 SVOC-6		1326													X
4 TPH-5		1400											X		
5 VOC-5		1400												X	
6 SVOC-5		1400													X
7 TPH-4		1440											X		
8 VOC-4		1440												X	
9 SVOC-4		1440													X

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]			1. Received By: C. Bonham	9/10/12	910
2. Relinquished By: C. Bonham	9/10/12	1730	2. Received By: [signature] / TAN 1.1	9/11/12	0835
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

1
2
3
4
5
6
7
8
9
10
11
12
13

Login Sample Receipt Checklist

Client: Duke Energy Corporation

Job Number: 490-6194-1

Login Number: 6194
List Number: 1
Creator: Buckingham, Paul

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-8013-1
Client Project/Site: Pine Street MGP J12100049
Revision: 1

For:
Duke Energy Corporation
13339 Hagers Ferry Road
Huntersville, North Carolina 28078

Attn: Lab Customer

Authorized for release by:
11/26/2013 2:28:26 PM

Shali Brown, Project Manager II
(615)301-5031
shali.brown@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-8013-1	OS 5S	Solid	09/26/12 16:25	09/29/12 08:30
490-8013-2	OS 10S	Solid	09/26/12 17:10	09/29/12 08:30
490-8013-3	OS 20S	Solid	09/26/12 08:45	09/29/12 08:30

Job ID: 490-8013-1

Laboratory: TestAmerica Nashville

Narrative

CASE NARRATIVE

Client: Duke Energy Corporation

Project: Pine Street MGP J12100049

Report Number: 490-8013-1

112613 Revised Report at client request to include results for Ethylbenzene on sample -3 that was missing from the original report. This report replaces the report previously generated on 101512.

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Nashville attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 09/29/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.8 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples OS 5S (490-8013-1), OS 10S (490-8013-2) and OS 20S (490-8013-3) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 10/02/2012 and analyzed on 10/05/2012, 10/06/2012 and 10/09/2012.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 26095, 25773, amd 26524.

4-Bromofluorobenzene (Surr) and Toluene-d8 (Surr) failed the surrogate recovery criteria high for OS 5S (490-8013-1). Evidence of matrix interference is present.

Job ID: 490-8013-1 (Continued)

Laboratory: TestAmerica Nashville (Continued)

The results of 4-Isopropyltoluene may be elevated due to the previous sample. This sample was not rerun at a low level due to it's matrix.

1,1,2-Trichloroethane, 1,1-Dichloroethene, 1,3-Dichloropropane and Tetrachloroethene failed the recovery criteria high for LCS 490-26095/3. Tetrachloroethene failed the recovery criteria high for LCSD 490-25773/4. 1,1-Dichloroethene and Tetrachloroethene failed the recovery criteria high for LCSD 490-26095/4. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample(s): OS 5S (490-8013-1), and OS 20S (490-8013-3).

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC MS)

Samples OS 5S (490-8013-1), OS 10S (490-8013-2) and OS 20S (490-8013-3) were analyzed for Semivolatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 10/02/2012 and analyzed on 10/02/2012 and 10/03/2012.

Method(s) 8270D: Matrix spikes for batch 24824 could not be recovered due to sample matrix interferences which required sample dilution. The associated laboratory control sample (LCS) met acceptance criteria.

Samples OS 5S (490-8013-1)[20X], OS 5S (490-8013-1)[5X], OS 10S (490-8013-2)[5X], OS 20S (490-8013-3)[20X] and OS 20S (490-8013-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples OS 5S (490-8013-1), OS 10S (490-8013-2) and OS 20S (490-8013-3) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared on 10/02/2012 and analyzed on 10/02/2012 and 10/03/2012.

No difficulties were encountered during the GRO analyses. All quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples OS 5S (490-8013-1), OS 10S (490-8013-2) and OS 20S (490-8013-3) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 10/02/2012 and analyzed on 10/03/2012 and 10/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.
o-Terphenyl (Surr) failed the surrogate recovery criteria high for OS 5S (490-8013-1). o-Terphenyl (Surr) failed the surrogate recovery criteria high for OS 10S (490-8013-2). o-Terphenyl (Surr) failed the surrogate recovery criteria high for OS 20S (490-8013-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Samples OS 5S (490-8013-1)[5X], OS 10S (490-8013-2)[2X] and OS 20S (490-8013-3)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8015C: The following sample(s) contained a hydrocarbon pattern which resembles the Diesel Fuel #2 pattern used by the laboratory for quantitative purposes: OS 10S (490-8013-2), OS 20S (490-8013-3), OS 5S (490-8013-1).

No other difficulties were encountered during the DRO analyses. All other quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Samples OS 5S (490-8013-1), OS 10S (490-8013-2) and OS 20S (490-8013-3) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 10/01/2012.

Job ID: 490-8013-1 (Continued)

Laboratory: TestAmerica Nashville (Continued)

No difficulties were encountered during the % solids analyses. All quality control parameters were within the acceptance limits.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
*	LCS or LCSD exceeds the control limits

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: OS 5S

Date Collected: 09/26/12 16:25
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-1

Matrix: Solid
Percent Solids: 80.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,1,1-Trichloroethane	ND		0.00222		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
1,1,1-Trichloroethane	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,1,2,2-Tetrachloroethane	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,1,2-Trichloroethane	ND	*	0.718		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,1-Dichloroethane	ND		0.00222		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
1,1-Dichloroethane	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Diisopropyl ether	ND		0.00222		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Diisopropyl ether	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,1-Dichloroethene	ND		0.00222		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
1,1-Dichloroethene	ND	*	0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,1-Dichloropropene	ND		0.00222		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
1,1-Dichloropropene	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,2,3-Trichlorobenzene	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,2,3-Trichloropropane	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,2,4-Trichlorobenzene	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,2,4-Trimethylbenzene	**123**		2.87		mg/Kg	☼	10/02/12 11:32	10/06/12 12:49	20
1,2-Dibromo-3-Chloropropane	ND		0.718		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,2-Dibromoethane (EDB)	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,2-Dichlorobenzene	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,2-Dichloroethane	ND		0.00222		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
1,2-Dichloroethane	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,2-Dichloropropane	ND		0.00222		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
1,2-Dichloropropane	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,3,5-Trimethylbenzene	**38.5**		2.87		mg/Kg	☼	10/02/12 11:32	10/06/12 12:49	20
1,3-Dichlorobenzene	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,3-Dichloropropane	ND	*	0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
1,4-Dichlorobenzene	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
2,2-Dichloropropane	ND		0.00222		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
2,2-Dichloropropane	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
2-Butanone (MEK)	ND		0.0556		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
2-Butanone (MEK)	ND		7.18		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
2-Chlorotoluene	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
2-Hexanone	ND		7.18		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
4-Chlorotoluene	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
4-Methyl-2-pentanone (MIBK)	ND		7.18		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Acetone	**0.110**		0.0556		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Acetone	ND		7.18		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Benzene	**0.0314**		0.00222		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Benzene	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Bromobenzene	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Bromochloromethane	ND		0.00222		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Bromochloromethane	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Bromodichloromethane	ND		0.00222		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Bromodichloromethane	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Bromoform	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Bromomethane	ND		0.00222		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Bromomethane	ND		0.287		mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Carbon disulfide	**0.00788**		0.00556		mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 5S

Date Collected: 09/26/12 16:25
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-1

Matrix: Solid
Percent Solids: 80.1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		0.718	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Carbon tetrachloride	ND		0.00222	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Carbon tetrachloride	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Chlorobenzene	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Chlorodibromomethane	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Chloroethane	ND		0.00556	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Chloroethane	ND		0.718	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Chloroform	**0.0136**		0.00222	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Chloroform	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Chloromethane	ND		0.00222	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Chloromethane	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
cis-1,2-Dichloroethene	ND		0.00222	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
cis-1,2-Dichloroethene	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
cis-1,3-Dichloropropene	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Dibromomethane	ND		0.00222	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Dibromomethane	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Dichlorodifluoromethane	ND		0.00222	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Dichlorodifluoromethane	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Ethylbenzene	**63.4**		2.87	mg/Kg	☼	10/02/12 11:32	10/06/12 12:49	20
Hexachlorobutadiene	ND		0.718	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Isopropylbenzene	**16.1**		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Methyl tert-butyl ether	ND		0.00222	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Methyl tert-butyl ether	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Methylene Chloride	ND		0.0111	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Methylene Chloride	ND		1.44	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Naphthalene	**1460**		71.8	mg/Kg	☼	10/02/12 11:32	10/06/12 13:19	200
n-Butylbenzene	**12.4**		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
N-Propylbenzene	**8.11**		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
p-Isopropyltoluene	**8.57**		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
sec-Butylbenzene	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Styrene	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
tert-Butylbenzene	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Tetrachloroethene	ND	*	0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Toluene	**0.565**		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
trans-1,2-Dichloroethene	ND		0.00222	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
trans-1,2-Dichloroethene	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
trans-1,3-Dichloropropene	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Trichloroethene	ND		0.00222	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Trichloroethene	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Trichlorofluoromethane	ND		0.00222	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Trichlorofluoromethane	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Vinyl chloride	ND		0.00222	mg/Kg	☼	10/02/12 11:36	10/05/12 15:38	1
Vinyl chloride	ND		0.287	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2
Xylenes, Total	**40.6**		0.718	mg/Kg	☼	10/02/12 11:32	10/06/12 19:20	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*	*10/02/12 11:36*	*10/05/12 15:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*70 - 130*	*10/02/12 11:32*	*10/06/12 12:49*	*20*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*	*10/02/12 11:32*	*10/06/12 13:19*	*200*
1,2-Dichloroethane-d4 (Surr)	*80*		*70 - 130*	*10/02/12 11:32*	*10/06/12 19:20*	*2*

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 5S

Date Collected: 09/26/12 16:25
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-1

Matrix: Solid
Percent Solids: 80.1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	214	X	70 - 130	10/02/12 11:36	10/05/12 15:38	1
4-Bromofluorobenzene (Surr)	84		70 - 130	10/02/12 11:32	10/06/12 12:49	20
4-Bromofluorobenzene (Surr)	85		70 - 130	10/02/12 11:32	10/06/12 13:19	200
4-Bromofluorobenzene (Surr)	91		70 - 130	10/02/12 11:32	10/06/12 19:20	2
Dibromofluoromethane (Surr)	107		70 - 130	10/02/12 11:36	10/05/12 15:38	1
Dibromofluoromethane (Surr)	86		70 - 130	10/02/12 11:32	10/06/12 12:49	20
Dibromofluoromethane (Surr)	86		70 - 130	10/02/12 11:32	10/06/12 13:19	200
Dibromofluoromethane (Surr)	85		70 - 130	10/02/12 11:32	10/06/12 19:20	2
Toluene-d8 (Surr)	329	X	70 - 130	10/02/12 11:36	10/05/12 15:38	1
Toluene-d8 (Surr)	116		70 - 130	10/02/12 11:32	10/06/12 12:49	20
Toluene-d8 (Surr)	116		70 - 130	10/02/12 11:32	10/06/12 13:19	200
Toluene-d8 (Surr)	111		70 - 130	10/02/12 11:32	10/06/12 19:20	2

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
1,2-Dichlorobenzene	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
1,3-Dichlorobenzene	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
1,4-Dichlorobenzene	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
1-Methylnaphthalene	**28.0**		1.63	mg/Kg	☼	10/02/12 10:52	10/03/12 17:09	20
2,4,5-Trichlorophenol	ND		1.01	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
2,4,6-Trichlorophenol	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
2,4-Dichlorophenol	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
2,4-Dimethylphenol	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
2,4-Dinitrophenol	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
2,4-Dinitrotoluene	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
2,6-Dinitrotoluene	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
2-Chloronaphthalene	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
2-Chlorophenol	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
2-Methylnaphthalene	**42.3**		1.63	mg/Kg	☼	10/02/12 10:52	10/03/12 17:09	20
2-Methylphenol	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
2-Nitroaniline	ND		1.01	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
2-Nitrophenol	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
3,3'-Dichlorobenzidine	ND		0.810	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
3 & 4 Methylphenol	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
3-Nitroaniline	ND		1.01	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
4,6-Dinitro-2-methylphenol	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
4-Bromophenyl phenyl ether	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
4-Chloro-3-methylphenol	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
4-Chlorophenyl phenyl ether	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
4-Chloroaniline	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
4-Nitroaniline	ND		1.01	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
4-Nitrophenol	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Acenaphthylene	**1.33**		0.0814	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Acenaphthene	**12.3**		0.407	mg/Kg	☼	10/02/12 10:52	10/03/12 16:45	5
Benzo[a]anthracene	**2.47**		0.0814	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Benzo[a]pyrene	**2.22**		0.0814	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Benzo[b]fluoranthene	**1.41**		0.0814	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Benzo[g,h,i]perylene	**0.764**		0.0814	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1

Client Sample ID: OS 5S

Date Collected: 09/26/12 16:25
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-1

Matrix: Solid
Percent Solids: 80.1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	**1.11**		0.0814	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Anthracene	**4.94**		0.407	mg/Kg	☼	10/02/12 10:52	10/03/12 16:45	5
Bis(2-chloroethoxy)methane	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Bis(2-chloroethyl)ether	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Bis(2-ethylhexyl) phthalate	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
bis (2-chloroisopropyl) ether	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Butyl benzyl phthalate	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Carbazole	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Chrysene	**1.94**		0.0814	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Cresols	ND		0.809	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Dibenz(a,h)anthracene	**0.246**		0.0814	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Dibenzofuran	**1.95**		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Diethyl phthalate	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Dimethyl phthalate	ND		2.03	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Di-n-butyl phthalate	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Di-n-octyl phthalate	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Fluoranthene	**5.00**		0.407	mg/Kg	☼	10/02/12 10:52	10/03/12 16:45	5
Fluorene	**6.03**		0.407	mg/Kg	☼	10/02/12 10:52	10/03/12 16:45	5
Hexachlorobenzene	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Hexachlorobutadiene	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Hexachlorocyclopentadiene	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Hexachloroethane	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Indeno[1,2,3-cd]pyrene	**0.628**		0.0814	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Isophorone	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Naphthalene	**64.6**		1.63	mg/Kg	☼	10/02/12 10:52	10/03/12 17:09	20
Nitrobenzene	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
N-Nitrosodi-n-propylamine	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Pentachlorophenol	ND		1.01	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Phenanthrene	**17.2**		0.407	mg/Kg	☼	10/02/12 10:52	10/03/12 16:45	5
Phenol	ND		0.405	mg/Kg	☼	10/02/12 10:52	10/02/12 21:51	1
Pyrene	**7.98**		0.407	mg/Kg	☼	10/02/12 10:52	10/03/12 16:45	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*84*		*10 - 120*	*10/02/12 10:52*	*10/02/12 21:51*	*1*
2-Fluorobiphenyl (Surr)	*54*		*29 - 120*	*10/02/12 10:52*	*10/02/12 21:51*	*1*
2-Fluorophenol (Surr)	*57*		*10 - 120*	*10/02/12 10:52*	*10/02/12 21:51*	*1*
Nitrobenzene-d5 (Surr)	*66*		*27 - 120*	*10/02/12 10:52*	*10/02/12 21:51*	*1*
Phenol-d5 (Surr)	*61*		*10 - 120*	*10/02/12 10:52*	*10/02/12 21:51*	*1*
Terphenyl-d14 (Surr)	*78*		*13 - 120*	*10/02/12 10:52*	*10/02/12 21:51*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	**563**		6.12	mg/Kg	☼	10/02/12 11:26	10/02/12 23:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*98*		*50 - 150*	*10/02/12 11:26*	*10/02/12 23:49*	*1*

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 5S

Date Collected: 09/26/12 16:25
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-1

Matrix: Solid
Percent Solids: 80.1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	642		30.9		mg/Kg	☼	10/02/12 08:07	10/04/12 13:27	5
C24-C40	88.0		6.19		mg/Kg	☼	10/02/12 08:07	10/03/12 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*416*	*X*	*50 - 150*	*10/02/12 08:07*	*10/03/12 22:20*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80		0.10		%			10/01/12 09:03	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 10S

Date Collected: 09/26/12 17:10
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-2

Matrix: Solid
Percent Solids: 81.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,1,1-Trichloroethane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,1,2,2-Tetrachloroethane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,1,2-Trichloroethane	ND		0.00583		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,1-Dichloroethane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Diisopropyl ether	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,1-Dichloroethene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,1-Dichloropropene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,2,3-Trichlorobenzene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,2,3-Trichloropropane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,2,4-Trichlorobenzene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,2,4-Trimethylbenzene	**23.4**		0.281		mg/Kg	☼	10/02/12 11:32	10/06/12 18:20	2
1,2-Dibromo-3-Chloropropane	ND		0.00583		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,2-Dibromoethane (EDB)	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,2-Dichlorobenzene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,2-Dichloroethane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,2-Dichloropropane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,3,5-Trimethylbenzene	**11.5**		0.281		mg/Kg	☼	10/02/12 11:32	10/06/12 18:20	2
1,3-Dichlorobenzene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,3-Dichloropropane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
1,4-Dichlorobenzene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
2,2-Dichloropropane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
2-Butanone (MEK)	ND		0.0583		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
2-Chlorotoluene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
2-Hexanone	ND		0.0583		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
4-Chlorotoluene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
4-Methyl-2-pentanone (MIBK)	ND		0.0583		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Acetone	ND		0.0583		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Benzene	**0.00704**		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Bromobenzene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Bromochloromethane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Bromodichloromethane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Bromoform	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Bromomethane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Carbon disulfide	ND		0.00583		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Carbon tetrachloride	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Chlorobenzene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Chlorodibromomethane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Chloroethane	ND		0.00583		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Chloroform	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Chloromethane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
cis-1,2-Dichloroethene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
cis-1,3-Dichloropropene	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Dibromomethane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Dichlorodifluoromethane	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Ethylbenzene	**8.16**		0.281		mg/Kg	☼	10/02/12 11:32	10/06/12 18:20	2
Hexachlorobutadiene	ND		0.00583		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Isopropylbenzene	**3.27**		0.281		mg/Kg	☼	10/02/12 11:32	10/06/12 18:20	2
Methyl tert-butyl ether	ND		0.00233		mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 10S

Date Collected: 09/26/12 17:10
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-2

Matrix: Solid
Percent Solids: 81.7

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		0.0117	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Naphthalene	**331**		70.3	mg/Kg	☼	10/02/12 11:32	10/09/12 08:39	200
n-Butylbenzene	**0.132**		0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
N-Propylbenzene	**0.123**		0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
p-Isopropyltoluene	**0.120**		0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
sec-Butylbenzene	**0.00932**		0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Styrene	ND		0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
tert-Butylbenzene	ND		0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Tetrachloroethene	ND	*	0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Toluene	**0.0549**		0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
trans-1,2-Dichloroethene	ND		0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
trans-1,3-Dichloropropene	ND		0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Trichloroethene	ND		0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Trichlorofluoromethane	ND		0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Vinyl chloride	ND		0.00233	mg/Kg	☼	10/02/12 11:36	10/05/12 16:08	1
Xylenes, Total	**5.76**		0.703	mg/Kg	☼	10/02/12 11:32	10/06/12 18:20	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*	*10/02/12 11:36*	*10/05/12 16:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*	*10/02/12 11:32*	*10/06/12 18:20*	*2*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*	*10/02/12 11:32*	*10/09/12 08:39*	*200*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*10/02/12 11:36*	*10/05/12 16:08*	*1*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*10/02/12 11:32*	*10/06/12 18:20*	*2*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*10/02/12 11:32*	*10/09/12 08:39*	*200*
Dibromofluoromethane (Surr)	*100*		*70 - 130*	*10/02/12 11:36*	*10/05/12 16:08*	*1*
Dibromofluoromethane (Surr)	*87*		*70 - 130*	*10/02/12 11:32*	*10/06/12 18:20*	*2*
Dibromofluoromethane (Surr)	*97*		*70 - 130*	*10/02/12 11:32*	*10/09/12 08:39*	*200*
Toluene-d8 (Surr)	*115*		*70 - 130*	*10/02/12 11:36*	*10/05/12 16:08*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*	*10/02/12 11:32*	*10/06/12 18:20*	*2*
Toluene-d8 (Surr)	*109*		*70 - 130*	*10/02/12 11:32*	*10/09/12 08:39*	*200*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
1,2-Dichlorobenzene	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
1,3-Dichlorobenzene	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
1,4-Dichlorobenzene	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
1-Methylnaphthalene	**4.54**		0.398	mg/Kg	☼	10/02/12 10:52	10/03/12 17:32	5
2,4,5-Trichlorophenol	ND		0.991	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
2,4,6-Trichlorophenol	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
2,4-Dichlorophenol	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
2,4-Dimethylphenol	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
2,4-Dinitrophenol	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
2,4-Dinitrotoluene	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
2,6-Dinitrotoluene	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
2-Chloronaphthalene	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
2-Chlorophenol	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
2-Methylnaphthalene	**5.24**		0.398	mg/Kg	☼	10/02/12 10:52	10/03/12 17:32	5
2-Methylphenol	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
2-Nitroaniline	ND		0.991	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 10S
Date Collected: 09/26/12 17:10
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-2
Matrix: Solid
Percent Solids: 81.7

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrophenol	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
3,3'-Dichlorobenzidine	ND		0.793	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
3 & 4 Methylphenol	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
3-Nitroaniline	ND		0.991	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
4,6-Dinitro-2-methylphenol	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
4-Bromophenyl phenyl ether	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
4-Chloro-3-methylphenol	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
4-Chlorophenyl phenyl ether	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
4-Chloroaniline	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
4-Nitroaniline	ND		0.991	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
4-Nitrophenol	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Acenaphthylene	**0.266**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Acenaphthene	**2.58**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Benzo[a]anthracene	**0.371**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Benzo[a]pyrene	**0.335**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Benzo[b]fluoranthene	**0.173**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Benzo[g,h,i]perylene	**0.116**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Benzo[k]fluoranthene	**0.220**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Anthracene	**0.919**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Bis(2-chloroethoxy)methane	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Bis(2-chloroethyl)ether	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Bis(2-ethylhexyl) phthalate	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
bis (2-chloroisopropyl) ether	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Butyl benzyl phthalate	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Carbazole	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Chrysene	**0.287**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Cresols	ND		0.792	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Dibenz(a,h)anthracene	ND		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Dibenzofuran	**0.407**		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Diethyl phthalate	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Dimethyl phthalate	ND		1.99	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Di-n-butyl phthalate	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Di-n-octyl phthalate	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Fluoranthene	**0.902**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Fluorene	**1.29**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Hexachlorobenzene	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Hexachlorobutadiene	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Hexachlorocyclopentadiene	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Hexachloroethane	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Indeno[1,2,3-cd]pyrene	**0.0929**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Isophorone	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Naphthalene	**11.6**		0.398	mg/Kg	☼	10/02/12 10:52	10/03/12 17:32	5
Nitrobenzene	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
N-Nitrosodi-n-propylamine	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Pentachlorophenol	ND		0.991	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Phenanthrene	**3.44**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Phenol	ND		0.396	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1
Pyrene	**1.44**		0.0797	mg/Kg	☼	10/02/12 10:52	10/02/12 22:14	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 10S

Date Collected: 09/26/12 17:10
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-2

Matrix: Solid
Percent Solids: 81.7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	82		10 - 120	10/02/12 10:52	10/02/12 22:14	1
2-Fluorobiphenyl (Surr)	62		29 - 120	10/02/12 10:52	10/02/12 22:14	1
2-Fluorophenol (Surr)	58		10 - 120	10/02/12 10:52	10/02/12 22:14	1
Nitrobenzene-d5 (Surr)	65		27 - 120	10/02/12 10:52	10/02/12 22:14	1
Phenol-d5 (Surr)	65		10 - 120	10/02/12 10:52	10/02/12 22:14	1
Terphenyl-d14 (Surr)	82		13 - 120	10/02/12 10:52	10/02/12 22:14	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	91.5		5.74	mg/Kg	☼	10/02/12 11:26	10/03/12 00:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	94		50 - 150	10/02/12 11:26	10/03/12 00:10	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	262		12.1	mg/Kg	☼	10/02/12 08:07	10/04/12 13:41	2
C24-C40	49.3		6.04	mg/Kg	☼	10/02/12 08:07	10/03/12 22:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	313	X	50 - 150	10/02/12 08:07	10/03/12 22:34	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82		0.10	%			10/01/12 09:03	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 20S

Date Collected: 09/26/12 08:45
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-3

Matrix: Solid
Percent Solids: 77.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
1,1,1-Trichloroethane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
1,1,2,2-Tetrachloroethane	ND		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
1,1,2-Trichloroethane	ND		0.00523		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
1,1-Dichloroethane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Diisopropyl ether	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
1,1-Dichloroethene	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
1,1-Dichloropropene	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
1,2,3-Trichlorobenzene	ND		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
1,2,3-Trichloropropane	ND		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
1,2,4-Trichlorobenzene	ND		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
1,2,4-Trimethylbenzene	**17.1**		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
1,2-Dibromo-3-Chloropropane	ND		0.740		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
1,2-Dibromoethane (EDB)	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
1,2-Dichlorobenzene	ND		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
1,2-Dichloroethane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
1,2-Dichloropropane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
1,3,5-Trimethylbenzene	**8.18**		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
1,3-Dichlorobenzene	ND		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
1,3-Dichloropropane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
1,4-Dichlorobenzene	ND		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
2,2-Dichloropropane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
2-Butanone (MEK)	ND		0.0523		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
2-Chlorotoluene	ND		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
2-Hexanone	ND		0.0523		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
4-Chlorotoluene	ND		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
4-Methyl-2-pentanone (MIBK)	ND		0.0523		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Acetone	ND		0.0523		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Benzene	**0.00278**		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Bromobenzene	ND		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
Bromochloromethane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Bromodichloromethane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Bromoform	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Bromomethane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Carbon disulfide	ND		0.00523		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Carbon tetrachloride	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Chlorobenzene	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Chlorodibromomethane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Chloroethane	ND		0.00523		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Chloroform	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Chloromethane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
cis-1,2-Dichloroethene	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
cis-1,3-Dichloropropene	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Dibromomethane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Dichlorodifluoromethane	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Ethylbenzene	**4.09**		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
Hexachlorobutadiene	ND		0.740		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
Isopropylbenzene	**1.37**		0.296		mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
Methyl tert-butyl ether	ND		0.00209		mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 20S

Date Collected: 09/26/12 08:45
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-3

Matrix: Solid
Percent Solids: 77.2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		0.0105	mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Naphthalene	**135**		7.40	mg/Kg	☼	10/02/12 11:32	10/06/12 14:49	20
n-Butylbenzene	**2.53**		0.296	mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
N-Propylbenzene	**1.29**		0.296	mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
p-Isopropyltoluene	**1.00**		0.296	mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
sec-Butylbenzene	ND		0.296	mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
Styrene	ND		0.00209	mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
tert-Butylbenzene	ND		0.296	mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2
Tetrachloroethene	ND	*	0.00209	mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Toluene	**0.0416**		0.00209	mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
trans-1,2-Dichloroethene	ND		0.00209	mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
trans-1,3-Dichloropropene	ND		0.00209	mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Trichloroethene	ND		0.00209	mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Trichlorofluoromethane	ND		0.00209	mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Vinyl chloride	ND		0.00209	mg/Kg	☼	10/02/12 11:36	10/05/12 16:39	1
Xylenes, Total	**4.05**		0.740	mg/Kg	☼	10/02/12 11:32	10/06/12 18:50	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*	*10/02/12 11:36*	*10/05/12 16:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*70 - 130*	*10/02/12 11:32*	*10/06/12 14:49*	*20*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*	*10/02/12 11:32*	*10/06/12 18:50*	*2*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*10/02/12 11:36*	*10/05/12 16:39*	*1*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*10/02/12 11:32*	*10/06/12 14:49*	*20*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*10/02/12 11:32*	*10/06/12 18:50*	*2*
Dibromofluoromethane (Surr)	*107*		*70 - 130*	*10/02/12 11:36*	*10/05/12 16:39*	*1*
Dibromofluoromethane (Surr)	*87*		*70 - 130*	*10/02/12 11:32*	*10/06/12 14:49*	*20*
Dibromofluoromethane (Surr)	*88*		*70 - 130*	*10/02/12 11:32*	*10/06/12 18:50*	*2*
Toluene-d8 (Surr)	*109*		*70 - 130*	*10/02/12 11:36*	*10/05/12 16:39*	*1*
Toluene-d8 (Surr)	*115*		*70 - 130*	*10/02/12 11:32*	*10/06/12 14:49*	*20*
Toluene-d8 (Surr)	*113*		*70 - 130*	*10/02/12 11:32*	*10/06/12 18:50*	*2*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
1,2-Dichlorobenzene	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
1,3-Dichlorobenzene	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
1,4-Dichlorobenzene	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
1-Methylnaphthalene	**20.7**		0.425	mg/Kg	☼	10/02/12 10:52	10/03/12 17:55	5
2,4,5-Trichlorophenol	ND		1.06	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
2,4,6-Trichlorophenol	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
2,4-Dichlorophenol	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
2,4-Dimethylphenol	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
2,4-Dinitrophenol	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
2,4-Dinitrotoluene	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
2,6-Dinitrotoluene	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
2-Chloronaphthalene	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
2-Chlorophenol	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
2-Methylnaphthalene	**37.6**		1.70	mg/Kg	☼	10/02/12 10:52	10/03/12 18:19	20
2-Methylphenol	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
2-Nitroaniline	ND		1.06	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 20S
Date Collected: 09/26/12 08:45
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-3
Matrix: Solid
Percent Solids: 77.2

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrophenol	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
3,3'-Dichlorobenzidine	ND		0.847	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
3 & 4 Methylphenol	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
3-Nitroaniline	ND		1.06	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
4,6-Dinitro-2-methylphenol	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
4-Bromophenyl phenyl ether	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
4-Chloro-3-methylphenol	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
4-Chlorophenyl phenyl ether	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
4-Chloroaniline	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
4-Nitroaniline	ND		1.06	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
4-Nitrophenol	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Acenaphthylene	**8.06**		0.425	mg/Kg	☼	10/02/12 10:52	10/03/12 17:55	5
Acenaphthene	**1.27**		0.0851	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Benzo[a]anthracene	**2.00**		0.0851	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Benzo[a]pyrene	**1.88**		0.0851	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Benzo[b]fluoranthene	**1.03**		0.0851	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Benzo[g,h,i]perylene	**0.712**		0.0851	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Benzo[k]fluoranthene	**0.996**		0.0851	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Anthracene	**4.10**		0.0851	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Bis(2-chloroethoxy)methane	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Bis(2-chloroethyl)ether	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Bis(2-ethylhexyl) phthalate	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
bis (2-chloroisopropyl) ether	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Butyl benzyl phthalate	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Carbazole	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Chrysene	**1.55**		0.0851	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Cresols	ND		0.845	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Dibenz(a,h)anthracene	**0.209**		0.0851	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Dibenzofuran	**1.59**		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Diethyl phthalate	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Dimethyl phthalate	ND		2.12	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Di-n-butyl phthalate	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Di-n-octyl phthalate	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Fluoranthene	**4.57**		0.425	mg/Kg	☼	10/02/12 10:52	10/03/12 17:55	5
Fluorene	**3.55**		0.0851	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Hexachlorobenzene	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Hexachlorobutadiene	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Hexachlorocyclopentadiene	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Hexachloroethane	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Indeno[1,2,3-cd]pyrene	**0.581**		0.0851	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Isophorone	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Naphthalene	**38.9**		1.70	mg/Kg	☼	10/02/12 10:52	10/03/12 18:19	20
Nitrobenzene	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
N-Nitrosodi-n-propylamine	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Pentachlorophenol	ND		1.06	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Phenanthrene	**14.9**		0.425	mg/Kg	☼	10/02/12 10:52	10/03/12 17:55	5
Phenol	ND		0.423	mg/Kg	☼	10/02/12 10:52	10/02/12 22:37	1
Pyrene	**6.86**		0.425	mg/Kg	☼	10/02/12 10:52	10/03/12 17:55	5

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 20S

Date Collected: 09/26/12 08:45
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-3

Matrix: Solid
Percent Solids: 77.2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*83*		*10 - 120*	*10/02/12 10:52*	*10/02/12 22:37*	*1*
2-Fluorobiphenyl (Surr)	*52*		*29 - 120*	*10/02/12 10:52*	*10/02/12 22:37*	*1*
2-Fluorophenol (Surr)	*42*		*10 - 120*	*10/02/12 10:52*	*10/02/12 22:37*	*1*
Nitrobenzene-d5 (Surr)	*53*		*27 - 120*	*10/02/12 10:52*	*10/02/12 22:37*	*1*
Phenol-d5 (Surr)	*49*		*10 - 120*	*10/02/12 10:52*	*10/02/12 22:37*	*1*
Terphenyl-d14 (Surr)	*72*		*13 - 120*	*10/02/12 10:52*	*10/02/12 22:37*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	**24.2**		7.14	mg/Kg	☼	10/02/12 11:26	10/03/12 00:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*88*		*50 - 150*	*10/02/12 11:26*	*10/03/12 00:30*	*1*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**227**		12.8	mg/Kg	☼	10/02/12 08:07	10/04/12 13:55	2
C24-C40	**32.5**		6.41	mg/Kg	☼	10/02/12 08:07	10/03/12 22:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*249*	*X*	*50 - 150*	*10/02/12 08:07*	*10/03/12 22:48*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**77**		0.10	%			10/01/12 09:03	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-25773/6
Matrix: Solid
Analysis Batch: 25773

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,1,1-Trichloroethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,1,2,2-Tetrachloroethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,1,2-Trichloroethane	ND		0.00500		mg/Kg			10/05/12 09:18	1
1,1-Dichloroethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
Diisopropyl ether	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,1-Dichloroethene	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,1-Dichloropropene	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,2,3-Trichlorobenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,2,3-Trichloropropane	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,2,4-Trichlorobenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,2,4-Trimethylbenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,2-Dibromo-3-Chloropropane	ND		0.00500		mg/Kg			10/05/12 09:18	1
1,2-Dibromoethane (EDB)	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,2-Dichlorobenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,2-Dichloroethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,2-Dichloropropane	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,3,5-Trimethylbenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,3-Dichlorobenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,3-Dichloropropane	ND		0.00200		mg/Kg			10/05/12 09:18	1
1,4-Dichlorobenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
2,2-Dichloropropane	ND		0.00200		mg/Kg			10/05/12 09:18	1
2-Butanone (MEK)	ND		0.0500		mg/Kg			10/05/12 09:18	1
2-Chlorotoluene	ND		0.00200		mg/Kg			10/05/12 09:18	1
2-Hexanone	ND		0.0500		mg/Kg			10/05/12 09:18	1
4-Chlorotoluene	ND		0.00200		mg/Kg			10/05/12 09:18	1
4-Methyl-2-pentanone (MIBK)	ND		0.0500		mg/Kg			10/05/12 09:18	1
Acetone	ND		0.0500		mg/Kg			10/05/12 09:18	1
Benzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
Bromobenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
Bromochloromethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
Bromodichloromethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
Bromoform	ND		0.00200		mg/Kg			10/05/12 09:18	1
Bromomethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
Carbon disulfide	ND		0.00500		mg/Kg			10/05/12 09:18	1
Carbon tetrachloride	ND		0.00200		mg/Kg			10/05/12 09:18	1
Chlorobenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
Chlorodibromomethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
Chloroethane	ND		0.00500		mg/Kg			10/05/12 09:18	1
Chloroform	ND		0.00200		mg/Kg			10/05/12 09:18	1
Chloromethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
cis-1,2-Dichloroethene	ND		0.00200		mg/Kg			10/05/12 09:18	1
cis-1,3-Dichloropropene	ND		0.00200		mg/Kg			10/05/12 09:18	1
Dibromomethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
Dichlorodifluoromethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
Ethylbenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
Hexachlorobutadiene	ND		0.00500		mg/Kg			10/05/12 09:18	1
Isopropylbenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-25773/6
Matrix: Solid
Analysis Batch: 25773

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.00200		mg/Kg			10/05/12 09:18	1
Methylene Chloride	ND		0.0100		mg/Kg			10/05/12 09:18	1
Naphthalene	ND		0.00500		mg/Kg			10/05/12 09:18	1
n-Butylbenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
N-Propylbenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
p-Isopropyltoluene	ND		0.00200		mg/Kg			10/05/12 09:18	1
sec-Butylbenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
Styrene	ND		0.00200		mg/Kg			10/05/12 09:18	1
tert-Butylbenzene	ND		0.00200		mg/Kg			10/05/12 09:18	1
Tetrachloroethene	ND		0.00200		mg/Kg			10/05/12 09:18	1
Toluene	ND		0.00200		mg/Kg			10/05/12 09:18	1
trans-1,2-Dichloroethene	ND		0.00200		mg/Kg			10/05/12 09:18	1
trans-1,3-Dichloropropene	ND		0.00200		mg/Kg			10/05/12 09:18	1
Trichloroethene	ND		0.00200		mg/Kg			10/05/12 09:18	1
Trichlorofluoromethane	ND		0.00200		mg/Kg			10/05/12 09:18	1
Vinyl chloride	ND		0.00200		mg/Kg			10/05/12 09:18	1
Xylenes, Total	ND		0.00500		mg/Kg			10/05/12 09:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 130*		*10/05/12 09:18*	*1*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*		*10/05/12 09:18*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*10/05/12 09:18*	*1*
Toluene-d8 (Surr)	*112*		*70 - 130*		*10/05/12 09:18*	*1*

Lab Sample ID: MB 490-25773/7
Matrix: Solid
Analysis Batch: 25773

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.100		mg/Kg			10/05/12 09:49	1
1,1,1-Trichloroethane	ND		0.100		mg/Kg			10/05/12 09:49	1
1,1,2,2-Tetrachloroethane	ND		0.100		mg/Kg			10/05/12 09:49	1
1,1,2-Trichloroethane	ND		0.250		mg/Kg			10/05/12 09:49	1
1,1-Dichloroethane	ND		0.100		mg/Kg			10/05/12 09:49	1
Diisopropyl ether	ND		0.100		mg/Kg			10/05/12 09:49	1
1,1-Dichloroethene	ND		0.100		mg/Kg			10/05/12 09:49	1
1,1-Dichloropropene	ND		0.100		mg/Kg			10/05/12 09:49	1
1,2,3-Trichlorobenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
1,2,3-Trichloropropane	ND		0.100		mg/Kg			10/05/12 09:49	1
1,2,4-Trichlorobenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
1,2,4-Trimethylbenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
1,2-Dibromo-3-Chloropropane	ND		0.250		mg/Kg			10/05/12 09:49	1
1,2-Dibromoethane (EDB)	ND		0.100		mg/Kg			10/05/12 09:49	1
1,2-Dichlorobenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
1,2-Dichloroethane	ND		0.100		mg/Kg			10/05/12 09:49	1
1,2-Dichloropropane	ND		0.100		mg/Kg			10/05/12 09:49	1
1,3,5-Trimethylbenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
1,3-Dichlorobenzene	ND		0.100		mg/Kg			10/05/12 09:49	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-25773/7
Matrix: Solid
Analysis Batch: 25773

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		0.100		mg/Kg			10/05/12 09:49	1
1,4-Dichlorobenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
2,2-Dichloropropane	ND		0.100		mg/Kg			10/05/12 09:49	1
2-Butanone (MEK)	ND		2.50		mg/Kg			10/05/12 09:49	1
2-Chlorotoluene	ND		0.100		mg/Kg			10/05/12 09:49	1
2-Hexanone	ND		2.50		mg/Kg			10/05/12 09:49	1
4-Chlorotoluene	ND		0.100		mg/Kg			10/05/12 09:49	1
4-Methyl-2-pentanone (MIBK)	ND		2.50		mg/Kg			10/05/12 09:49	1
Acetone	ND		2.50		mg/Kg			10/05/12 09:49	1
Benzene	ND		0.100		mg/Kg			10/05/12 09:49	1
Bromobenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
Bromochloromethane	ND		0.100		mg/Kg			10/05/12 09:49	1
Bromodichloromethane	ND		0.100		mg/Kg			10/05/12 09:49	1
Bromoform	ND		0.100		mg/Kg			10/05/12 09:49	1
Bromomethane	ND		0.100		mg/Kg			10/05/12 09:49	1
Carbon disulfide	ND		0.250		mg/Kg			10/05/12 09:49	1
Carbon tetrachloride	ND		0.100		mg/Kg			10/05/12 09:49	1
Chlorobenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
Chlorodibromomethane	ND		0.100		mg/Kg			10/05/12 09:49	1
Chloroethane	ND		0.250		mg/Kg			10/05/12 09:49	1
Chloroform	ND		0.100		mg/Kg			10/05/12 09:49	1
Chloromethane	ND		0.100		mg/Kg			10/05/12 09:49	1
cis-1,2-Dichloroethene	ND		0.100		mg/Kg			10/05/12 09:49	1
cis-1,3-Dichloropropene	ND		0.100		mg/Kg			10/05/12 09:49	1
Dibromomethane	ND		0.100		mg/Kg			10/05/12 09:49	1
Dichlorodifluoromethane	ND		0.100		mg/Kg			10/05/12 09:49	1
Ethylbenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
Hexachlorobutadiene	ND		0.250		mg/Kg			10/05/12 09:49	1
Isopropylbenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
Methyl tert-butyl ether	ND		0.100		mg/Kg			10/05/12 09:49	1
Methylene Chloride	ND		0.500		mg/Kg			10/05/12 09:49	1
Naphthalene	ND		0.250		mg/Kg			10/05/12 09:49	1
n-Butylbenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
N-Propylbenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
p-Isopropyltoluene	ND		0.100		mg/Kg			10/05/12 09:49	1
sec-Butylbenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
Styrene	ND		0.100		mg/Kg			10/05/12 09:49	1
tert-Butylbenzene	ND		0.100		mg/Kg			10/05/12 09:49	1
Tetrachloroethene	ND		0.100		mg/Kg			10/05/12 09:49	1
Toluene	ND		0.100		mg/Kg			10/05/12 09:49	1
trans-1,2-Dichloroethene	ND		0.100		mg/Kg			10/05/12 09:49	1
trans-1,3-Dichloropropene	ND		0.100		mg/Kg			10/05/12 09:49	1
Trichloroethene	ND		0.100		mg/Kg			10/05/12 09:49	1
Trichlorofluoromethane	ND		0.100		mg/Kg			10/05/12 09:49	1
Vinyl chloride	ND		0.100		mg/Kg			10/05/12 09:49	1
Xylenes, Total	ND		0.250		mg/Kg			10/05/12 09:49	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-25773/7
Matrix: Solid
Analysis Batch: 25773

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 130		10/05/12 09:49	1
4-Bromofluorobenzene (Surr)	84		70 - 130		10/05/12 09:49	1
Dibromofluoromethane (Surr)	101		70 - 130		10/05/12 09:49	1
Toluene-d8 (Surr)	108		70 - 130		10/05/12 09:49	1

Lab Sample ID: LCS 490-25773/3
Matrix: Solid
Analysis Batch: 25773

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.0500	0.05181		mg/Kg		104	80 - 136
1,1,1-Trichloroethane	0.0500	0.05494		mg/Kg		110	72 - 140
1,1,2,2-Tetrachloroethane	0.0500	0.03918		mg/Kg		78	66 - 134
1,1,2-Trichloroethane	0.0500	0.05964		mg/Kg		119	78 - 128
1,1-Dichloroethane	0.0500	0.04983		mg/Kg		100	75 - 124
Diisopropyl ether	0.0500	0.04644		mg/Kg		93	68 - 124
1,1-Dichloroethene	0.0500	0.06002		mg/Kg		120	75 - 131
1,1-Dichloropropene	0.0500	0.05219		mg/Kg		104	79 - 127
1,2,3-Trichlorobenzene	0.0500	0.04994		mg/Kg		100	70 - 150
1,2,3-Trichloropropane	0.0500	0.03923		mg/Kg		78	65 - 139
1,2,4-Trichlorobenzene	0.0500	0.04738		mg/Kg		95	62 - 150
1,2,4-Trimethylbenzene	0.0500	0.04040		mg/Kg		81	77 - 139
1,2-Dibromo-3-Chloropropane	0.0500	0.04441		mg/Kg		89	49 - 142
1,2-Dibromoethane (EDB)	0.0500	0.05856		mg/Kg		117	80 - 135
1,2-Dichlorobenzene	0.0500	0.04855		mg/Kg		97	80 - 134
1,2-Dichloroethane	0.0500	0.04739		mg/Kg		95	65 - 134
1,2-Dichloropropane	0.0500	0.05054		mg/Kg		101	69 - 120
1,3,5-Trimethylbenzene	0.0500	0.04213		mg/Kg		84	78 - 138
1,3-Dichlorobenzene	0.0500	0.04944		mg/Kg		99	79 - 137
1,3-Dichloropropane	0.0500	0.05927		mg/Kg		119	78 - 126
1,4-Dichlorobenzene	0.0500	0.04897		mg/Kg		98	77 - 139
2,2-Dichloropropane	0.0500	0.04995		mg/Kg		100	68 - 145
2-Butanone (MEK)	0.250	0.2359		mg/Kg		94	61 - 132
2-Chlorotoluene	0.0500	0.04399		mg/Kg		88	78 - 132
2-Hexanone	0.250	0.2675		mg/Kg		107	57 - 148
4-Chlorotoluene	0.0500	0.04445		mg/Kg		89	77 - 138
4-Methyl-2-pentanone (MIBK)	0.250	0.2620		mg/Kg		105	59 - 138
Acetone	0.250	0.2315		mg/Kg		93	51 - 149
Benzene	0.0500	0.05341		mg/Kg		107	75 - 127
Bromobenzene	0.0500	0.04035		mg/Kg		81	75 - 130
Bromochloromethane	0.0500	0.05543		mg/Kg		111	70 - 132
Bromodichloromethane	0.0500	0.05509		mg/Kg		110	68 - 135
Bromoform	0.0500	0.05100		mg/Kg		102	36 - 150
Bromomethane	0.0500	0.06521		mg/Kg		130	43 - 142
Carbon disulfide	0.0500	0.05472		mg/Kg		109	74 - 135
Carbon tetrachloride	0.0500	0.05595		mg/Kg		112	70 - 141
Chlorobenzene	0.0500	0.05214		mg/Kg		104	84 - 125
Chlorodibromomethane	0.0500	0.05174		mg/Kg		103	66 - 134

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-25773/3
Matrix: Solid
Analysis Batch: 25773

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	0.0500	0.04520		mg/Kg		90	53 - 144
Chloroform	0.0500	0.05230		mg/Kg		105	76 - 130
Chloromethane	0.0500	0.04165		mg/Kg		83	23 - 150
cis-1,2-Dichloroethene	0.0500	0.04632		mg/Kg		93	75 - 125
cis-1,3-Dichloropropene	0.0500	0.05674		mg/Kg		113	73 - 148
Dibromomethane	0.0500	0.05523		mg/Kg		110	71 - 130
Dichlorodifluoromethane	0.0500	0.04080		mg/Kg		82	12 - 144
Ethylbenzene	0.0500	0.05284		mg/Kg		106	80 - 134
Hexachlorobutadiene	0.0500	0.04248		mg/Kg		85	65 - 148
Isopropylbenzene	0.0500	0.04975		mg/Kg		99	80 - 150
Methyl tert-butyl ether	0.0500	0.05061		mg/Kg		101	70 - 136
Methylene Chloride	0.0500	0.06112		mg/Kg		122	68 - 144
Naphthalene	0.0500	0.04413		mg/Kg		88	69 - 150
n-Butylbenzene	0.0500	0.04262		mg/Kg		85	72 - 152
N-Propylbenzene	0.0500	0.04176		mg/Kg		84	75 - 137
p-Isopropyltoluene	0.0500	0.03971		mg/Kg		79	77 - 141
sec-Butylbenzene	0.0500	0.04186		mg/Kg		84	79 - 141
Styrene	0.0500	0.05090		mg/Kg		102	82 - 137
tert-Butylbenzene	0.0500	0.04255		mg/Kg		85	80 - 132
Tetrachloroethene	0.0500	0.06686		mg/Kg		134	78 - 140
Toluene	0.0500	0.05864		mg/Kg		117	80 - 132
trans-1,2-Dichloroethene	0.0500	0.05097		mg/Kg		102	76 - 128
trans-1,3-Dichloropropene	0.0500	0.05238		mg/Kg		105	62 - 139
Trichloroethene	0.0500	0.05413		mg/Kg		108	77 - 127
Trichlorofluoromethane	0.0500	0.04939		mg/Kg		99	50 - 140
Vinyl chloride	0.0500	0.04414		mg/Kg		88	47 - 136
Xylenes, Total	0.150	0.1537		mg/Kg		102	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*
Dibromofluoromethane (Surr)	*95*		*70 - 130*
Toluene-d8 (Surr)	*114*		*70 - 130*

Lab Sample ID: LCSD 490-25773/4
Matrix: Solid
Analysis Batch: 25773

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.0500	0.05539		mg/Kg		111	80 - 136	7	50
1,1,1-Trichloroethane	0.0500	0.05480		mg/Kg		110	72 - 140	0	50
1,1,2,2-Tetrachloroethane	0.0500	0.04389		mg/Kg		88	66 - 134	11	50
1,1,2-Trichloroethane	0.0500	0.06201		mg/Kg		124	78 - 128	4	50
1,1-Dichloroethane	0.0500	0.04872		mg/Kg		97	75 - 124	2	50
Diisopropyl ether	0.0500	0.04580		mg/Kg		92	68 - 124	1	45
1,1-Dichloroethene	0.0500	0.06149		mg/Kg		123	75 - 131	2	50
1,1-Dichloropropene	0.0500	0.05099		mg/Kg		102	79 - 127	2	50
1,2,3-Trichlorobenzene	0.0500	0.04890		mg/Kg		98	70 - 150	2	50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-25773/4
Matrix: Solid
Analysis Batch: 25773

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3-Trichloropropane	0.0500	0.04098		mg/Kg		82	65 - 139	4	50
1,2,4-Trichlorobenzene	0.0500	0.04726		mg/Kg		95	62 - 150	0	50
1,2,4-Trimethylbenzene	0.0500	0.04033		mg/Kg		81	77 - 139	0	50
1,2-Dibromo-3-Chloropropane	0.0500	0.04373		mg/Kg		87	49 - 142	2	50
1,2-Dibromoethane (EDB)	0.0500	0.06098		mg/Kg		122	80 - 135	4	50
1,2-Dichlorobenzene	0.0500	0.05022		mg/Kg		100	80 - 134	3	50
1,2-Dichloroethane	0.0500	0.04779		mg/Kg		96	65 - 134	1	50
1,2-Dichloropropane	0.0500	0.04993		mg/Kg		100	69 - 120	1	50
1,3,5-Trimethylbenzene	0.0500	0.04315		mg/Kg		86	78 - 138	2	50
1,3-Dichlorobenzene	0.0500	0.05054		mg/Kg		101	79 - 137	2	50
1,3-Dichloropropane	0.0500	0.06170		mg/Kg		123	78 - 126	4	42
1,4-Dichlorobenzene	0.0500	0.04905		mg/Kg		98	77 - 139	0	50
2,2-Dichloropropane	0.0500	0.04972		mg/Kg		99	68 - 145	0	50
2-Butanone (MEK)	0.250	0.2168		mg/Kg		87	61 - 132	8	50
2-Chlorotoluene	0.0500	0.04595		mg/Kg		92	78 - 132	4	50
2-Hexanone	0.250	0.2408		mg/Kg		96	57 - 148	11	50
4-Chlorotoluene	0.0500	0.04543		mg/Kg		91	77 - 138	2	50
4-Methyl-2-pentanone (MIBK)	0.250	0.2509		mg/Kg		100	59 - 138	4	50
Acetone	0.250	0.2191		mg/Kg		88	51 - 149	6	50
Benzene	0.0500	0.05270		mg/Kg		105	75 - 127	1	50
Bromobenzene	0.0500	0.04638		mg/Kg		93	75 - 130	14	50
Bromochloromethane	0.0500	0.05324		mg/Kg		106	70 - 132	4	50
Bromodichloromethane	0.0500	0.05504		mg/Kg		110	68 - 135	0	50
Bromoform	0.0500	0.05041		mg/Kg		101	36 - 150	1	50
Bromomethane	0.0500	0.06732		mg/Kg		135	43 - 142	3	50
Carbon disulfide	0.0500	0.05410		mg/Kg		108	74 - 135	1	50
Carbon tetrachloride	0.0500	0.05597		mg/Kg		112	70 - 141	0	50
Chlorobenzene	0.0500	0.05387		mg/Kg		108	84 - 125	3	50
Chlorodibromomethane	0.0500	0.05242		mg/Kg		105	66 - 134	1	50
Chloroethane	0.0500	0.04537		mg/Kg		91	53 - 144	0	50
Chloroform	0.0500	0.05136		mg/Kg		103	76 - 130	2	49
Chloromethane	0.0500	0.04436		mg/Kg		89	23 - 150	6	50
cis-1,2-Dichloroethene	0.0500	0.04564		mg/Kg		91	75 - 125	1	50
cis-1,3-Dichloropropene	0.0500	0.05894		mg/Kg		118	73 - 148	4	50
Dibromomethane	0.0500	0.05522		mg/Kg		110	71 - 130	0	50
Dichlorodifluoromethane	0.0500	0.04231		mg/Kg		85	12 - 144	4	50
Ethylbenzene	0.0500	0.05534		mg/Kg		111	80 - 134	5	50
Hexachlorobutadiene	0.0500	0.04472		mg/Kg		89	65 - 148	5	50
Isopropylbenzene	0.0500	0.05180		mg/Kg		104	80 - 150	4	50
Methyl tert-butyl ether	0.0500	0.04979		mg/Kg		100	70 - 136	2	50
Methylene Chloride	0.0500	0.05921		mg/Kg		118	68 - 144	3	50
Naphthalene	0.0500	0.04260		mg/Kg		85	69 - 150	4	50
n-Butylbenzene	0.0500	0.04346		mg/Kg		87	72 - 152	2	50
N-Propylbenzene	0.0500	0.04556		mg/Kg		91	75 - 137	9	50
p-Isopropyltoluene	0.0500	0.04101		mg/Kg		82	77 - 141	3	50
sec-Butylbenzene	0.0500	0.04338		mg/Kg		87	79 - 141	4	50
Styrene	0.0500	0.05277		mg/Kg		106	82 - 137	4	50
tert-Butylbenzene	0.0500	0.04403		mg/Kg		88	80 - 132	3	50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-25773/4
Matrix: Solid
Analysis Batch: 25773

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	0.0500	0.07146	*	mg/Kg		143	78 - 140	7	50
Toluene	0.0500	0.06210		mg/Kg		124	80 - 132	6	50
trans-1,2-Dichloroethene	0.0500	0.05070		mg/Kg		101	76 - 128	1	50
trans-1,3-Dichloropropene	0.0500	0.05348		mg/Kg		107	62 - 139	2	50
Trichloroethene	0.0500	0.05536		mg/Kg		111	77 - 127	2	50
Trichlorofluoromethane	0.0500	0.05032		mg/Kg		101	50 - 140	2	50
Vinyl chloride	0.0500	0.04410		mg/Kg		88	47 - 136	0	50
Xylenes, Total	0.150	0.1596		mg/Kg		106	80 - 137	4	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 130*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
Dibromofluoromethane (Surr)	*92*		*70 - 130*
Toluene-d8 (Surr)	*117*		*70 - 130*

Lab Sample ID: MB 490-26095/7
Matrix: Solid
Analysis Batch: 26095

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,1,1-Trichloroethane	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,1,2,2-Tetrachloroethane	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,1,2-Trichloroethane	ND		0.00500	mg/Kg			10/06/12 11:18	1
1,1-Dichloroethane	ND		0.00200	mg/Kg			10/06/12 11:18	1
Diisopropyl ether	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,1-Dichloroethene	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,1-Dichloropropene	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,2,3-Trichlorobenzene	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,2,3-Trichloropropane	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,2,4-Trichlorobenzene	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,2,4-Trimethylbenzene	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,2-Dibromo-3-Chloropropane	ND		0.00500	mg/Kg			10/06/12 11:18	1
1,2-Dibromoethane (EDB)	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,2-Dichlorobenzene	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,2-Dichloroethane	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,2-Dichloropropane	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,3,5-Trimethylbenzene	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,3-Dichlorobenzene	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,3-Dichloropropane	ND		0.00200	mg/Kg			10/06/12 11:18	1
1,4-Dichlorobenzene	ND		0.00200	mg/Kg			10/06/12 11:18	1
2,2-Dichloropropane	ND		0.00200	mg/Kg			10/06/12 11:18	1
2-Butanone (MEK)	ND		0.0500	mg/Kg			10/06/12 11:18	1
2-Chlorotoluene	ND		0.00200	mg/Kg			10/06/12 11:18	1
2-Hexanone	ND		0.0500	mg/Kg			10/06/12 11:18	1
4-Chlorotoluene	ND		0.00200	mg/Kg			10/06/12 11:18	1
4-Methyl-2-pentanone (MIBK)	ND		0.0500	mg/Kg			10/06/12 11:18	1
Acetone	ND		0.0500	mg/Kg			10/06/12 11:18	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-26095/7
Matrix: Solid
Analysis Batch: 26095

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200		mg/Kg			10/06/12 11:18	1
Bromobenzene	ND		0.00200		mg/Kg			10/06/12 11:18	1
Bromochloromethane	ND		0.00200		mg/Kg			10/06/12 11:18	1
Bromodichloromethane	ND		0.00200		mg/Kg			10/06/12 11:18	1
Bromoform	ND		0.00200		mg/Kg			10/06/12 11:18	1
Bromomethane	ND		0.00200		mg/Kg			10/06/12 11:18	1
Carbon disulfide	ND		0.00500		mg/Kg			10/06/12 11:18	1
Carbon tetrachloride	ND		0.00200		mg/Kg			10/06/12 11:18	1
Chlorobenzene	ND		0.00200		mg/Kg			10/06/12 11:18	1
Chlorodibromomethane	ND		0.00200		mg/Kg			10/06/12 11:18	1
Chloroethane	ND		0.00500		mg/Kg			10/06/12 11:18	1
Chloroform	ND		0.00200		mg/Kg			10/06/12 11:18	1
Chloromethane	ND		0.00200		mg/Kg			10/06/12 11:18	1
cis-1,2-Dichloroethene	ND		0.00200		mg/Kg			10/06/12 11:18	1
cis-1,3-Dichloropropene	ND		0.00200		mg/Kg			10/06/12 11:18	1
Dibromomethane	ND		0.00200		mg/Kg			10/06/12 11:18	1
Dichlorodifluoromethane	ND		0.00200		mg/Kg			10/06/12 11:18	1
Ethylbenzene	ND		0.00200		mg/Kg			10/06/12 11:18	1
Hexachlorobutadiene	ND		0.00500		mg/Kg			10/06/12 11:18	1
Isopropylbenzene	ND		0.00200		mg/Kg			10/06/12 11:18	1
Methyl tert-butyl ether	ND		0.00200		mg/Kg			10/06/12 11:18	1
Methylene Chloride	ND		0.0100		mg/Kg			10/06/12 11:18	1
Naphthalene	ND		0.00500		mg/Kg			10/06/12 11:18	1
n-Butylbenzene	ND		0.00200		mg/Kg			10/06/12 11:18	1
N-Propylbenzene	ND		0.00200		mg/Kg			10/06/12 11:18	1
p-Isopropyltoluene	ND		0.00200		mg/Kg			10/06/12 11:18	1
sec-Butylbenzene	ND		0.00200		mg/Kg			10/06/12 11:18	1
Styrene	ND		0.00200		mg/Kg			10/06/12 11:18	1
tert-Butylbenzene	ND		0.00200		mg/Kg			10/06/12 11:18	1
Tetrachloroethene	ND		0.00200		mg/Kg			10/06/12 11:18	1
Toluene	ND		0.00200		mg/Kg			10/06/12 11:18	1
trans-1,2-Dichloroethene	ND		0.00200		mg/Kg			10/06/12 11:18	1
trans-1,3-Dichloropropene	ND		0.00200		mg/Kg			10/06/12 11:18	1
Trichloroethene	ND		0.00200		mg/Kg			10/06/12 11:18	1
Trichlorofluoromethane	ND		0.00200		mg/Kg			10/06/12 11:18	1
Vinyl chloride	ND		0.00200		mg/Kg			10/06/12 11:18	1
Xylenes, Total	ND		0.00500		mg/Kg			10/06/12 11:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*10/06/12 11:18*	*1*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*		*10/06/12 11:18*	*1*
Dibromofluoromethane (Surr)	*91*		*70 - 130*		*10/06/12 11:18*	*1*
Toluene-d8 (Surr)	*110*		*70 - 130*		*10/06/12 11:18*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-26095/8
Matrix: Solid
Analysis Batch: 26095

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.100		mg/Kg			10/06/12 11:48	1
1,1,1-Trichloroethane	ND		0.100		mg/Kg			10/06/12 11:48	1
1,1,2,2-Tetrachloroethane	ND		0.100		mg/Kg			10/06/12 11:48	1
1,1,2-Trichloroethane	ND		0.250		mg/Kg			10/06/12 11:48	1
1,1-Dichloroethane	ND		0.100		mg/Kg			10/06/12 11:48	1
Diisopropyl ether	ND		0.100		mg/Kg			10/06/12 11:48	1
1,1-Dichloroethene	ND		0.100		mg/Kg			10/06/12 11:48	1
1,1-Dichloropropene	ND		0.100		mg/Kg			10/06/12 11:48	1
1,2,3-Trichlorobenzene	ND		0.100		mg/Kg			10/06/12 11:48	1
1,2,3-Trichloropropane	ND		0.100		mg/Kg			10/06/12 11:48	1
1,2,4-Trichlorobenzene	ND		0.100		mg/Kg			10/06/12 11:48	1
1,2,4-Trimethylbenzene	ND		0.100		mg/Kg			10/06/12 11:48	1
1,2-Dibromo-3-Chloropropane	ND		0.250		mg/Kg			10/06/12 11:48	1
1,2-Dibromoethane (EDB)	ND		0.100		mg/Kg			10/06/12 11:48	1
1,2-Dichlorobenzene	ND		0.100		mg/Kg			10/06/12 11:48	1
1,2-Dichloroethane	ND		0.100		mg/Kg			10/06/12 11:48	1
1,2-Dichloropropane	ND		0.100		mg/Kg			10/06/12 11:48	1
1,3,5-Trimethylbenzene	ND		0.100		mg/Kg			10/06/12 11:48	1
1,3-Dichlorobenzene	ND		0.100		mg/Kg			10/06/12 11:48	1
1,3-Dichloropropane	ND		0.100		mg/Kg			10/06/12 11:48	1
1,4-Dichlorobenzene	ND		0.100		mg/Kg			10/06/12 11:48	1
2,2-Dichloropropane	ND		0.100		mg/Kg			10/06/12 11:48	1
2-Butanone (MEK)	ND		2.50		mg/Kg			10/06/12 11:48	1
2-Chlorotoluene	ND		0.100		mg/Kg			10/06/12 11:48	1
2-Hexanone	ND		2.50		mg/Kg			10/06/12 11:48	1
4-Chlorotoluene	ND		0.100		mg/Kg			10/06/12 11:48	1
4-Methyl-2-pentanone (MIBK)	ND		2.50		mg/Kg			10/06/12 11:48	1
Acetone	ND		2.50		mg/Kg			10/06/12 11:48	1
Benzene	ND		0.100		mg/Kg			10/06/12 11:48	1
Bromobenzene	ND		0.100		mg/Kg			10/06/12 11:48	1
Bromochloromethane	ND		0.100		mg/Kg			10/06/12 11:48	1
Bromodichloromethane	ND		0.100		mg/Kg			10/06/12 11:48	1
Bromoform	ND		0.100		mg/Kg			10/06/12 11:48	1
Bromomethane	ND		0.100		mg/Kg			10/06/12 11:48	1
Carbon disulfide	ND		0.250		mg/Kg			10/06/12 11:48	1
Carbon tetrachloride	ND		0.100		mg/Kg			10/06/12 11:48	1
Chlorobenzene	ND		0.100		mg/Kg			10/06/12 11:48	1
Chlorodibromomethane	ND		0.100		mg/Kg			10/06/12 11:48	1
Chloroethane	ND		0.250		mg/Kg			10/06/12 11:48	1
Chloroform	ND		0.100		mg/Kg			10/06/12 11:48	1
Chloromethane	ND		0.100		mg/Kg			10/06/12 11:48	1
cis-1,2-Dichloroethene	ND		0.100		mg/Kg			10/06/12 11:48	1
cis-1,3-Dichloropropene	ND		0.100		mg/Kg			10/06/12 11:48	1
Dibromomethane	ND		0.100		mg/Kg			10/06/12 11:48	1
Dichlorodifluoromethane	ND		0.100		mg/Kg			10/06/12 11:48	1
Ethylbenzene	ND		0.100		mg/Kg			10/06/12 11:48	1
Hexachlorobutadiene	ND		0.250		mg/Kg			10/06/12 11:48	1
Isopropylbenzene	ND		0.100		mg/Kg			10/06/12 11:48	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-26095/8
Matrix: Solid
Analysis Batch: 26095

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.100	mg/Kg			10/06/12 11:48	1
Methylene Chloride	ND		0.500	mg/Kg			10/06/12 11:48	1
Naphthalene	ND		0.250	mg/Kg			10/06/12 11:48	1
n-Butylbenzene	ND		0.100	mg/Kg			10/06/12 11:48	1
N-Propylbenzene	ND		0.100	mg/Kg			10/06/12 11:48	1
p-Isopropyltoluene	ND		0.100	mg/Kg			10/06/12 11:48	1
sec-Butylbenzene	ND		0.100	mg/Kg			10/06/12 11:48	1
Styrene	ND		0.100	mg/Kg			10/06/12 11:48	1
tert-Butylbenzene	ND		0.100	mg/Kg			10/06/12 11:48	1
Tetrachloroethene	ND		0.100	mg/Kg			10/06/12 11:48	1
Toluene	ND		0.100	mg/Kg			10/06/12 11:48	1
trans-1,2-Dichloroethene	ND		0.100	mg/Kg			10/06/12 11:48	1
trans-1,3-Dichloropropene	ND		0.100	mg/Kg			10/06/12 11:48	1
Trichloroethene	ND		0.100	mg/Kg			10/06/12 11:48	1
Trichlorofluoromethane	ND		0.100	mg/Kg			10/06/12 11:48	1
Vinyl chloride	ND		0.100	mg/Kg			10/06/12 11:48	1
Xylenes, Total	ND		0.250	mg/Kg			10/06/12 11:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*		*10/06/12 11:48*	*1*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*		*10/06/12 11:48*	*1*
Dibromofluoromethane (Surr)	*86*		*70 - 130*		*10/06/12 11:48*	*1*
Toluene-d8 (Surr)	*112*		*70 - 130*		*10/06/12 11:48*	*1*

Lab Sample ID: LCS 490-26095/3
Matrix: Solid
Analysis Batch: 26095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.0500	0.05826		mg/Kg		117	80 - 136
1,1,1-Trichloroethane	0.0500	0.05862		mg/Kg		117	72 - 140
1,1,2,2-Tetrachloroethane	0.0500	0.04764		mg/Kg		95	66 - 134
1,1,2-Trichloroethane	0.0500	0.06441	*	mg/Kg		129	78 - 128
1,1-Dichloroethane	0.0500	0.05466		mg/Kg		109	75 - 124
Diisopropyl ether	0.0500	0.05146		mg/Kg		103	68 - 124
1,1-Dichloroethene	0.0500	0.06942	*	mg/Kg		139	75 - 131
1,1-Dichloropropene	0.0500	0.05708		mg/Kg		114	79 - 127
1,2,3-Trichlorobenzene	0.0500	0.06108		mg/Kg		122	70 - 150
1,2,3-Trichloropropane	0.0500	0.04694		mg/Kg		94	65 - 139
1,2,4-Trichlorobenzene	0.0500	0.06094		mg/Kg		122	62 - 150
1,2,4-Trimethylbenzene	0.0500	0.04700		mg/Kg		94	77 - 139
1,2-Dibromo-3-Chloropropane	0.0500	0.04434		mg/Kg		89	49 - 142
1,2-Dibromoethane (EDB)	0.0500	0.06426		mg/Kg		129	80 - 135
1,2-Dichlorobenzene	0.0500	0.05624		mg/Kg		112	80 - 134
1,2-Dichloroethane	0.0500	0.05269		mg/Kg		105	65 - 134
1,2-Dichloropropane	0.0500	0.05338		mg/Kg		107	69 - 120
1,3,5-Trimethylbenzene	0.0500	0.04809		mg/Kg		96	78 - 138
1,3-Dichlorobenzene	0.0500	0.05765		mg/Kg		115	79 - 137

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-26095/3
Matrix: Solid
Analysis Batch: 26095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	0.0500	0.06549	*	mg/Kg		131	78 - 126
1,4-Dichlorobenzene	0.0500	0.05662		mg/Kg		113	77 - 139
2,2-Dichloropropane	0.0500	0.05406		mg/Kg		108	68 - 145
2-Butanone (MEK)	0.250	0.2575		mg/Kg		103	61 - 132
2-Chlorotoluene	0.0500	0.04908		mg/Kg		98	78 - 132
2-Hexanone	0.250	0.2651		mg/Kg		106	57 - 148
4-Chlorotoluene	0.0500	0.05108		mg/Kg		102	77 - 138
4-Methyl-2-pentanone (MIBK)	0.250	0.2775		mg/Kg		111	59 - 138
Acetone	0.250	0.2526		mg/Kg		101	51 - 149
Benzene	0.0500	0.05678		mg/Kg		114	75 - 127
Bromobenzene	0.0500	0.04915		mg/Kg		98	75 - 130
Bromochloromethane	0.0500	0.06097		mg/Kg		122	70 - 132
Bromodichloromethane	0.0500	0.05776		mg/Kg		116	68 - 135
Bromoform	0.0500	0.05376		mg/Kg		108	36 - 150
Bromomethane	0.0500	0.06419		mg/Kg		128	43 - 142
Carbon disulfide	0.0500	0.06020		mg/Kg		120	74 - 135
Carbon tetrachloride	0.0500	0.06109		mg/Kg		122	70 - 141
Chlorobenzene	0.0500	0.05875		mg/Kg		117	84 - 125
Chlorodibromomethane	0.0500	0.05693		mg/Kg		114	66 - 134
Chloroethane	0.0500	0.04715		mg/Kg		94	53 - 144
Chloroform	0.0500	0.05582		mg/Kg		112	76 - 130
Chloromethane	0.0500	0.04081		mg/Kg		82	23 - 150
cis-1,2-Dichloroethene	0.0500	0.05224		mg/Kg		104	75 - 125
cis-1,3-Dichloropropene	0.0500	0.06172		mg/Kg		123	73 - 148
Dibromomethane	0.0500	0.05819		mg/Kg		116	71 - 130
Dichlorodifluoromethane	0.0500	0.04742		mg/Kg		95	12 - 144
Ethylbenzene	0.0500	0.05900		mg/Kg		118	80 - 134
Hexachlorobutadiene	0.0500	0.05298		mg/Kg		106	65 - 148
Isopropylbenzene	0.0500	0.05613		mg/Kg		112	80 - 150
Methyl tert-butyl ether	0.0500	0.05708		mg/Kg		114	70 - 136
Methylene Chloride	0.0500	0.06334		mg/Kg		127	68 - 144
Naphthalene	0.0500	0.05190		mg/Kg		104	69 - 150
n-Butylbenzene	0.0500	0.05262		mg/Kg		105	72 - 152
N-Propylbenzene	0.0500	0.05027		mg/Kg		101	75 - 137
p-Isopropyltoluene	0.0500	0.04866		mg/Kg		97	77 - 141
sec-Butylbenzene	0.0500	0.04940		mg/Kg		99	79 - 141
Styrene	0.0500	0.05569		mg/Kg		111	82 - 137
tert-Butylbenzene	0.0500	0.04841		mg/Kg		97	80 - 132
Tetrachloroethene	0.0500	0.07851	*	mg/Kg		157	78 - 140
Toluene	0.0500	0.06483		mg/Kg		130	80 - 132
trans-1,2-Dichloroethene	0.0500	0.05944		mg/Kg		119	76 - 128
trans-1,3-Dichloropropene	0.0500	0.05697		mg/Kg		114	62 - 139
Trichloroethene	0.0500	0.06214		mg/Kg		124	77 - 127
Trichlorofluoromethane	0.0500	0.05213		mg/Kg		104	50 - 140
Vinyl chloride	0.0500	0.04478		mg/Kg		90	47 - 136
Xylenes, Total	0.150	0.1682		mg/Kg		112	80 - 137

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-26095/3
Matrix: Solid
Analysis Batch: 26095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
Dibromofluoromethane (Surr)	*96*		*70 - 130*
Toluene-d8 (Surr)	*111*		*70 - 130*

Lab Sample ID: LCSD 490-26095/4
Matrix: Solid
Analysis Batch: 26095

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.0500	0.05737		mg/Kg		115	80 - 136	2	50
1,1,1-Trichloroethane	0.0500	0.05885		mg/Kg		118	72 - 140	0	50
1,1,2,2-Tetrachloroethane	0.0500	0.04636		mg/Kg		93	66 - 134	3	50
1,1,2-Trichloroethane	0.0500	0.06183		mg/Kg		124	78 - 128	4	50
1,1-Dichloroethane	0.0500	0.05535		mg/Kg		111	75 - 124	1	50
Diisopropyl ether	0.0500	0.05038		mg/Kg		101	68 - 124	2	45
1,1-Dichloroethene	0.0500	0.06931	*	mg/Kg		139	75 - 131	0	50
1,1-Dichloropropene	0.0500	0.05710		mg/Kg		114	79 - 127	0	50
1,2,3-Trichlorobenzene	0.0500	0.06163		mg/Kg		123	70 - 150	1	50
1,2,3-Trichloropropane	0.0500	0.04765		mg/Kg		95	65 - 139	2	50
1,2,4-Trichlorobenzene	0.0500	0.06230		mg/Kg		125	62 - 150	2	50
1,2,4-Trimethylbenzene	0.0500	0.04742		mg/Kg		95	77 - 139	1	50
1,2-Dibromo-3-Chloropropane	0.0500	0.03974		mg/Kg		79	49 - 142	11	50
1,2-Dibromoethane (EDB)	0.0500	0.06147		mg/Kg		123	80 - 135	4	50
1,2-Dichlorobenzene	0.0500	0.05554		mg/Kg		111	80 - 134	1	50
1,2-Dichloroethane	0.0500	0.05040		mg/Kg		101	65 - 134	4	50
1,2-Dichloropropane	0.0500	0.05266		mg/Kg		105	69 - 120	1	50
1,3,5-Trimethylbenzene	0.0500	0.04818		mg/Kg		96	78 - 138	0	50
1,3-Dichlorobenzene	0.0500	0.05737		mg/Kg		115	79 - 137	0	50
1,3-Dichloropropane	0.0500	0.06121		mg/Kg		122	78 - 126	7	42
1,4-Dichlorobenzene	0.0500	0.05741		mg/Kg		115	77 - 139	1	50
2,2-Dichloropropane	0.0500	0.05325		mg/Kg		107	68 - 145	2	50
2-Butanone (MEK)	0.250	0.2696		mg/Kg		108	61 - 132	5	50
2-Chlorotoluene	0.0500	0.04943		mg/Kg		99	78 - 132	1	50
2-Hexanone	0.250	0.2895		mg/Kg		116	57 - 148	9	50
4-Chlorotoluene	0.0500	0.05034		mg/Kg		101	77 - 138	1	50
4-Methyl-2-pentanone (MIBK)	0.250	0.2862		mg/Kg		114	59 - 138	3	50
Acetone	0.250	0.2556		mg/Kg		102	51 - 149	1	50
Benzene	0.0500	0.05712		mg/Kg		114	75 - 127	1	50
Bromobenzene	0.0500	0.04936		mg/Kg		99	75 - 130	0	50
Bromochloromethane	0.0500	0.05958		mg/Kg		119	70 - 132	2	50
Bromodichloromethane	0.0500	0.05716		mg/Kg		114	68 - 135	1	50
Bromoform	0.0500	0.05288		mg/Kg		106	36 - 150	2	50
Bromomethane	0.0500	0.06289		mg/Kg		126	43 - 142	2	50
Carbon disulfide	0.0500	0.05896		mg/Kg		118	74 - 135	2	50
Carbon tetrachloride	0.0500	0.06146		mg/Kg		123	70 - 141	1	50
Chlorobenzene	0.0500	0.05828		mg/Kg		117	84 - 125	1	50
Chlorodibromomethane	0.0500	0.05445		mg/Kg		109	66 - 134	4	50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-26095/4
Matrix: Solid
Analysis Batch: 26095

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloroethane	0.0500	0.04484		mg/Kg		90	53 - 144	5	50
Chloroform	0.0500	0.05631		mg/Kg		113	76 - 130	1	49
Chloromethane	0.0500	0.04241		mg/Kg		85	23 - 150	4	50
cis-1,2-Dichloroethene	0.0500	0.05091		mg/Kg		102	75 - 125	3	50
cis-1,3-Dichloropropene	0.0500	0.06035		mg/Kg		121	73 - 148	2	50
Dibromomethane	0.0500	0.05761		mg/Kg		115	71 - 130	1	50
Dichlorodifluoromethane	0.0500	0.04553		mg/Kg		91	12 - 144	4	50
Ethylbenzene	0.0500	0.05907		mg/Kg		118	80 - 134	0	50
Hexachlorobutadiene	0.0500	0.05573		mg/Kg		111	65 - 148	5	50
Isopropylbenzene	0.0500	0.05529		mg/Kg		111	80 - 150	1	50
Methyl tert-butyl ether	0.0500	0.05485		mg/Kg		110	70 - 136	4	50
Methylene Chloride	0.0500	0.06111		mg/Kg		122	68 - 144	4	50
Naphthalene	0.0500	0.05509		mg/Kg		110	69 - 150	6	50
n-Butylbenzene	0.0500	0.05190		mg/Kg		104	72 - 152	1	50
N-Propylbenzene	0.0500	0.05060		mg/Kg		101	75 - 137	1	50
p-Isopropyltoluene	0.0500	0.04853		mg/Kg		97	77 - 141	0	50
sec-Butylbenzene	0.0500	0.04968		mg/Kg		99	79 - 141	1	50
Styrene	0.0500	0.05553		mg/Kg		111	82 - 137	0	50
tert-Butylbenzene	0.0500	0.04919		mg/Kg		98	80 - 132	2	50
Tetrachloroethene	0.0500	0.07740	*	mg/Kg		155	78 - 140	1	50
Toluene	0.0500	0.06426		mg/Kg		129	80 - 132	1	50
trans-1,2-Dichloroethene	0.0500	0.05800		mg/Kg		116	76 - 128	2	50
trans-1,3-Dichloropropene	0.0500	0.05499		mg/Kg		110	62 - 139	4	50
Trichloroethene	0.0500	0.06075		mg/Kg		122	77 - 127	2	50
Trichlorofluoromethane	0.0500	0.05160		mg/Kg		103	50 - 140	1	50
Vinyl chloride	0.0500	0.04479		mg/Kg		90	47 - 136	0	50
Xylenes, Total	0.150	0.1673		mg/Kg		112	80 - 137	1	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*
Dibromofluoromethane (Surr)	*94*		*70 - 130*
Toluene-d8 (Surr)	*112*		*70 - 130*

Lab Sample ID: MB 490-26524/7
Matrix: Solid
Analysis Batch: 26524

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.100	mg/Kg			10/09/12 08:09	1
1,1,1-Trichloroethane	ND		0.100	mg/Kg			10/09/12 08:09	1
1,1,2,2-Tetrachloroethane	ND		0.100	mg/Kg			10/09/12 08:09	1
1,1,2-Trichloroethane	ND		0.250	mg/Kg			10/09/12 08:09	1
1,1-Dichloroethane	ND		0.100	mg/Kg			10/09/12 08:09	1
Diisopropyl ether	ND		0.100	mg/Kg			10/09/12 08:09	1
1,1-Dichloroethene	ND		0.100	mg/Kg			10/09/12 08:09	1
1,1-Dichloropropene	ND		0.100	mg/Kg			10/09/12 08:09	1
1,2,3-Trichlorobenzene	ND		0.100	mg/Kg			10/09/12 08:09	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-26524/7
Matrix: Solid
Analysis Batch: 26524

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.100		mg/Kg			10/09/12 08:09	1
1,2,4-Trichlorobenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
1,2,4-Trimethylbenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
1,2-Dibromo-3-Chloropropane	ND		0.250		mg/Kg			10/09/12 08:09	1
1,2-Dibromoethane (EDB)	ND		0.100		mg/Kg			10/09/12 08:09	1
1,2-Dichlorobenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
1,2-Dichloroethane	ND		0.100		mg/Kg			10/09/12 08:09	1
1,2-Dichloropropane	ND		0.100		mg/Kg			10/09/12 08:09	1
1,3,5-Trimethylbenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
1,3-Dichlorobenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
1,3-Dichloropropane	ND		0.100		mg/Kg			10/09/12 08:09	1
1,4-Dichlorobenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
2,2-Dichloropropane	ND		0.100		mg/Kg			10/09/12 08:09	1
2-Butanone (MEK)	ND		2.50		mg/Kg			10/09/12 08:09	1
2-Chlorotoluene	ND		0.100		mg/Kg			10/09/12 08:09	1
2-Hexanone	ND		2.50		mg/Kg			10/09/12 08:09	1
4-Chlorotoluene	ND		0.100		mg/Kg			10/09/12 08:09	1
4-Methyl-2-pentanone (MIBK)	ND		2.50		mg/Kg			10/09/12 08:09	1
Acetone	ND		2.50		mg/Kg			10/09/12 08:09	1
Benzene	ND		0.100		mg/Kg			10/09/12 08:09	1
Bromobenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
Bromochloromethane	ND		0.100		mg/Kg			10/09/12 08:09	1
Bromodichloromethane	ND		0.100		mg/Kg			10/09/12 08:09	1
Bromoform	ND		0.100		mg/Kg			10/09/12 08:09	1
Bromomethane	ND		0.100		mg/Kg			10/09/12 08:09	1
Carbon disulfide	ND		0.250		mg/Kg			10/09/12 08:09	1
Carbon tetrachloride	ND		0.100		mg/Kg			10/09/12 08:09	1
Chlorobenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
Chlorodibromomethane	ND		0.100		mg/Kg			10/09/12 08:09	1
Chloroethane	ND		0.250		mg/Kg			10/09/12 08:09	1
Chloroform	ND		0.100		mg/Kg			10/09/12 08:09	1
Chloromethane	ND		0.100		mg/Kg			10/09/12 08:09	1
cis-1,2-Dichloroethene	ND		0.100		mg/Kg			10/09/12 08:09	1
cis-1,3-Dichloropropene	ND		0.100		mg/Kg			10/09/12 08:09	1
Dibromomethane	ND		0.100		mg/Kg			10/09/12 08:09	1
Dichlorodifluoromethane	ND		0.100		mg/Kg			10/09/12 08:09	1
Ethylbenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
Hexachlorobutadiene	ND		0.250		mg/Kg			10/09/12 08:09	1
Isopropylbenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
Methyl tert-butyl ether	ND		0.100		mg/Kg			10/09/12 08:09	1
Methylene Chloride	ND		0.500		mg/Kg			10/09/12 08:09	1
Naphthalene	ND		0.250		mg/Kg			10/09/12 08:09	1
n-Butylbenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
N-Propylbenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
p-Isopropyltoluene	ND		0.100		mg/Kg			10/09/12 08:09	1
sec-Butylbenzene	ND		0.100		mg/Kg			10/09/12 08:09	1
Styrene	ND		0.100		mg/Kg			10/09/12 08:09	1
tert-Butylbenzene	ND		0.100		mg/Kg			10/09/12 08:09	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-26524/7
Matrix: Solid
Analysis Batch: 26524

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.100	mg/Kg			10/09/12 08:09	1
Toluene	ND		0.100	mg/Kg			10/09/12 08:09	1
trans-1,2-Dichloroethene	ND		0.100	mg/Kg			10/09/12 08:09	1
trans-1,3-Dichloropropene	ND		0.100	mg/Kg			10/09/12 08:09	1
Trichloroethene	ND		0.100	mg/Kg			10/09/12 08:09	1
Trichlorofluoromethane	ND		0.100	mg/Kg			10/09/12 08:09	1
Vinyl chloride	ND		0.100	mg/Kg			10/09/12 08:09	1
Xylenes, Total	ND		0.250	mg/Kg			10/09/12 08:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*10/09/12 08:09*	*1*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*		*10/09/12 08:09*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*10/09/12 08:09*	*1*
Toluene-d8 (Surr)	*109*		*70 - 130*		*10/09/12 08:09*	*1*

Lab Sample ID: LCS 490-26524/3
Matrix: Solid
Analysis Batch: 26524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.0500	0.05486		mg/Kg		110	80 - 136
1,1,1-Trichloroethane	0.0500	0.06091		mg/Kg		122	72 - 140
1,1,2,2-Tetrachloroethane	0.0500	0.04923		mg/Kg		98	66 - 134
1,1,2-Trichloroethane	0.0500	0.05927		mg/Kg		119	78 - 128
1,1-Dichloroethane	0.0500	0.05529		mg/Kg		111	75 - 124
Diisopropyl ether	0.0500	0.05426		mg/Kg		109	68 - 124
1,1-Dichloroethene	0.0500	0.06517		mg/Kg		130	75 - 131
1,1-Dichloropropene	0.0500	0.05701		mg/Kg		114	79 - 127
1,2,3-Trichlorobenzene	0.0500	0.05763		mg/Kg		115	70 - 150
1,2,3-Trichloropropane	0.0500	0.05306		mg/Kg		106	65 - 139
1,2,4-Trichlorobenzene	0.0500	0.05936		mg/Kg		119	62 - 150
1,2,4-Trimethylbenzene	0.0500	0.05079		mg/Kg		102	77 - 139
1,2-Dibromo-3-Chloropropane	0.0500	0.04647		mg/Kg		93	49 - 142
1,2-Dibromoethane (EDB)	0.0500	0.06218		mg/Kg		124	80 - 135
1,2-Dichlorobenzene	0.0500	0.05531		mg/Kg		111	80 - 134
1,2-Dichloroethane	0.0500	0.05576		mg/Kg		112	65 - 134
1,2-Dichloropropane	0.0500	0.05393		mg/Kg		108	69 - 120
1,3,5-Trimethylbenzene	0.0500	0.05209		mg/Kg		104	78 - 138
1,3-Dichlorobenzene	0.0500	0.05407		mg/Kg		108	79 - 137
1,3-Dichloropropane	0.0500	0.05983		mg/Kg		120	78 - 126
1,4-Dichlorobenzene	0.0500	0.05396		mg/Kg		108	77 - 139
2,2-Dichloropropane	0.0500	0.05659		mg/Kg		113	68 - 145
2-Butanone (MEK)	0.250	0.2511		mg/Kg		100	61 - 132
2-Chlorotoluene	0.0500	0.05212		mg/Kg		104	78 - 132
2-Hexanone	0.250	0.2669		mg/Kg		107	57 - 148
4-Chlorotoluene	0.0500	0.05220		mg/Kg		104	77 - 138
4-Methyl-2-pentanone (MIBK)	0.250	0.2788		mg/Kg		112	59 - 138
Acetone	0.250	0.2696		mg/Kg		108	51 - 149

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-26524/3
Matrix: Solid
Analysis Batch: 26524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.05438		mg/Kg		109	75 - 127
Bromobenzene	0.0500	0.05236		mg/Kg		105	75 - 130
Bromochloromethane	0.0500	0.05763		mg/Kg		115	70 - 132
Bromodichloromethane	0.0500	0.05833		mg/Kg		117	68 - 135
Bromoform	0.0500	0.04991		mg/Kg		100	36 - 150
Bromomethane	0.0500	0.06446		mg/Kg		129	43 - 142
Carbon disulfide	0.0500	0.05662		mg/Kg		113	74 - 135
Carbon tetrachloride	0.0500	0.06656		mg/Kg		133	70 - 141
Chlorobenzene	0.0500	0.05559		mg/Kg		111	84 - 125
Chlorodibromomethane	0.0500	0.05662		mg/Kg		113	66 - 134
Chloroethane	0.0500	0.04635		mg/Kg		93	53 - 144
Chloroform	0.0500	0.05640		mg/Kg		113	76 - 130
Chloromethane	0.0500	0.04365		mg/Kg		87	23 - 150
cis-1,2-Dichloroethene	0.0500	0.05395		mg/Kg		108	75 - 125
cis-1,3-Dichloropropene	0.0500	0.06083		mg/Kg		122	73 - 148
Dibromomethane	0.0500	0.05632		mg/Kg		113	71 - 130
Dichlorodifluoromethane	0.0500	0.04788		mg/Kg		96	12 - 144
Ethylbenzene	0.0500	0.05342		mg/Kg		107	80 - 134
Hexachlorobutadiene	0.0500	0.05539		mg/Kg		111	65 - 148
Isopropylbenzene	0.0500	0.05377		mg/Kg		108	80 - 150
Methyl tert-butyl ether	0.0500	0.05838		mg/Kg		117	70 - 136
Methylene Chloride	0.0500	0.05881		mg/Kg		118	68 - 144
Naphthalene	0.0500	0.05528		mg/Kg		111	69 - 150
n-Butylbenzene	0.0500	0.05426		mg/Kg		109	72 - 152
N-Propylbenzene	0.0500	0.05096		mg/Kg		102	75 - 137
p-Isopropyltoluene	0.0500	0.05316		mg/Kg		106	77 - 141
sec-Butylbenzene	0.0500	0.05380		mg/Kg		108	79 - 141
Styrene	0.0500	0.05367		mg/Kg		107	82 - 137
tert-Butylbenzene	0.0500	0.05267		mg/Kg		105	80 - 132
Tetrachloroethene	0.0500	0.06326		mg/Kg		127	78 - 140
Toluene	0.0500	0.05745		mg/Kg		115	80 - 132
trans-1,2-Dichloroethene	0.0500	0.06213		mg/Kg		124	76 - 128
trans-1,3-Dichloropropene	0.0500	0.05642		mg/Kg		113	62 - 139
Trichloroethene	0.0500	0.05785		mg/Kg		116	77 - 127
Trichlorofluoromethane	0.0500	0.05455		mg/Kg		109	50 - 140
Vinyl chloride	0.0500	0.04638		mg/Kg		93	47 - 136
Xylenes, Total	0.150	0.1552		mg/Kg		103	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
Dibromofluoromethane (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-26524/4
Matrix: Solid
Analysis Batch: 26524

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.0500	0.05321		mg/Kg		106	80 - 136	3	50
1,1,1-Trichloroethane	0.0500	0.06024		mg/Kg		120	72 - 140	1	50
1,1,2,2-Tetrachloroethane	0.0500	0.04954		mg/Kg		99	66 - 134	1	50
1,1,2-Trichloroethane	0.0500	0.05873		mg/Kg		117	78 - 128	1	50
1,1-Dichloroethane	0.0500	0.05663		mg/Kg		113	75 - 124	2	50
Diisopropyl ether	0.0500	0.05501		mg/Kg		110	68 - 124	1	45
1,1-Dichloroethene	0.0500	0.06800	*	mg/Kg		136	75 - 131	4	50
1,1-Dichloropropene	0.0500	0.05600		mg/Kg		112	79 - 127	2	50
1,2,3-Trichlorobenzene	0.0500	0.05593		mg/Kg		112	70 - 150	3	50
1,2,3-Trichloropropane	0.0500	0.05403		mg/Kg		108	65 - 139	2	50
1,2,4-Trichlorobenzene	0.0500	0.05738		mg/Kg		115	62 - 150	3	50
1,2,4-Trimethylbenzene	0.0500	0.04948		mg/Kg		99	77 - 139	3	50
1,2-Dibromo-3-Chloropropane	0.0500	0.04960		mg/Kg		99	49 - 142	7	50
1,2-Dibromoethane (EDB)	0.0500	0.06221		mg/Kg		124	80 - 135	0	50
1,2-Dichlorobenzene	0.0500	0.05457		mg/Kg		109	80 - 134	1	50
1,2-Dichloroethane	0.0500	0.05493		mg/Kg		110	65 - 134	1	50
1,2-Dichloropropane	0.0500	0.05292		mg/Kg		106	69 - 120	2	50
1,3,5-Trimethylbenzene	0.0500	0.05121		mg/Kg		102	78 - 138	2	50
1,3-Dichlorobenzene	0.0500	0.05569		mg/Kg		111	79 - 137	3	50
1,3-Dichloropropane	0.0500	0.05891		mg/Kg		118	78 - 126	2	42
1,4-Dichlorobenzene	0.0500	0.05622		mg/Kg		112	77 - 139	4	50
2,2-Dichloropropane	0.0500	0.05554		mg/Kg		111	68 - 145	2	50
2-Butanone (MEK)	0.250	0.2742		mg/Kg		110	61 - 132	9	50
2-Chlorotoluene	0.0500	0.05057		mg/Kg		101	78 - 132	3	50
2-Hexanone	0.250	0.2974		mg/Kg		119	57 - 148	11	50
4-Chlorotoluene	0.0500	0.05139		mg/Kg		103	77 - 138	2	50
4-Methyl-2-pentanone (MIBK)	0.250	0.2936		mg/Kg		117	59 - 138	5	50
Acetone	0.250	0.2820		mg/Kg		113	51 - 149	4	50
Benzene	0.0500	0.05405		mg/Kg		108	75 - 127	1	50
Bromobenzene	0.0500	0.05135		mg/Kg		103	75 - 130	2	50
Bromochloromethane	0.0500	0.06012		mg/Kg		120	70 - 132	4	50
Bromodichloromethane	0.0500	0.05847		mg/Kg		117	68 - 135	0	50
Bromoform	0.0500	0.05030		mg/Kg		101	36 - 150	1	50
Bromomethane	0.0500	0.06058		mg/Kg		121	43 - 142	6	50
Carbon disulfide	0.0500	0.05811		mg/Kg		116	74 - 135	3	50
Carbon tetrachloride	0.0500	0.06500		mg/Kg		130	70 - 141	2	50
Chlorobenzene	0.0500	0.05434		mg/Kg		109	84 - 125	2	50
Chlorodibromomethane	0.0500	0.05513		mg/Kg		110	66 - 134	3	50
Chloroethane	0.0500	0.04743		mg/Kg		95	53 - 144	2	50
Chloroform	0.0500	0.05521		mg/Kg		110	76 - 130	2	49
Chloromethane	0.0500	0.04573		mg/Kg		91	23 - 150	5	50
cis-1,2-Dichloroethene	0.0500	0.05447		mg/Kg		109	75 - 125	1	50
cis-1,3-Dichloropropene	0.0500	0.05914		mg/Kg		118	73 - 148	3	50
Dibromomethane	0.0500	0.05519		mg/Kg		110	71 - 130	2	50
Dichlorodifluoromethane	0.0500	0.04575		mg/Kg		91	12 - 144	5	50
Ethylbenzene	0.0500	0.05328		mg/Kg		107	80 - 134	0	50
Hexachlorobutadiene	0.0500	0.05256		mg/Kg		105	65 - 148	5	50
Isopropylbenzene	0.0500	0.05193		mg/Kg		104	80 - 150	3	50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-26524/4
Matrix: Solid
Analysis Batch: 26524

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	0.0500	0.05830		mg/Kg		117	70 - 136	0	50
Methylene Chloride	0.0500	0.05935		mg/Kg		119	68 - 144	1	50
Naphthalene	0.0500	0.05487		mg/Kg		110	69 - 150	1	50
n-Butylbenzene	0.0500	0.05314		mg/Kg		106	72 - 152	2	50
N-Propylbenzene	0.0500	0.04998		mg/Kg		100	75 - 137	2	50
p-Isopropyltoluene	0.0500	0.05178		mg/Kg		104	77 - 141	3	50
sec-Butylbenzene	0.0500	0.05366		mg/Kg		107	79 - 141	0	50
Styrene	0.0500	0.05155		mg/Kg		103	82 - 137	4	50
tert-Butylbenzene	0.0500	0.05276		mg/Kg		106	80 - 132	0	50
Tetrachloroethene	0.0500	0.05998		mg/Kg		120	78 - 140	5	50
Toluene	0.0500	0.05752		mg/Kg		115	80 - 132	0	50
trans-1,2-Dichloroethene	0.0500	0.06103		mg/Kg		122	76 - 128	2	50
trans-1,3-Dichloropropene	0.0500	0.05670		mg/Kg		113	62 - 139	0	50
Trichloroethene	0.0500	0.05748		mg/Kg		115	77 - 127	1	50
Trichlorofluoromethane	0.0500	0.05225		mg/Kg		104	50 - 140	4	50
Vinyl chloride	0.0500	0.04627		mg/Kg		93	47 - 136	0	50
Xylenes, Total	0.150	0.1524		mg/Kg		102	80 - 137	2	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
Dibromofluoromethane (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-24824/1-A
Matrix: Solid
Analysis Batch: 24882

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24824

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
1,2-Dichlorobenzene	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
1,3-Dichlorobenzene	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
1,4-Dichlorobenzene	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
1-Methylnaphthalene	ND		0.0670	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
2,4,5-Trichlorophenol	ND		0.833	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
2,4,6-Trichlorophenol	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
2,4-Dichlorophenol	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
2,4-Dimethylphenol	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
2,4-Dinitrophenol	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
2,4-Dinitrotoluene	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
2,6-Dinitrotoluene	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
2-Chloronaphthalene	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
2-Chlorophenol	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
2-Methylnaphthalene	ND		0.0670	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
2-Methylphenol	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
2-Nitroaniline	ND		0.833	mg/Kg		10/02/12 10:52	10/02/12 18:23	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-24824/1-A
Matrix: Solid
Analysis Batch: 24882

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24824

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrophenol	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
3,3'-Dichlorobenzidine	ND		0.667		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
3 & 4 Methylphenol	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
3-Nitroaniline	ND		0.833		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
4,6-Dinitro-2-methylphenol	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
4-Bromophenyl phenyl ether	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
4-Chloro-3-methylphenol	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
4-Chlorophenyl phenyl ether	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
4-Chloroaniline	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
4-Nitroaniline	ND		0.833		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
4-Nitrophenol	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Acenaphthylene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Acenaphthene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Benzo[a]anthracene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Benzo[a]pyrene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Benzo[b]fluoranthene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Benzo[g,h,i]perylene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Benzo[k]fluoranthene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Anthracene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Bis(2-chloroethoxy)methane	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Bis(2-chloroethyl)ether	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Bis(2-ethylhexyl) phthalate	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
bis (2-chloroisopropyl) ether	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Butyl benzyl phthalate	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Carbazole	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Chrysene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Cresols	ND		0.666		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Dibenz(a,h)anthracene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Dibenzofuran	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Diethyl phthalate	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Dimethyl phthalate	ND		1.67		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Di-n-butyl phthalate	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Di-n-octyl phthalate	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Fluoranthene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Fluorene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Hexachlorobenzene	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Hexachlorobutadiene	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Hexachlorocyclopentadiene	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Hexachloroethane	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Indeno[1,2,3-cd]pyrene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Isophorone	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Naphthalene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Nitrobenzene	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
N-Nitrosodi-n-propylamine	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.333		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Pentachlorophenol	ND		0.833		mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Phenanthrene	ND		0.0670		mg/Kg		10/02/12 10:52	10/02/12 18:23	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-24824/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24882 — **Prep Batch: 24824**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		0.333	mg/Kg		10/02/12 10:52	10/02/12 18:23	1
Pyrene	ND		0.0670	mg/Kg		10/02/12 10:52	10/02/12 18:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*68*		*10 - 120*	*10/02/12 10:52*	*10/02/12 18:23*	*1*
2-Fluorobiphenyl (Surr)	*73*		*29 - 120*	*10/02/12 10:52*	*10/02/12 18:23*	*1*
2-Fluorophenol (Surr)	*64*		*10 - 120*	*10/02/12 10:52*	*10/02/12 18:23*	*1*
Nitrobenzene-d5 (Surr)	*74*		*27 - 120*	*10/02/12 10:52*	*10/02/12 18:23*	*1*
Phenol-d5 (Surr)	*69*		*10 - 120*	*10/02/12 10:52*	*10/02/12 18:23*	*1*
Terphenyl-d14 (Surr)	*89*		*13 - 120*	*10/02/12 10:52*	*10/02/12 18:23*	*1*

Lab Sample ID: LCS 490-24824/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24882 — **Prep Batch: 24824**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1.67	1.350		mg/Kg		81	29 - 120
1,2-Dichlorobenzene	1.67	1.386		mg/Kg		83	33 - 120
1,3-Dichlorobenzene	1.67	1.409		mg/Kg		85	32 - 120
1,4-Dichlorobenzene	1.67	1.402		mg/Kg		84	32 - 120
1-Methylnaphthalene	1.67	1.418		mg/Kg		85	32 - 120
2,4,5-Trichlorophenol	1.67	1.344		mg/Kg		81	39 - 120
2,4,6-Trichlorophenol	1.67	1.547		mg/Kg		93	39 - 120
2,4-Dichlorophenol	1.67	1.497		mg/Kg		90	32 - 120
2,4-Dimethylphenol	1.67	1.777		mg/Kg		107	32 - 120
2,4-Dinitrophenol	1.67	1.339		mg/Kg		80	23 - 142
2,4-Dinitrotoluene	1.67	1.670		mg/Kg		100	43 - 120
2,6-Dinitrotoluene	1.67	1.720		mg/Kg		103	43 - 120
2-Chloronaphthalene	1.67	1.544		mg/Kg		93	34 - 120
2-Chlorophenol	1.67	1.511		mg/Kg		91	32 - 120
2-Methylnaphthalene	1.67	1.468		mg/Kg		88	28 - 120
2-Methylphenol	1.67	1.689		mg/Kg		101	36 - 120
2-Nitroaniline	1.67	1.932		mg/Kg		116	40 - 120
2-Nitrophenol	1.67	1.329		mg/Kg		80	29 - 120
3,3'-Dichlorobenzidine	1.67	1.410		mg/Kg		85	39 - 120
3 & 4 Methylphenol	1.67	1.616		mg/Kg		97	37 - 120
3-Nitroaniline	1.67	1.754		mg/Kg		105	42 - 120
4,6-Dinitro-2-methylphenol	1.67	1.425		mg/Kg		86	27 - 134
4-Bromophenyl phenyl ether	1.67	1.520		mg/Kg		91	40 - 120
4-Chloro-3-methylphenol	1.67	1.658		mg/Kg		99	38 - 120
4-Chlorophenyl phenyl ether	1.67	1.490		mg/Kg		89	42 - 120
4-Chloroaniline	1.67	1.728		mg/Kg		104	35 - 120
4-Nitroaniline	1.67	1.667		mg/Kg		100	43 - 120
4-Nitrophenol	1.67	1.849		mg/Kg		111	32 - 136
Acenaphthylene	1.67	1.599		mg/Kg		96	38 - 120
Acenaphthene	1.67	1.558		mg/Kg		93	36 - 120
Benzo[a]anthracene	1.67	1.543		mg/Kg		93	45 - 120
Benzo[a]pyrene	1.67	1.645		mg/Kg		99	45 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-24824/2-A
Matrix: Solid
Analysis Batch: 24882

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24824

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	1.67	1.525		mg/Kg		91	42 - 120
Benzo[g,h,i]perylene	1.67	1.464		mg/Kg		88	38 - 120
Benzo[k]fluoranthene	1.67	1.602		mg/Kg		96	42 - 120
Anthracene	1.67	1.607		mg/Kg		96	46 - 124
Bis(2-chloroethoxy)methane	1.67	1.670		mg/Kg		100	32 - 120
Bis(2-chloroethyl)ether	1.67	1.437		mg/Kg		86	31 - 120
Bis(2-ethylhexyl) phthalate	1.67	1.806		mg/Kg		108	43 - 120
bis (2-chloroisopropyl) ether	1.67	1.589		mg/Kg		95	32 - 120
Butyl benzyl phthalate	1.67	1.836		mg/Kg		110	43 - 133
Carbazole	1.67	1.657		mg/Kg		99	44 - 120
Chrysene	1.67	1.500		mg/Kg		90	43 - 120
Cresols	3.33	3.305		mg/Kg		99	49 - 129
Dibenz(a,h)anthracene	1.67	1.509		mg/Kg		91	32 - 128
Dibenzofuran	1.67	1.582		mg/Kg		95	41 - 120
Diethyl phthalate	1.67	1.625		mg/Kg		97	41 - 122
Dimethyl phthalate	1.67	ND		mg/Kg		94	55 - 120
Di-n-butyl phthalate	1.67	1.642		mg/Kg		99	46 - 127
Di-n-octyl phthalate	1.67	1.808		mg/Kg		108	40 - 130
Fluoranthene	1.67	1.556		mg/Kg		93	46 - 120
Fluorene	1.67	1.589		mg/Kg		95	42 - 120
Hexachlorobenzene	1.67	1.629		mg/Kg		98	44 - 120
Hexachlorobutadiene	1.67	1.419		mg/Kg		85	31 - 120
Hexachlorocyclopentadiene	1.67	1.138		mg/Kg		68	24 - 120
Hexachloroethane	1.67	1.595		mg/Kg		96	33 - 120
Indeno[1,2,3-cd]pyrene	1.67	1.491		mg/Kg		89	41 - 121
Isophorone	1.67	1.620		mg/Kg		97	33 - 120
Naphthalene	1.67	1.656		mg/Kg		99	32 - 120
Nitrobenzene	1.67	1.694		mg/Kg		102	26 - 120
N-Nitrosodi-n-propylamine	1.67	1.784		mg/Kg		107	35 - 120
n-Nitrosodiphenylamine(as diphenylamine)	1.67	1.966		mg/Kg		118	52 - 140
Pentachlorophenol	1.67	1.647		mg/Kg		99	44 - 134
Phenanthrene	1.67	1.599		mg/Kg		96	45 - 120
Phenol	1.67	1.661		mg/Kg		100	30 - 120
Pyrene	1.67	1.727		mg/Kg		104	43 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*89*		*10 - 120*
2-Fluorobiphenyl (Surr)	*70*		*29 - 120*
2-Fluorophenol (Surr)	*63*		*10 - 120*
Nitrobenzene-d5 (Surr)	*80*		*27 - 120*
Phenol-d5 (Surr)	*75*		*10 - 120*
Terphenyl-d14 (Surr)	*91*		*13 - 120*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: 180-14797-A-18-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24896 — **Prep Batch: 24795**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	ND		563	534.9		mg/Kg	☼	95	56 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*117*		*50 - 150*

Lab Sample ID: 180-14797-A-18-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24896 — **Prep Batch: 24795**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	ND		563	564.3		mg/Kg	☼	100	56 - 130	5	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*114*		*50 - 150*

Lab Sample ID: MB 490-24896/13 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24896

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND		5.00	mg/Kg			10/02/12 16:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*102*		*50 - 150*		*10/02/12 16:37*	*1*

Lab Sample ID: MB 490-24896/14 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24896

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND		5.00	mg/Kg			10/02/12 16:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*100*		*50 - 150*		*10/02/12 16:57*	*1*

Lab Sample ID: LCS 490-24896/17 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24896

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	10.0	9.411		mg/Kg		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*112*		*50 - 150*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: LCS 490-24896/18
Matrix: Solid
Analysis Batch: 24896

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10			10.0	10.98		mg/Kg		110	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*128*		*50 - 150*

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 490-24736/1-A
Matrix: Solid
Analysis Batch: 25249

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24736

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	ND		5.00		mg/Kg		10/02/12 08:07	10/03/12 16:57	1
C24-C40	ND		5.00		mg/Kg		10/02/12 08:07	10/03/12 16:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*70*		*50 - 150*	*10/02/12 08:07*	*10/03/12 16:57*	*1*

Lab Sample ID: LCS 490-24736/2-A
Matrix: Solid
Analysis Batch: 25249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24736

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28			40.0	36.78		mg/Kg		92	54 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*85*		*50 - 150*

Lab Sample ID: 180-14797-A-14-C MS
Matrix: Solid
Analysis Batch: 25249

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 24736

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28	ND		45.0	42.32		mg/Kg	☼	94	10 - 142		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl (Surr)	*76*		*50 - 150*

Lab Sample ID: 180-14797-A-14-D MSD
Matrix: Solid
Analysis Batch: 25249

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 24736

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28	ND		44.6	40.06		mg/Kg	☼	90	10 - 142	5	47

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: 180-14797-A-14-D MSD
Matrix: Solid
Analysis Batch: 25249

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 24736

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl (Surr)	*73*		*50 - 150*

Method: Moisture - Percent Moisture

Lab Sample ID: 490-7942-B-1 DU
Matrix: Solid
Analysis Batch: 24496

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	94			93		%				1	20

QC Association Summary

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

GC/MS VOA

Prep Batch: 24860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-8013-1	OS 5S	Total/NA	Solid	5035	
490-8013-2	OS 10S	Total/NA	Solid	5035	
490-8013-3	OS 20S	Total/NA	Solid	5035	

Prep Batch: 24861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-8013-1	OS 5S	Total/NA	Solid	5035	
490-8013-2	OS 10S	Total/NA	Solid	5035	
490-8013-3	OS 20S	Total/NA	Solid	5035	

Analysis Batch: 25773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-8013-1	OS 5S	Total/NA	Solid	8260B	24861
490-8013-2	OS 10S	Total/NA	Solid	8260B	24861
490-8013-3	OS 20S	Total/NA	Solid	8260B	24861
LCS 490-25773/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-25773/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-25773/6	Method Blank	Total/NA	Solid	8260B	
MB 490-25773/7	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 26095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-8013-1	OS 5S	Total/NA	Solid	8260B	24860
490-8013-1	OS 5S	Total/NA	Solid	8260B	24860
490-8013-1	OS 5S	Total/NA	Solid	8260B	24860
490-8013-2	OS 10S	Total/NA	Solid	8260B	24860
490-8013-3	OS 20S	Total/NA	Solid	8260B	24860
490-8013-3	OS 20S	Total/NA	Solid	8260B	24860
LCS 490-26095/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-26095/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-26095/7	Method Blank	Total/NA	Solid	8260B	
MB 490-26095/8	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 26524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-8013-2	OS 10S	Total/NA	Solid	8260B	24860
LCS 490-26524/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-26524/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-26524/7	Method Blank	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 24824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-8013-1	OS 5S	Total/NA	Solid	3550C	
490-8013-2	OS 10S	Total/NA	Solid	3550C	
490-8013-3	OS 20S	Total/NA	Solid	3550C	
LCS 490-24824/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 490-24824/1-A	Method Blank	Total/NA	Solid	3550C	

GC/MS Semi VOA (Continued)

Analysis Batch: 24882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-8013-1	OS 5S	Total/NA	Solid	8270D	24824
490-8013-2	OS 10S	Total/NA	Solid	8270D	24824
490-8013-3	OS 20S	Total/NA	Solid	8270D	24824
LCS 490-24824/2-A	Lab Control Sample	Total/NA	Solid	8270D	24824
MB 490-24824/1-A	Method Blank	Total/NA	Solid	8270D	24824

Analysis Batch: 25228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-8013-1	OS 5S	Total/NA	Solid	8270D	24824
490-8013-1	OS 5S	Total/NA	Solid	8270D	24824
490-8013-2	OS 10S	Total/NA	Solid	8270D	24824
490-8013-3	OS 20S	Total/NA	Solid	8270D	24824
490-8013-3	OS 20S	Total/NA	Solid	8270D	24824

GC VOA

Prep Batch: 24795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-14797-A-18-C MS	Matrix Spike	Total/NA	Solid	5030B	
180-14797-A-18-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5030B	

Prep Batch: 24857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-8013-1	OS 5S	Total/NA	Solid	5035	
490-8013-2	OS 10S	Total/NA	Solid	5035	
490-8013-3	OS 20S	Total/NA	Solid	5035	

Analysis Batch: 24896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-14797-A-18-C MS	Matrix Spike	Total/NA	Solid	8015C	24795
180-14797-A-18-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015C	24795
490-8013-1	OS 5S	Total/NA	Solid	8015C	24857
490-8013-2	OS 10S	Total/NA	Solid	8015C	24857
490-8013-3	OS 20S	Total/NA	Solid	8015C	24857
LCS 490-24896/17	Lab Control Sample	Total/NA	Solid	8015C	
LCS 490-24896/18	Lab Control Sample	Total/NA	Solid	8015C	
MB 490-24896/13	Method Blank	Total/NA	Solid	8015C	
MB 490-24896/14	Method Blank	Total/NA	Solid	8015C	

GC Semi VOA

Prep Batch: 24736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-14797-A-14-C MS	Matrix Spike	Total/NA	Solid	3550C	
180-14797-A-14-D MSD	Matrix Spike Duplicate	Total/NA	Solid	3550C	
490-8013-1	OS 5S	Total/NA	Solid	3550C	
490-8013-2	OS 10S	Total/NA	Solid	3550C	
490-8013-3	OS 20S	Total/NA	Solid	3550C	
LCS 490-24736/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 490-24736/1-A	Method Blank	Total/NA	Solid	3550C	

GC Semi VOA (Continued)

Analysis Batch: 25249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-14797-A-14-C MS	Matrix Spike	Total/NA	Solid	8015C	24736
180-14797-A-14-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015C	24736
490-8013-1	OS 5S	Total/NA	Solid	8015C	24736
490-8013-2	OS 10S	Total/NA	Solid	8015C	24736
490-8013-3	OS 20S	Total/NA	Solid	8015C	24736
LCS 490-24736/2-A	Lab Control Sample	Total/NA	Solid	8015C	24736
MB 490-24736/1-A	Method Blank	Total/NA	Solid	8015C	24736

Analysis Batch: 25575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-8013-1	OS 5S	Total/NA	Solid	8015C	24736
490-8013-2	OS 10S	Total/NA	Solid	8015C	24736
490-8013-3	OS 20S	Total/NA	Solid	8015C	24736

General Chemistry

Analysis Batch: 24496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-7942-B-1 DU	Duplicate	Total/NA	Solid	Moisture	
490-8013-1	OS 5S	Total/NA	Solid	Moisture	
490-8013-2	OS 10S	Total/NA	Solid	Moisture	
490-8013-3	OS 20S	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 5S

Lab Sample ID: 490-8013-1

Date Collected: 09/26/12 16:25
Matrix: Solid
Date Received: 09/29/12 08:30
Percent Solids: 80.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			24861	10/02/12 11:36	MLN	TAL NSH
Total/NA	Analysis	8260B		1	25773	10/05/12 15:38	AJF	TAL NSH
Total/NA	Analysis	8260B		20	26095	10/06/12 12:49	AJF	TAL NSH
Total/NA	Prep	5035			24860	10/02/12 11:32	MLN	TAL NSH
Total/NA	Analysis	8260B		200	26095	10/06/12 13:19	AJF	TAL NSH
Total/NA	Analysis	8260B		2	26095	10/06/12 19:20	AJF	TAL NSH
Total/NA	Analysis	8270D		1	24882	10/02/12 21:51	KJP	TAL NSH
Total/NA	Analysis	8270D		20	25228	10/03/12 17:09	KJP	TAL NSH
Total/NA	Prep	3550C			24824	10/02/12 10:52	AJK	TAL NSH
Total/NA	Analysis	8270D		5	25228	10/03/12 16:45	KJP	TAL NSH
Total/NA	Prep	5035			24857	10/02/12 11:26	MLN	TAL NSH
Total/NA	Analysis	8015C		1	24896	10/02/12 23:49	BDH	TAL NSH
Total/NA	Prep	3550C			24736	10/02/12 08:07	AJK	TAL NSH
Total/NA	Analysis	8015C		1	25249	10/03/12 22:20	JDJ	TAL NSH
Total/NA	Analysis	8015C		5	25575	10/04/12 13:27	JML	TAL NSH
Total/NA	Analysis	Moisture		1	24496	10/01/12 09:03	RRS	TAL NSH

Client Sample ID: OS 10S

Lab Sample ID: 490-8013-2

Date Collected: 09/26/12 17:10
Matrix: Solid
Date Received: 09/29/12 08:30
Percent Solids: 81.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			24861	10/02/12 11:36	MLN	TAL NSH
Total/NA	Analysis	8260B		1	25773	10/05/12 16:08	AJF	TAL NSH
Total/NA	Analysis	8260B		2	26095	10/06/12 18:20	AJF	TAL NSH
Total/NA	Prep	5035			24860	10/02/12 11:32	MLN	TAL NSH
Total/NA	Analysis	8260B		200	26524	10/09/12 08:39	AJF	TAL NSH
Total/NA	Prep	3550C			24824	10/02/12 10:52	AJK	TAL NSH
Total/NA	Analysis	8270D		1	24882	10/02/12 22:14	KJP	TAL NSH
Total/NA	Analysis	8270D		5	25228	10/03/12 17:32	KJP	TAL NSH
Total/NA	Prep	5035			24857	10/02/12 11:26	MLN	TAL NSH
Total/NA	Analysis	8015C		1	24896	10/03/12 00:10	BDH	TAL NSH
Total/NA	Analysis	8015C		1	25249	10/03/12 22:34	JDJ	TAL NSH
Total/NA	Prep	3550C			24736	10/02/12 08:07	AJK	TAL NSH
Total/NA	Analysis	8015C		2	25575	10/04/12 13:41	JML	TAL NSH
Total/NA	Analysis	Moisture		1	24496	10/01/12 09:03	RRS	TAL NSH

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Client Sample ID: OS 20S

Date Collected: 09/26/12 08:45
Date Received: 09/29/12 08:30

Lab Sample ID: 490-8013-3

Matrix: Solid
Percent Solids: 77.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			24861	10/02/12 11:36	MLN	TAL NSH
Total/NA	Analysis	8260B		1	25773	10/05/12 16:39	AJF	TAL NSH
Total/NA	Analysis	8260B		20	26095	10/06/12 14:49	AJF	TAL NSH
Total/NA	Prep	5035			24860	10/02/12 11:32	MLN	TAL NSH
Total/NA	Analysis	8260B		2	26095	10/06/12 18:50	AJF	TAL NSH
Total/NA	Analysis	8270D		1	24882	10/02/12 22:37	KJP	TAL NSH
Total/NA	Prep	3550C			24824	10/02/12 10:52	AJK	TAL NSH
Total/NA	Analysis	8270D		5	25228	10/03/12 17:55	KJP	TAL NSH
Total/NA	Analysis	8270D		20	25228	10/03/12 18:19	KJP	TAL NSH
Total/NA	Prep	5035			24857	10/02/12 11:26	MLN	TAL NSH
Total/NA	Analysis	8015C		1	24896	10/03/12 00:30	BDH	TAL NSH
Total/NA	Prep	3550C			24736	10/02/12 08:07	AJK	TAL NSH
Total/NA	Analysis	8015C		1	25249	10/03/12 22:48	JDJ	TAL NSH
Total/NA	Analysis	8015C		2	25575	10/04/12 13:55	JML	TAL NSH
Total/NA	Analysis	Moisture		1	24496	10/01/12 09:03	RRS	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NSH
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL NSH
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL NSH
Moisture	Percent Moisture	EPA	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Duke Energy Corporation
Project/Site: Pine Street MGP J12100049

TestAmerica Job ID: 490-8013-1

Laboratory: TestAmerica Nashville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-13
AIHA	IHLAP		100790	09-01-13
Alabama	State Program	4	41150	05-31-13
Alaska (UST)	State Program	10	UST-087	07-24-14
Arizona	State Program	9	AZ0473	05-05-14
Arizona	State Program	9	AZ0473	05-05-14 *
Arkansas DEQ	State Program	6	88-0737	04-25-14
California	NELAP	9	1168CA	10-31-14
Canadian Assoc Lab Accred (CALA)	Canada		3744	03-08-14
Colorado	State Program	8	N/A	02-28-13
Connecticut	State Program	1	PH-0220	12-31-13
Florida	NELAP	4	E87358	06-30-14
Illinois	NELAP	5	200010	12-09-14
Iowa	State Program	7	131	05-01-14
Kansas	NELAP	7	E-10229	10-31-14
Kentucky (UST)	State Program	4	19	06-30-14
Louisiana	NELAP	6	30613	06-30-14
Maryland	State Program	3	316	03-31-14
Massachusetts	State Program	1	M-TN032	06-30-14
Minnesota	NELAP	5	047-999-345	12-31-13
Mississippi	State Program	4	N/A	06-30-14
Montana (UST)	State Program	8	NA	01-01-20
Nevada	State Program	9	TN00032	07-31-14
New Hampshire	NELAP	1	2963	10-10-14
New Jersey	NELAP	2	TN965	06-30-14
New York	NELAP	2	11342	04-01-14
North Carolina DENR	State Program	4	387	12-31-13
North Dakota	State Program	8	R-146	06-30-14
Ohio VAP	State Program	5	CL0033	10-16-15
Oklahoma	State Program	6	9412	08-31-14
Oregon	NELAP	10	TN200001	04-29-14
Pennsylvania	NELAP	3	68-00585	06-30-14
Rhode Island	State Program	1	LAO00268	12-30-13
South Carolina	State Program	4	84009 (001)	02-28-14
Tennessee	State Program	4	2008	02-23-14
Texas	NELAP	6	T104704077-09-TX	08-31-14
USDA	Federal		S-48469	10-30-16
Utah	NELAP	8	TN00032	07-31-14
Virginia	NELAP	3	460152	06-14-14
Washington	State Program	10	C789	07-19-14
West Virginia DEP	State Program	3	219	02-28-14
Wisconsin	State Program	5	998020430	08-31-14
Wyoming (UST)	A2LA	8	453.07	12-31-13

* Expired certification is currently pending renewal and is considered valid.

Brown, Shali

From: Perkins, Jay C [Jay.Perkins@duke-energy.com]
Sent: Friday, November 22, 2013 10:12 AM
To: Brown, Shali
Subject: FW: J12100049 Report - OS well soils.pdf
Attachments: J12100049 Report - OS well soils.pdf

Shali, just looks like ethylbenzene was left off of sample 490-8013-3… If you can resubmit the report that should work.

Thanks,
Jay

From: Clark, Andy M [mailto:Andy.Clark@amec.com]
Sent: Friday, November 22, 2013 10:54 AM
To: Perkins, Jay C
Cc: Teichert, William P
Subject: J12100049 Report - OS well soils.pdf

Jay,

We just noticed that for some reason, ethylbenzene was not reported for our sample OS-20S in the attached report (lab sample ID 490-8013-3). Can you double check. I am guessing the lab ran it, but it just was cut off of the report somehow. We are trying to turn around a final report to SCDHEC and would be great if we could insert that data point for our table…even if the lab were to issue a revised report at a later date.

Thanks!

Andy

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

Charlotte

COOLER RECEIPT FORM

490-8013 Chain of

Cooler Received/Opened On 9/28/2012 @ 8:30

1. Tracking # 2563 (last 4 digits, FedEx)

Courier: FEDEX IR Gun ID 17960357

2. Temperature of rep. sample or temp blank when opened: 3.8 *Degrees Celsius*

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

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

If yes, how many and where: 1 Orange

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

6. Were custody papers inside cooler? YES...NO...NA

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

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

Were these signed and dated correctly? YES...NO...NA

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

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

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

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

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

13a. Were VOA vials received? YES...NO...NA

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

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

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

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

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

16. Was residual chlorine present? YES...NO...NA

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

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

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

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

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

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

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

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

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 6/24/09

11/26/2013

49001290

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

5755 8th Street East, Tacoma, WA 98424-1317 253-922-2310 FAX 922-5047
11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

11/26/2013

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT:

REPORT TO: Andy Clark, Paul Teichert, Angela Adams

ADDRESS: AMEC 2801 Yorkmont Rd Charlotte, NC 28208

PHONE: 704-357-8600 FAX:

INVOICE TO: Duke

P.O. NUMBER: 225674

PROJECT NAME: Spartanburg MGP

PROJECT NUMBER: 6228120021

SAMPLED BY: Mike Flanik

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: 10 (STD) 7 5 4 3 2 1 <1

Petroleum Hydrocarbon Analyses: 5 (STD.) 4 3 2 1 <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: 4-MeOH, 2-NaH, 3-Non preserved

REQUESTED ANALYSES: VOCs, SVOCs, TPH 1 GRO, TPH 2 DRO

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	VOCs	SVOCs	TPH 1 GRO	TPH 2 DRO	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	OS 5S	9-26-12 / 1625	X	X	X	X	S	9		
2	OS 10S	9-26-12 / 1710	X	X	X	X	S	9		
3	OS 20S	9-27-12 / 0845	X	X	X	X	S	9		
4										
5										
6										
7										
8										
9										
10										

Loc: 490 8013

RELEASED BY:		DATE: 9/27/12	RECEIVED BY:		DATE: 9-27-12
PRINT NAME:	FIRM: AMEC	TIME: 1537	PRINT NAME: C. Bonham	FIRM: TA	TIME: 1537
RELEASED BY:		DATE: 9-27-12	RECEIVED BY:		DATE: 9-28-12
PRINT NAME: C. Bonham	FIRM: TA	TIME: 1800	PRINT NAME: 3.8	FIRM: TAN	TIME: 08:30

ADDITIONAL REMARKS:

TEMP:

PAGE OF

TAL-1000 (0612)

Analytical Laboratory Request Form (ARF)

(1) Complete all yellow sections of this form. Move through by striking the "TAB" key.	
(2) Save the file & e-mail to:	labcustomer@duke-energy.com
Questions / Problems Call:	704-875-5245

Customer Information

Name	Office Phone	Cell Phone
Andy Clark	704-357-5630	704-953-6833
Fax	e-Mail Address	
	andy.clark@amec.com	

Accounting Fields

*** Only complete if specific charging to capital or other special projects is needed. Include field type and specific field entry. ***	Field Type	Specific Field

Sampling Information

Sampling Personnel / Contractor	Scheduled Sampling Date	Date Sample Kit Needed
AMEC	9/7/2012	9/6/2012

Shipping Address for Kit

Name	Phone	Mail Code
Mike Flanik	704-357-5617	704-659-1232
Street Address - street address and town needed	State	Zip Code
2801 Yorkmont Rd, Charlotte	NC	28208

Reporting

Report Due Date	Additional Reports - .pdf file w/ Basic QC and EDD (spreadsheet) is Standard	
9/28/2012	.pdf and excel	
Report To (e-Mail Address 1)	Report To (e-Mail Address 2)	Report to (e-Mail Address 3)
andy.clark@amec.com	angela.adams@amec.com	

Project Specifics

Project Name		Program Type
Spartanburg MGP		
Site, Location or Station	State	Approximate Number of Days Sampling is Scheduled
Pine Street, Spartanburg	SC	1

Notes, Special Requests, Required Contract Lab to use, etc. **(LIMS Job Number-Duke Lab Provides)**

AMEC can pick sample jars up from Duke. TPH, VOC, and SVOC analysis. Also, request 24 x 16 oz jars to collect additional soil for bench scale testing. The 16 oz jars will be sent to FMC Corporation for the bench testing.

Bottles	Matrix	Variables, Methods
4	Soil	TPH - 5035/8015M
4	Soil	VOCs - 8260 (Prep 5035) - Encore kits
4	Soil	SVOCs - 8260
24 x 16 oz jars	Soil	For bench testing (see note above)

Login Sample Receipt Checklist

Client: Duke Energy Corporation

Job Number: 490-8013-1

Login Number: 8013
List Number: 1
Creator: Ford, Easton

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Environmental Solutions

Klozur® Persulfate Demand Test

Client:	AMEC, Paul Teichert 9725 Cogdill Road Knoxville, TN 37932 Phone: 865-218-1028
Performing Lab:	FMC Corporation Tonawanda, NY
Date	September 28, 2012

I. Background

Klozur® activated persulfate is a strong oxidant capable of mineralizing a wide range of contaminants, including chlorinated solvents, petroleum hydrocarbons, polyaromatic hydrocarbons, gasoline additives, pesticides, and many others. Activation of the persulfate anion generates the sulfate radical, the primary species that drives the rapid destruction of the contaminants of concern. Activation can be accomplished by several methods[1]: heat, transition metals, addition of hydrogen peroxide, or utilizing high pH. Choice of the activation method will depend on the contaminant of concern and site characteristics.

A chemical oxidant is not specific as to what it will oxidize. As a result, activated persulfate will not only mineralize the contaminant of concern, but a portion of the oxidant will be used in oxidizing soil organics, reduced metals, and organic species that are not of concern. In addition, activated persulfate will undergo auto-decomposition, which will be a function of temperature, concentration and activation method. The demand upon the activated persulfate from all of these components is captured in a coarse screening test termed, "Klozur Demand Test". It is dependent upon the site characteristics, such as the organic content of the soil, the mineral loading, and soil type and collectively must be considered for estimating the magnitude of oxidant dosing during field application.

The Klozur® Persulfate KDT test measures the loss of persulfate in the presence of soil, groundwater and activator over a period of 48 and 96 hours. The resulting KDT values can then be used as a guide to develop appropriate persulfate dosing for subsequent treatability testing and field applications.

[1] FMC is the owner of licensee under various patent applications relating to the use of activation chemistries

II. Sample Handling for AMEC

Client Sample Identification

- Soil ID: SOD-1A/AVTR-1A, SOD-2A/AVTR-2A, SOD-3A/AVTR-3A, SOD-5A/AVTR-5A, SOD-6A/AVTR-6A; GW ID: None Sent; DiH_2O Used

Handling Procedures

- The samples were received on 09/11/2012.
- During the collection of the preliminary data, the soil was well mixed, used and put into its original container after its use.
- No groundwater was sent, DiH_2O was used in its place.
- On 09/24/2012, multiple experimental samples were prepared according to the amounts shown in the results table below.
- The experimental samples were stored at room temperature and each sample was vigorously shaken once per day.
- More than 1000 grams of each soil sample is left with us. The unused soil samples will be disposed of responsibly after about one week.

III. Results

Sample ID	Run #	Trial Activator	Soil Wt. (g)	DiH_2O Water Vol. (mL)	Klozur Dosage (g/Kg Soil) t=0 hrs.	Soil Slurry pH	t=48hr	t=96 hr
SOD-1A/ AVTR-1A	1	H_2O_2	10	30	15	2.61-2.56	14.76	14.91
	2	H_2O_2	10	30	15	2.61-2.56	14.77	14.92

Sample ID	Run #	Trial Activator	Soil Wt. (g)	DiH_2O Water Vol. (mL)	Klozur Dosage (g/Kg Soil) t=0 hrs.	Soil Slurry pH	t=48hr	t=96 hr
SOD-2A/ AVTR-2A	1	H_2O_2	10	30	15	2.50-2.48	14.90	14.95
	2	H_2O_2	10	30	15	2.50-2.48	14.91	14.96

Sample ID	Run #	Trial Activator	Soil Wt. (g)	DiH_2O Water Vol. (mL)	Klozur Dosage (g/Kg Soil) t=0 hrs.	Soil Slurry pH	t=48hr	t=96 hr
SOD-3A/ AVTR-3A	1	H_2O_2	10	30	15	2.73-2.61	14.69	14.93
	2	H_2O_2	10	30	15	2.73-2.61	14.69	14.95

Sample ID	Run #	Trial Activator	Soil Wt. (g)	DiH_2O Water Vol. (mL)	Klozur Dosage (g/Kg Soil) t=0 hrs.	Soil Slurry pH	t=48hr	t=96 hr
SOD-5A/ AVTR-5A	1	H_2O_2	10	30	15	2.62-2.57	14.88	15.23
	2	H_2O_2	10	30	15	2.62-2.57	14.89	15.27

Sample ID	Run #	Trial Activator	Soil Wt. (g)	DiH_2O Water Vol. (mL)	Klozur Dosage (g/Kg Soil) t=0 hrs.	Soil Slurry pH	t=48hr	t=96 hr
SOD-6A/ AVTR-6A	1	H_2O_2	10	30	15	2.68-2.64	15.76	21.83
	2	H_2O_2	10	30	15	2.68-2.64	16.04	22.87

IV. Conclusions

The Klozur® Persulfate demand with hydrogen peroxide activation for the Soil SOD-1/AVTR-1 ranges from approximately 14.76 – 14.92 g persulfate / kg soil, which is considered high as compared to persulfate SOD for most soils. Based on these values, an average of 14.84 g / kg should be used as an area SOD for further refinement of the Klozur persulfate total demand.

The Klozur® Persulfate demand with hydrogen peroxide activation for the Soil SOD-2/AVTR-2 ranges from approximately 14.90 – 14.96 g persulfate / kg soil, which is considered high as compared to persulfate SOD for most soils. Based on these values, an average of 14.93 g / kg should be used as an area SOD for further refinement of the Klozur persulfate total demand.

The Klozur® Persulfate demand with hydrogen peroxide activation for the Soil SOD-3/AVTR-3 ranges from approximately 14.69 – 14.95 g persulfate / kg soil, which is considered high as compared to persulfate SOD for most soils. Based on these values, an average of 14.82 g / kg should be used as an area SOD for further refinement of the Klozur persulfate total demand.

The Klozur® Persulfate demand with hydrogen peroxide activation for the Soil SOD-5/AVTR-5 ranges from approximately 14.88 – 15.27 g persulfate / kg soil, which is considered high as compared to persulfate SOD for most soils. Based on these values, an average of 15.07 g / kg should be used as an area SOD for further refinement of the Klozur persulfate total demand.

The Klozur® Persulfate demand with hydrogen peroxide activation for the Soil SOD-6/AVTR-6 ranges from approximately 15.76 – 22.87 g persulfate / kg soil, which is considered high as compared to persulfate SOD for most soils. Based on these values, an average of 19.13 g / kg should be used as an area SOD for further refinement of the Klozur persulfate total demand.

It was noted that some of the soil and groundwater samples received by our lab were suspected of containing an unknown amount of contaminant present in the samples. SOD-5/AVTR-5 and SOD-6/AVTR-6 were of specific concern. SOD testing is usually performed on clean soils with similar lithology from the contaminant zone. Samples containing contaminant will have a higher SOD than uncontaminated soil samples, as a portion of the oxidant will be utilized in the destruction of the contaminant versus interacting with soil components. As a result, due to the presence of contaminants within the sample, the measured SOD is anticipated to be somewhat higher than the actual site SOD.

V. Authorizing Signatures

This report contains the results as determined by FMC laboratory protocol and are accurately represented herein.

Jennifer Lindsey
FMC Customer Representative

Note: 1. FMC recommends performing suitable treatability testing and field pilot demonstration to determine the effectiveness of Klozur® activated persulfate on the contaminants of concern. KDT testing provides only an indication of the minimum amount of oxidant required to overcome the demands of soil, groundwater and other secondary species that contribute to the usage of the oxidant. The KDT results do not imply a guarantee of efficacy of the activated persulfate in actual field situations. 2. ANY SUCH QUANTITY OR WARRANTY IS EXPRESSLY DISCLAIMED.

Klozur® Persulfate Demand Test

Client: AMEC , R Paul Teichert
9725 Cogdill Road
Knoxville, TN 37932
Phone: 865.218.1028

Performing Lab: FMC Corporation
Tonawanda, NY

Date September 26, 2012

I. Background

Klozur® activated persulfate is a strong oxidant capable of mineralizing a wide range of contaminants, including chlorinated solvents, petroleum hydrocarbons, polyaromatic hydrocarbons, gasoline additives, pesticides, and many others. Activation of the persulfate anion generates the sulfate radical, the primary species that drives the rapid destruction of the contaminants of concern. Activation can be accomplished by several methods[1]: heat, transition metals, addition of hydrogen peroxide, or utilizing high pH. Choice of the activation method will depend on the contaminant of concern and site characteristics.

A chemical oxidant is not specific as to what it will oxidize. As a result, activated persulfate will not only mineralize the contaminant of concern, but a portion of the oxidant will be used in oxidizing soil organics, reduced metals, and organic species that are not of concern. In addition, activated persulfate will undergo auto-decomposition, which will be a function of temperature, concentration and activation method. The demand upon the activated persulfate from all of these components is captured in a coarse screening test termed, "Klozur Demand Test". It is dependent upon the site characteristics, such as the organic content of the soil, the mineral loading, and soil type and collectively must be considered for estimating the magnitude of oxidant dosing during field application.

The Klozur® Persulfate KDT test measures the loss of persulfate in the presence of soil, groundwater and activator over a period of 48 and 96 hours. The resulting KDT values can then be used as a guide to develop appropriate persulfate dosing for subsequent treatability testing and field applications.

[1] FMC is the owner of licensee under various patent applications relating to the use of activation chemistries

II. Sample Handling for AMEC

Client Sample Identification

- Soil ID: SOD-1/AVTR-1, SOD-2/AVTR-2, SOD-3/AVTR-3, SOD-4/AVTR-4, SOD-5/AVTR-5, SOD-6/AVTR-6; GW ID: None Sent; DiH_2O Used

Handling Procedures

- The samples were received on 09/11/2012.
- During the collection of the preliminary data, the soil was well mixed, used and put into its original container after its use.
- No groundwater was sent, DiH_2O was used in its place.
- On 09/17/2012, multiple experimental samples were prepared according to the amounts shown in the results table below.
- The experimental samples were stored at room temperature and each sample was vigorously shaken once per day.
- More than 1000 grams of each soil sample is left with us. The unused soil samples will be disposed of responsibly after about one week.

III. Results

Sample ID	Run #	Trial Activator	Soil Wt. (g)	Water Vol. (mL)	Klozur Dosage (g/Kg Soil) t=0 hrs.	Slurry pH	t=48hr	t=96 hr
SOD-1/ AVTR-1	1	NaOH	10	30	15	11.29-11.15	0.28	0.36
	2	NaOH	10	30	15	11.29-11.15	0.28	0.37
	Soil Buffering Demand = **0.57 gallons 25% NaOH/ 2000 lb of Soil** **Acid Generation Demand** = **0.13 gallons 25% NaOH/ lb of Klozur persulfate**							

Sample ID	Run #	Trial Activator	Soil Wt. (g)	Water Vol. (mL)	Klozur Dosage (g/Kg Soil) t=0 hrs.	Slurry pH	t=48hr	t=96 hr
SOD-2/ AVTR-2	1	NaOH	10	30	15	11.24-11.19	0.62	1.40
	2	NaOH	10	30	15	11.24-11.19	0.64	1.45
	Soil Buffering Demand = 0.57 gallons 25% NaOH/ 2000 lb of Soil **Acid Generation Demand** = 0.13 gallons 25% NaOH/ lb of Klozur persulfate							

Sample ID	Run #	Trial Activator	Soil Wt. (g)	Water Vol. (mL)	Klozur Dosage (g/Kg Soil) t=0 hrs.	Slurry pH	t=48hr	t=96 hr
SOD-3/ AVTR-3	1	NaOH	10	30	15	11.03-10.91	0.38	0.46
	2	NaOH	10	30	15	11.03-10.91	0.40	0.46
	Soil Buffering Demand = 0.66 gallons 25% NaOH/ 2000 lb of Soil **Acid Generation Demand** = 0.13 gallons 25% NaOH/ lb of Klozur persulfate							

Sample ID	Run #	Trial Activator	Soil Wt. (g)	Water Vol. (mL)	Klozur Dosage (g/Kg Soil) t=0 hrs.	Slurry pH	t=48hr	t=96 hr
SOD-4/ AVTR-4	1	NaOH	10	30	15	11.26-11.09	2.05	2.70
	2	NaOH	10	30	15	11.26-11.09	2.08	2.72
	Soil Buffering Demand = 0.52 gallons 25% NaOH/ 2000 lb of Soil **Acid Generation Demand** = 0.13 gallons 25% NaOH/ lb of Klozur persulfate							

Sample ID	Run #	Trial Activator	Soil Wt. (g)	Water Vol. (mL)	Klozur Dosage (g/Kg Soil) t=0 hrs.	Slurry pH	t=48hr	t=96 hr
SOD-5/ AVTR-5	1	NaOH	10	30	15	11.32-11.24	1.20	1.42
	2	NaOH	10	30	15	11.32-11.24	1.25	1.59
	Soil Buffering Demand = 0.47 gallons 25% NaOH/ 2000 lb of Soil **Acid Generation Demand** = 0.13 gallons 25% NaOH/ lb of Klozur persulfate							

Sample ID	Run #	Trial Activator	Soil Wt. (g)	Water Vol. (mL)	Klozur Dosage (g/Kg Soil) t=0 hrs.	Slurry pH	t=48hr	t=96 hr
SOD-6/ AVTR-6	1	NaOH	10	30	15	10.99-10.93	3.86	6.13
	2	NaOH	10	30	15	10.99-10.93	3.90	6.16
	Soil Buffering Demand = 0.75 gallons 25% NaOH/ 2000 lb of Soil **Acid Generation Demand** = 0.13 gallons 25% NaOH/ lb of Klozur persulfate							

IV. Conclusions

The Klozur® Persulfate demand with NaOH activation for the Soil SOD-1/AVTR-1 ranges from approximately 0.28 – 0.37 g persulfate / kg soil, which is considered low as compared to persulfate SOD for most soils. Based on these values, an average of 0.32 g / kg should be used as an area SOD for further refinement of the Klozur persulfate total demand.

The Klozur® Persulfate demand with NaOH activation for the Soil SOD-2/AVTR-2 ranges from approximately 0.62 – 1.45 g persulfate / kg soil, which is considered average as compared to persulfate SOD for most soils. Based on these values, an average of 1.03 g / kg should be used as an area SOD for further refinement of the Klozur persulfate total demand.

The Klozur® Persulfate demand with NaOH activation for the Soil SOD-3/AVTR-3 ranges from approximately 0.38 – 0.46g persulfate / kg soil, which is considered low as compared to persulfate SOD for most soils. Based on these

values, an average of 0.42 g / kg should be used as an area SOD for further refinement of the Klozur persulfate total demand.

The Klozur® Persulfate demand with NaOH activation for the Soil SOD-4/AVTR-4 ranges from approximately 2.05 – 2.72g persulfate / kg soil, which is considered moderately high as compared to persulfate SOD for most soils. Based on these values, an average of 2.39 g / kg should be used as an area SOD for further refinement of the Klozur persulfate total demand.

The Klozur® Persulfate demand with NaOH activation for the Soil SOD-5/AVTR-5 ranges from approximately 1.20 – 1.59g persulfate / kg soil, which is considered slightly above average as compared to persulfate SOD for most soils. Based on these values, an average of 1.37 g / kg should be used as an area SOD for further refinement of the Klozur persulfate total demand.

The Klozur® Persulfate demand with NaOH activation for the Soil SOD-6/AVTR-6 ranges from approximately 3.86 – 6.16g persulfate / kg soil, which is considered slightly above average as compared to persulfate SOD for most soils. Based on these values, an average of 5.01 g / kg should be used as an area SOD for further refinement of the Klozur persulfate total demand.

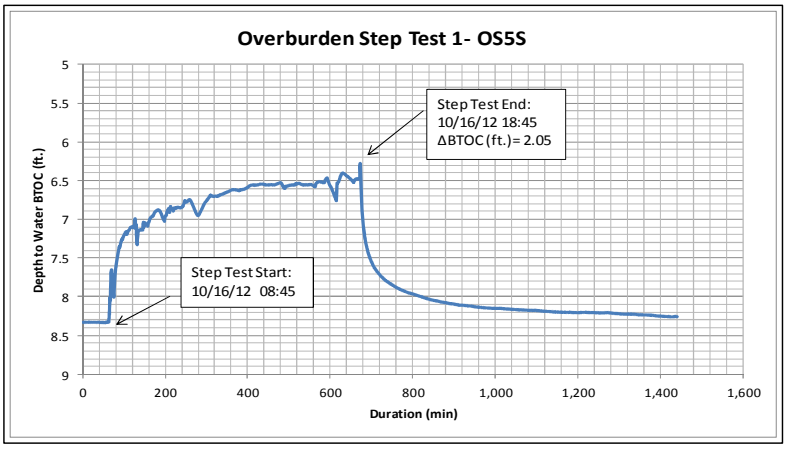
It was noted that some of the soil and groundwater samples received by our lab were suspected of containing an unknown amount of contaminant present in the samples. SOD-4/AVTR-4, SOD-5/AVTR-5, SOD-6/AVTR-6 were of specific concern. SOD testing is usually performed on clean soils with similar lithology from the contaminant zone. Samples containing contaminant will have a higher SOD than uncontaminated soil samples, as a portion of the oxidant will be utilized in the destruction of the contaminant versus interacting with soil components. As a result, due to the presence of contaminants within the sample, the measured SOD is anticipated to be somewhat higher than the actual site SOD.

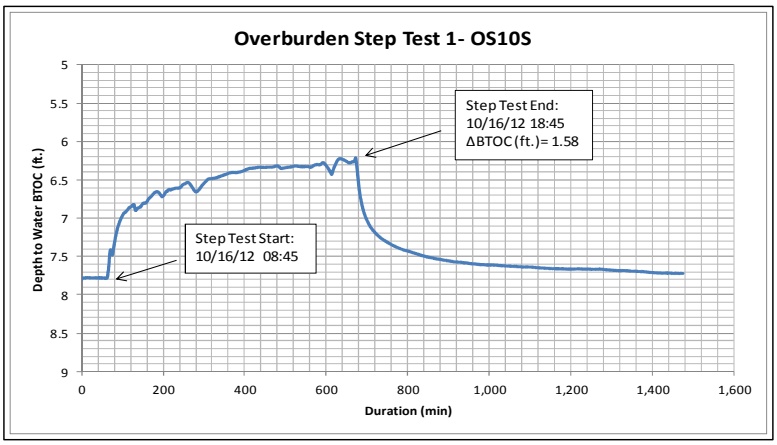
V. Authorizing Signatures

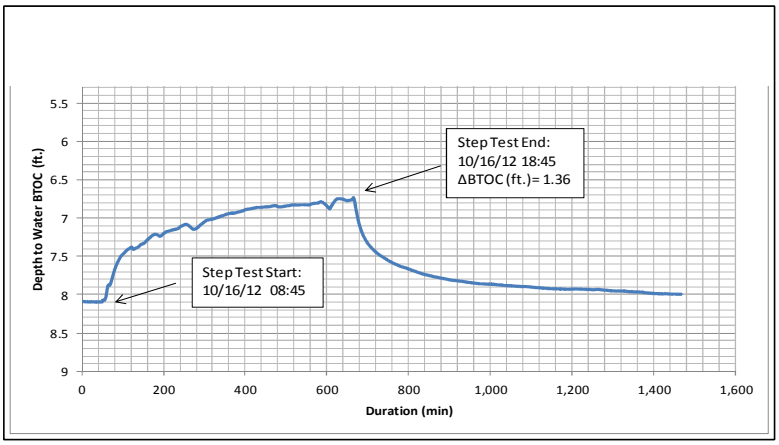
This report contains the results as determined by FMC laboratory protocol and are accurately represented herein.

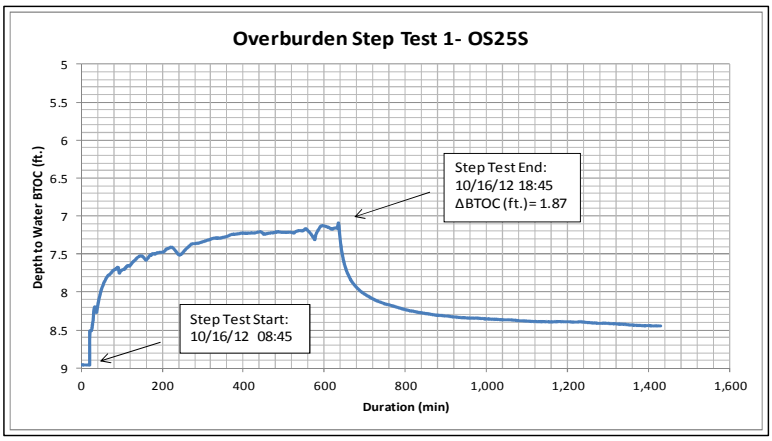
Jennifer Lindsey
FMC Customer Representative

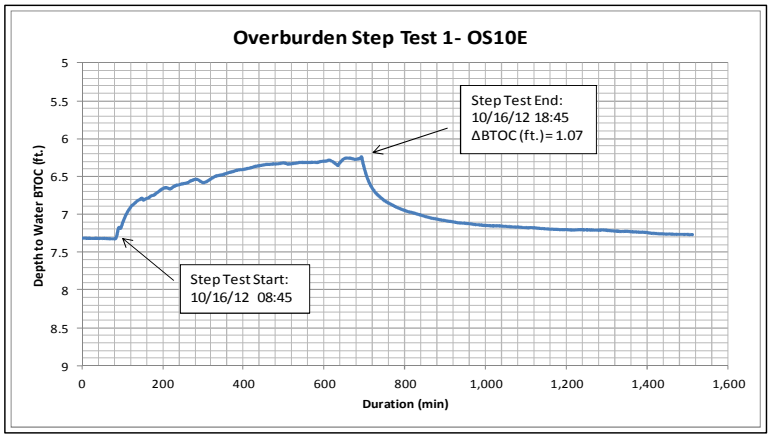
Note: 1. FMC recommends performing suitable treatability testing and field pilot demonstration to determine the effectiveness of Klozur® activated persulfate on the contaminants of concern. KDT testing provides only an indication of the minimum amount of oxidant required to overcome the demands of soil, groundwater and other secondary species that contribute to the usage of the oxidant. The KDT results do not imply a guarantee of efficacy of the activated persulfate in actual field situations. 2. ANY SUCH QUANTITY OR WARRANTY IS EXPRESSLY DISCLAIMED.

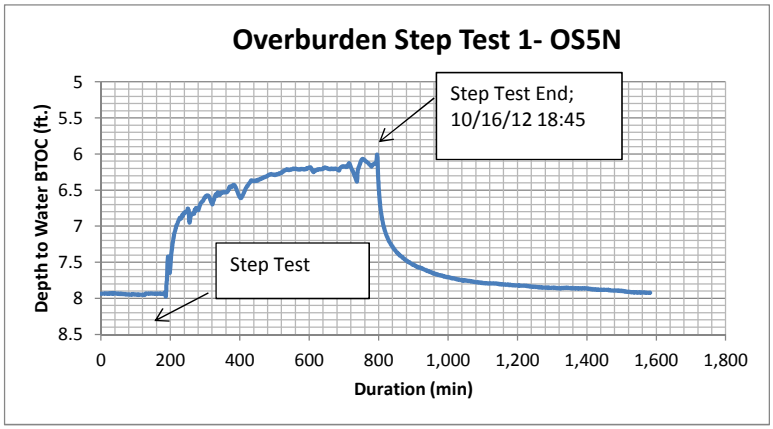

Overburden Step Test 1- OS5S
Step Test End:
10/16/12 18:45
ΔBTOC (ft.)= 2.05
Step Test Start:
10/16/12 08:45
Depth to Water BTOC (ft.)
Duration (min)

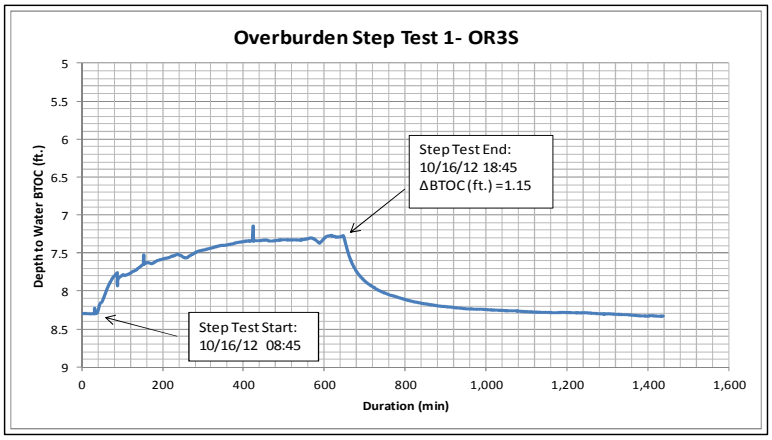

Overburden Step Test 1- OS10S
Step Test End:
10/16/12 18:45
ΔBTOC (ft.)= 1.58
Step Test Start:
10/16/12 08:45
Depth to Water BTOC (ft.)
Duration (min)

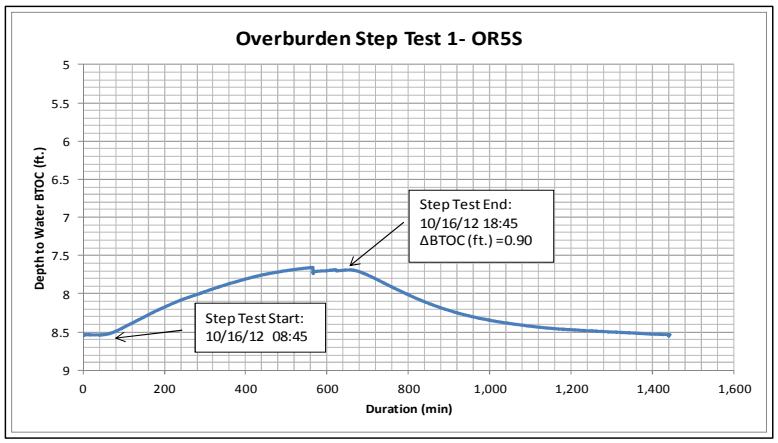

Step Test End:
10/16/12 18:45
ΔBTOC (ft.)= 1.36
Step Test Start:
10/16/12 08:45
Depth to Water BTOC (ft.)
Duration (min)

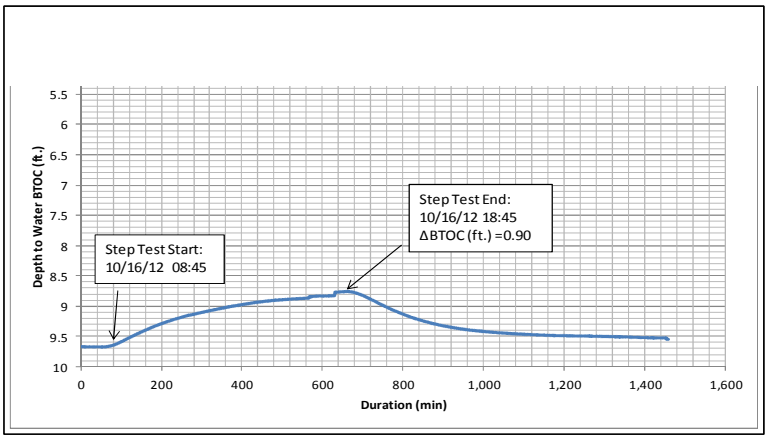

Overburden Step Test 1- OS25S
Step Test End:
10/16/12 18:45
ΔBTOC (ft.)= 1.87
Step Test Start:
10/16/12 08:45
Depth to Water BTOC (ft.)
Duration (min)

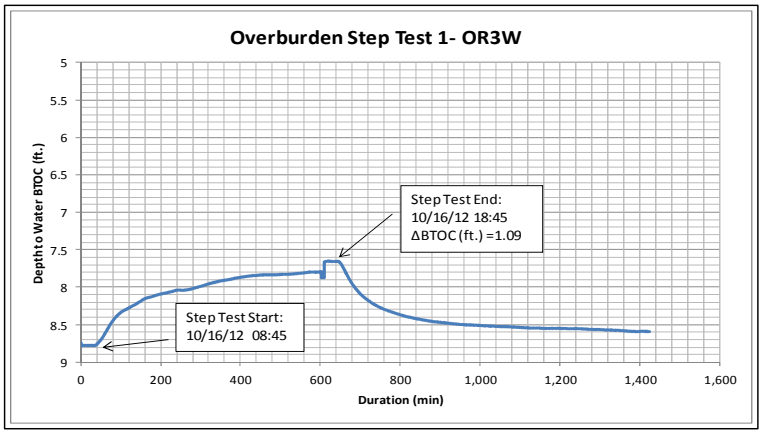

Overburden Step Test 1- OS10E
Depth to Water BTOC (ft.)
5
5.5
6
6.5
7
7.5
8
8.5
9
0
200
400
600
800
1,000
1,200
1,400
1,600
Duration (min)
Step Test End:
10/16/12 18:45
ΔBTOC (ft.)= 1.07
Step Test Start:
10/16/12 08:45

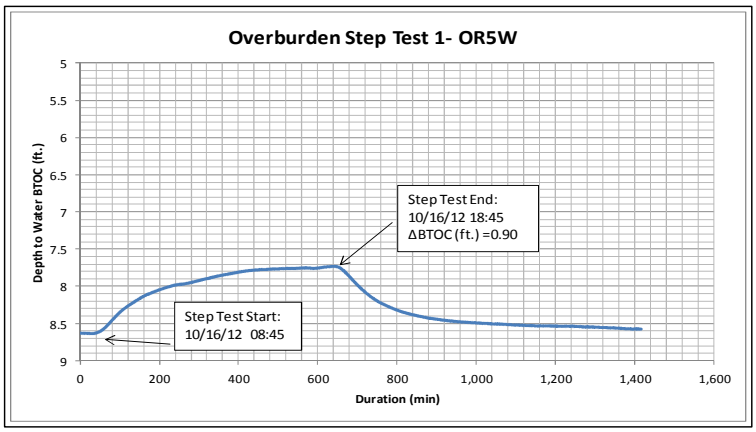

Overburden Step Test 1- OS5N
Depth to Water BTOC (ft.)
5
5.5
6
6.5
7
7.5
8
8.5
0
200
400
600
800
1,000
1,200
1,400
1,600
1,800
Duration (min)
Step Test End;
10/16/12 18:45
Step Test

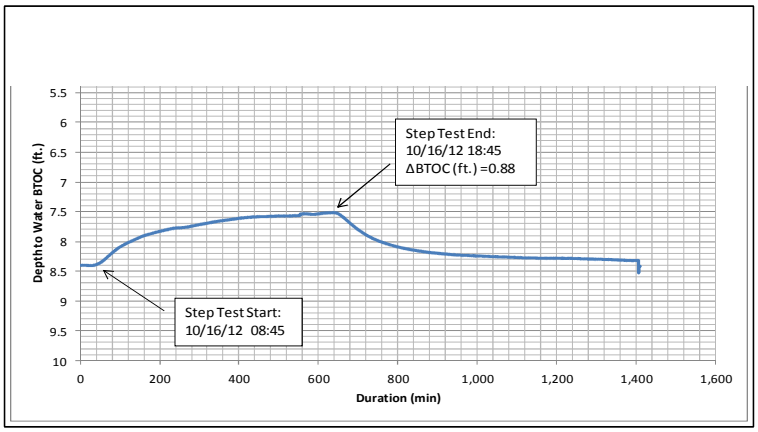

Overburden Step Test 1- OR3S
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/16/12 18:45
ΔBTOC (ft.) =1.15
Step Test Start:
10/16/12 08:45

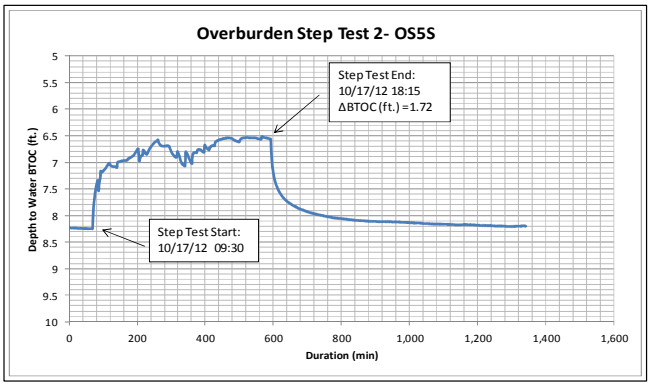

Overburden Step Test 1- OR5S
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/16/12 18:45
ΔBTOC (ft.) =0.90
Step Test Start:
10/16/12 08:45

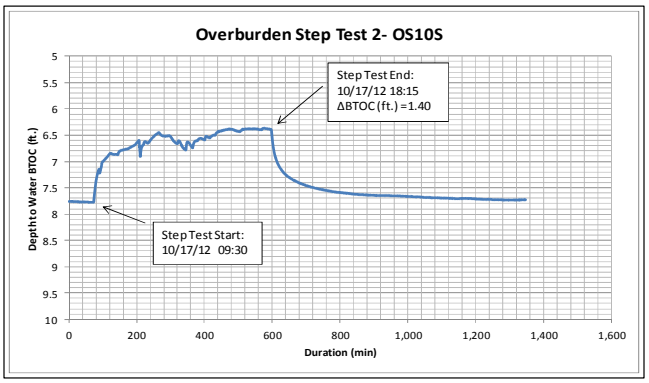

Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/16/12 18:45
ΔBTOC (ft.) =0.90
Step Test Start:
10/16/12 08:45

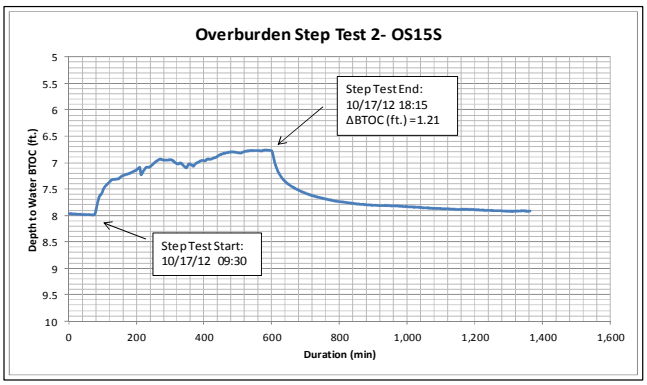

Overburden Step Test 1- OR3W
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/16/12 18:45
ΔBTOC (ft.) =1.09
Step Test Start:
10/16/12 08:45

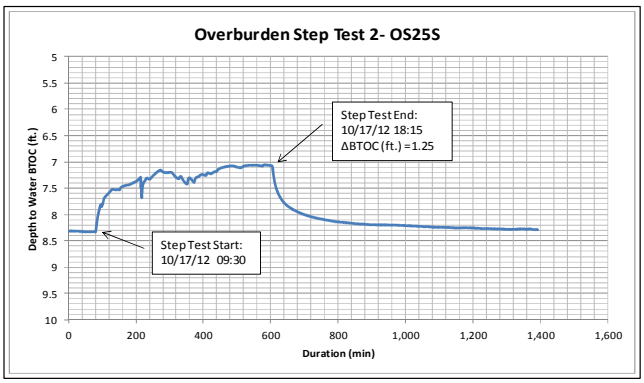

Overburden Step Test 1- OR5W
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/16/12 18:45
ΔBTOC (ft.) =0.90
Step Test Start:
10/16/12 08:45

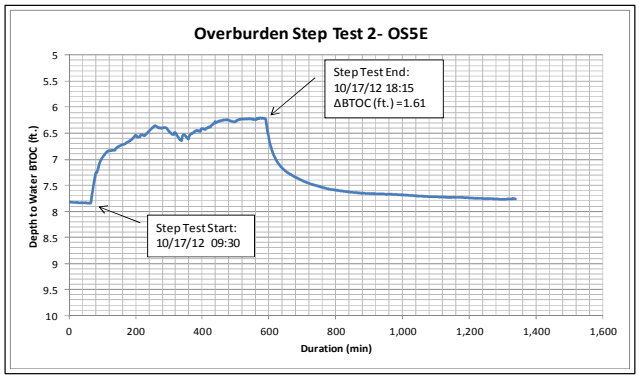

Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/16/12 18:45
ΔBTOC (ft.) =0.88
Step Test Start:
10/16/12 08:45

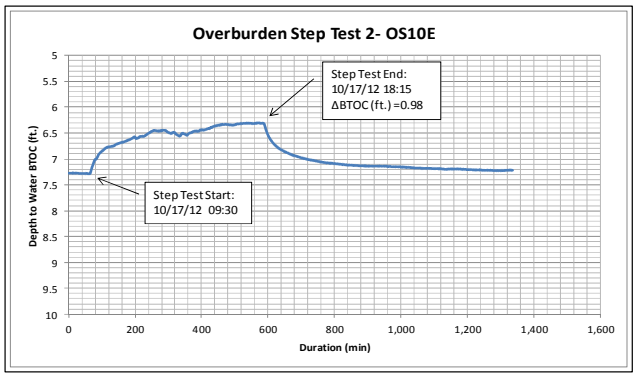

Overburden Step Test 2- OS5S
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) = 1.72
Step Test Start:
10/17/12 09:30
Depth to Water BTOC (ft.)
Duration (min)

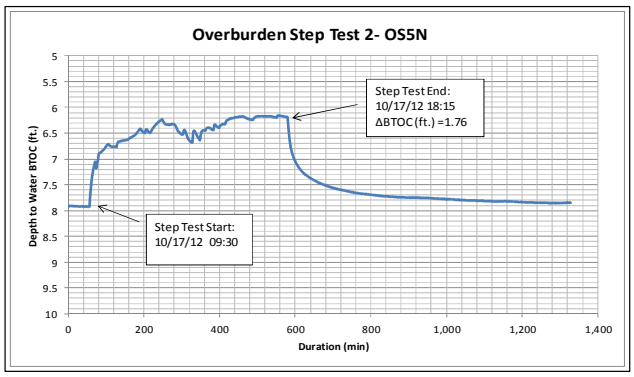

Overburden Step Test 2- OS10S
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) = 1.40
Step Test Start:
10/17/12 09:30
Depth to Water BTOC (ft.)
Duration (min)

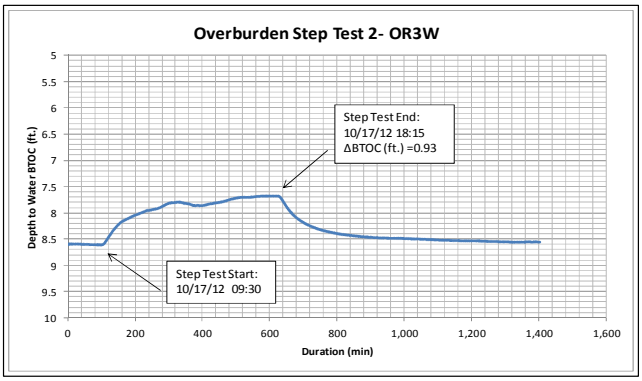

Overburden Step Test 2- OS15S
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) = 1.21
Step Test Start:
10/17/12 09:30
Depth to Water BTOC (ft.)
Duration (min)

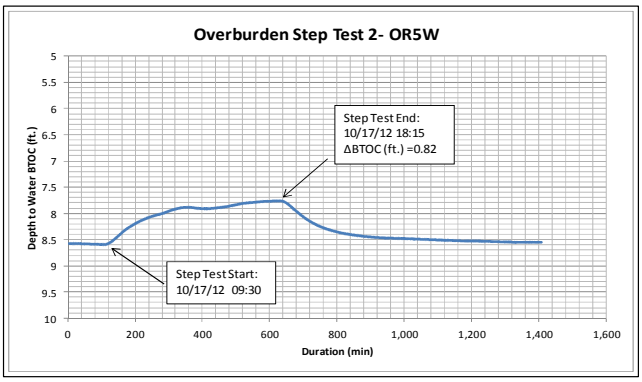

Overburden Step Test 2- OS25S
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) = 1.25
Step Test Start:
10/17/12 09:30
Depth to Water BTOC (ft.)
Duration (min)

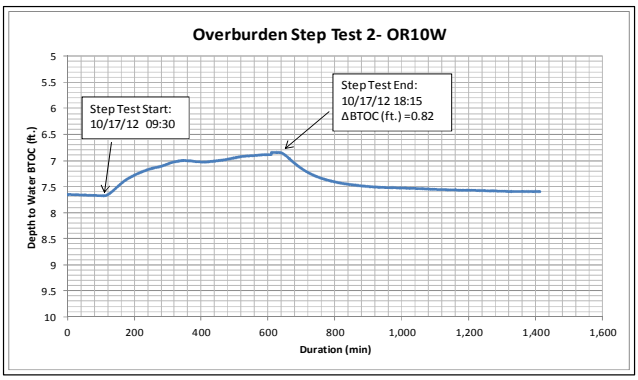

Overburden Step Test 2- OS5E
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) =1.61
Step Test Start:
10/17/12 09:30
Depth to Water BTOC (ft.)
Duration (min)

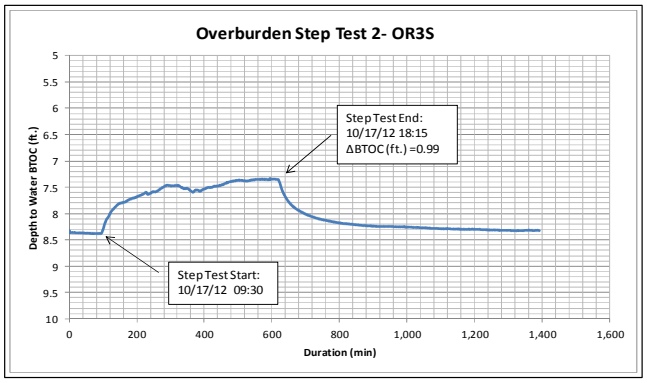

Overburden Step Test 2- OS10E
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) =0.98
Step Test Start:
10/17/12 09:30
Depth to Water BTOC (ft.)
Duration (min)

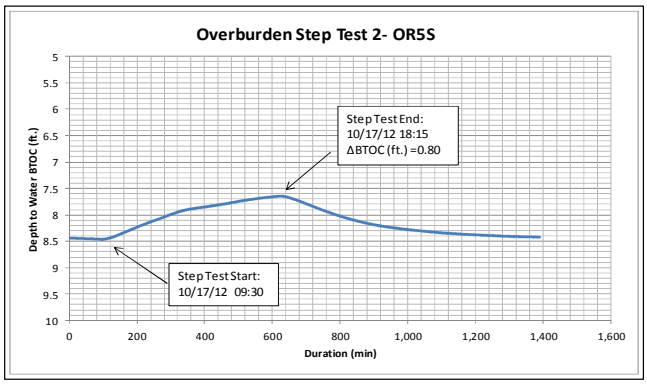

Overburden Step Test 2- OS5N
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) =1.76
Step Test Start:
10/17/12 09:30
Depth to Water BTOC (ft.)
Duration (min)

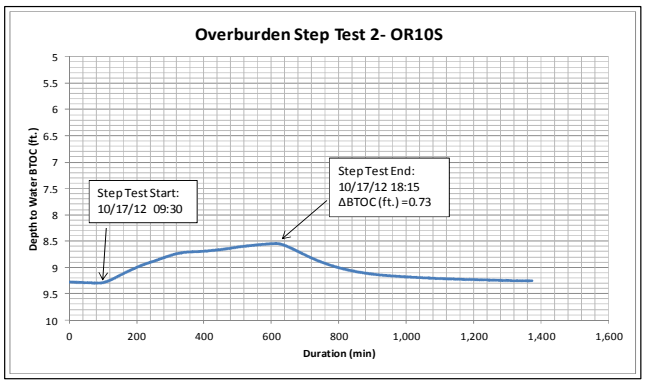

Overburden Step Test 2- OR3W
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) =0.93
Step Test Start:
10/17/12 09:30

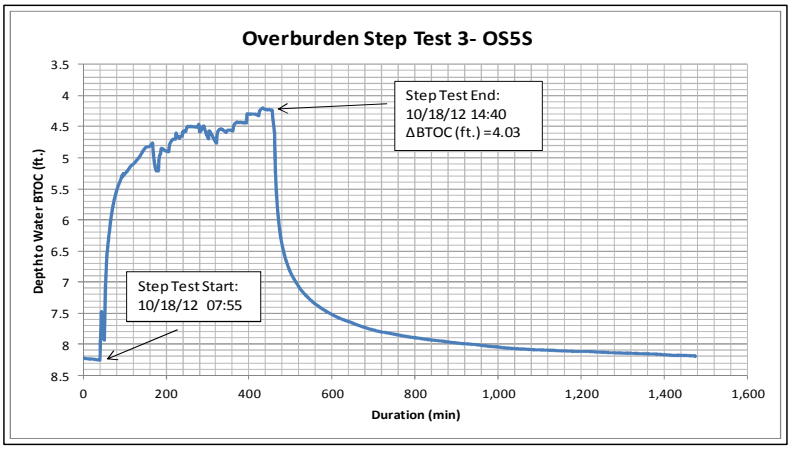

Overburden Step Test 2- OR5W
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) =0.82
Step Test Start:
10/17/12 09:30

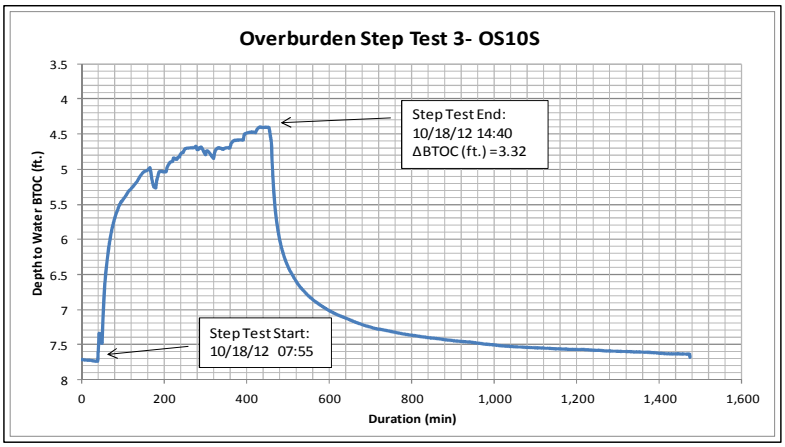

Overburden Step Test 2- OR10W
Depth to Water BTOC (ft.)
Duration (min)
Step Test Start:
10/17/12 09:30
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) =0.82


Overburden Step Test 2- OR3S
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) =0.99
Step Test Start:
10/17/12 09:30


Overburden Step Test 2- OR5S
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) =0.80
Step Test Start:
10/17/12 09:30


Overburden Step Test 2- OR10S
Depth to Water BTOC (ft.)
Duration (min)
Step Test Start:
10/17/12 09:30
Step Test End:
10/17/12 18:15
ΔBTOC (ft.) =0.73


Overburden Step Test 3- OS5S
Step Test End:
10/18/12 14:40
ΔBTOC (ft.) =4.03
Step Test Start:
10/18/12 07:55
Depth to Water BTOC (ft.)
Duration (min)


Overburden Step Test 3- OS10S
Step Test End:
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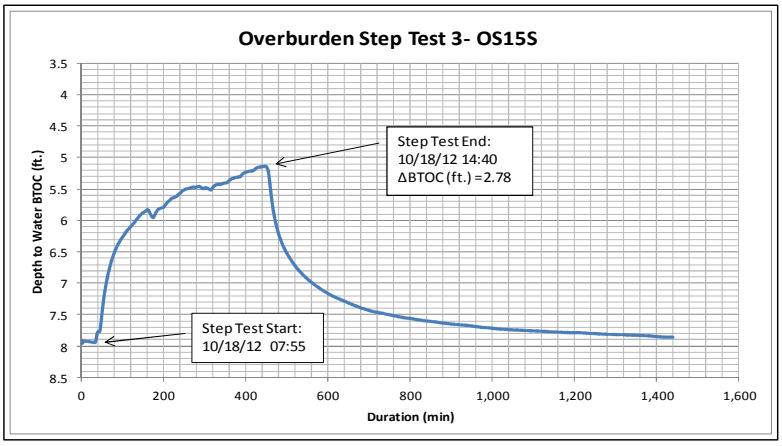
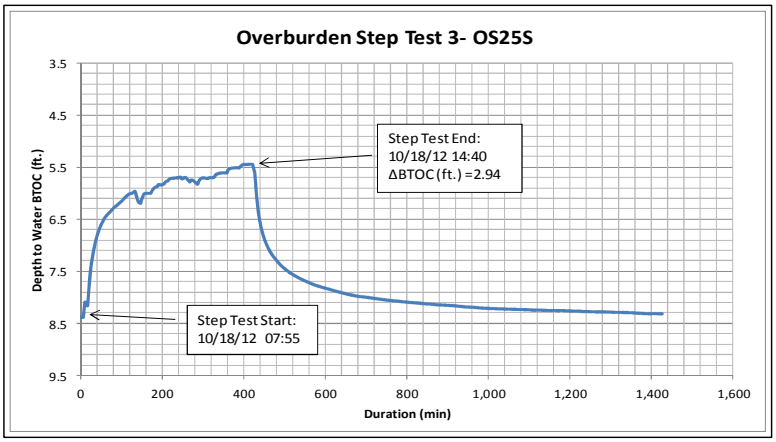
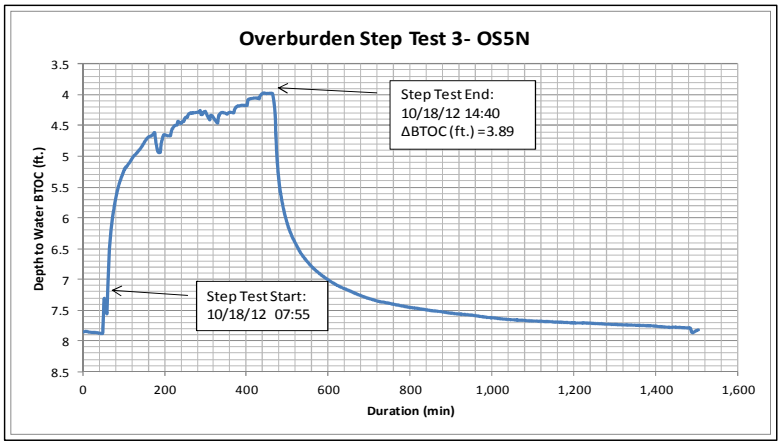
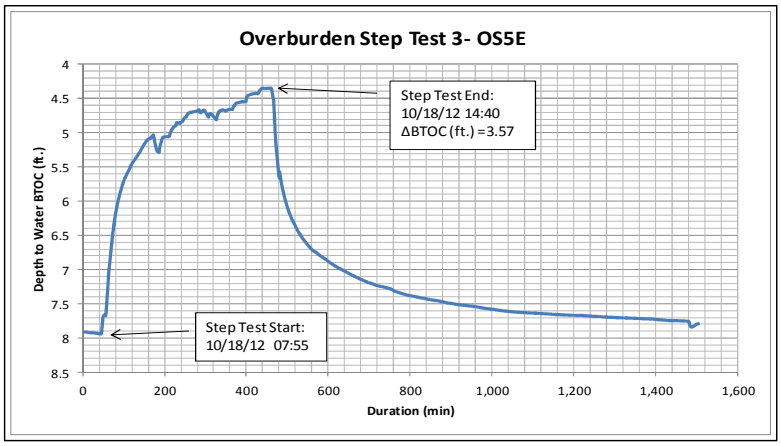
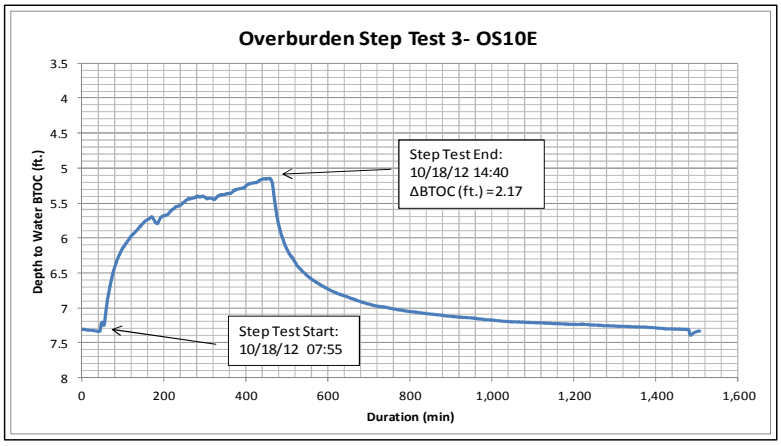
ΔBTOC (ft.) =3.32
Step Test Start:
10/18/12 07:55
Depth to Water BTOC (ft.)
Duration (min)


Overburden Step Test 3- OS15S
Step Test End:
10/18/12 14:40
ΔBTOC (ft.) =2.78
Step Test Start:
10/18/12 07:55
Depth to Water BTOC (ft.)
Duration (min)


Overburden Step Test 3- OS25S
Step Test End:
10/18/12 14:40
ΔBTOC (ft.) =2.94
Step Test Start:
10/18/12 07:55
Depth to Water BTOC (ft.)
Duration (min)


Overburden Step Test 3- OS5N
Step Test End:
10/18/12 14:40
ΔBTOC (ft.) =3.89
Step Test Start:
10/18/12 07:55
Depth to Water BTOC (ft.)
Duration (min)


Overburden Step Test 3- OS5E
Step Test End:
10/18/12 14:40
ΔBTOC (ft.) =3.57
Step Test Start:
10/18/12 07:55
Depth to Water BTOC (ft.)
Duration (min)


Overburden Step Test 3- OS10E
Step Test End:
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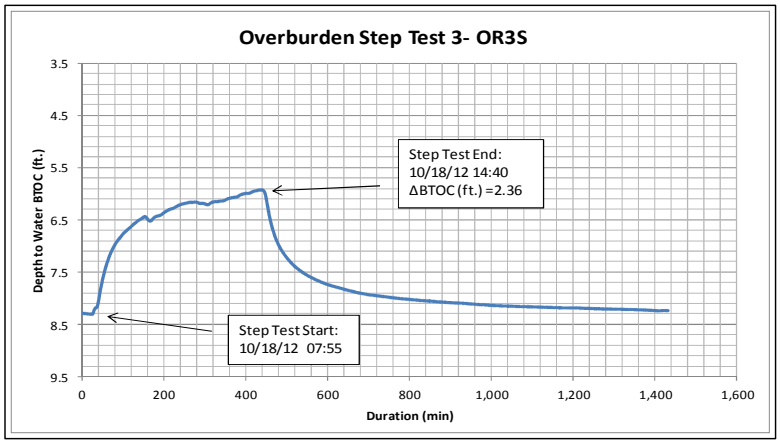
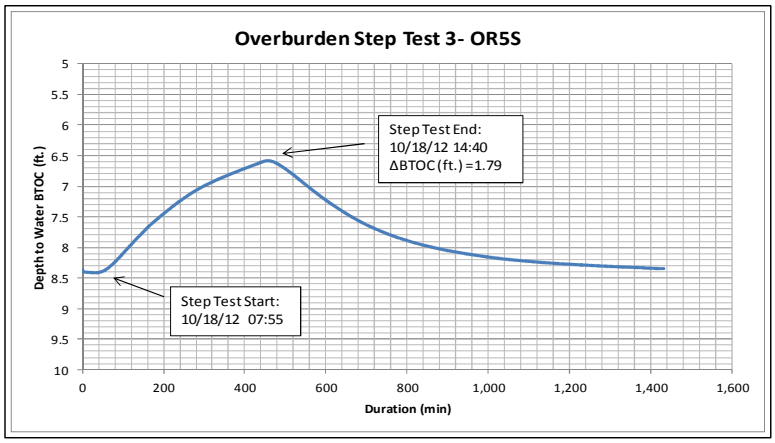
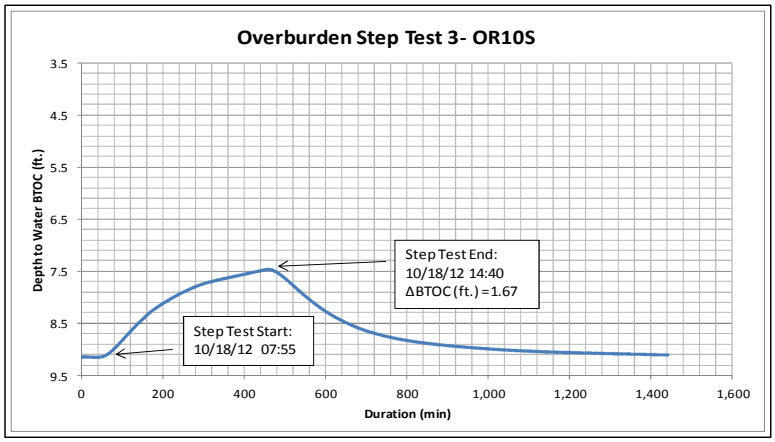
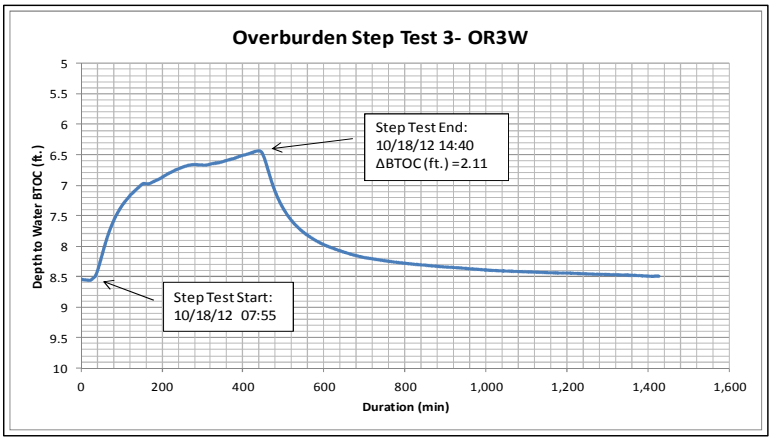
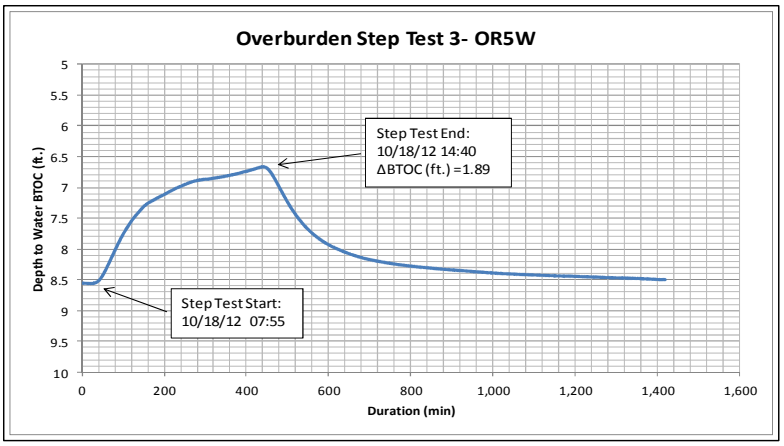
ΔBTOC (ft.) =2.17
Step Test Start:
10/18/12 07:55
Depth to Water BTOC (ft.)
Duration (min)

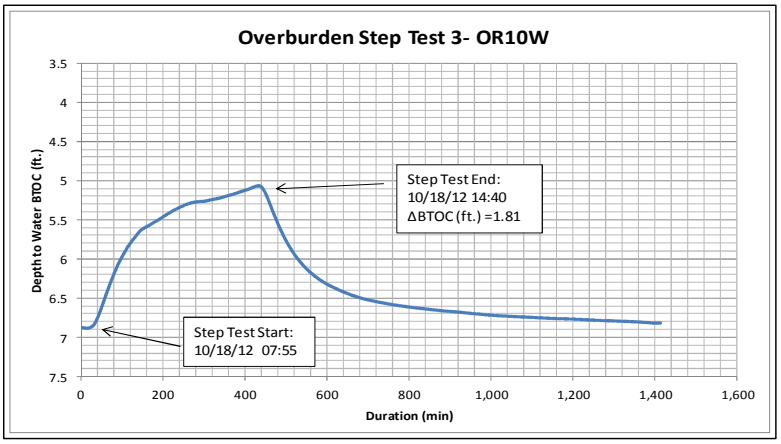

Overburden Step Test 3- OR3S
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
200
400
600
800
1,000
1,200
1,400
1,600
Duration (min)
Step Test End:
10/18/12 14:40
ΔBTOC (ft.) =2.36
Step Test Start:
10/18/12 07:55

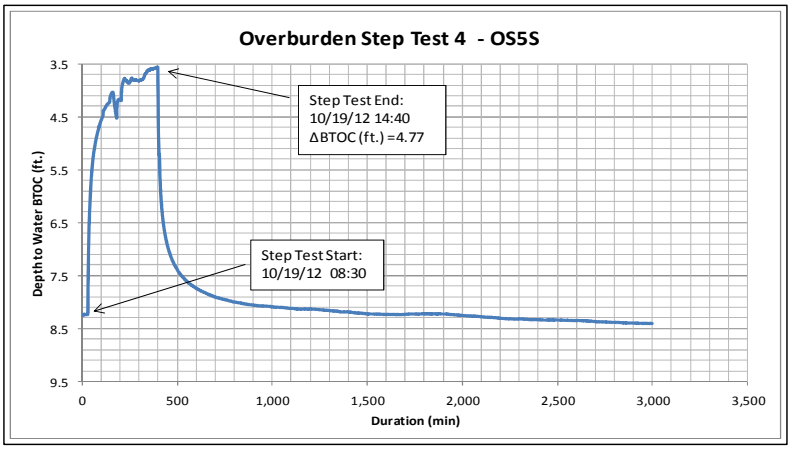

Overburden Step Test 3- OR5S
Depth to Water BTOC (ft.)
5
5.5
6
6.5
7
7.5
8
8.5
9
9.5
10
0
200
400
600
800
1,000
1,200
1,400
1,600
Duration (min)
Step Test End:
10/18/12 14:40
ΔBTOC (ft.) =1.79
Step Test Start:
10/18/12 07:55

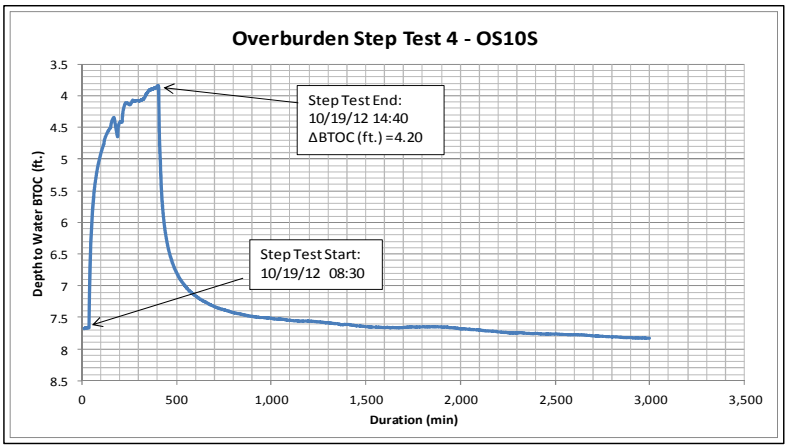

Overburden Step Test 3- OR10S
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
200
400
600
800
1,000
1,200
1,400
1,600
Duration (min)
Step Test End:
10/18/12 14:40
ΔBTOC (ft.) =1.67
Step Test Start:
10/18/12 07:55

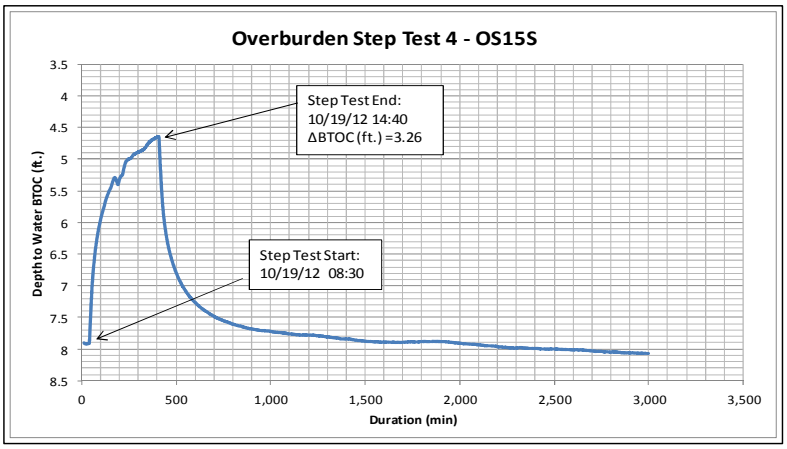

Overburden Step Test 3- OR3W
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/18/12 14:40
ΔBTOC (ft.) =2.11
Step Test Start:
10/18/12 07:55

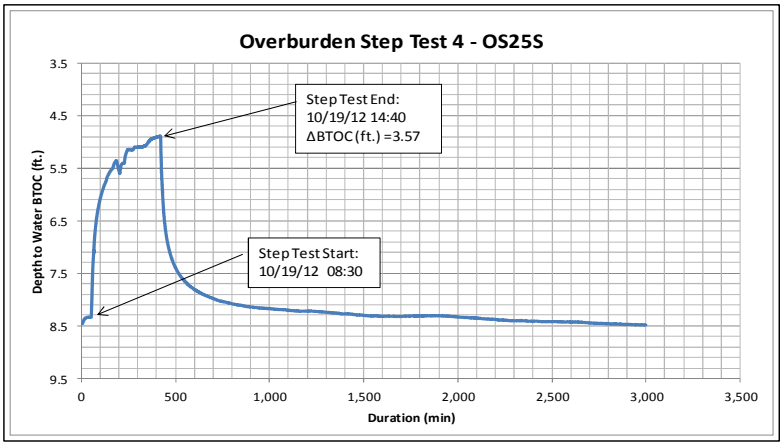

Overburden Step Test 3- OR5W
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/18/12 14:40
ΔBTOC (ft.) =1.89
Step Test Start:
10/18/12 07:55

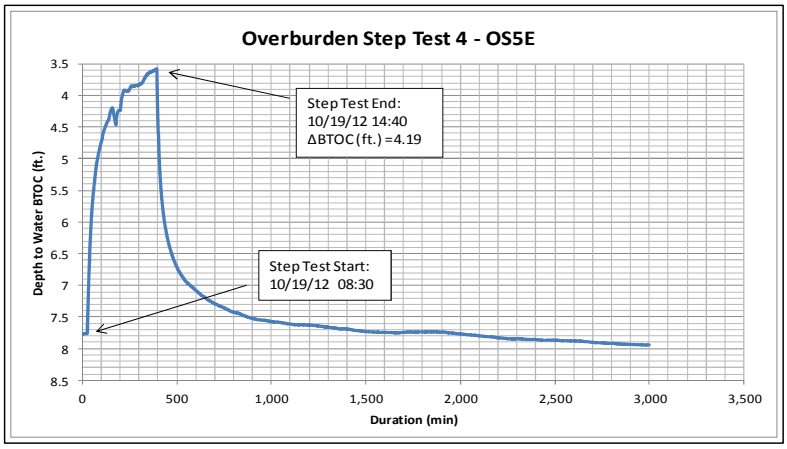

Overburden Step Test 3- OR10W
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/18/12 14:40
ΔBTOC (ft.) =1.81
Step Test Start:
10/18/12 07:55

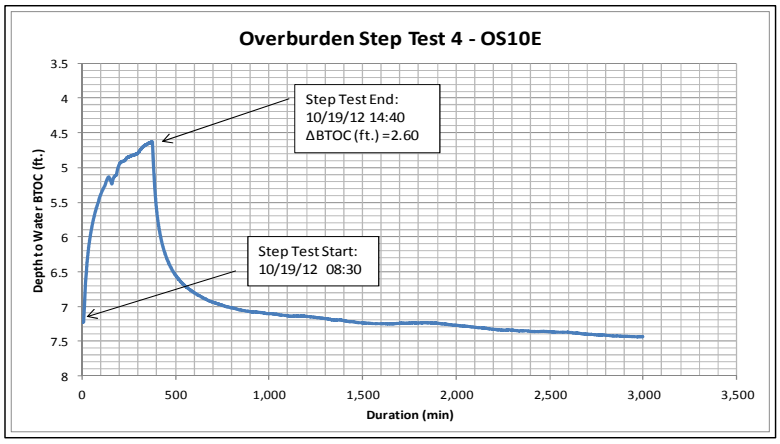

Overburden Step Test 4 - OS5S
Step Test End:
10/19/12 14:40
ΔBTOC (ft.) =4.77
Step Test Start:
10/19/12 08:30
Depth to Water BTOC (ft.)
Duration (min)

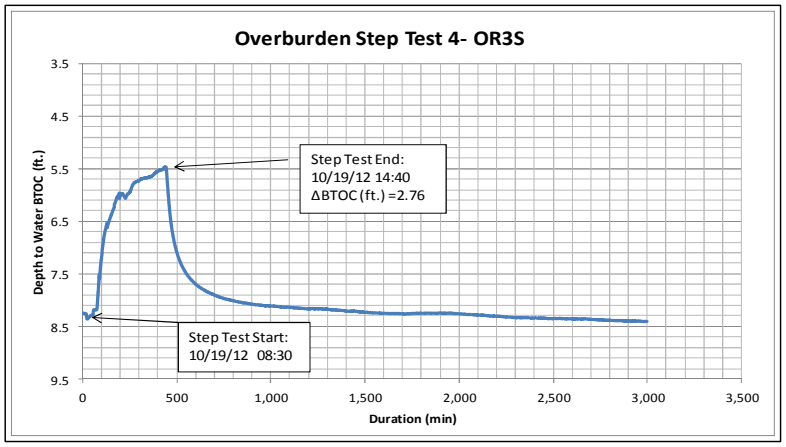

Overburden Step Test 4 - OS10S
Step Test End:
10/19/12 14:40
ΔBTOC (ft.) =4.20
Step Test Start:
10/19/12 08:30
Depth to Water BTOC (ft.)
Duration (min)

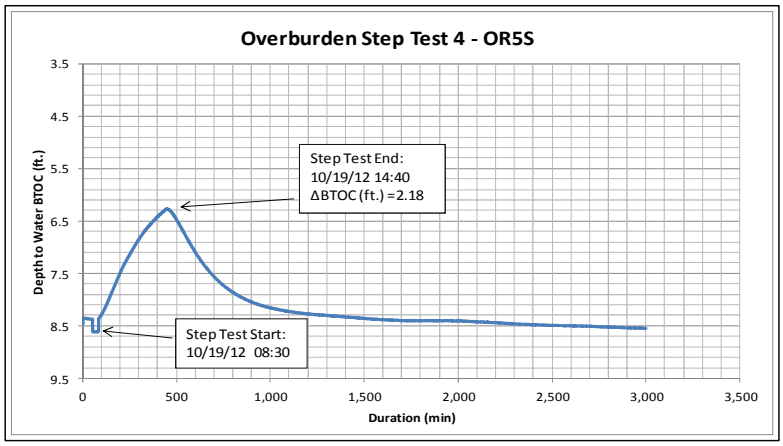

Overburden Step Test 4 - OS15S
Step Test End:
10/19/12 14:40
ΔBTOC (ft.) =3.26
Step Test Start:
10/19/12 08:30
Depth to Water BTOC (ft.)
Duration (min)

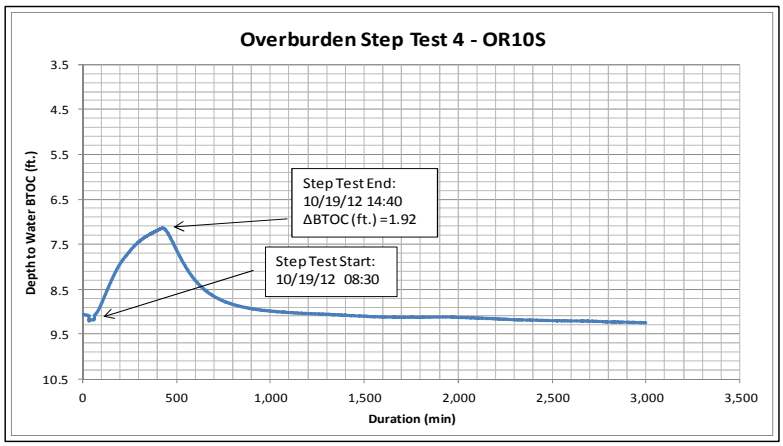

Overburden Step Test 4 - OS25S
Step Test End:
10/19/12 14:40
ΔBTOC (ft.) =3.57
Step Test Start:
10/19/12 08:30
Depth to Water BTOC (ft.)
Duration (min)

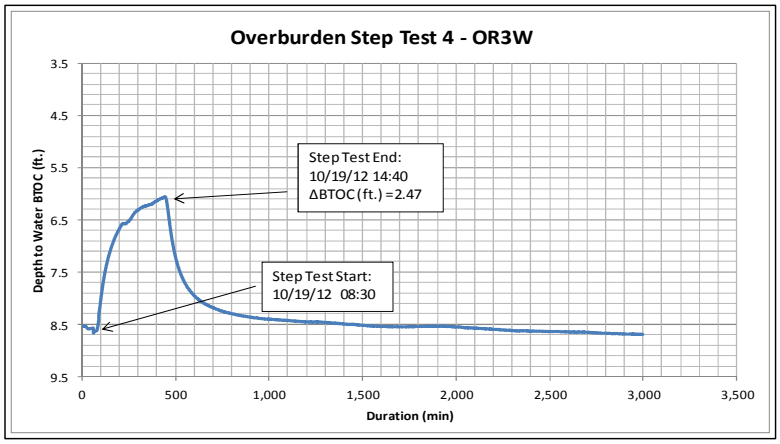

Overburden Step Test 4 - OS5E
Step Test End:
10/19/12 14:40
ΔBTOC (ft.) =4.19
Step Test Start:
10/19/12 08:30
Depth to Water BTOC (ft.)
3.5
4
4.5
5
5.5
6
6.5
7
7.5
8
8.5
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Duration (min)

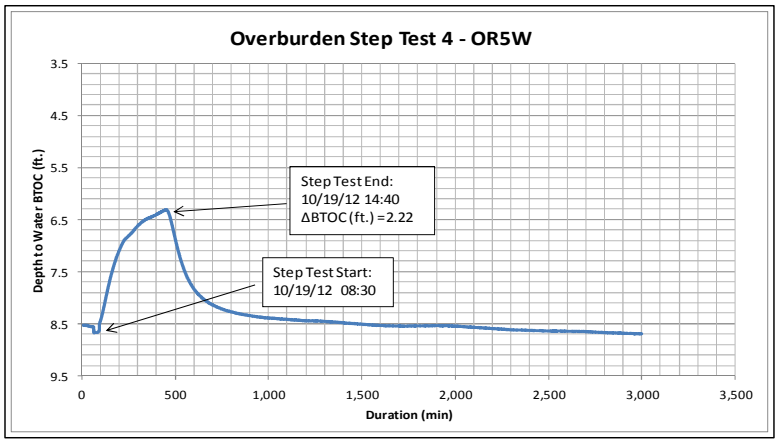

Overburden Step Test 4 - OS10E
Step Test End:
10/19/12 14:40
ΔBTOC (ft.) =2.60
Step Test Start:
10/19/12 08:30
Depth to Water BTOC (ft.)
3.5
4
4.5
5
5.5
6
6.5
7
7.5
8
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Duration (min)

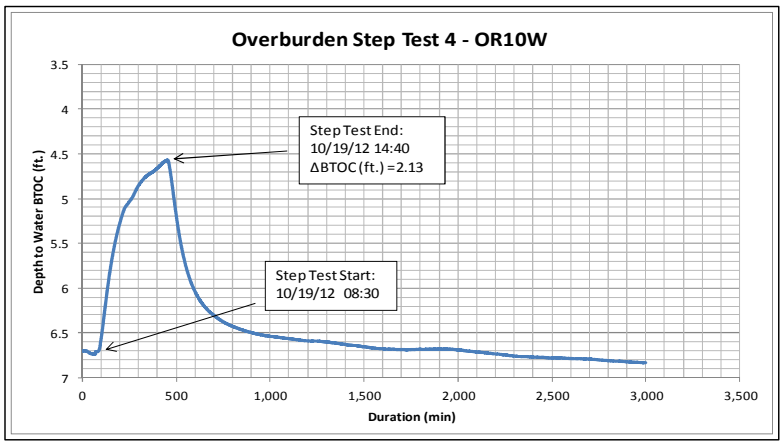

Overburden Step Test 4- OR3S
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Duration (min)
Step Test End:
10/19/12 14:40
ΔBTOC (ft.) =2.76
Step Test Start:
10/19/12 08:30

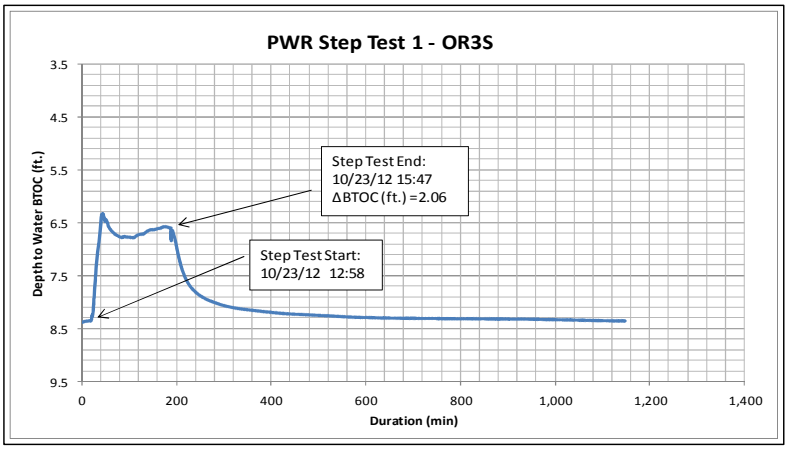

Overburden Step Test 4 - OR5S
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Duration (min)
Step Test End:
10/19/12 14:40
ΔBTOC (ft.) =2.18
Step Test Start:
10/19/12 08:30

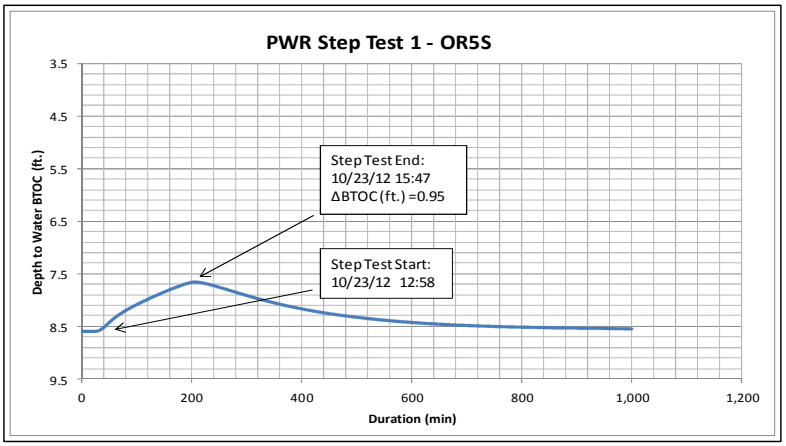

Overburden Step Test 4 - OR10S
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
10.5
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Duration (min)
Step Test End:
10/19/12 14:40
ΔBTOC (ft.) =1.92
Step Test Start:
10/19/12 08:30

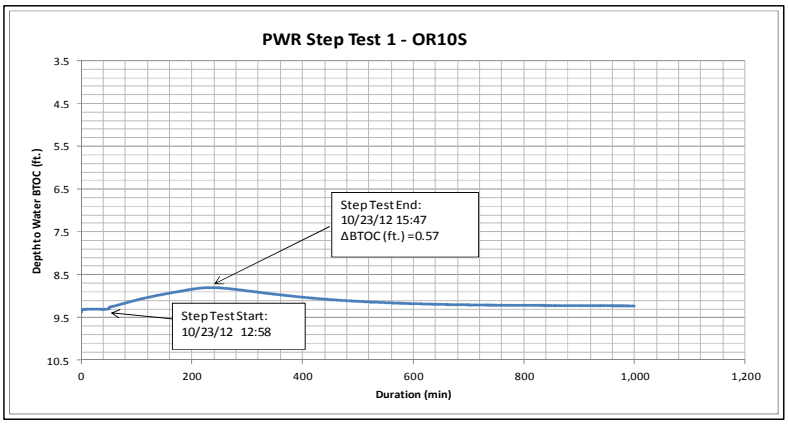

Overburden Step Test 4 - OR3W
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Duration (min)
Step Test End:
10/19/12 14:40
ΔBTOC (ft.) = 2.47
Step Test Start:
10/19/12 08:30

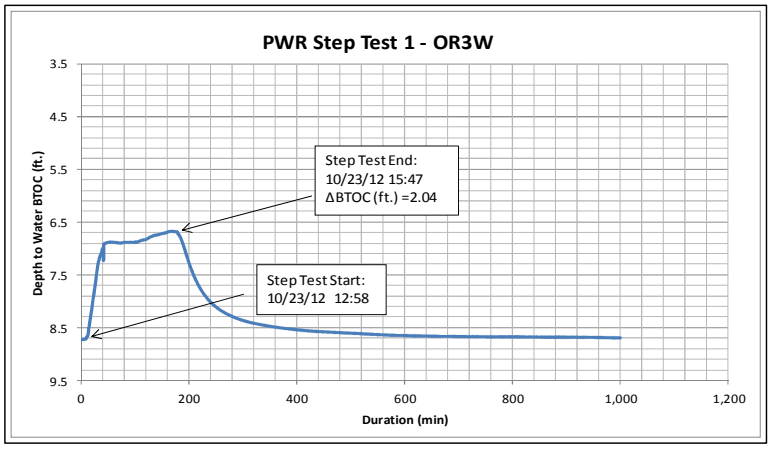

Overburden Step Test 4 - OR5W
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Duration (min)
Step Test End:
10/19/12 14:40
ΔBTOC (ft.) = 2.22
Step Test Start:
10/19/12 08:30

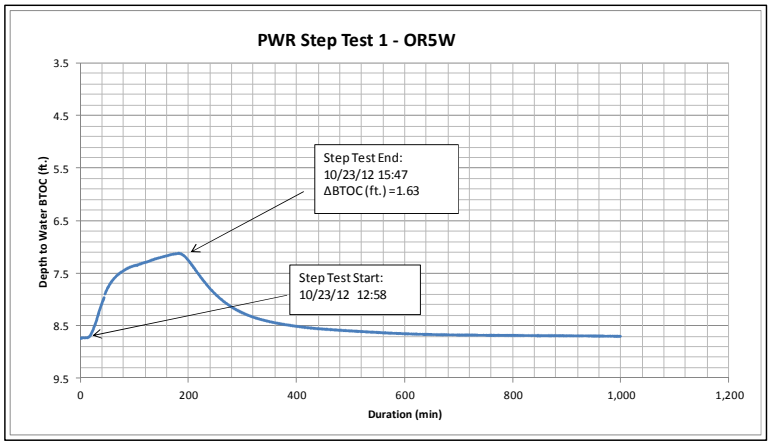

Overburden Step Test 4 - OR10W
Depth to Water BTOC (ft.)
3.5
4
4.5
5
5.5
6
6.5
7
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Duration (min)
Step Test End:
10/19/12 14:40
ΔBTOC (ft.) = 2.13
Step Test Start:
10/19/12 08:30

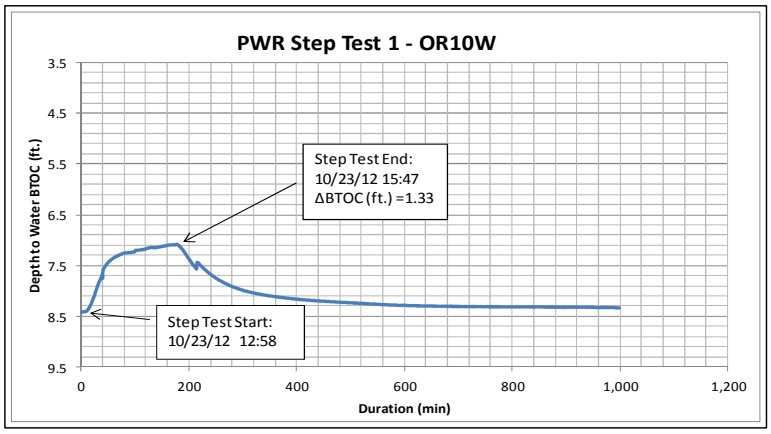

PWR Step Test 1 - OR3S
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
200
400
600
800
1,000
1,200
1,400
Duration (min)
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =2.06
Step Test Start:
10/23/12 12:58

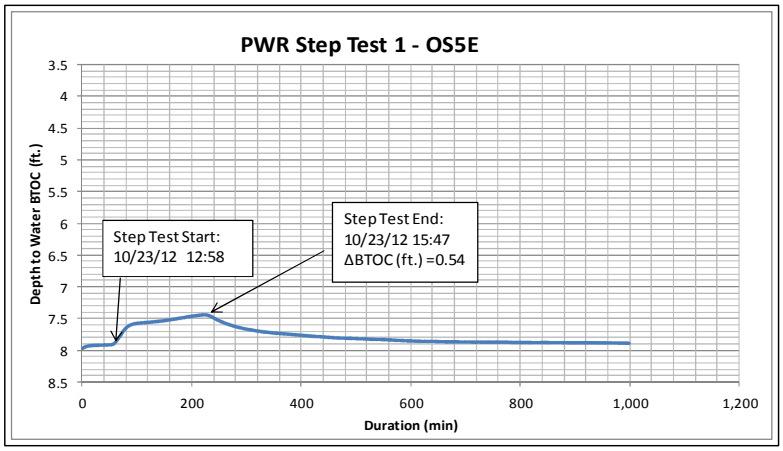

PWR Step Test 1 - OR5S
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
200
400
600
800
1,000
1,200
Duration (min)
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =0.95
Step Test Start:
10/23/12 12:58

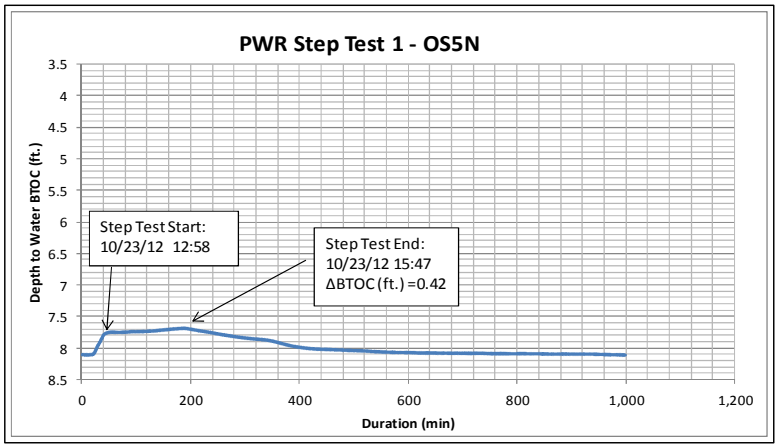

PWR Step Test 1 - OR10S
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
10.5
0
200
400
600
800
1,000
1,200
Duration (min)
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =0.57
Step Test Start:
10/23/12 12:58

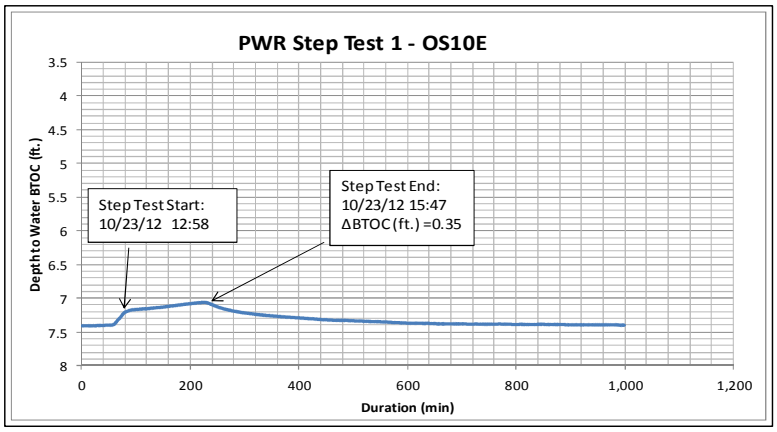

PWR Step Test 1 - OR3W
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
200
400
600
800
1,000
1,200
Duration (min)
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =2.04
Step Test Start:
10/23/12 12:58

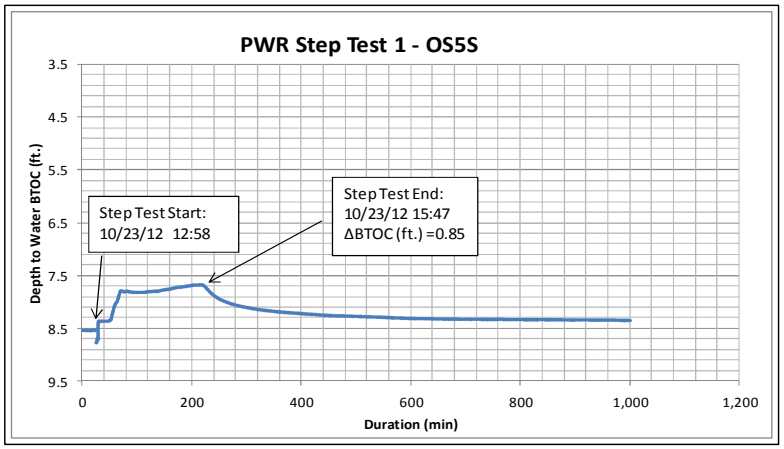

PWR Step Test 1 - OR5W
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
200
400
600
800
1,000
1,200
Duration (min)
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =1.63
Step Test Start:
10/23/12 12:58

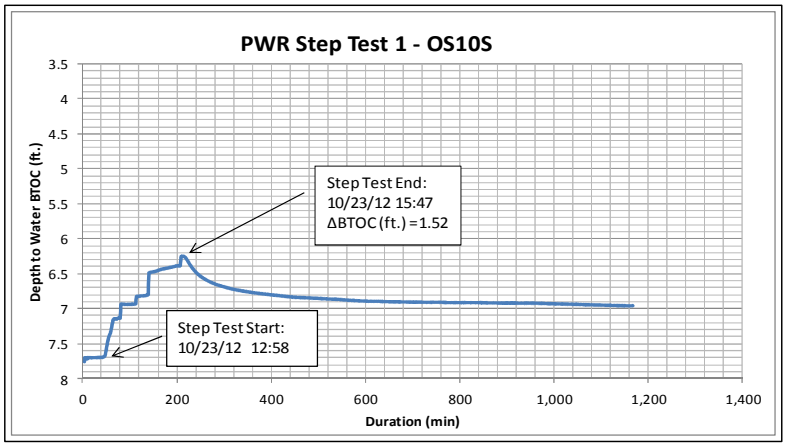

PWR Step Test 1 - OR10W
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
200
400
600
800
1,000
1,200
Duration (min)
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =1.33
Step Test Start:
10/23/12 12:58

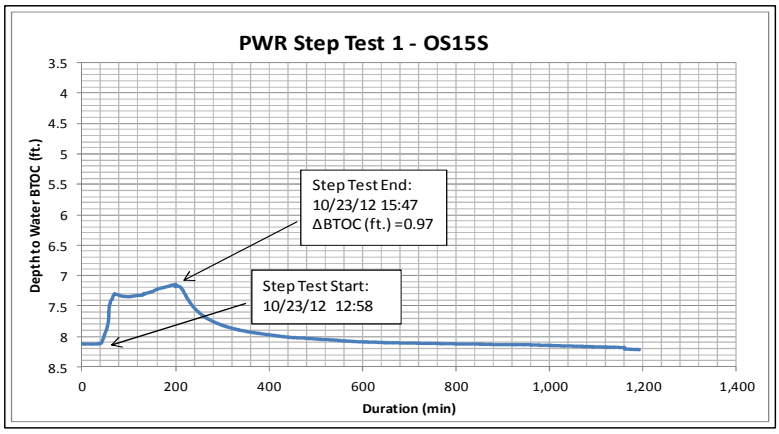

PWR Step Test 1 - OS5E
Depth to Water BTOC (ft.)
3.5
4
4.5
5
5.5
6
6.5
7
7.5
8
8.5
0
200
400
600
800
1,000
1,200
Duration (min)
Step Test Start:
10/23/12 12:58
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =0.54

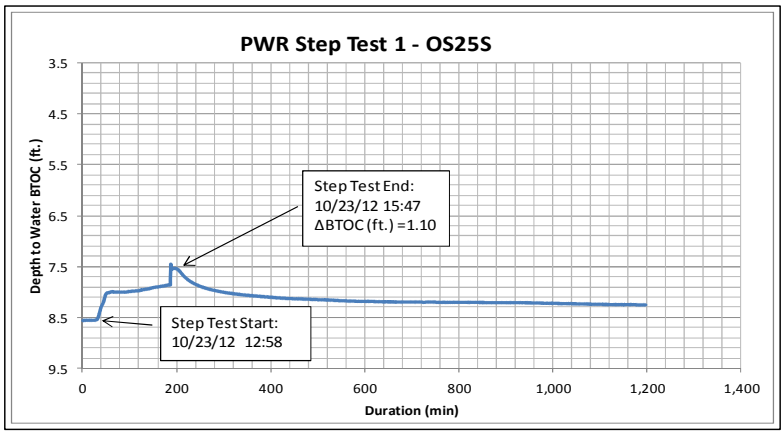

PWR Step Test 1 - OS5N
Depth to Water BTOC (ft.)
3.5
4
4.5
5
5.5
6
6.5
7
7.5
8
8.5
0
200
400
600
800
1,000
1,200
Duration (min)
Step Test Start:
10/23/12 12:58
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =0.42

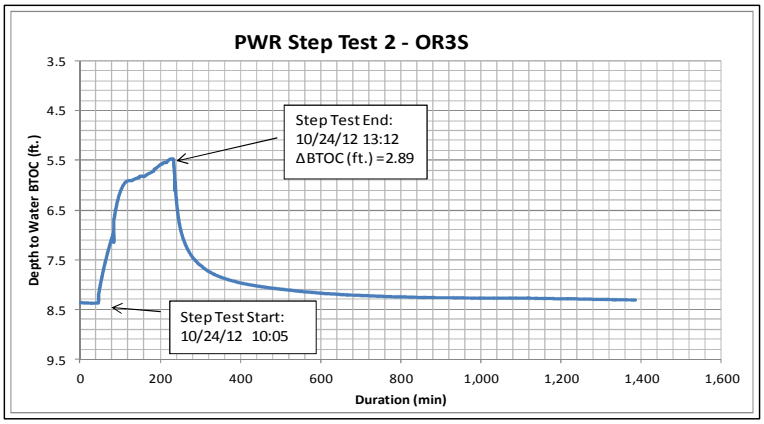

PWR Step Test 1 - OS10E
Depth to Water BTOC (ft.)
3.5
4
4.5
5
5.5
6
6.5
7
7.5
8
0
200
400
600
800
1,000
1,200
Duration (min)
Step Test Start:
10/23/12 12:58
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =0.35

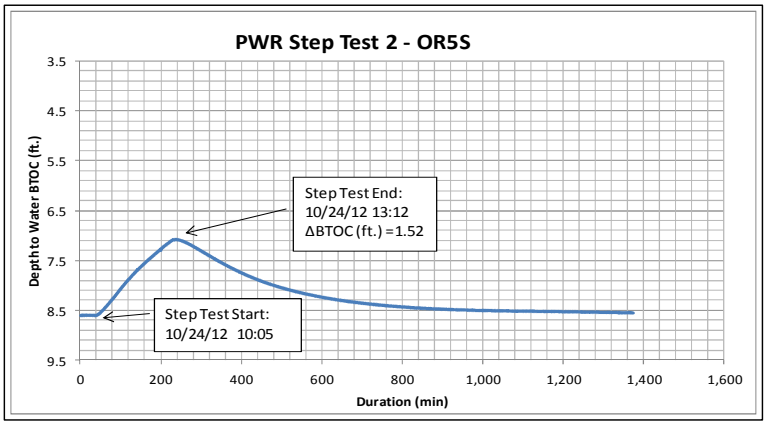

PWR Step Test 1 - OS5S
Depth to Water BTOC (ft.)
Duration (min)
Step Test Start:
10/23/12 12:58
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =0.85

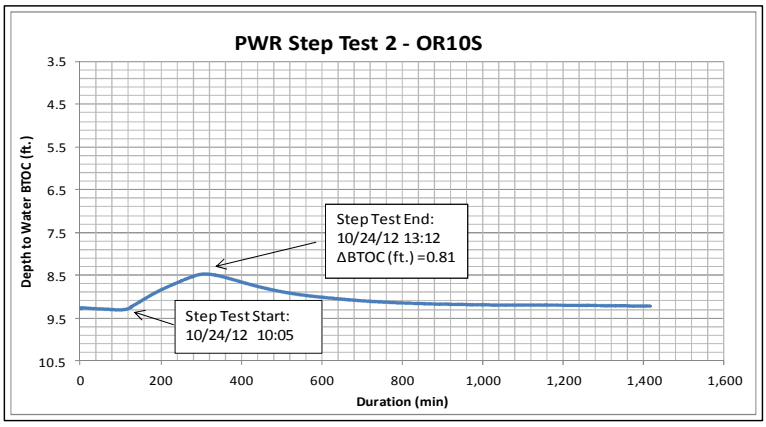

PWR Step Test 1 - OS10S
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =1.52
Step Test Start:
10/23/12 12:58

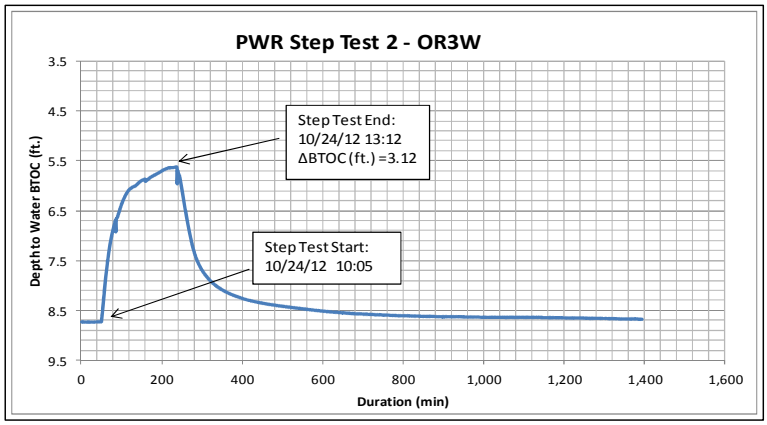

PWR Step Test 1 - OS15S
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =0.97
Step Test Start:
10/23/12 12:58

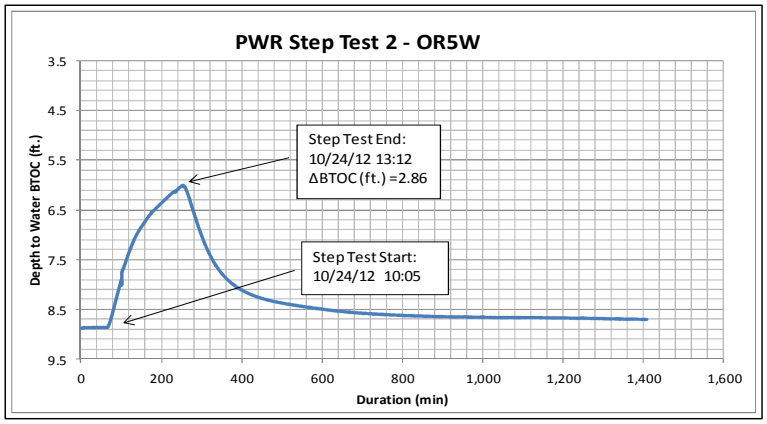

PWR Step Test 1 - OS25S
Depth to Water BTOC (ft.)
Duration (min)
Step Test End:
10/23/12 15:47
ΔBTOC (ft.) =1.10
Step Test Start:
10/23/12 12:58

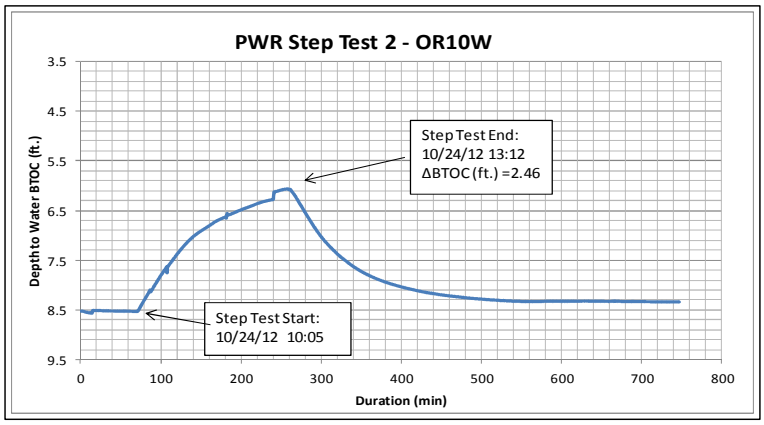

PWR Step Test 2 - OR3S
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
200
400
600
800
1,000
1,200
1,400
1,600
Duration (min)
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =2.89
Step Test Start:
10/24/12 10:05

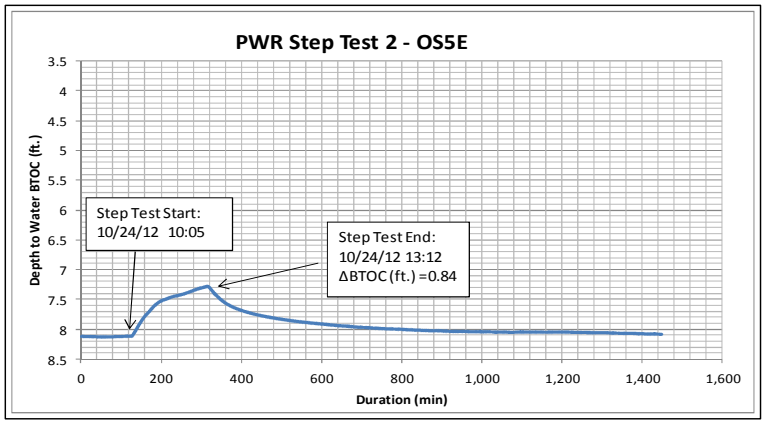

PWR Step Test 2 - OR5S
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
200
400
600
800
1,000
1,200
1,400
1,600
Duration (min)
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =1.52
Step Test Start:
10/24/12 10:05

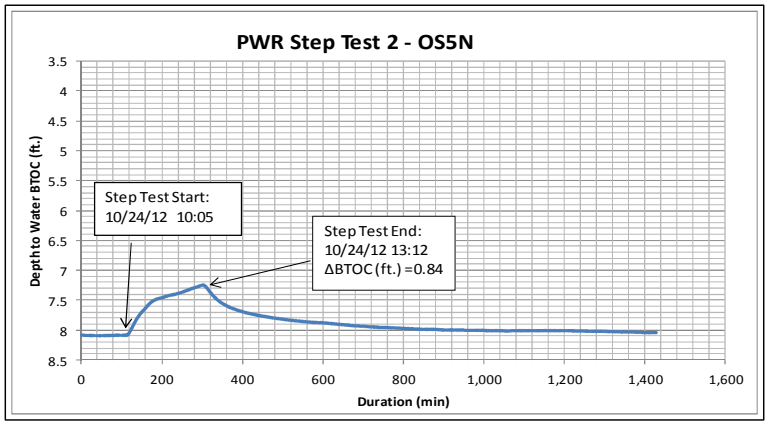

PWR Step Test 2 - OR10S
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
10.5
0
200
400
600
800
1,000
1,200
1,400
1,600
Duration (min)
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =0.81
Step Test Start:
10/24/12 10:05

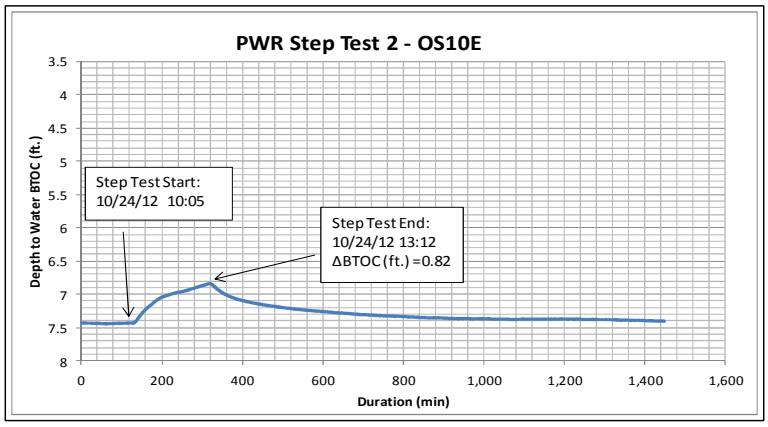

PWR Step Test 2 - OR3W
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
200
400
600
800
1,000
1,200
1,400
1,600
Duration (min)
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =3.12
Step Test Start:
10/24/12 10:05

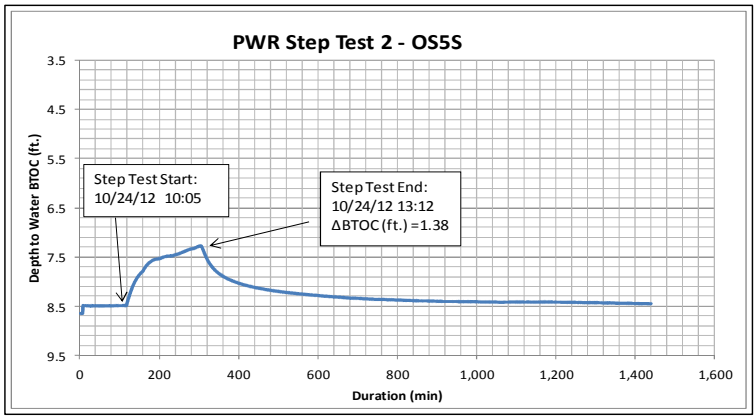

PWR Step Test 2 - OR5W
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
200
400
600
800
1,000
1,200
1,400
1,600
Duration (min)
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =2.86
Step Test Start:
10/24/12 10:05

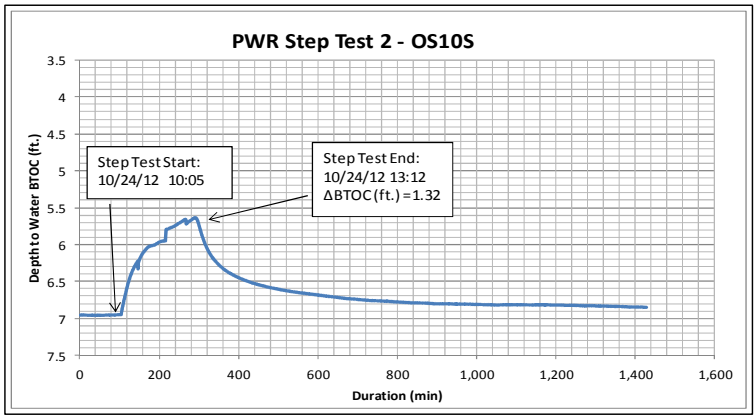

PWR Step Test 2 - OR10W
Depth to Water BTOC (ft.)
3.5
4.5
5.5
6.5
7.5
8.5
9.5
0
100
200
300
400
500
600
700
800
Duration (min)
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =2.46
Step Test Start:
10/24/12 10:05

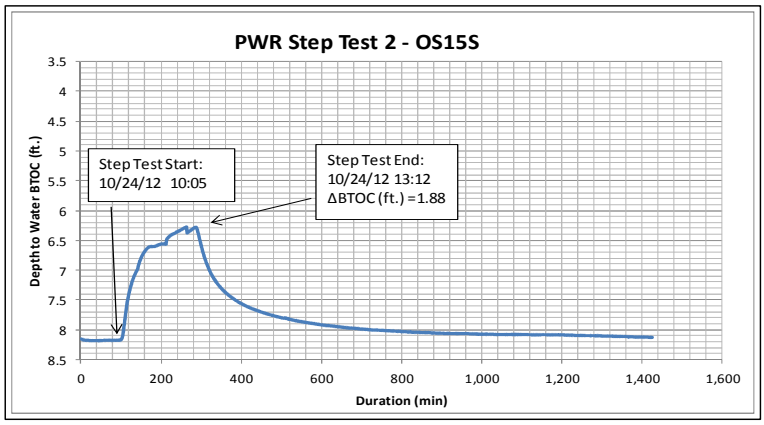

PWR Step Test 2 - OS5E
Depth to Water BTOC (ft.)
3.5
4
4.5
5
5.5
6
6.5
7
7.5
8
8.5
0
200
400
600
800
1,000
1,200
1,400
1,600
Duration (min)
Step Test Start:
10/24/12 10:05
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =0.84

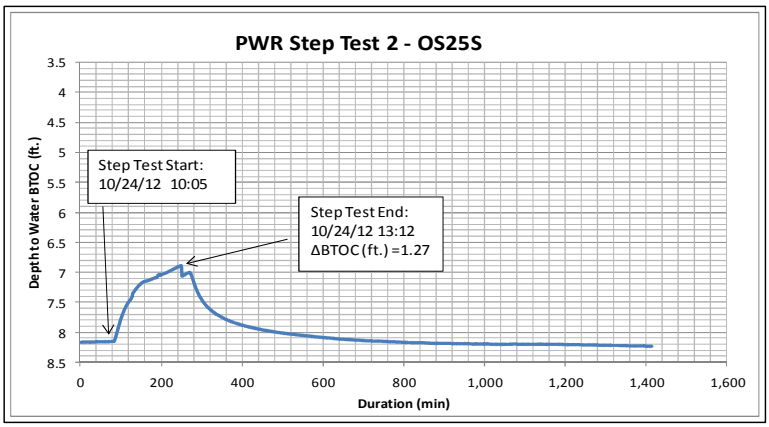

PWR Step Test 2 - OS5N
Depth to Water BTOC (ft.)
3.5
4
4.5
5
5.5
6
6.5
7
7.5
8
8.5
0
200
400
600
800
1,000
1,200
1,400
1,600
Duration (min)
Step Test Start:
10/24/12 10:05
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =0.84


PWR Step Test 2 - OS10E
Depth to Water BTOC (ft.)
3.5
4
4.5
5
5.5
6
6.5
7
7.5
8
0
200
400
600
800
1,000
1,200
1,400
1,600
Duration (min)
Step Test Start:
10/24/12 10:05
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =0.82


PWR Step Test 2 - OS5S
Depth to Water BTOC (ft.)
Duration (min)
Step Test Start:
10/24/12 10:05
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =1.38


PWR Step Test 2 - OS10S
Depth to Water BTOC (ft.)
Duration (min)
Step Test Start:
10/24/12 10:05
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =1.32


PWR Step Test 2 - OS15S
Depth to Water BTOC (ft.)
Duration (min)
Step Test Start:
10/24/12 10:05
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =1.88


PWR Step Test 2 - OS25S
Depth to Water BTOC (ft.)
Duration (min)
Step Test Start:
10/24/12 10:05
Step Test End:
10/24/12 13:12
ΔBTOC (ft.) =1.27

Self Potential Survey

amec

Name	Angela Adams
Date	9/6/2012
Line	LINE 1
Base Location	BASE A ~ 200' away
Project	Duke Pine St MGP
Project Number	622812
Weather/Temp	cloudy/humid 75°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms)	Base Drift (mV)	Drift Correction	Notes
START ~~0824~~	~~0~~	~~6.3~~	~~6.1~~	~~48.57~~			~~BASE "A"~~
~~0829~~	0 BASE	2.4	-2.7	3.05 mΩ			BASE "A"
0832	0 Line 1	203.2	-203.6	206.9 kΩ			34°57'38.8"/81°55'21.3"
0834	5	199.0	-199.2	202.0			
0835	10	184.0	-183.8	187.5			
0837	15	147.1	-167.9	170.4			
0839	~~20~~ 25	129.9	-131.6	135.4			
0840	~~25~~ 35	86.4	-30.5	94.5			
0843	~~30~~ 45	102.3	-101.9	110.3			
0845	~~35~~ 55	132.4	-132.9	139.2			34°57'38.3" / 81° 55' 21.5"
0847	~~40~~ 65	139.0	-139.1	145.0			
0850	~~50~~ 75	149.3	-149.9	156.7			
0851	~~60~~ 85	163.2	-163.2	168.7			
0853	~~70~~ 95	+164.7	-164.5	+157.0			rocks surf
0855	~~80~~ 105	159.8	-160.5	163.3	34°57' 37.9"	81°55' 21.8"	rocks surf
0857	~~90~~ 115	155.1	-156.0	163.8			rocks surf
0859	~~100~~ 125	154.1	-154.0	158.9			
0901	135	171.4	-172.3	176.3			
0904	145	191.8	-191.5	196.0			
0906	155	197.7	-198.3	202.4			34°57' 37.5" / 81° 55' 22"
0907	165	213.8	-214.1	216.4			edge of berm
0909	175	206.5	-206.8	211.2			on berm
0910	185	206.6	-206.9	210.3	34°57' 37.4"	81°55' 22.3	edge of berm
0913	BASE "A"	5.3	-3.9	2.731			

Self Potential Survey

amec

Name	Angela Adams
Date	9/6/2012
Line	Line 2
Base Location	Base "A"
Project	Duke Pine St MGP
Project Number	622812
Weather/Temp	cloudy / humid 75°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms)	Base Drift (mV)	Drift Correction	Notes
0925	BASE "A"	2.9	-3.8	2.677			
0929	0	187.4	-188.2	190.7			34°57'39.0"/81°55'21.4"
0930	10	177.5	-177.9	180.9			
0932	20	176.3	-177.0	180.0			
0933	30	156.2	-155.1	159.0			
0934	40	62.7	-64.9	54.2			erratic response
0937	50	116.0	26.9	16.79	34°57'38.5"	81°55'21.7"	" "
0939	60	84.4	-64.8	89.1			" "
0942	70	103.1	-103.6	111.4			
0943	80	128.8	-121.5	121.7			
0945	90	131.2	-132.1	136.8			
0947	100	144.2	-142.4	148.1	34°57'38.0"	81°55'21.9"	rocks surf
0948	110	143.7	-144.3	150.2			" "
0950	120	142.7	-144.0	152.9			" "
0951	130	155.4	-154.6	166.0			" "
0953	140	159.2	-160.6	170.6			
0955	150	183.1	-183.7	199.9			34°57'37.7" / 81°55'22.1"
0959	160	183.8	-184.5	191.8			
1000	170	175.7	-175.8	181.4			
1002	180	200.7	-200.4	203.0			under pwr lines
1004	190	208.3	-208.0	210.5	34°57'37.4"	81°55'22.4"	near pwr lines
1006	BASE "A"	4.3	-2.9	2.614			

Self Potential Survey

amec

Name	Angela Adams
Date	9/6/2012
Line	LINE 3
Base Location	BASE "A"
Project	Duke Pine Street MEP
Project Number	622812
Weather/Temp	cloudy / humid 79°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms) KΩ	Base Drift (mV)	Drift Correction	Notes
1025	BASE "A"	1.5	-2.3	2.480			
1027	0	228.1	-228.4	230.4			34° 57' 39.1" / 81° 55' 21.5"
1029	10	208.9	-209.0	211.3			
1030	20	196.0	-196.3	198.5			
1031	30	175.0	-174.5	178.1			
1033	40	166.9	-167.4	170.3			
1034	50	143.8	-143.9	148.8			34°57'38.7" / 81° 55' 21.8"
1035	60	92.6	-81.9	98.9			
1037	70	102.5	34.1	16.95			erratic response
1039	80	93.0	-17.0	78.1			" " on neg only
1041	90	83.3	-79.5	88.9			
1043	100	101.0	-101.4	105.2			34° 57' 38.2" / 81° 55' 22.0"
1046	110	121.0	-121.6	129.6			rocks near surf
1047	120	127.6	-127.9	141.7			" "
1048	130	140.5	-140.8	143.9			" "
1050	140	160.2	-160.2	166.7			
1052	150	183.6	-184.2	195.5			34°57'37.8" / 81° 55' 22.3"
1053	160	192.4	-192.7	217.8			
1055	170	190.4	-190.8	226.3			
1056	180	193.9	-194.1	198.9			
1058	190	186.4	-186.2	190.2			
1100	200	212.4	-212.7	213.9	34°57'37.3"	81°55'22.6"	near pwr line / pole
1102	BASE "A"	2.4	-0.8	2.456			

Self Potential Survey

amec

Name	Angela Adams
Date	9/6/2012
Line	LINE 4
Base Location	BASE "A"
Project	Duke Pine St. MGP
Project Number	622812
Weather/Temp	Partly sunny / humid 81°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms)	Base Drift (mV)	Drift Correction	Notes
1113	BASE "A"	0.1	-0.4	2.406			
1119	0	251.8	-252.7	254.9			34° 57' 39.3" / 81° 55' 21.7"
1120	10	232.4	-231.7	235.3			
1122	20	214.1	-214.7	210.1			
1123	30	187.6	-187.6	189.8			
1125	40	179.7	-180.3	183.8			
1126	50	162.2	-162.1	165.1			34° 57' 38.9" / 81° 55' 21.9"
1128	60	153.8	-155.1	159.2			
1129	70	117.2	-116.6	127.4			
1131	80	35.7	-37.8	8.43			erratic
1133	90	56.1	-20.9	55.7			
1135	100	57.9	-40.1	67.1	34° 57' 38.4"	81° 55' 22.2"	erratic for reversed
1136	110	86.7	-71.3	14.40			
1138	120	107.3	-106.3	112.4			
1140	130	131.0	-132.1	140.9			rocks @ surf
1142	140	164.5	-164.9	171.1			" "
1143	150	243.2	-241.8	249.0	34° 57' 38"	81° 55' 22.5"	" "
1145	160	210.0	-210.8	233.8			
1147	170	196.4	-196.1	211.0			
1148	180	204.8	-204.8	221.7			
1151	190	205.4	-206.1	212.0			
1153	200	202.5	-202.9	206.0			34° 57' 37.5" / 81° 55' 22.6"
1154	210	193.1	-193.0	199.2			34° 57' 37.3" / 81° 55' 22.7"
1157	BASE "A"	-0.8	0.9	2.435			

Self Potential Survey

amec

Name	ANGELA ADAMS
Date	9/6/2012
Line	LINE 5
Base Location	BASE "A"
Project	DUKE PINE STREET MGP
Project Number	622812
Weather/Temp	Partly cloudy / humid 82°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms)	Base Drift (mV)	Drift Correction	Notes
1324	BASE "A"	-4.9	3.2	2.177			N 34° 57' 38.5" / W 81° 55' 23.7"
1327	0	185.7	-186.4	192.1			34° 57' 39.1" / 81° 55' 22"
1330	10	~~180.1~~ 180.4	-177.7	180.3			
1331	20	167.2	-167.8	169.7			
1332	30	149.6	-151.8	155.0			
1334	40	128.9	-129.6	132.9			
1335	50	106.6	-106.5	111.0			34° 57' 38.5" / 81° 55' 22"
1337	60	91.8	-93.7	94.7			
1338	70	74.2	-75.6	78.5			
1340	80	57.5	-50.2	8.94			
1341	90	85.5	-84.4	88.4			
1343	100	112.9	-113.3	116.0			34° 57' 38.0" / 81° 55' 22.2"
1345	110	143.4	-145.1	146.8			
1347	120	163.7	-164.0	167.1			
1349	130	187.6	-187.9	197.5			
1350	140	195.9	-195.7	204.5			
1352	150	212.4	-212.9	219.4			34° 57' 37.6" / 81° 55' 22.5"
1354	160	214.3	-214.2	219.3			
1356	170	188.0	-188.2	192.9			
1357	180	188.1	-187.1	197.0			near MW-13
1359	190	208.1	-209.0	212.6			" "
1401	200	253.4	-253.8	254.6			34° 57' 37.2" / 81° 55' 22.8"
1404	BASE "A"	-0.1	1.3	2.325			

Self Potential Survey

amec

Name	ANGELA ADAMS
Date	9/6/2012
Line	LINE 6
Base Location	BASE "A"
Project	DUKE PINE ST MGP
Project Number	622812
Weather/Temp	Partly Sunny/humid 82°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms)	Base Drift (mV)	Drift Correction	Notes
1415	BASE "A"	-0.4	1.6	2.258			
1418	0	197.7	-197.9	200.0			34° 57' 39.5"/81° 55' 22.4"
1420	10	193.9	-194.6	196.7			
1422	20	178.3	-178.6	181.0			
1423	30	166.0	-166.2	168.2			
1424	40	155.5	-155.3	157.7			
1426	50	137.2	-139.4	141.8			34° 57' 38.6"/81° 55' 22.2"
1427	60	108.6	-111.8	110.2			near MW-17
1429	70	109.7	-109.0	115.0			
1430	80	93.9	-94.8	98.5			
1432	90	82.8	-83.6	87.1			
1433	100	98.8	-99.4	13.78			34° 57' 38.2"/81° 55' 22.5"
1435	110	123.1	-123.4	126.6			
1437	120	144.2	-144.3	149.4			
1438	130	165.0	-165.8	168.1			
1440	140	194.6	-194.7	199.2			
1441	150	234.3	-234.0	239.7			34° 57' 37.8"/81° 55' 22.9"
1443	160	265.6	-265.6	269.0			
1445	170	240.1	-241.1	244.3			
1446	180	196.4	-195.9	201.8			
1448	190	212.1	-212.9	227.4			
1450	200	253.9	-253.1	260.4			34° 57' 37.2"/81° 55' 23.0"
1452	BASE "A"	-0.5	1.5	2.241			

Self Potential Survey

amec

Name	ANGELA ADAMS
Date	9/6/2012
Line	LINE 7
Base Location	BASE "A"
Project	DUKE PINE ST MGP
Project Number	622812
Weather/Temp	Partly Sunny/humid 86°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms)	Base Drift (mV)	Drift Correction	Notes
1611	BASE "A"	-2.8	1.9	2.206			
1614	0	215.9	-216.4	219.6			34°57' 39.2"/81°55' 22.5"
1616	10	186.2	-185.7	188.8			
1617	20	168.5	-168.4	170.4			
1619	30	159.0	-159.2	161.5			
1620	40	147.2	-147.4	150.2			
1622	50	120.5	-119.9	123.8			34°57' 38.5"/81°55' 21.8"
1623	60	101.9	-106.3	107.0			
1624	70	83.9	-63.6	84.3			junction w/ Line 4
1627	80	109.4	4.8	6.024			~~junct w/ Line 4~~ erratic
1629	90	125.0	21.0	4.770			junction w/ Line 3
1631	100	91.6	-66.5	13.75			34°57' 38.2"/81°55' 21.8"
1633	110	114.4	-114.0	121.9			junction Line 2
1635	120	129.1	-129.2	137.8			
1636	130	151.6	-152.2	156.6			near MW-12
1638	140	156.5	-156.7	160.3			rocks surf @ 150 too
1640	150	170.3	-171.8	175.5			34°57' 38.0"/81°55' 21.6"
1642	160	176.0	-176.8	181.8			rocks surf
1644	170	168.5	-168.3	174.8			
1646	180	180.3	-181.3	193.6			34°57' 37.6"/81°55' 21.4"
1649	BASE "A"	-3.0	2.2	2.220			

Self Potential Survey

amec

Name	ANGELA ADAMS
Date	9/7/2012
Line	LINE 8
Base Location	BASE "A"
Project	DUKE PINE ST MGP
Project Number	622812
Weather/Temp	Cloudy / 72°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms)	Base Drift (mV)	Drift Correction	Notes
0724	BASE "A"	4.7	-5.0	2,434			
0729	0	183.0	-183.5	185.4			34°57' 39.1" / 81° 55' 23.1"
0732	10	171.1	-170.9	175.5			
0733	20	165.4	-166.9	169.6			
0734	30	150.1	-149.7	153.6			
0736	40	131.9	-131.9	139.0			
0737	50	77.7	-93.2	94.3			34°57' 39.6"/81° 55' 23.0"
0740	60	113.7	-114.5	123.6			
0741	70	83.0	-86.5	85.6			
0743	80	75.7	-76.6	80.8			
0744	90	94.6	-95.7	98.7			
0746	100	114.2	-116.0	119.1			34° 57' 38.2"/81° 55' 22.1"
0748	110	127.3	-127.4	149.0			rock @ surf
0751	120	126.5	-126.9	139.5			" "
0753	130	134.2	-135.0	137.4			" "
0754	140	142.8	-142.7	155.9			" "
0756	150	137.0	-137.6	145.6			34°57' 37.7" / 81°55' 21.9"
0758	160	144.8	-145.3	148.0			
0759	170	156.2	-155.9	160.2			
0801	180	180.7	-180.8	185.0			34°57' 37.4"/ 81° 55' 22.0"
0803	BASE "A"	6.0	-6.5	2.576			

Self Potential Survey

amec

Name	ANGELA ADAMS
Date	9/7/2012
Line	LINE 9
Base Location	BASE "A"
Project	DUKE PINE ST MGP
Project Number	622812
Weather/Temp	cloudy / humid 72°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms)	Base Drift (mV)	Drift Correction	Notes
0815	BASE "A"	5.8	-6.0	2.588			
0817	0	346.0	-346.6	350.8			34° 57' 38.9" / 81° 55' 23.5"
0819	10	141.2	-141.1	144.8			
0821	20	104.0	-104.1	109.7			
0824	30	76.1	-73.1	89.8			
0825	40	48.3	-46.3	13.57			erratic
0827	50	50.2	-49.7	58.7			34° 57' 38.4" / 81° 55' 23.0"
0830	60	63.1	-62.6	70.3			
0831	70	88.9	-95.4	100.9			
0832	80	113.5	-114.8	117.4			
0834	90	142.5	-146.6	145.1			
0836	100	150.0	-150.7	153.8			34° 57' 38.0" / 81° 55' 22.6"
0838	110	176.5	-177.0	180.4			rocks & curb
0840	120	228.4	-229.2	235.2			" "
0842	130	241.6	-242.0	252.3			" "
0844	140	189.5	-189.8	202.6			" "
0845	150	172.4	-172.4	212.0			34° 57' 37.6" / 81° 55' 22.3"
0847	160	173.3	-173.9	204.4			
0849	170	194.4	-194.8	203.3			
0850	180	183.9	-184.7	191.7			34° 57' 37.5" / 81° 55' 21.9"
0854	BASE "A"	7.9	-8.3	2.830			

Self Potential Survey

amec

Name	ANGELA ADAMS
Date	9/7/2012
Line	LINE 10
Base Location	BASE "A"
Project	DUKE PINE STREET MGP
Project Number	622812
Weather/Temp	cloudy/humid 73°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms)	Base Drift (mV)	Drift Correction	Notes
0905	BASE "A"	5.7	-5.6	2.621			
0910	0	502.2	-502.0	504.7			34°57'38.8"/81°55'23.5"
0912	10	339.2	-339.2	343.5			
0913	20	110.2	-110.3	115.4			
0915	30	4.9	-4.0	6.74			OL of Ω then read
0916	40	-57.5	58.1	6.579			erratic
0919	50	-32.5	33.8	6.160			34°57'38.5"/81°55'23.0"
0922	60	26.6	-23.7	7.80			
0924	70	75.7	-75.6	81.0			
0925	80	115.5	-115.8	120.3			
0926	90	143.5	-143.6	146.6			
0928	100	167.0	-167.7	172.7			34°57'37.9"/81°55'22.7"
0931	110	186.2	-186.1	192.9			rocks @ surf
0932	120	198.8	-199.6	208.4			
0933	130	204.4	-204.4	217.1			
0935	140	198.6	-201.0	223.1			
0936	150	202.7	-202.3	218.4			34°57'37.7"/81°55'22.4"
0938	160	190.0	-190.4	205.5			
0940	170	180.2	-180.1	186.6			34°57'37.5"/81°55'22.1"
0942	BASE "A"	7.9	-6.9	2.745			

Self Potential Survey

amec

Name	ANGELA ADAMS
Date	9/7/2012
Line	LINE 11
Base Location	BASE "A"
Project	DUKE PINE STREET MGP
Project Number	622812
Weather/Temp	Partly sun / humid 73°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms) kΩ	Base Drift (mV)	Drift Correction	Notes
0957	BASE "A"	5.8	~6.5	2.863			34° 57' 58.5" / 81° 55' 23.8"
1000	0	632.4	-633.2	0.674 MΩ			34° 57' 39.4" / 81° 55' 23.8"
1002	10	417.1	-416.8	419.5			
1004	20	0.4	+0.5	5.088			erratic on neg near base
1005	30	-73.1	73.0	-68.3			near base
1007	40	-91.7	91.3	-85.6			
1009	50	-47.9	50.1	5.998			34° 57' 38.3" / 81° 55' 23.4"
1012	60	43.8	-43.7	10.63			
1013	70	127.9	-127.8	134.0			
1015	80	157.0	-157.6	161.8			
1016	90	183.6	-183.0	191.6			
1018	100	213.2	-213.6	218.7			34° 57' 37.9" / 81° 55' 23.1"
1020	110	222.4	-222.3	229.4			
1022	120	244.2	-244.2	250.9			
1024	130	224.6	-224.2	235.0			
1025	140	~~222.3~~ 213.9	-214.5	222.3			
1027	150	203.9	-203.7	213.2			34° 57' 37.6" / 81° 55' 22.6"
1029	160	201.2	-200.0	210.2			
1031	170	189.8	-189.9	191.9			34° 57' 37.5" / 81° 55' 22.8"
1033	BASE "A"	8.5	-7.1	2.925			

Self Potential Survey

amec

Name	ANGELA ADAMS
Date	9/7/2012
Line	LINE 12
Base Location	BASE "A"
Project	DUKE PINE STREET MCP
Project Number	622812
Weather/Temp	Partly Sunny / 75°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms)	Base Drift (mV)	Drift Correction	Notes
1045	BASE "A"	5.1	-5.7	2.698			
1047	0	632.1	-632.5	0.677 MΩ			34° 57' 38.8" / 81° 55' 24.2"
1050	10	423.9	-423.7	426.2			
1051	20	87.4	-85.7	93.5			near base
1053	30	35.3	-34.8	11.95			" "
1054	40	-27.5	-27.7	6.136			erratic on Ω
1056	50	-6.1	8.2	9.77			34° 57' 38.4" / 81° 55' 23.7"
1058	60	132.8	-133.3	143.6			
1059	70	167.7	-167.3	171.1			
1101	80	196.5	-197.0	202.8			
1103	90	220.5	-219.4	225.7			
1105	100	246.0	-246.5	250.3			34° 57' 37.8" / 81° 55' 23.6"
1107	110	266.8	-266.7	270.7			
1108	120	259.4	-259.7	263.8			
1110	130	243.2	-242.2	247.3			
1112	140	198.5	-199.6	207.0			
MW-13 1113	150	205.3	-204.2	210.0			34° 57' 37.2" / 81° 55' 23.1"
1116	160	213.8	-214.5	221.3			
1117	170	211.0	-210.9	212.7			34° 57' 37.2" / 81° 55' 22.7"
1120	BASE "A"	8.7	-7.7	3.112			

Self Potential Survey

amec

Name	ANGELA ADAMS
Date	9/7/2012
Line	LINE 13
Base Location	BASE "A"
Project	Duke Pine Street MGP
Project Number	622812
Weather/Temp	Partly Sunny / 77°

Time	Distance from Line Base (ft)	Normal Voltage (mV)	Reversed Voltage (mV)	Resistance (ohms) kΩ	Base Drift (mV)	Drift Correction	Notes
1148	BASE "A"	1.6	-2.4	2.924			34° 57' 38.4" / 81°55' 23.9"
1151	0	0.676 V	-0.676 V	0.724 mΩ			34° 57' 38.3" / 81°55' 24.6"
1153	10	658.6	-658.2	0.704 mΩ			
1154	20	570.4	-569.7	0.604 mΩ			
1156	30	518.5	-519.7	0.545 mΩ			
1157	40	480.3	-480.1	483.7			
1159	50	355.4	-356.0	362.9			34°57'38.1" / 81° 55' 24.1"
1201	60	320.3	-320.0	322.9			
1202	70	290.3	-291.9	322.0			erratic resistance
1204	80	261.3	-260.8	265.7			
1206	90	263.7	-264.8	268.9			
1208	100	370.1	-369.6	377.0			34°57' 37.6" / 81° 55' 23.7"
1210	110	299.9	-300.4	304.1			
1212	120	287.4	-287.1	295.1			
1214	130	272.3	-272.1	273.3			
1216	140	266.9	-267.0	268.3			
1218	150	271.2	-271.3	273.3			34°57' 37.3" / 81°55' 23.1"
1221	BASE "A"	6.1	-6.5	3.192			

Appendix D. Shallow Zone Geochemical Monitoring Summary During Injection

Well Number	Week	Date	Time	Specific Conductivity (µS/cm)	ORP (mV)	pH	DO (mg/L)	Temperature ºC
OS-5N	1	12/4/2012	11:30	0.554	-13.50	6.40	12.70	18.10
		12/5/2012	9:30	0.928	58.40	5.79	4.49	17.30
		12/6/2012	9:00	3.770	185.00	6.15	2.74	17.90
	2	12/10/2012	13:05	4.228	172.30	6.17	2.29	20.77
		12/11/2012	8:50	3.776	217.00	6.17	4.08	20.50
		12/12/2012	8:55	2.938	275.00	5.80	4.70	31.74
		12/13/2012	8:20	1.246	5.15	5.80	5.20	21.16
		12/14/2012	Instrument Failure					
	3	12/17/2012	13:40	1799.000	N/M	5.89	N/M	21.18
		12/18/2012	8:10	62.140	145.00	8.00	1.20	25.44
		12/18/2012	14:35	2.181	136.00	5.61	14.20	18.80
		12/19/2012	7:40	2.280	235.00	5.72	6.94	23.13
		12/20/2012	7:00	68.930	213.50	8.47	1.62	26.34
	4	1/7/2013	11:30	0.354	154.80	7.65	4.62	17.78
		1/8/2013	7:10	1.380	274.40	6.48	1.36	22.20
		1/9/2013	7:30	77.560	292.20	8.74	0.61	24.67
		1/10/2013	7:30	90.910	380.40	7.94	2.30	24.68
OS-5E	1	12/4/2012	N/M	N/M	N/M	N/M	N/M	N/M
		12/5/2012	N/M	N/M	N/M	N/M	N/M	N/M
		12/6/2012	N/M	N/M	N/M	N/M	N/M	N/M
	2	12/10/2012	13:05	109.000	210.00	13.45	1.59	24.46
		12/11/2012	8:50	32.850	106.00	12.05	4.92	23.12
		12/12/2012	8:55	43.560	180.00	12.80	6.40	23.51
		12/13/2012	8:20	89.200	254.00	13.05	6.08	24.83
		12/14/2012	Instrument Failure					
	3	12/17/2012	13:40	Out of range	N/M	12.62	N/M	21.80
		12/18/2012	8:10	76.190	64.70	12.90	13.60	25.90
		12/18/2012	14:35	31.100	109.00	12.59	19.60	20.76
		12/19/2012	7:40	65.140	165.00	12.79	28.30	24.96
		12/20/2012	7:00	100.600	204.90	13.10	16.40	26.50
	4	1/7/2013	11:30	8.630	279.40	8.77	26.83	19.71
		1/8/2013	7:10	9.892	209.60	9.02	23.79	19.39
		1/9/2013	7:30	17.340	266.20	10.20	27.88	21.50
		1/10/2013	7:30	25.760	303.80	12.06	26.12	22.30
OS-10E	1	12/4/2012	11:30	0.360	-40.00	6.30	13.70	18.00
		12/5/2012	9:30	0.407	-33.30	6.38	4.35	17.50
		12/6/2012	9:00	0.396	-23.50	6.71	1.57	17.70
	2	12/10/2012	13:05	0.456	-43.90	9.42	2.27	18.71
		12/11/2012	8:50	0.473	-42.10	9.70	3.59	18.69
		12/12/2012	8:55	0.533	41.50	9.58	3.66	18.87
		12/13/2012	8:20	0.573	309.00	9.19	5.50	19.11
		12/14/2012	Instrument Failure					
	3	12/17/2012	13:40	1401.000	N/M	9.47	N/M	18.80
		12/18/2012	8:10	0.490	120.00	12.40	0.31	21.17
		12/18/2012	14:35	0.625	167.00	8.50	1.40	19.16
		12/19/2012	7:40	0.786	179.00	7.65	1.61	19.59
		12/20/2012	7:00	5.720	225.60	7.68	1.89	20.07
	4	1/7/2013	11:30	0.518	311.70	7.12	1.47	17.59
		1/8/2013	7:10	0.543	173.70	7.53	2.04	17.30
		1/9/2013	7:30	4.304	338.40	8.04	1.62	19.42
		1/10/2013	7:30	2.345	391.10	8.38	1.71	19.12

Appendix D. Shallow Zone Geochemical Monitoring Summary During Injection

Well Number	Week	Date	Time	Specific Conductivity (µS/cm)	ORP (mV)	pH	DO (mg/L)	Temperature ºC
OS-5S	1	12/4/2012	N/M	N/M	N/M	N/M	N/M	N/M
		12/5/2012	9:30	0.549	34.80	6.51	3.70	18.10
		12/6/2012	9:00	0.639	67.30	6.60	0.70	18.80
	2	12/10/2012	13:05	3.278	68.80	8.96	8.05	24.22
		12/11/2012	8:50	6.457	112.30	8.52	8.49	24.24
		12/12/2012	8:55	20.970	143.90	10.03	8.78	25.66
		12/13/2012	8:20	32.560	229.00	10.25	8.84	25.63
		12/14/2012	Instrument Failure					
	3	12/17/2012	13:40	Out of range	N/M	8.12	N/M	24.00
		12/18/2012	8:10	63.300	176.80	12.11	17.72	29.31
		12/18/2012	14:35	45.720	218.00	9.71	23.06	24.37
		12/19/2012	7:40	53.620	279.00	10.19	21.07	28.00
		12/20/2012	7:00	67.300	253.80	12.17	12.40	28.20
	4	1/7/2013	11:30	34.020	389.10	6.58	7.02	24.42
		1/8/2013	7:10	39.520	353.40	6.76	7.36	23.45
		1/9/2013	7:30	158.000	377.80	13.83	8.04	25.21
		1/10/2013	7:30	19.540	373.90	13.76	7.63	23.49
OS-10S	1	12/4/2012	11:30	0.357	-7.00	6.51	5.90	18.00
		12/5/2012	9:30	0.402	15.20	6.51	3.48	17.80
		12/6/2012	9:00	0.392	24.90	6.53	0.70	19.70
	2	12/10/2012	13:05	0.483	111.40	8.26	6.22	21.80
		12/11/2012	8:50	0.474	111.20	8.20	8.47	21.57
		12/12/2012	8:55	0.465	161.00	8.76	9.34	22.87
		12/13/2012	8:20	0.482	240.00	7.06	9.30	23.50
		12/14/2012	Instrument Failure					
	3	12/17/2012	13:40	0.442	N/M	6.56	N/M	22.40
		12/18/2012	8:10	133.000	182.00	13.00	23.20	26.40
		12/18/2012	14:35	0.907	84.40	6.90	32.94	22.16
		12/19/2012	7:40	434.020	160.00	12.90	24.48	26.02
		12/20/2012	7:00	142.800	240.20	13.23	10.95	27.80
	4	1/7/2013	11:30	2.584	281.90	6.28	11.27	21.65
		1/8/2013	7:10	2.347	210.10	6.56	13.10	20.90
		1/9/2013	7:30	104.400	178.40	13.55	12.94	24.12
		1/10/2013	7:30	177.600	264.70	13.87	6.15	24.55

Appendix D. Shallow Zone Geochemical Monitoring Summary During Injection

Well Number	Week	Date	Time	Specific Conductivity (µS/cm)	ORP (mV)	pH	DO (mg/L)	Temperature ºC
OS-15S	1	12/4/2012	11:30	N/M	N/M	N/M	N/M	N/M
		12/5/2012	9:30	N/M	N/M	N/M	N/M	N/M
		12/6/2012	9:00	N/M	N/M	N/M	N/M	N/M
	2	12/10/2012	13:05	0.402	55.00	7.97	2.24	19.24
		12/11/2012	8:50	0.405	59.60	7.79	3.06	19.00
		12/12/2012	8:55	0.426	87.40	7.98	3.17	19.77
		12/13/2012	8:20	0.428	182.00	6.66	4.01	20.17
		12/14/2012	Instrument Failure					
	3	12/17/2012	13:40	0.384	N/M	6.42	N/M	19.20
		12/18/2012	8:10	0.356	-10.20	6.48	0.04	21.10
		12/18/2012	14:35	0.416	-10.10	6.38	0.49	20.30
		12/19/2012	7:40	0.440	-38.60	7.80	1.19	20.90
		12/20/2012	7:00	0.384	95.60	7.72	0.51	21.43
	4	1/7/2013	11:30	0.361	90.70	7.05	1.03	19.72
		1/8/2013	7:10	0..357	48.10	7.31	1.46	19.48
		1/9/2013	7:30	1.270	-59.10	7.87	0.75	21.33
		1/10/2013	7:30	0.685	-52.20	8.19	0.69	20.97
OS-20S	1	12/4/2012	11:30	N/M	N/M	N/M	N/M	N/M
		12/5/2012	9:30	N/M	N/M	N/M	N/M	N/M
		12/6/2012	9:00	N/M	N/M	N/M	N/M	N/M
	2	12/10/2012	13:05	0.519	9.10	7.34	2.00	17.90
		12/11/2012	8:50	0.674	-9.50	7.34	2.89	17.35
		12/12/2012	8:55	0.833	0.10	7.58	3.20	17.82
		12/13/2012	8:20	0.585	18.60	7.58	3.95	18.19
		12/14/2012	Instrument Failure					
	3	12/17/2012	13:40	0.450	N/M	6.29	N/M	18.20
		12/18/2012	8:10	0.522	-45.80	6.72	0.38	18.49
		12/18/2012	14:35	1.033	3.60	6.16	0.57	18.17
		12/19/2012	7:40	89.260	194.00	11.03	0.35	20.67
		12/20/2012	7:00	115.700	164.50	13.13	0.36	20.50
	4	1/7/2013	11:30	0.387	76.20	6.91	3.55	17.53
		1/8/2013	7:10	0.451	17.40	7.32	2.05	17.37
		1/9/2013	7:30	50.730	186.10	11.18	0.75	19.59
		1/10/2013	7:30	49.150	83.50	11.24	0.70	19.75
OS-25S	1	12/4/2012	11:30	0.330	-48.90	6.27	7.30	17.70
		12/5/2012	9:30	0.336	-37.70	6.39	5.04	17.30
		12/6/2012	9:00	0.343	-45.00	6.41	1.20	16.90
	2	12/10/2012	13:05	0.389	-9.00	7.04	1.98	17.50
		12/11/2012	8:50	0.530	-29.80	7.11	2.74	17.36
		12/12/2012	8:55	0.497	-9.70	7.08	3.10	17.25
		12/13/2012	8:20	0.557	-22.30	7.52	3.69	17.49
		12/14/2012	Instrument Failure					
	3	12/17/2012	13:40	0.679	N/M	6.33	N/M	17.00
		12/18/2012	8:10	0.617	-32.80	6.17	0.76	17.40
		12/18/2012	14:35	2.235	104.80	6.25	1.11	17.76
		12/19/2012	7:40	67.510	197.00	9.98	0.34	18,53
		12/20/2012	7:00	71.930	212.30	10.40	0.73	18.59
	4	1/7/2013	11:30	0.430	-18.70	7.01	1.69	16.64
		1/8/2013	7:10	0.521	-29.70	7.30	1.74	16.50
		1/9/2013	7:30	47.130	239.80	10.04	0.96	18.26
		1/10/2013	7:30	40.840	133.50	9.89	0.85	18.20

Appendix D. Shallow Zone Geochemical Monitoring Summary During Injection

Well Number	Week	Date	Time	Specific Conductivity (µS/cm)	ORP (mV)	pH	DO (mg/L)	Temperature ºC
OR-10W	1	12/4/2012	11:30	0.401	-4.30	6.58	8.15	18.20
		12/5/2012	9:30	0.406	-14.60	6.67	6.20	17.80
		12/6/2012	9:00	0.399	-13.60	6.73	1.69	17.90
	2	12/10/2012	13:05	0.453	3.90	7.08	2.64	17.90
		12/11/2012	8:50	0.453	-10.00	7.10	3.40	19.92
		12/12/2012	8:55	0.454	-0.50	7.14	3.80	17.76
		12/13/2012	8:20	0.456	16.50	7.68	4.43	17.84
		12/14/2012	Instrument Failure					
	3	12/17/2012	13:40	0.445	N/M	7.50	N/M	17.50
		12/18/2012	8:10	0.384	134.00	6.75	4.90	17.30
		12/18/2012	14:35	0.393	113.00	7.50	5.70	17.75
		12/19/2012	7:40	0.531	-33.80	6.68	0.53	18.14
		12/20/2012	7:00	0.397	15.90	7.25	14.30	16.92
	4	1/7/2013	11:30	1.145	258.60	6.14	4.68	22.59
		1/8/2013	7:10	0.400	156.20	8.02	4.85	16.83
		1/9/2013	7:30	0.367	242.60	7.89	4.41	17.87
		1/10/2013	7:30	0.456	287.30	8.81	4.67	16.38
Chinquapin Creek (South of Pilot Area)	1	12/4/2012	11:30	0.352	217.00	6.38	26.60	13.30
		12/5/2012	9:30	0.172	59.20	5.96	11.30	13.50
		12/6/2012	9:00	0.167	89.20	6.49	7.05	12.90
	2	12/10/2012	13:05	0.154	111.70	6.50	4.58	14.94
		12/11/2012	8:50	0.134	114.60	7.90	6.80	13.50
		12/12/2012	8:55	0.161	127.00	7.40	6.54	11.20
		12/13/2012	8:20	0.150	527.00	7.06	11.70	9.76
		12/14/2012	Instrument Failure					
	3	12/17/2012	13:40	0.990	N/M	6.82	N/M	13.30
		12/18/2012	8:10	0.077	230.00	7.80	10.24	12.30
		12/19/2012	7:40	0.118	74.50	6.75	10.60	9.35
		12/20/2012	7:00	0.127	66.00	7.94	10.90	9.86
	4	1/7/2013	7:30	0.107	131.10	7.29	11.93	9.69
		1/8/2013	7:10	0.108	70.80	7.04	12.53	6.71
		1/9/2013	7:40	0.092	33.61	8.11	11.67	9.33
		1/10/2013	7:10	0.218	193.90	7.75	10.30	10.44
Chinquapin Creek (Upstream at Bridge)	1	12/4/2012	11:30	0.161	293.00	5.12	23.70	13.10
		12/5/2012	9:30	0.158	144.70	5.51	10.60	13.20
		12/6/2012	9:00	0.157	130.00	6.20	5.80	12.46
	2	12/10/2012	13:05	0.148	114.90	6.63	4.36	14.88
		12/11/2012	8:50	0.137	146.00	7.50	6.10	13.57
		12/12/2012	8:55	0.158	166.00	7.20	6.20	11.16
		12/13/2012	8:20	0.147	515.00	7.08	9.10	9.86
		12/14/2012	Instrument Failure					
	3	12/17/2012	13:40	0.980	N/M	6.56	N/M	13.30
		12/18/2012	8:10	0.990	166.30	7.67	10.02	12.36
		12/19/2012	7:40	0.119	76.20	6.49	11.90	9.32
		12/20/2012	7:00	0.125	74.40	7.65	11.50	9.89
	4	1/7/2013	7:30	0.085	136.00	7.32	11.90	9.58
		1/8/2013	7:10	0.092	101.70	7.28	13.11	6.52
		1/9/2013	7:40	0.092	305.70	7.70	11.95	9.36
		1/10/2013	7:10	0.110	287.80	7.49	11.37	10.44

Notes:
N/M - not measured
uS/cm - micro Siemens per centimeter
mV - millivolts
mg/L = milligrams per liter

Prepared By/Date: MJP 11/5/13
Checked By/Date: