Ms. Carolyn Bury
U.S. Environmental Protection Agency
Land and Chemicals Division
Remediation and Re-use Branch
Corrective Action Section 2 – LU9J
77 West Jackson Blvd
Chicago, IL 60604

Arcadis U.S., Inc.
6602 Excelsior Rd
Baxter
Minnesota 56425
Tel 218 829 4607
www.arcadis.com

ENVIRONMENT

Subject:

Former Koppers Wood-Treating Site – Carbondale, IL
February 2016 Groundwater Sampling Data Submittal

Date:

May 17, 2016

Dear Ms. Bury:

On behalf of Beazer East, Inc., this letter submits the analytical results for February 2016[1] groundwater samples collected at the Former Koppers Wood-Treating Site in Carbondale, Illinois (the Site). The February 2016 groundwater sampling event represented the first event conducted in accordance with the final *Groundwater Monitoring Plan* (GMP), which was submitted to the United States Environmental Protection Agency (USEPA) on November 25, 2015, and approved by USEPA on December 15, 2015. In accordance with the GMP, the February 2016 groundwater sampling event consisted of the following (see Figure 1 for monitoring well locations):

- Sampling of groundwater from selected existing monitoring wells located in the eastern portion of the Site near Glade Creek (OW-205A, OW-206A, OW-207A), and all new monitoring wells[2] (OW-207B, OW-208A/B, OW-209A/B, OW-210A/B, OW-211A/B, OW-212A/B), for analyses of benzene, ethylbenzene, toluene, and total xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs), and pentachlorophenol; and

Contact:

David Bessingpas

Phone:

218 829 4607

Email:

david.bessingpas@
arcadis.com

Our ref:

B0039321.0000

[1] The February 2016 data are being provided at this time, at the request of USEPA. Going forward, it is anticipated that all groundwater sampling data will be submitted in an annual report, in accordance with the GMP.

[2] "New" indicates monitoring wells that were installed in November 2015. A report documenting the installation of these new monitoring wells was submitted to USEPA on February 12, 2016.

- Sampling of groundwater from selected existing monitoring wells (OW-022BR, OW-035B, OW-102B) and new monitoring wells located along the Site's southern property boundary (OW-209A/B, OW-210A/B, OW-211A/B) for analysis of dioxins/furans.

The February 2016 groundwater sample analytical data are summarized in the attached Table 1 (BTEX, PAHs, and pentachlorophenol) and Table 2 (dioxins/furans). Laboratory data reports are provided in Attachment 1. In accordance with the GMP, the February 2016 analytical data were compared to the following criteria:

- BTEX, PAH, and pentachlorophenol data for all A/B-Unit monitoring wells were compared to the Tiered Approach to Corrective Action Objectives (TACO) Tier I Groundwater Remediation Objectives (GROs) for Class II Groundwater;

- BTEX, PAH, and pentachlorophenol data for OW-206A, OW-207A/B, and OW-208A/B (located adjacent to Glade Creek in the eastern portion of the Site) were compared to Illinois Water Quality Criteria;

- BTEX and naphthalene data for monitoring wells OW-209A/B, OW-210A/B, and OW-211A/B (located along the Site's southern property boundary) were compared to TACO Tier I GROs for the Indoor Inhalation Exposure Route; and

- Dioxin/furan (2,3,7,8-TCDD congener and 2,3,7,8-TCDD TEQ) data for all monitoring wells were compared to the USEPA's Maximum Contaminant Level (MCL) for 2,3,7,8-TCDD.

Note that there were no exceedances of any of the above criteria for the February 2016 groundwater samples.

Please contact Michael Slenska of Beazer (412 208 8867) or me if you have any questions or comments.

Sincerely,

Arcadis U.S., Inc.

David Bessingpas
Sr. Project Manager

Copies:
Jim Moore, IEPA
Michael Slenska, Beazer
Jeffrey Holden, Arcadis
Keith White, Arcadis
Angie Gatchie, FTS

Tables

Table 1
Summary of February 2016 Groundwater Sample Data (BTEX, PAHs, Pentachlorophenol)
Former Koppers Wood-Treating Site
Carbondale, Illinois

ARCADIS Design & Consultancy for natural and built assets

Analyte	Unit	TACO Tier I GROs [1]		C. IWQC [2]				OW-205A 2/4/2016 (A)[3]	OW-206A 2/4/2016 (A,C)[3]	OW-206A DUP (A,C)[3]	OW-207A 2/4/2016 (A,C)[3]	OW-207B 2/4/2016 (A,C)[3]	OW-208A 2/4/2016 (A,C)[3]
		A. Class II	B. Indoor Inhalation Exposure Route (Residential)	Aquatic Life		Human Health							
				Acute	Chronic	HTC	HNC						
BTEX (Method 8260B)													
Benzene	ug/L	25	110	4,200	860	310		**7.4**	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/L	1,000	370	150	14	-	-	**14**	1 U	1 U	1 U	1 U	1 U
Toluene	ug/L	2,500	530,000	2,000	600	-	-	5 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	ug/L	10,000	30,000	920	360	-	-	15 U	3 U	3 U	3 U	3 U	3 U
PAHs and Pentachlorophenol (Method 8270D LL)													
Acenaphthene	ug/L	2,100	-	-	120	62	-	**21**	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Acenaphthylene	ug/L	1,050	-	-	190	15	-	**0.39**	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Anthracene	ug/L	10,500	-	-	0.66	0.53	35,000	**0.82**	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Benzo(a)anthracene	ug/L	0.65	-	-	-	-	0.16	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Benzo(a)pyrene	ug/L	2	-	-	-	-	0.016	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Benzo(b)fluoranthene	ug/L	0.9	-	-	-	-	0.16	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Benzo(ghi)perylene	ug/L	1,050	-	-	-	-	-	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Benzo(k)fluoranthene	ug/L	0.85	-	-	-	-	1.6	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Chrysene	ug/L	7.5	-	-	-	-	16	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Dibenzo(a,h)anthracene	ug/L	1.5	-	-	-	-	0.016	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Fluoranthene	ug/L	1,400	-	4.3	1.8	120	-	**0.39**	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Fluorene	ug/L	1,400	-	59	16	4,500	-	**11**	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Indeno(1,2,3-cd)pyrene	ug/L	2.15	-	-	-	-	0.16	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Naphthalene	ug/L	220	75	510	68	-	-	**36**	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Phenanthrene	ug/L	1,050	-	46	3.7	-	-	**5.1**	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Pyrene	ug/L	1,050	-	-	-	3,500	-	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Pentachlorophenol	ug/L	5	-	20	13	-	2.5	1.1 U	1 U	1 U	1 U	1 U	1 U

See Notes on Page 4

Table 1
Summary of February 2016 Groundwater Sample Data (BTEX, PAHs, Pentachlorophenol)
Former Koppers Wood-Treating Site
Carbondale, Illinois

ARCADIS Design & Consultancy for natural and built assets

Analyte	Unit	TACO Tier I GROs [1]		C. IWQC [2]				OW-208B 2/4/2016 (A,C)[3]	OW-209A 2/4/2016 (A,B)[3]	OW-209A DUP (A,B)[3]	OW-209B 2/5/2016 (A,B)[3]	OW-210A 2/4/2016 (A,B)[3]	OW-210B 2/4/2016 (A,B)[3]
		A. Class II	B. Indoor Inhalation Exposure Route (Residential)	Aquatic Life		Human Health							
				Acute	Chronic	HTC	HNC						
BTEX (Method 8260B)													
Benzene	ug/L	25	110	4,200	860	310		1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/L	1,000	370	150	14	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	ug/L	2,500	530,000	2,000	600	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	ug/L	10,000	30,000	920	360	-	-	3 U	3 U	3 U	3 U	3 U	3 U
PAHs and Pentachlorophenol (Method 8270D LL)													
Acenaphthene	ug/L	2,100	-	-	120	62	-	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Acenaphthylene	ug/L	1,050	-	-	190	15	-	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Anthracene	ug/L	10,500	-	-	0.66	0.53	35,000	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Benzo(a)anthracene	ug/L	0.65	-	-	-	-	0.16	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Benzo(a)pyrene	ug/L	2	-	-	-	-	0.016	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Benzo(b)fluoranthene	ug/L	0.9	-	-	-	-	0.16	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Benzo(ghi)perylene	ug/L	1,050	-	-	-	-	-	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Benzo(k)fluoranthene	ug/L	0.85	-	-	-	-	1.6	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Chrysene	ug/L	7.5	-	-	-	-	16	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Dibenzo(a,h)anthracene	ug/L	1.5	-	-	-	-	0.016	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Fluoranthene	ug/L	1,400	-	4.3	1.8	120	-	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Fluorene	ug/L	1,400	-	59	16	4,500	-	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Indeno(1,2,3-cd)pyrene	ug/L	2.15	-	-	-	-	0.16	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Naphthalene	ug/L	220	75	510	68	-	-	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Phenanthrene	ug/L	1,050	-	46	3.7	-	-	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Pyrene	ug/L	1,050	-	-	-	3,500	-	0.21 U	0.19 U	0.19 U	0.21 U	0.21 U	0.2 U
Pentachlorophenol	ug/L	5	-	20	13	-	2.5	1 U	0.93 U	0.93 U	1 U	1 U	1 U

See Notes on Page 4

Table 1
Summary of February 2016 Groundwater Sample Data (BTEX, PAHs, Pentachlorophenol)
Former Koppers Wood-Treating Site
Carbondale, Illinois

ARCADIS Design & Consultancy for natural and built assets

Analyte	Unit	TACO Tier I GROs [1]		C. IWQC [2]				OW-211A 2/5/2016 (A,B)[3]	OW-211B 2/5/2016 (A,B)[3]	OW-212A 2/4/2016 (A)[3]	OW-212B 2/5/2016 (A)[3]
		A. Class II	B. Indoor Inhalation Exposure Route (Residential)	Aquatic Life		Human Health					
				Acute	Chronic	HTC	HNC				
BTEX (Method 8260B)											
Benzene	ug/L	25	110	4,200	860	310		1 U	1 U	1 U	1 U
Ethylbenzene	ug/L	1,000	370	150	14	-	-	1 U	1 U	1 U	1 U
Toluene	ug/L	2,500	530,000	2,000	600	-	-	1 U	1 U	1 U	1 U
Total Xylenes	ug/L	10,000	30,000	920	360	-	-	3 U	3 U	3 U	3 U
PAHs and Pentachlorophenol (Method 8270D LL)											
Acenaphthene	ug/L	2,100	-	-	120	62	-	0.22 U	0.21 U	0.21 U	0.22 U
Acenaphthylene	ug/L	1,050	-	-	190	15	-	0.22 U	0.21 U	0.21 U	0.22 U
Anthracene	ug/L	10,500	-	-	0.66	0.53	35,000	0.22 U	0.21 U	0.21 U	0.22 U
Benzo(a)anthracene	ug/L	0.65	-	-	-	-	0.16	0.22 U	0.21 U	0.21 U	0.22 U
Benzo(a)pyrene	ug/L	2	-	-	-	-	0.016	0.22 U	0.21 U	0.21 U	0.22 U
Benzo(b)fluoranthene	ug/L	0.9	-	-	-	-	0.16	0.22 U	0.21 U	0.21 U	0.22 U
Benzo(ghi)perylene	ug/L	1,050	-	-	-	-	-	0.22 U	0.21 U	0.21 U	0.22 U
Benzo(k)fluoranthene	ug/L	0.85	-	-	-	-	1.6	0.22 U	0.21 U	0.21 U	0.22 U
Chrysene	ug/L	7.5	-	-	-	-	16	0.22 U	0.21 U	0.21 U	0.22 U
Dibenzo(a,h)anthracene	ug/L	1.5	-	-	-	-	0.016	0.22 U	0.21 U	0.21 U	0.22 U
Fluoranthene	ug/L	1,400	-	4.3	1.8	120	-	0.22 U	0.21 U	0.21 U	0.22 U
Fluorene	ug/L	1,400	-	59	16	4,500	-	0.22 U	0.21 U	0.21 U	0.22 U
Indeno(1,2,3-cd)pyrene	ug/L	2.15	-	-	-	-	0.16	0.22 U	0.21 U	0.21 U	0.22 U
Naphthalene	ug/L	220	75	510	68	-	-	0.22 U	0.21 U	0.21 U	0.22 U
Phenanthrene	ug/L	1,050	-	46	3.7	-	-	0.22 U	0.21 U	0.21 U	0.22 U
Pyrene	ug/L	1,050	-	-	-	3,500	-	0.22 U	0.21 U	0.21 U	0.22 U
Pentachlorophenol	ug/L	5	-	20	13	-	2.5	1.1 U	1 U	1 U	1.1 U

See Notes on Page 4

Table 1
Summary of February 2016 Groundwater Sample Data (BTEX, PAHs, Pentachlorophenol)
Former Koppers Wood-Treating Site
Carbondale, Illinois

ARCADIS Design & Consultancy for natural and built assets

Notes:
BTEX = Benzene, Toluene, Ethylbenzene, and Total Xylenes
PAHs = Polycyclic Aromatic Hydrocarbons
ug/L = micrograms per liter
U = compound was analyzed but not detected; listed value is the laboratory reporting limit
-- = no criteria available
DUP = duplicate sample
Bold = constituent detected

1. TACO Tier I Groundwater Remediation Objectives (GROs) for Class II groundwater are compared to groundwater samples from all A- and B-Unit monitoring wells. TACO Tier I GROs for the indoor inhalation exposure route (residential) are compared to groundwater samples from the following A/B-Unit monitoring wells located along the southern property boundary: OW-209A, OW-209B, OW-210A, OW-210B, OW-211A, and OW-211B. GRO values obtained from 35 IAC 742 Appendix B, Table E.

2. Illinois Water Quality Criteria (IWQC) are compared to groundwater samples from the following A/B-Unit monitoring wells located adjacent to Glade Creek in the eastern portion of the Site: OW-206A, OW-207A, OW-207B, OW-208A, and OW-208B. Values for BTEX obtained from 35 IAC 302.208. Values for PAHs and pentachlorophenol obtained from http://www.epa.state.il.us/water/water-quality-standards/water-quality-criteria-list.pdf. Acute aquatic life criteria are not to be exceeded at any time. Chronic aquatic life criteria are not to be exceeded by the arithmetic average of at least four consecutive samples. Human Threshold Criteria (HTC) are based on noncancerous effects. Human Nonthreshold Criteria (HNC) are based on cancerous effects.

3. Letter designations below sample ID/date indicate the criteria to which data from each well are compared, as follows:
   A - TACO Tier I GROs for Class II groundwater (See Note 1)
   B - TACO Tier I GROs for the indoor inhalation exposure route (See Note 1)
   C - IWQC (See Note 2)

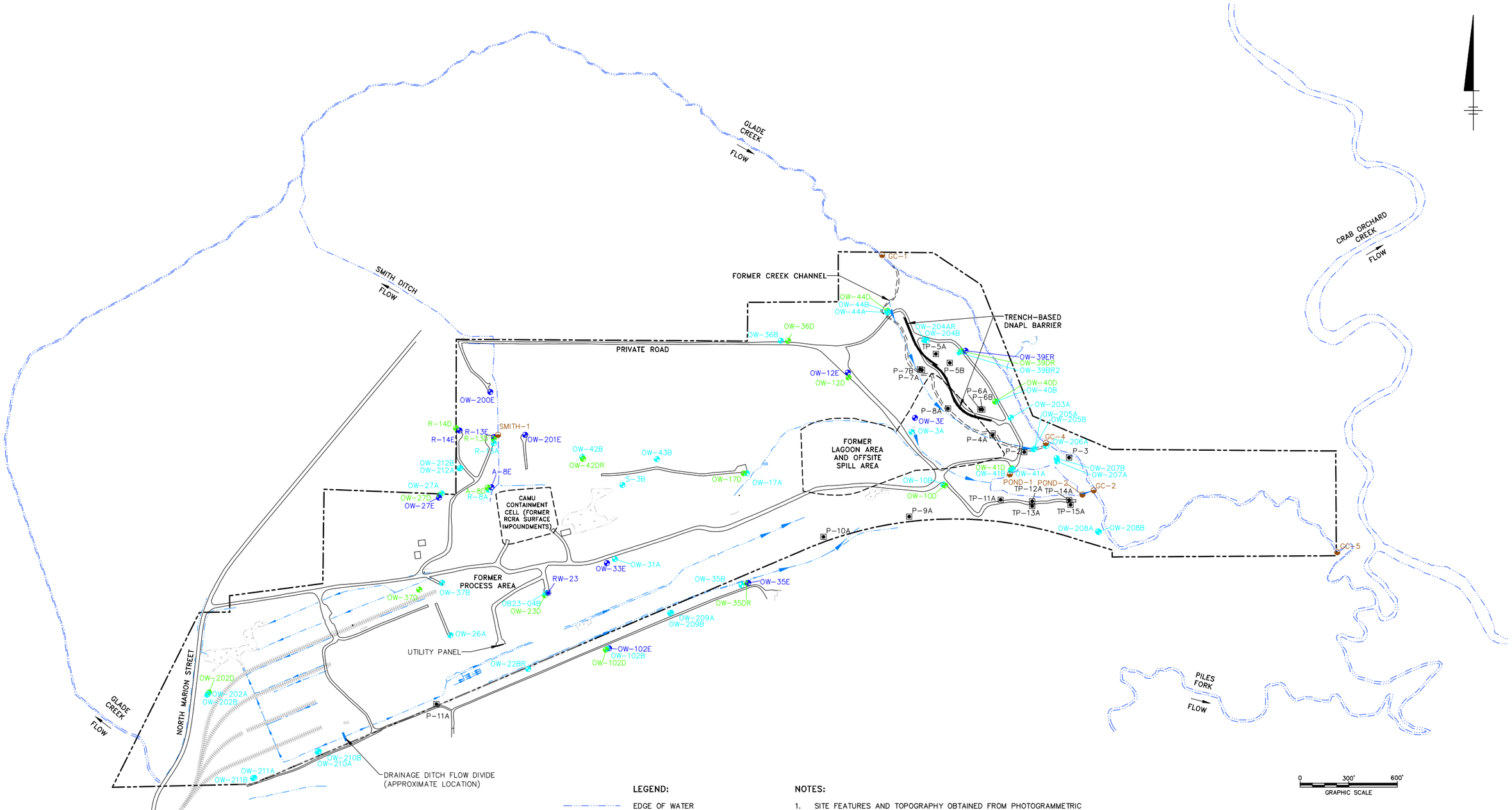
Table 2
Summary of February 2016 Groundwater Sample Data (Dioxins/Furans)
Former Koppers Wood-Treating Site
Carbondale, Illinois

ARCADIS Design & Consultancy for natural and built assets

Analyte	Unit	MCL	OW-022BR 2/4/2016	OW-035B 2/4/2016	OW-102B 2/4/2016	OW-209A 2/4/2016	OW-209A DUP	OW-209B 2/5/2016	OW-210A 2/4/2016	OW-210B 2/4/2016	OW-211A 2/5/2016	OW-211B 2/5/2016
Dioxins/Furans (Method 8290)												
1,2,3,4,6,7,8-HpCDD	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	**0.00011**	0.000048 U
1,2,3,4,6,7,8-HpCDF	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
1,2,3,4,7,8,9-HpCDF	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
1,2,3,4,7,8-HxCDD	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
1,2,3,4,7,8-HxCDF	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
1,2,3,6,7,8-HxCDD	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
1,2,3,6,7,8-HxCDF	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
1,2,3,7,8,9-HxCDD	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
1,2,3,7,8,9-HxCDF	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
1,2,3,7,8-PeCDD	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
1,2,3,7,8-PeCDF	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
2,3,4,6,7,8-HxCDF	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
2,3,4,7,8-PeCDF	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
2,3,7,8-TCDD [1]	ug/L	3.0E-05	0.0000096 U	0.0000097 U	0.0000096 U	0.00001 U	0.0000098 U	0.000099 U	0.0000097 U	0.0000098 U	0.00001 U	0.0000097 U
2,3,7,8-TCDF	ug/L	-	0.0000096 U	0.0000097 U	0.0000096 U	0.00001 U	0.0000098 U	0.000099 U	0.0000097 U	0.0000098 U	0.00001 U	0.0000097 U
OCDD	ug/L	-	0.000096 U	**0.00017**	0.000096 U	0.0001 U	0.000098 U	**0.00011**	**0.00015**	0.000098 U	**0.00097**	0.000097 U
OCDF	ug/L	-	0.000096 U	0.000097 U	0.000096 U	0.0001 U	0.000098 U	0.000099 U	0.000097 U	0.000098 U	0.0001 U	0.000097 U
Total HpCDD	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	**0.00021**	0.000048 U
Total HpCDF	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	**0.000061**	0.000048 U
Total HxCDD	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
Total HxCDF	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
Total PeCDD	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
Total PeCDF	ug/L	-	0.000048 U	0.000049 U	0.000048 U	0.00005 U	0.000049 U	0.000049 U	0.000048 U	0.000049 U	0.00005 U	0.000048 U
Total TCDD	ug/L	-	0.0000096 U	0.0000097 U	0.0000096 U	0.00001 U	0.0000098 U	0.000099 U	0.0000097 U	0.0000098 U	0.00001 U	0.0000097 U
Total TCDF	ug/L	-	0.0000096 U	0.0000097 U	0.0000096 U	0.00001 U	0.0000098 U	0.000099 U	0.0000097 U	0.0000098 U	0.00001 U	0.0000097 U
2,3,7,8-TCDD TEQ [1]	ug/L	3.0E-05	0.0E+00	5.1E-08	0.0E+00	0.0E+00	0.0E+00	3.3E-08	4.5E-08	0.0E+00	1.4E-06	0.0E+00

Notes:
ug/L = micrograms per liter
U = compound was analyzed but not detected; listed value is the laboratory reporting limit
-- = no criteria available
DUP = duplicate sample
Bold = constituent detected
MCL = Maximum Contaminant Level (See Note 1)
TCDD = tetrachlorinated dibenzo-p-dioxin
TEQ = toxic equivalency (calculated using 2005 WHO toxic equivalency factors [TEFs], and assuming non-detects equal zero)
1. 2,3,7,8-TCDD congener and 2,3,7,8-TCDD TEQ values are compared to the MCL for 2,3,7,8-TCDD.

Figure



LEGEND:

- EDGE OF WATER
- DRAINAGE DITCH AND DIRECTION OF FLOW
- PROPERTY BOUNDARY (SEE NOTE 2)
- "A/B" UNIT MONITORING WELL
- "D" UNIT MONITORING WELL
- "E" UNIT MONITORING WELL
- PIEZOMETER
- SURFACE WATER GAUGE
- RECOVERY WELL

NOTES:

1. SITE FEATURES AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRIC MAPPING PROVIDED BY LOCKWOOD MAPPING COMPANY IN SEPTEMBER 2001 AND SURVEY DATA PROVIDED BY ENGINEERING DESIGN SOURCE, INC. IN JANUARY 2004. AND BASED ON AERIAL PHOTOGRAPHY PROVIDED BY LOCKWOOD MAPPING, INC. TAKEN ON NOVEMBER 22, 1996 AT AN APPROXIMATE SCALE OF 1'=500'. CERTAIN SOUTH DRAINAGE DITCH FEATURES ADDED BASED ON 11/01 AND 11/02/05 RECONNAISSANCE.
2. PROPERTY BOUNDARY IS APPROXIMATE; OBTAINED FROM A COMBINATION OF SITE SURVEY DATA, HISTORICAL MAPS AND TAX MAPS.

BEAZER EAST, INC.
FORMER KOPPERS WOOD-TREATING SITE
CARBONDALE, ILLINOIS

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB: L. POSENAUER PIC: J. HOLDEN PM/TM: D. BESSINGPAS LYR: ON=*; OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0039321\0000\00002\SITE\39314G01.dwg LAYOUT: 1 SAVED: 2/8/2016 2:53 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 2/8/2016 2:54 PM BY: POSENAUER, LISA
XREFS: 39314X00 39200X01 IMAGES:

ATTACHMENT 1

Laboratory Data Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-51978-1
Client Project/Site: Carbondale, IL - Semiannual GW

For:
Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie

Authorized for release by:
2/26/2016 11:07:12 AM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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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Case Narrative

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

Job ID: 180-51978-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-51978-1

Comments
No additional comments.

Receipt
The samples were received on 2/6/2016 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.8º C and 5.6º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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
CFL	Contains Free Liquid
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)

Certification Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

Laboratory: TestAmerica Pittsburgh

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	200005	06-30-16

Sample Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-51978-1	CARB-TB-02-020516	Water	02/05/16 00:00	02/08/16 08:45
180-51978-2	CARB-OW-209B-020516	Water	02/05/16 08:58	02/08/16 08:45
180-51978-3	CARB-OW-211A-020516	Water	02/05/16 08:46	02/08/16 08:45
180-51978-4	CARB-OW-211B-020516	Water	02/05/16 10:09	02/08/16 08:45
180-51978-5	CARB-OW-212B-020516	Water	02/05/16 08:32	02/08/16 08:45
180-51978-6	CARB-EB-02-020516	Water	02/05/16 08:44	02/08/16 08:45

Method Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PIT

Protocol References:

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

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

Client Sample ID: CARB-TB-02-020516 — Lab Sample ID: 180-51978-1

Date Collected: 02/05/16 00:00 — **Matrix: Water**
Date Received: 02/08/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168420	02/16/16 12:33	DLF	TAL PIT
	Instrument ID: CHHP6									

Client Sample ID: CARB-OW-209B-020516 — Lab Sample ID: 180-51978-2

Date Collected: 02/05/16 08:58 — **Matrix: Water**
Date Received: 02/08/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168420	02/16/16 12:09	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Prep	3520C			240 mL	0.25 mL	168023	02/10/16 10:39	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	240 mL	0.25 mL	168808	02/21/16 15:42	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-211A-020516 — Lab Sample ID: 180-51978-3

Date Collected: 02/05/16 08:46 — **Matrix: Water**
Date Received: 02/08/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 17:55	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Prep	3520C			230 mL	0.25 mL	168023	02/10/16 10:39	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	230 mL	0.25 mL	168808	02/21/16 17:07	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-211B-020516 — Lab Sample ID: 180-51978-4

Date Collected: 02/05/16 10:09 — **Matrix: Water**
Date Received: 02/08/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 18:19	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Prep	3520C			240 mL	0.25 mL	168023	02/10/16 10:39	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	240 mL	0.25 mL	168808	02/21/16 17:35	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-212B-020516 — Lab Sample ID: 180-51978-5

Date Collected: 02/05/16 08:32 — **Matrix: Water**
Date Received: 02/08/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 18:43	DLF	TAL PIT
	Instrument ID: CHHP5									

Lab Chronicle

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

Client Sample ID: CARB-OW-212B-020516

Lab Sample ID: 180-51978-5
Date Collected: 02/05/16 08:32
Matrix: Water
Date Received: 02/08/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			230 mL	0.25 mL	168023	02/10/16 10:39	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	230 mL	0.25 mL	168808	02/21/16 18:03	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-EB-02-020516

Lab Sample ID: 180-51978-6
Date Collected: 02/05/16 08:44
Matrix: Water
Date Received: 02/08/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 19:07	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Prep	3520C			260 mL	0.25 mL	168023	02/10/16 10:39	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	260 mL	0.25 mL	168808	02/21/16 18:32	VVP	TAL PIT
	Instrument ID: CH731									

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

BJT = Bill Trout

Batch Type: Analysis

DLF = Donald Ferguson

VVP = Vincent Piccolino

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

Client Sample ID: CARB-TB-02-020516

Lab Sample ID: 180-51978-1
Date Collected: 02/05/16 00:00
Matrix: Water
Date Received: 02/08/16 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/16/16 12:33	1
Ethylbenzene	ND		1.0		ug/L			02/16/16 12:33	1
Toluene	ND		1.0		ug/L			02/16/16 12:33	1
Xylenes, Total	ND		3.0		ug/L			02/16/16 12:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*72 - 134*		*02/16/16 12:33*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*02/16/16 12:33*	*1*
4-Bromofluorobenzene (Surr)	*95*		*72 - 120*		*02/16/16 12:33*	*1*
Dibromofluoromethane (Surr)	*109*		*77 - 127*		*02/16/16 12:33*	*1*

Client Sample ID: CARB-OW-209B-020516

Lab Sample ID: 180-51978-2
Date Collected: 02/05/16 08:58
Matrix: Water
Date Received: 02/08/16 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/16/16 12:09	1
Ethylbenzene	ND		1.0		ug/L			02/16/16 12:09	1
Toluene	ND		1.0		ug/L			02/16/16 12:09	1
Xylenes, Total	ND		3.0		ug/L			02/16/16 12:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*72 - 134*		*02/16/16 12:09*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*02/16/16 12:09*	*1*
4-Bromofluorobenzene (Surr)	*95*		*72 - 120*		*02/16/16 12:09*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 127*		*02/16/16 12:09*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Acenaphthylene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Anthracene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Benzo[a]anthracene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Benzo[b]fluoranthene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Benzo[k]fluoranthene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Benzo[g,h,i]perylene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Benzo[a]pyrene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Chrysene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Dibenz(a,h)anthracene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Fluoranthene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Fluorene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Indeno[1,2,3-cd]pyrene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Naphthalene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:39	02/21/16 15:42	1
Phenanthrene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1
Pyrene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 15:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*49*		*28 - 109*	*02/10/16 10:39*	*02/21/16 15:42*	*1*

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

Client Sample ID: CARB-OW-209B-020516

Lab Sample ID: 180-51978-2
Date Collected: 02/05/16 08:58
Matrix: Water
Date Received: 02/08/16 08:45

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	48		20 - 105	02/10/16 10:39	02/21/16 15:42	1
2,4,6-Tribromophenol (Surr)	55		30 - 118	02/10/16 10:39	02/21/16 15:42	1
Nitrobenzene-d5 (Surr)	59		27 - 114	02/10/16 10:39	02/21/16 15:42	1
Phenol-d5 (Surr)	54		25 - 105	02/10/16 10:39	02/21/16 15:42	1
Terphenyl-d14 (Surr)	53		20 - 118	02/10/16 10:39	02/21/16 15:42	1

Client Sample ID: CARB-OW-211A-020516

Lab Sample ID: 180-51978-3
Date Collected: 02/05/16 08:46
Matrix: Water
Date Received: 02/08/16 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 17:55	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 17:55	1
Toluene	ND		1.0		ug/L			02/17/16 17:55	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 17:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		72 - 134		02/17/16 17:55	1
Toluene-d8 (Surr)	109		80 - 120		02/17/16 17:55	1
4-Bromofluorobenzene (Surr)	99		72 - 120		02/17/16 17:55	1
Dibromofluoromethane (Surr)	102		77 - 127		02/17/16 17:55	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Acenaphthylene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Anthracene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Benzo[a]anthracene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Benzo[b]fluoranthene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Benzo[k]fluoranthene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Benzo[g,h,i]perylene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Benzo[a]pyrene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Chrysene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Dibenz(a,h)anthracene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Fluoranthene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Fluorene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Indeno[1,2,3-cd]pyrene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Naphthalene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Pentachlorophenol	ND		1.1		ug/L		02/10/16 10:39	02/21/16 17:07	1
Phenanthrene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1
Pyrene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 17:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	68		28 - 109	02/10/16 10:39	02/21/16 17:07	1
2-Fluorophenol (Surr)	59		20 - 105	02/10/16 10:39	02/21/16 17:07	1
2,4,6-Tribromophenol (Surr)	78		30 - 118	02/10/16 10:39	02/21/16 17:07	1
Nitrobenzene-d5 (Surr)	83		27 - 114	02/10/16 10:39	02/21/16 17:07	1
Phenol-d5 (Surr)	58		25 - 105	02/10/16 10:39	02/21/16 17:07	1
Terphenyl-d14 (Surr)	67		20 - 118	02/10/16 10:39	02/21/16 17:07	1

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

Client Sample ID: CARB-OW-211B-020516

Lab Sample ID: 180-51978-4
Date Collected: 02/05/16 10:09
Matrix: Water
Date Received: 02/08/16 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 18:19	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 18:19	1
Toluene	ND		1.0		ug/L			02/17/16 18:19	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 18:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*72 - 134*		*02/17/16 18:19*	*1*
Toluene-d8 (Surr)	*111*		*80 - 120*		*02/17/16 18:19*	*1*
4-Bromofluorobenzene (Surr)	*103*		*72 - 120*		*02/17/16 18:19*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 127*		*02/17/16 18:19*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Acenaphthylene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Anthracene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Benzo[a]anthracene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Benzo[b]fluoranthene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Benzo[k]fluoranthene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Benzo[g,h,i]perylene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Benzo[a]pyrene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Chrysene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Dibenz(a,h)anthracene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Fluoranthene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Fluorene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Indeno[1,2,3-cd]pyrene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Naphthalene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:39	02/21/16 17:35	1
Phenanthrene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1
Pyrene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*53*		*28 - 109*	*02/10/16 10:39*	*02/21/16 17:35*	*1*
2-Fluorophenol (Surr)	*46*		*20 - 105*	*02/10/16 10:39*	*02/21/16 17:35*	*1*
2,4,6-Tribromophenol (Surr)	*60*		*30 - 118*	*02/10/16 10:39*	*02/21/16 17:35*	*1*
Nitrobenzene-d5 (Surr)	*60*		*27 - 114*	*02/10/16 10:39*	*02/21/16 17:35*	*1*
Phenol-d5 (Surr)	*53*		*25 - 105*	*02/10/16 10:39*	*02/21/16 17:35*	*1*
Terphenyl-d14 (Surr)	*62*		*20 - 118*	*02/10/16 10:39*	*02/21/16 17:35*	*1*

Client Sample ID: CARB-OW-212B-020516

Lab Sample ID: 180-51978-5
Date Collected: 02/05/16 08:32
Matrix: Water
Date Received: 02/08/16 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 18:43	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 18:43	1
Toluene	ND		1.0		ug/L			02/17/16 18:43	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 18:43	1

Client Sample ID: CARB-OW-212B-020516

Lab Sample ID: 180-51978-5
Date Collected: 02/05/16 08:32
Matrix: Water
Date Received: 02/08/16 08:45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*72 - 134*		*02/17/16 18:43*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*02/17/16 18:43*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 120*		*02/17/16 18:43*	*1*
Dibromofluoromethane (Surr)	*104*		*77 - 127*		*02/17/16 18:43*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Acenaphthylene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Anthracene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Benzo[a]anthracene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Benzo[b]fluoranthene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Benzo[k]fluoranthene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Benzo[g,h,i]perylene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Benzo[a]pyrene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Chrysene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Dibenz(a,h)anthracene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Fluoranthene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Fluorene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Indeno[1,2,3-cd]pyrene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Naphthalene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Pentachlorophenol	ND		1.1		ug/L		02/10/16 10:39	02/21/16 18:03	1
Phenanthrene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1
Pyrene	ND		0.22		ug/L		02/10/16 10:39	02/21/16 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*48*		*28 - 109*	*02/10/16 10:39*	*02/21/16 18:03*	*1*
2-Fluorophenol (Surr)	*43*		*20 - 105*	*02/10/16 10:39*	*02/21/16 18:03*	*1*
2,4,6-Tribromophenol (Surr)	*51*		*30 - 118*	*02/10/16 10:39*	*02/21/16 18:03*	*1*
Nitrobenzene-d5 (Surr)	*55*		*27 - 114*	*02/10/16 10:39*	*02/21/16 18:03*	*1*
Phenol-d5 (Surr)	*47*		*25 - 105*	*02/10/16 10:39*	*02/21/16 18:03*	*1*
Terphenyl-d14 (Surr)	*57*		*20 - 118*	*02/10/16 10:39*	*02/21/16 18:03*	*1*

Client Sample ID: CARB-EB-02-020516

Lab Sample ID: 180-51978-6
Date Collected: 02/05/16 08:44
Matrix: Water
Date Received: 02/08/16 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 19:07	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 19:07	1
Toluene	ND		1.0		ug/L			02/17/16 19:07	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 19:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*72 - 134*		*02/17/16 19:07*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*02/17/16 19:07*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 120*		*02/17/16 19:07*	*1*
Dibromofluoromethane (Surr)	*109*		*77 - 127*		*02/17/16 19:07*	*1*

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

Client Sample ID: CARB-EB-02-020516

Lab Sample ID: 180-51978-6
Date Collected: 02/05/16 08:44
Matrix: Water
Date Received: 02/08/16 08:45

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Acenaphthylene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Anthracene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Benzo[a]anthracene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Benzo[b]fluoranthene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Benzo[k]fluoranthene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Benzo[g,h,i]perylene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Benzo[a]pyrene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Chrysene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Dibenz(a,h)anthracene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Fluoranthene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Fluorene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Indeno[1,2,3-cd]pyrene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Naphthalene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Pentachlorophenol	ND		0.96		ug/L		02/10/16 10:39	02/21/16 18:32	1
Phenanthrene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1
Pyrene	ND		0.19		ug/L		02/10/16 10:39	02/21/16 18:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*57*		*28 - 109*	*02/10/16 10:39*	*02/21/16 18:32*	*1*
2-Fluorophenol (Surr)	*51*		*20 - 105*	*02/10/16 10:39*	*02/21/16 18:32*	*1*
2,4,6-Tribromophenol (Surr)	*65*		*30 - 118*	*02/10/16 10:39*	*02/21/16 18:32*	*1*
Nitrobenzene-d5 (Surr)	*66*		*27 - 114*	*02/10/16 10:39*	*02/21/16 18:32*	*1*
Phenol-d5 (Surr)	*56*		*25 - 105*	*02/10/16 10:39*	*02/21/16 18:32*	*1*
Terphenyl-d14 (Surr)	*66*		*20 - 118*	*02/10/16 10:39*	*02/21/16 18:32*	*1*

QC Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

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

Lab Sample ID: MB 180-168420/4
Matrix: Water
Analysis Batch: 168420

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/16/16 11:27	1
Ethylbenzene	ND		1.0		ug/L			02/16/16 11:27	1
Toluene	ND		1.0		ug/L			02/16/16 11:27	1
Xylenes, Total	ND		3.0		ug/L			02/16/16 11:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*72 - 134*		*02/16/16 11:27*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*02/16/16 11:27*	*1*
4-Bromofluorobenzene (Surr)	*98*		*72 - 120*		*02/16/16 11:27*	*1*
Dibromofluoromethane (Surr)	*104*		*77 - 127*		*02/16/16 11:27*	*1*

Lab Sample ID: LCS 180-168420/7
Matrix: Water
Analysis Batch: 168420

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.4		ug/L		104	80 - 121
Ethylbenzene	10.0	8.54		ug/L		85	80 - 123
Toluene	10.0	9.77		ug/L		98	80 - 125
Xylenes, Total	20.0	17.2		ug/L		86	80 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 134*
Toluene-d8 (Surr)	*96*		*80 - 120*
4-Bromofluorobenzene (Surr)	*96*		*72 - 120*
Dibromofluoromethane (Surr)	*105*		*77 - 127*

Lab Sample ID: 180-51978-2 MS
Matrix: Water
Analysis Batch: 168420

Client Sample ID: CARB-OW-209B-020516
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		10.0	10.6		ug/L		106	80 - 121
Ethylbenzene	ND		10.0	8.20		ug/L		82	80 - 123
Toluene	ND		10.0	9.53		ug/L		95	80 - 125
Xylenes, Total	ND		20.0	16.4		ug/L		82	80 - 123

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*72 - 134*
Toluene-d8 (Surr)	*93*		*80 - 120*
4-Bromofluorobenzene (Surr)	*97*		*72 - 120*
Dibromofluoromethane (Surr)	*108*		*77 - 127*

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

Lab Sample ID: 180-51978-2 MSD — **Client Sample ID: CARB-OW-209B-020516**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 168420

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		10.0	10.2		ug/L		102	80 - 121	4	32
Ethylbenzene	ND		10.0	8.79		ug/L		88	80 - 123	7	33
Toluene	ND		10.0	9.76		ug/L		98	80 - 125	2	35
Xylenes, Total	ND		20.0	17.4		ug/L		87	80 - 123	6	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*73*		*72 - 134*
Toluene-d8 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*95*		*72 - 120*
Dibromofluoromethane (Surr)	*98*		*77 - 127*

Lab Sample ID: MB 180-168514/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 168514

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 11:42	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 11:42	1
Toluene	ND		1.0		ug/L			02/17/16 11:42	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 11:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*72 - 134*		*02/17/16 11:42*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*02/17/16 11:42*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 120*		*02/17/16 11:42*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 127*		*02/17/16 11:42*	*1*

Lab Sample ID: LCS 180-168514/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 168514

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	11.2		ug/L		112	80 - 121
Ethylbenzene	10.0	10.3		ug/L		103	80 - 123
Toluene	10.0	11.6		ug/L		116	80 - 125
Xylenes, Total	20.0	20.4		ug/L		102	80 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*72 - 134*
Toluene-d8 (Surr)	*108*		*80 - 120*
4-Bromofluorobenzene (Surr)	*102*		*72 - 120*
Dibromofluoromethane (Surr)	*95*		*77 - 127*

QC Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 180-168023/1-A
Matrix: Water
Analysis Batch: 168808

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 168023

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Acenaphthylene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Anthracene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Benzo[a]anthracene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Benzo[b]fluoranthene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Benzo[k]fluoranthene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Benzo[g,h,i]perylene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Benzo[a]pyrene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Chrysene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Dibenz(a,h)anthracene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Fluoranthene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Fluorene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Indeno[1,2,3-cd]pyrene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Naphthalene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:39	02/21/16 11:26	1
Phenanthrene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Pyrene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*58*		*28 - 109*	*02/10/16 10:39*	*02/21/16 11:26*	*1*
2-Fluorophenol (Surr)	*61*		*20 - 105*	*02/10/16 10:39*	*02/21/16 11:26*	*1*
2,4,6-Tribromophenol (Surr)	*58*		*30 - 118*	*02/10/16 10:39*	*02/21/16 11:26*	*1*
Nitrobenzene-d5 (Surr)	*64*		*27 - 114*	*02/10/16 10:39*	*02/21/16 11:26*	*1*
Phenol-d5 (Surr)	*62*		*25 - 105*	*02/10/16 10:39*	*02/21/16 11:26*	*1*
Terphenyl-d14 (Surr)	*72*		*20 - 118*	*02/10/16 10:39*	*02/21/16 11:26*	*1*

Lab Sample ID: LCS 180-168023/2-A
Matrix: Water
Analysis Batch: 168808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 168023

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	20.0	12.9		ug/L		64	47 - 100
Acenaphthylene	20.0	13.7		ug/L		69	47 - 100
Anthracene	20.0	14.1		ug/L		70	49 - 100
Benzo[a]anthracene	20.0	13.7		ug/L		68	50 - 100
Benzo[b]fluoranthene	20.0	12.8		ug/L		64	43 - 100
Benzo[k]fluoranthene	20.0	14.0		ug/L		70	47 - 100
Benzo[g,h,i]perylene	20.0	14.5		ug/L		73	48 - 100
Benzo[a]pyrene	20.0	13.9		ug/L		70	47 - 100
Chrysene	20.0	13.6		ug/L		68	49 - 100
Dibenz(a,h)anthracene	20.0	14.5		ug/L		72	48 - 100
Fluoranthene	20.0	14.7		ug/L		74	48 - 100
Fluorene	20.0	13.6		ug/L		68	48 - 100
Indeno[1,2,3-cd]pyrene	20.0	14.3		ug/L		72	47 - 100
Naphthalene	20.0	13.5		ug/L		68	44 - 100
Pentachlorophenol	40.0	32.4		ug/L		81	36 - 105
Phenanthrene	20.0	13.4		ug/L		67	48 - 100
Pyrene	20.0	13.5		ug/L		68	44 - 100

QC Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	65		28 - 109
2-Fluorophenol (Surr)	70		20 - 105
2,4,6-Tribromophenol (Surr)	74		30 - 118
Nitrobenzene-d5 (Surr)	75		27 - 114
Phenol-d5 (Surr)	69		25 - 105
Terphenyl-d14 (Surr)	68		20 - 118

Lab Sample ID: 180-51978-2 MS — **Client Sample ID: CARB-OW-209B-020516**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 168808 — **Prep Batch: 168023**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		20.0	13.6		ug/L		68	47 - 100
Acenaphthylene	ND		20.0	14.3		ug/L		72	47 - 100
Anthracene	ND		20.0	15.3		ug/L		76	49 - 100
Benzo[a]anthracene	ND		20.0	16.0		ug/L		80	50 - 100
Benzo[b]fluoranthene	ND		20.0	14.9		ug/L		74	43 - 100
Benzo[k]fluoranthene	ND		20.0	15.8		ug/L		79	47 - 100
Benzo[g,h,i]perylene	ND		20.0	16.7		ug/L		84	48 - 100
Benzo[a]pyrene	ND		20.0	15.4		ug/L		77	47 - 100
Chrysene	ND		20.0	15.9		ug/L		79	49 - 100
Dibenz(a,h)anthracene	ND		20.0	16.7		ug/L		84	48 - 100
Fluoranthene	ND		20.0	16.9		ug/L		84	48 - 100
Fluorene	ND		20.0	14.6		ug/L		73	48 - 100
Indeno[1,2,3-cd]pyrene	ND		20.0	16.4		ug/L		82	47 - 100
Naphthalene	ND		20.0	12.7		ug/L		64	44 - 100
Pentachlorophenol	ND		40.0	32.1		ug/L		80	36 - 105
Phenanthrene	ND		20.0	14.5		ug/L		73	48 - 100
Pyrene	ND		20.0	15.4		ug/L		77	44 - 100

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl	71		28 - 109
2-Fluorophenol (Surr)	64		20 - 105
2,4,6-Tribromophenol (Surr)	88		30 - 118
Nitrobenzene-d5 (Surr)	83		27 - 114
Phenol-d5 (Surr)	71		25 - 105
Terphenyl-d14 (Surr)	44		20 - 118

Lab Sample ID: 180-51978-2 MSD — **Client Sample ID: CARB-OW-209B-020516**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 168808 — **Prep Batch: 168023**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		20.8	14.9		ug/L		72	47 - 100	9	25
Acenaphthylene	ND		20.8	15.5		ug/L		75	47 - 100	8	26
Anthracene	ND		20.8	16.4		ug/L		79	49 - 100	7	20
Benzo[a]anthracene	ND		20.8	17.6		ug/L		85	50 - 100	10	20
Benzo[b]fluoranthene	ND		20.8	16.4		ug/L		79	43 - 100	10	22
Benzo[k]fluoranthene	ND		20.8	17.3		ug/L		83	47 - 100	9	24
Benzo[g,h,i]perylene	ND		20.8	18.1		ug/L		87	48 - 100	8	21
Benzo[a]pyrene	ND		20.8	16.8		ug/L		81	47 - 100	9	22
Chrysene	ND		20.8	17.4		ug/L		83	49 - 100	9	20
Dibenz(a,h)anthracene	ND		20.8	18.3		ug/L		88	48 - 100	9	21

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: 180-51978-2 MSD | **Client Sample ID: CARB-OW-209B-020516**
Matrix: Water | **Prep Type: Total/NA**
Analysis Batch: 168808 | **Prep Batch: 168023**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoranthene	ND		20.8	18.3		ug/L		88	48 - 100	8	20
Fluorene	ND		20.8	15.5		ug/L		74	48 - 100	6	22
Indeno[1,2,3-cd]pyrene	ND		20.8	18.1		ug/L		87	47 - 100	9	21
Naphthalene	ND		20.8	13.5		ug/L		65	44 - 100	6	25
Pentachlorophenol	ND		41.7	35.5		ug/L		85	36 - 105	10	15
Phenanthrene	ND		20.8	15.8		ug/L		76	48 - 100	8	20
Pyrene	ND		20.8	17.1		ug/L		82	44 - 100	10	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*72*		*28 - 109*
2-Fluorophenol (Surr)	*66*		*20 - 105*
2,4,6-Tribromophenol (Surr)	*89*		*30 - 118*
Nitrobenzene-d5 (Surr)	*84*		*27 - 114*
Phenol-d5 (Surr)	*72*		*25 - 105*
Terphenyl-d14 (Surr)	*46*		*20 - 118*

QC Association Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-1

GC/MS VOA

Analysis Batch: 168420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51978-1	CARB-TB-02-020516	Total/NA	Water	8260B	
180-51978-2	CARB-OW-209B-020516	Total/NA	Water	8260B	
180-51978-2 MS	CARB-OW-209B-020516	Total/NA	Water	8260B	
180-51978-2 MSD	CARB-OW-209B-020516	Total/NA	Water	8260B	
LCS 180-168420/7	Lab Control Sample	Total/NA	Water	8260B	
MB 180-168420/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 168514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51978-3	CARB-OW-211A-020516	Total/NA	Water	8260B	
180-51978-4	CARB-OW-211B-020516	Total/NA	Water	8260B	
180-51978-5	CARB-OW-212B-020516	Total/NA	Water	8260B	
180-51978-6	CARB-EB-02-020516	Total/NA	Water	8260B	
LCS 180-168514/7	Lab Control Sample	Total/NA	Water	8260B	
MB 180-168514/4	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 168023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51978-2	CARB-OW-209B-020516	Total/NA	Water	3520C	
180-51978-2 MS	CARB-OW-209B-020516	Total/NA	Water	3520C	
180-51978-2 MSD	CARB-OW-209B-020516	Total/NA	Water	3520C	
180-51978-3	CARB-OW-211A-020516	Total/NA	Water	3520C	
180-51978-4	CARB-OW-211B-020516	Total/NA	Water	3520C	
180-51978-5	CARB-OW-212B-020516	Total/NA	Water	3520C	
180-51978-6	CARB-EB-02-020516	Total/NA	Water	3520C	
LCS 180-168023/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 180-168023/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 168808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51978-2	CARB-OW-209B-020516	Total/NA	Water	8270D LL	168023
180-51978-2 MS	CARB-OW-209B-020516	Total/NA	Water	8270D LL	168023
180-51978-2 MSD	CARB-OW-209B-020516	Total/NA	Water	8270D LL	168023
180-51978-3	CARB-OW-211A-020516	Total/NA	Water	8270D LL	168023
180-51978-4	CARB-OW-211B-020516	Total/NA	Water	8270D LL	168023
180-51978-5	CARB-OW-212B-020516	Total/NA	Water	8270D LL	168023
180-51978-6	CARB-EB-02-020516	Total/NA	Water	8270D LL	168023
LCS 180-168023/2-A	Lab Control Sample	Total/NA	Water	8270D LL	168023
MB 180-168023/1-A	Method Blank	Total/NA	Water	8270D LL	168023

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 101092 [redacted]

Project Name: Carbondale 2016 1SA Sampling
Project Number: OM-0414-16
Laboratory: TAPIT
Shipment Method FEDEX
Program: Carbondale 2016 1SA Sampling_001

Company: Field & Technical Services
Address: 200 Third Avenue
Carnegie, PA 15106
(412) 279-3363

Client: Beazer East, Inc.
Contact: (412) 680-4312
brick.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP	8290-Dioxins/Furans	Notes:
				Preservative	HCL	None	None	
				Total Bottle Count				
02/05/2016	0000	GW	CARB-TB-02-020516	2	2	0	0	
02/05/2016	0858	GW	CARB-OW-209B-020516	7	3	2	2	
02/05/2016	0858	GW	CARB-OW-209B-MS/MSD-020516	14	6	4	4	

Rec

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: [signature]	Signature: [signature]	Signature:	[ ] Rush
Printed Name: Brendan Rick	Printed Name: Ryan Buhr	Printed Name:	[X] Standard
Firm: FTS	Firm: FTS	Firm:	
Date/Time: 02/05/2016 1112	Date/Time: 2/6/16 0845	Date/Time:	

180-51978 Chain of Custody

Page 1 of 1

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.#

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(724) 858-5953
Laboratory:	TAPIT		Carnegie, PA 15106		btrask.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP	8280-Dioxins/Furans													Notes:
				Preservative	HCL	None	None													
				Total Bottle Count																
02/05/2016	0846	GW	CARB-OW-211A-020516	7	3	2	2													
02/05/2016	1009	GW	CARB-OW-211B-020516	7	3	2	2													

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: Ben Trask	Signature:	Signature:	[ ] Rush
Printed Name: Ben Trask	Printed Name: Ryan Butler	Printed Name:	
Firm: FTS	Firm: TAP	Firm:	[X] Standard
Date/Time: 02/05/2016 1052	Date/Time: 2/6/16 0845	Date/Time:	

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 201146

[redacted]

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(412) 728-8378
Laboratory:	TAPIT		Carnegie, PA 15106		ggelzhiser.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP														Notes:
				Preservative	HCL	None														
				Total Bottle Count																
02/05/2016	0832	GW	CARB-OW-212B-020516	5	3	2														
02/05/2016	0844	GW	CARB-EB-02-020516	5	3	2														

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature:	Signature:	Signature:	Signature:	[ ] Rush
Printed Name: Graham Gelzhiser	Printed Name:	Printed Name:	Printed Name:	
Firm FTS	Firm TAP	Firm	Firm	[X] Standard
Date/Time: 02/05/2016 0922	Date/Time: 2/6/16 0845	Date/Time:	Date/Time:	

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 101092

[redacted]

Project Name: Carbondale 2016 1SA Sampling
Project Number: OM-0414-16
Laboratory: TAPIT
Shipment Method FEDEX
Program: Carbondale 2016 1SA Sampling_001

Company: Field & Technical Services
Address: 200 Third Avenue
Carnegie, PA 15106
(412) 279-3363

Client: Beazer East, Inc.
Contact: (412) 680-4312
brick.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP	8290-Dioxins/Furans	Notes:
				Preservative	HCL	None	None	
				Total Bottle Count				
02/05/2016	0000	GW	CARB-TB-02-020516	2	2	0	0	
02/05/2016	0858	GW	CARB-OW-209B-020516	7	3	2	2	
02/05/2016	0858	GW	CARB-OW-209B-MS/MSD-020516	14	6	4	4	

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature:	[ ] Rush
Printed Name: Brendan Rick	Printed Name: Ryan Butler	Printed Name:	[X] Standard
Firm: FTS	Firm: T&P	Firm:	
Date/Time: 02/05/2016 1112	Date/Time: 2/6/16 0845	Date/Time:	

180-51978 Chain of Custody

Page 1 of 1

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.#

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(724) 858-5953
Laboratory:	TAPIT		Carnegie, PA 15106		btrask.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP	8290-Dioxins/Furans														Notes:
				Preservative	HCL	None	None														
				Total Bottle Count																	
02/05/2016	0846	GW	CARB-OW-211A-020516	7	3	2	2														
02/05/2016	1009	GW	CARB-OW-211B-020516	7	3	2	2														

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: Ben Trask	Signature:	Signature:	[ ] Rush
Printed Name: Ben Trask	Printed Name: Ryan Brown	Printed Name:	[X] Standard
Firm: FTS	Firm: TAP	Firm:	
Date/Time: 02/05/2016 1052	Date/Time: 2/6/16 0845	Date/Time:	

ORIGIN ID:MWAA (412) 963-7058
TESTAMERICA PITTSBURGH

SEE CHEERS 5 BEFORE BILL
301 ALPHA DR
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE: 05FEB16
ACTWGT: 49.10 LB
CAD: /POS1621
DIMS: 20x12x12 IN

BILL SENDER

TO

TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238

(512) 756-6001 REF:
INV:
PO: DEPT:

FedEx Express

1 of 2

TRK# 0200 8081 8311 2616

MASTER

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO AGCA

15238
PA-US PIT

ORIGIN ID:MWAA (412) 963-7058
TESTAMERICA PITTSBURGH

SEE CHEERS 5 BEFORE BILL
301 ALPHA DR
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE: 05FEB16
ACTWGT: 69.60 LB
CAD: /POS1621
DIMS: 20x12x12 IN

BILL SENDER

TO

TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238

(512) 756-6001 REF:
PO: DEPT:

FedEx Express

MPS# 0601 7623 1717 6310
Mstr# 8081 8311 2616 0200

SATURDAY 12:00
PRIORITY OVERNIGH

XO AGCA

15238
PA-US PIT

Uncorrected temp 3.8 °C
Thermometer ID
CF 0 Initials
PT-WI-SR-001 effective 7/26/13

Uncorrected temp 5.6 °C
Thermometer ID
CF 0 Initials
PT-WI-SR-001 effective 7/26/13

180-51978 Waybill

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 101092

[redacted]

Project Name: Carbondale 2016 1SA Sampling
Project Number: OM-0414-16
Laboratory: TAPIT
Shipment Method FEDEX
Program: Carbondale 2016 1SA Sampling_001

Company: Field & Technical Services
Address: 200 Third Avenue
Carnegie, PA 15106
(412) 279-3363

Client: Beazer East, Inc.
Contact: (412) 680-4312
brick.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP	8290-Dioxins/Furans													Notes:
				Preservative	HCL	None	None													
				Total Bottle Count																
02/05/2016	0000	GW	CARB-TB-02-020516	2	2	0	0													
02/05/2016	0858	GW	CARB-OW-209B-020516	7	3	2	2													180-51978
02/05/2016	0858	GW	CARB-OW-209B-MS/MSD-020516	14	6	4	4													

180-51978 Chain of Custody

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature:	[ ] Rush
Printed Name: Brendan Rick	Printed Name: Ryan Butler	Printed Name:	[X] Standard
Firm: FTS	Firm: TAP	Firm:	
Date/Time: 02/05/2016 1112	Date/Time: 2/6/16 0845	Date/Time:	

Page 1 of 1

Relinquished 2/8/16 7:00

2/8/16 9:45

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.#

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(724) 858-5953
Laboratory:	TAPIT		Carnegie, PA 15106		btrask.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C-LL-PAHs-PCP	8290-Dioxins/Furans
				Preservative	HCL	None	None
				Total Bottle Count			
02/05/2016	0840	GW	CARB-OW-211A-020516	7	3	2	2
02/05/2016	1009	GW	CARB-OW-211B-020516	7	3	2	2

Notes: 160-39733-3
160-39734-1

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: Btrask	Signature:	Signature:	[ ] Rush
Printed Name: Ben Trask	Printed Name: Ryan Brown	Printed Name:	[X] Standard
Firm: FTS	Firm: TAP	Firm:	
Date/Time: 02/05/2016 1052	Date/Time: 2/6/16 0845	Date/Time:	

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Relinquished 2/8/16 1700 2/9/16 845

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 180-51978-1

Login Number: 51978
List Number: 1
Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

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 (excluding tests with immediate HTs)	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.	True	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-51978-2
Client Project/Site: Carbondale, IL - Semiannual GW

For:
Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie

Authorized for release by:
2/29/2016 6:53:54 AM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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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Job ID: 180-51978-2

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-51978-2

Comments
No additional comments.

Receipt
The samples were received on 2/6/2016 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.8º C and 5.6º C.

Dioxin
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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
CFL	Contains Free Liquid
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)

Certification Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-2

Laboratory: TestAmerica Pittsburgh

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	200005	06-30-16

Laboratory: TestAmerica Sacramento

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	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-16
Arizona	State Program	9	AZ0708	08-11-16
Arkansas DEQ	State Program	6	88-0691	06-17-16
California	State Program	9	2897	01-31-17
Colorado	State Program	8	N/A	08-31-16
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-16
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	05-31-16
Louisiana	NELAP	6	30612	06-30-16
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA44	07-31-16
New Jersey	NELAP	2	CA005	06-30-16
New York	NELAP	2	11666	04-01-16
Oregon	NELAP	10	CA200005	01-29-17
Pennsylvania	NELAP	3	9947	03-31-16
Texas	NELAP	6	T104704399-15-9	05-31-16
US Fish & Wildlife	Federal		LE148388-0	10-31-16
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-16
Utah	NELAP	8	QUAN1	02-28-17
Virginia	NELAP Secondary AB	3	460278	03-14-16
Washington	State Program	10	C581	05-04-16
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-Q	01-29-16 *

* Certification renewal pending - certification considered valid.

Sample Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-51978-2	CARB-OW-209B-020516	Water	02/05/16 08:58	02/08/16 08:45
180-51978-3	CARB-OW-211A-020516	Water	02/05/16 08:46	02/08/16 08:45
180-51978-4	CARB-OW-211B-020516	Water	02/05/16 10:09	02/08/16 08:45

Method Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-2

Method	Method Description	Protocol	Laboratory
8290	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC

Protocol References:

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

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Lab Chronicle

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-2

Client Sample ID: CARB-OW-209B-020516 — Lab Sample ID: 180-51978-2

Date Collected: 02/05/16 08:58 — **Matrix: Water**
Date Received: 02/08/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1011.9 mL	20 uL	100412	02/15/16 13:00	DXD	TAL SAC
Total/NA	Analysis	8290		1	1011.9 mL	20 uL	101643	02/25/16 05:49	SMA	TAL SAC
	Instrument ID: 10D5									

Client Sample ID: CARB-OW-211A-020516 — Lab Sample ID: 180-51978-3

Date Collected: 02/05/16 08:46 — **Matrix: Water**
Date Received: 02/08/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			998.2 mL	20 uL	100412	02/15/16 13:00	DXD	TAL SAC
Total/NA	Analysis	8290		1	998.2 mL	20 uL	101643	02/25/16 08:06	SMA	TAL SAC
	Instrument ID: 10D5									

Client Sample ID: CARB-OW-211B-020516 — Lab Sample ID: 180-51978-4

Date Collected: 02/05/16 10:09 — **Matrix: Water**
Date Received: 02/08/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1034.5 mL	20 uL	100412	02/15/16 13:00	DXD	TAL SAC
Total/NA	Analysis	8290		1	1034.5 mL	20 uL	101643	02/25/16 08:52	SMA	TAL SAC
	Instrument ID: 10D5									

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Analyst References:

Lab: TAL SAC

Batch Type: Prep

DXD = David Do

Batch Type: Analysis

SMA = Saleh Arghestani

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-2

Client Sample ID: CARB-OW-209B-020516

Lab Sample ID: 180-51978-2
Date Collected: 02/05/16 08:58
Matrix: Water
Date Received: 02/08/16 08:45

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.9		pg/L		02/15/16 13:00	02/25/16 05:49	1
2,3,7,8-TCDF	ND		9.9		pg/L		02/15/16 13:00	02/25/16 05:49	1
1,2,3,7,8-PeCDD	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
1,2,3,7,8-PeCDF	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
2,3,4,7,8-PeCDF	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
1,2,3,4,7,8-HxCDD	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
1,2,3,6,7,8-HxCDD	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
1,2,3,7,8,9-HxCDD	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
1,2,3,4,7,8-HxCDF	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
1,2,3,6,7,8-HxCDF	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
2,3,4,6,7,8-HxCDF	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
1,2,3,7,8,9-HxCDF	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
1,2,3,4,6,7,8-HpCDD	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
1,2,3,4,6,7,8-HpCDF	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
1,2,3,4,7,8,9-HpCDF	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
OCDD	**110**		99		pg/L		02/15/16 13:00	02/25/16 05:49	1
OCDF	ND		99		pg/L		02/15/16 13:00	02/25/16 05:49	1
Total TCDD	ND		9.9		pg/L		02/15/16 13:00	02/25/16 05:49	1
Total TCDF	ND		9.9		pg/L		02/15/16 13:00	02/25/16 05:49	1
Total PeCDD	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
Total PeCDF	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
Total HxCDD	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
Total HxCDF	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
Total HpCDD	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1
Total HpCDF	ND		49		pg/L		02/15/16 13:00	02/25/16 05:49	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*80*		*40 - 135*	*02/15/16 13:00*	*02/25/16 05:49*	*1*
13C-2,3,7,8-TCDF	*80*		*40 - 135*	*02/15/16 13:00*	*02/25/16 05:49*	*1*
13C-1,2,3,7,8-PeCDD	*80*		*40 - 135*	*02/15/16 13:00*	*02/25/16 05:49*	*1*
13C-1,2,3,7,8-PeCDF	*78*		*40 - 135*	*02/15/16 13:00*	*02/25/16 05:49*	*1*
13C-1,2,3,6,7,8-HxCDD	*84*		*40 - 135*	*02/15/16 13:00*	*02/25/16 05:49*	*1*
13C-1,2,3,4,7,8-HxCDF	*79*		*40 - 135*	*02/15/16 13:00*	*02/25/16 05:49*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*94*		*40 - 135*	*02/15/16 13:00*	*02/25/16 05:49*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*87*		*40 - 135*	*02/15/16 13:00*	*02/25/16 05:49*	*1*
13C-OCDD	*98*		*40 - 135*	*02/15/16 13:00*	*02/25/16 05:49*	*1*

Client Sample ID: CARB-OW-211A-020516

Lab Sample ID: 180-51978-3
Date Collected: 02/05/16 08:46
Matrix: Water
Date Received: 02/08/16 08:45

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10		pg/L		02/15/16 13:00	02/25/16 08:06	1
2,3,7,8-TCDF	ND		10		pg/L		02/15/16 13:00	02/25/16 08:06	1
1,2,3,7,8-PeCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
1,2,3,7,8-PeCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
2,3,4,7,8-PeCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
1,2,3,4,7,8-HxCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
1,2,3,6,7,8-HxCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1

Client Sample ID: CARB-OW-211A-020516

Lab Sample ID: 180-51978-3
Date Collected: 02/05/16 08:46
Matrix: Water
Date Received: 02/08/16 08:45

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
1,2,3,4,7,8-HxCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
1,2,3,6,7,8-HxCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
2,3,4,6,7,8-HxCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
1,2,3,7,8,9-HxCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
1,2,3,4,6,7,8-HpCDD	**110**		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
1,2,3,4,6,7,8-HpCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
1,2,3,4,7,8,9-HpCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
OCDD	**970**		100		pg/L		02/15/16 13:00	02/25/16 08:06	1
OCDF	ND		100		pg/L		02/15/16 13:00	02/25/16 08:06	1
Total TCDD	ND		10		pg/L		02/15/16 13:00	02/25/16 08:06	1
Total TCDF	ND		10		pg/L		02/15/16 13:00	02/25/16 08:06	1
Total PeCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
Total PeCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
Total HxCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
Total HxCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
Total HpCDD	**210**		50		pg/L		02/15/16 13:00	02/25/16 08:06	1
Total HpCDF	**61**		50		pg/L		02/15/16 13:00	02/25/16 08:06	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*81*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:06*	*1*
13C-2,3,7,8-TCDF	*78*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:06*	*1*
13C-1,2,3,7,8-PeCDD	*79*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:06*	*1*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:06*	*1*
13C-1,2,3,6,7,8-HxCDD	*84*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:06*	*1*
13C-1,2,3,4,7,8-HxCDF	*81*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:06*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*92*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:06*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*88*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:06*	*1*
13C-OCDD	*99*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:06*	*1*

Client Sample ID: CARB-OW-211B-020516

Lab Sample ID: 180-51978-4
Date Collected: 02/05/16 10:09
Matrix: Water
Date Received: 02/08/16 08:45

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7		pg/L		02/15/16 13:00	02/25/16 08:52	1
2,3,7,8-TCDF	ND		9.7		pg/L		02/15/16 13:00	02/25/16 08:52	1
1,2,3,7,8-PeCDD	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
1,2,3,7,8-PeCDF	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
2,3,4,7,8-PeCDF	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
1,2,3,4,7,8-HxCDD	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
1,2,3,6,7,8-HxCDD	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
1,2,3,7,8,9-HxCDD	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
1,2,3,4,7,8-HxCDF	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
1,2,3,6,7,8-HxCDF	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
2,3,4,6,7,8-HxCDF	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
1,2,3,7,8,9-HxCDF	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
1,2,3,4,6,7,8-HpCDD	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
1,2,3,4,6,7,8-HpCDF	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-2

Client Sample ID: CARB-OW-211B-020516

Lab Sample ID: 180-51978-4

Date Collected: 02/05/16 10:09
Matrix: Water
Date Received: 02/08/16 08:45

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
OCDD	ND		97		pg/L		02/15/16 13:00	02/25/16 08:52	1
OCDF	ND		97		pg/L		02/15/16 13:00	02/25/16 08:52	1
Total TCDD	ND		9.7		pg/L		02/15/16 13:00	02/25/16 08:52	1
Total TCDF	ND		9.7		pg/L		02/15/16 13:00	02/25/16 08:52	1
Total PeCDD	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
Total PeCDF	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
Total HxCDD	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
Total HxCDF	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
Total HpCDD	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1
Total HpCDF	ND		48		pg/L		02/15/16 13:00	02/25/16 08:52	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*82*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:52*	*1*
13C-2,3,7,8-TCDF	*80*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:52*	*1*
13C-1,2,3,7,8-PeCDD	*82*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:52*	*1*
13C-1,2,3,7,8-PeCDF	*80*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:52*	*1*
13C-1,2,3,6,7,8-HxCDD	*88*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:52*	*1*
13C-1,2,3,4,7,8-HxCDF	*81*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:52*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*95*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:52*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*89*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:52*	*1*
13C-OCDD	*102*		*40 - 135*	*02/15/16 13:00*	*02/25/16 08:52*	*1*

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-100412/1-A
Matrix: Water
Analysis Batch: 101643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 100412

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10		pg/L		02/15/16 13:00	02/25/16 04:17	1
2,3,7,8-TCDF	ND		10		pg/L		02/15/16 13:00	02/25/16 04:17	1
1,2,3,7,8-PeCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
1,2,3,7,8-PeCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
2,3,4,7,8-PeCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
1,2,3,4,7,8-HxCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
1,2,3,6,7,8-HxCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
1,2,3,7,8,9-HxCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
1,2,3,4,7,8-HxCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
1,2,3,6,7,8-HxCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
2,3,4,6,7,8-HxCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
1,2,3,7,8,9-HxCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
1,2,3,4,6,7,8-HpCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
1,2,3,4,6,7,8-HpCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
1,2,3,4,7,8,9-HpCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
OCDD	ND		100		pg/L		02/15/16 13:00	02/25/16 04:17	1
OCDF	ND		100		pg/L		02/15/16 13:00	02/25/16 04:17	1
Total TCDD	ND		10		pg/L		02/15/16 13:00	02/25/16 04:17	1
Total TCDF	ND		10		pg/L		02/15/16 13:00	02/25/16 04:17	1
Total PeCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
Total PeCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
Total HxCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
Total HxCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
Total HpCDD	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1
Total HpCDF	ND		50		pg/L		02/15/16 13:00	02/25/16 04:17	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*78*		*40 - 135*	*02/15/16 13:00*	*02/25/16 04:17*	*1*
13C-2,3,7,8-TCDF	*77*		*40 - 135*	*02/15/16 13:00*	*02/25/16 04:17*	*1*
13C-1,2,3,7,8-PeCDD	*77*		*40 - 135*	*02/15/16 13:00*	*02/25/16 04:17*	*1*
13C-1,2,3,7,8-PeCDF	*76*		*40 - 135*	*02/15/16 13:00*	*02/25/16 04:17*	*1*
13C-1,2,3,6,7,8-HxCDD	*82*		*40 - 135*	*02/15/16 13:00*	*02/25/16 04:17*	*1*
13C-1,2,3,4,7,8-HxCDF	*76*		*40 - 135*	*02/15/16 13:00*	*02/25/16 04:17*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*91*		*40 - 135*	*02/15/16 13:00*	*02/25/16 04:17*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*86*		*40 - 135*	*02/15/16 13:00*	*02/25/16 04:17*	*1*
13C-OCDD	*99*		*40 - 135*	*02/15/16 13:00*	*02/25/16 04:17*	*1*

Lab Sample ID: LCS 320-100412/2-A
Matrix: Water
Analysis Batch: 101643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100412

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	205		pg/L		102	72 - 128
2,3,7,8-TCDF	200	204		pg/L		102	67 - 135
1,2,3,7,8-PeCDD	1000	1020		pg/L		102	71 - 135
1,2,3,7,8-PeCDF	1000	1090		pg/L		109	70 - 133
2,3,4,7,8-PeCDF	1000	1060		pg/L		106	69 - 135
1,2,3,4,7,8-HxCDD	1000	1030		pg/L		103	67 - 130

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-100412/2-A
Matrix: Water
Analysis Batch: 101643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100412

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	1000	1050		pg/L		105	61 - 144
1,2,3,7,8,9-HxCDD	1000	1020		pg/L		102	61 - 140
1,2,3,4,7,8-HxCDF	1000	1070		pg/L		107	69 - 140
1,2,3,6,7,8-HxCDF	1000	1110		pg/L		111	62 - 155
2,3,4,6,7,8-HxCDF	1000	1110		pg/L		111	70 - 146
1,2,3,7,8,9-HxCDF	1000	1080		pg/L		108	71 - 142
1,2,3,4,6,7,8-HpCDD	1000	1050		pg/L		105	71 - 134
1,2,3,4,6,7,8-HpCDF	1000	1010		pg/L		101	68 - 137
1,2,3,4,7,8,9-HpCDF	1000	1130		pg/L		113	74 - 134
OCDD	2000	2050		pg/L		102	72 - 134
OCDF	2000	2120		pg/L		106	65 - 143

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*81*		*40 - 135*
13C-2,3,7,8-TCDF	*79*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*80*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*78*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*81*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*79*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*89*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*84*		*40 - 135*
13C-OCDD	*95*		*40 - 135*

Lab Sample ID: 180-51978-2 MS
Matrix: Water
Analysis Batch: 101643

Client Sample ID: CARB-OW-209B-020516
Prep Type: Total/NA
Prep Batch: 100412

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	ND		201	203		pg/L		101	72 - 128
2,3,7,8-TCDF	ND		201	207		pg/L		103	67 - 135
1,2,3,7,8-PeCDD	ND		1000	1040		pg/L		103	71 - 135
1,2,3,7,8-PeCDF	ND		1000	1100		pg/L		110	70 - 133
2,3,4,7,8-PeCDF	ND		1000	1060		pg/L		106	69 - 135
1,2,3,4,7,8-HxCDD	ND		1000	1020		pg/L		102	67 - 130
1,2,3,6,7,8-HxCDD	ND		1000	1070		pg/L		107	61 - 144
1,2,3,7,8,9-HxCDD	ND		1000	1010		pg/L		100	61 - 140
1,2,3,4,7,8-HxCDF	ND		1000	1110		pg/L		110	69 - 140
1,2,3,6,7,8-HxCDF	ND		1000	1140		pg/L		113	62 - 155
2,3,4,6,7,8-HxCDF	ND		1000	1130		pg/L		113	70 - 146
1,2,3,7,8,9-HxCDF	ND		1000	1120		pg/L		111	71 - 142
1,2,3,4,6,7,8-HpCDD	ND		1000	1070		pg/L		106	71 - 134
1,2,3,4,6,7,8-HpCDF	ND		1000	1030		pg/L		103	68 - 137
1,2,3,4,7,8,9-HpCDF	ND		1000	1160		pg/L		116	74 - 134
OCDD	110		2010	2270		pg/L		107	72 - 134
OCDF	ND		2010	2180		pg/L		108	65 - 143

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*84*		*40 - 135*

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 180-51978-2 MS
Matrix: Water
Analysis Batch: 101643

Client Sample ID: CARB-OW-209B-020516
Prep Type: Total/NA
Prep Batch: 100412

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C-2,3,7,8-TCDF	82		40 - 135
13C-1,2,3,7,8-PeCDD	83		40 - 135
13C-1,2,3,7,8-PeCDF	82		40 - 135
13C-1,2,3,6,7,8-HxCDD	88		40 - 135
13C-1,2,3,4,7,8-HxCDF	83		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	97		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	91		40 - 135
13C-OCDD	104		40 - 135

Lab Sample ID: 180-51978-2 MSD
Matrix: Water
Analysis Batch: 101643

Client Sample ID: CARB-OW-209B-020516
Prep Type: Total/NA
Prep Batch: 100412

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	ND		198	200		pg/L		101	72 - 128	1	20
2,3,7,8-TCDF	ND		198	199		pg/L		101	67 - 135	4	20
1,2,3,7,8-PeCDD	ND		989	999		pg/L		101	71 - 135	4	20
1,2,3,7,8-PeCDF	ND		989	1060		pg/L		108	70 - 133	4	20
2,3,4,7,8-PeCDF	ND		989	1010		pg/L		102	69 - 135	5	20
1,2,3,4,7,8-HxCDD	ND		989	1000		pg/L		101	67 - 130	2	20
1,2,3,6,7,8-HxCDD	ND		989	1010		pg/L		103	61 - 144	6	20
1,2,3,7,8,9-HxCDD	ND		989	965		pg/L		98	61 - 140	4	20
1,2,3,4,7,8-HxCDF	ND		989	1060		pg/L		107	69 - 140	4	20
1,2,3,6,7,8-HxCDF	ND		989	1090		pg/L		110	62 - 155	4	20
2,3,4,6,7,8-HxCDF	ND		989	1070		pg/L		108	70 - 146	6	20
1,2,3,7,8,9-HxCDF	ND		989	1060		pg/L		107	71 - 142	5	20
1,2,3,4,6,7,8-HpCDD	ND		989	1040		pg/L		104	71 - 134	3	20
1,2,3,4,6,7,8-HpCDF	ND		989	1010		pg/L		102	68 - 137	2	20
1,2,3,4,7,8,9-HpCDF	ND		989	1120		pg/L		113	74 - 134	3	20
OCDD	110		1980	2180		pg/L		105	72 - 134	4	20
OCDF	ND		1980	2150		pg/L		108	65 - 143	2	20

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDD	80		40 - 135
13C-2,3,7,8-TCDF	79		40 - 135
13C-1,2,3,7,8-PeCDD	79		40 - 135
13C-1,2,3,7,8-PeCDF	79		40 - 135
13C-1,2,3,6,7,8-HxCDD	82		40 - 135
13C-1,2,3,4,7,8-HxCDF	79		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	89		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	84		40 - 135
13C-OCDD	92		40 - 135

QC Association Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51978-2

Specialty Organics

Prep Batch: 100412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51978-2	CARB-OW-209B-020516	Total/NA	Water	8290	
180-51978-2 MS	CARB-OW-209B-020516	Total/NA	Water	8290	
180-51978-2 MSD	CARB-OW-209B-020516	Total/NA	Water	8290	
180-51978-3	CARB-OW-211A-020516	Total/NA	Water	8290	
180-51978-4	CARB-OW-211B-020516	Total/NA	Water	8290	
LCS 320-100412/2-A	Lab Control Sample	Total/NA	Water	8290	
MB 320-100412/1-A	Method Blank	Total/NA	Water	8290	

Analysis Batch: 101643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51978-2	CARB-OW-209B-020516	Total/NA	Water	8290	100412
180-51978-2 MS	CARB-OW-209B-020516	Total/NA	Water	8290	100412
180-51978-2 MSD	CARB-OW-209B-020516	Total/NA	Water	8290	100412
180-51978-3	CARB-OW-211A-020516	Total/NA	Water	8290	100412
180-51978-4	CARB-OW-211B-020516	Total/NA	Water	8290	100412
LCS 320-100412/2-A	Lab Control Sample	Total/NA	Water	8290	100412
MB 320-100412/1-A	Method Blank	Total/NA	Water	8290	100412

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 101092

[redacted]

Project Name: Carbondale 2016 1SA Sampling
Project Number: OM-0414-16
Laboratory: TAPIT
Shipment Method FEDEX
Program: Carbondale 2016 1SA Sampling_001

Company: Field & Technical Services
Address: 200 Third Avenue
Carnegie, PA 15106
(412) 279-3363

Client: Beazer East, Inc.
Contact: (412) 680-4312
brick.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP	8290-Dioxins/Furans	Notes:
				Preservative	HCL	None	None	
				Total Bottle Count				
02/05/2016	0000	GW	CARB-TB-02-020516	2	2	0	0	
02/05/2016	0858	GW	CARB-OW-209B-020516	7	3	2	2	
02/05/2016	0858	GW	CARB-OW-209B-MS/MSD-020516	14	6	4	4	

Rec

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature:	[ ] Rush
Printed Name: Brendan Rick	Printed Name: Ryan Buhr	Printed Name:	[X] Standard
Firm: FTS	Firm: FTS	Firm:	
Date/Time: 02/05/2016 1112	Date/Time: 2/6/16 0845	Date/Time:	

180-51978 Chain of Custody

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FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.#

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(724) 858-5953
Laboratory:	TAPIT		Carnegie, PA 15106		btrask.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP	8280-Dioxins/Furans													Notes:
				Preservative	HCL	None	None													
				Total Bottle Count																
02/05/2016	0846	GW	CARB-OW-211A-020516	7	3	2	2													
02/05/2016	1009	GW	CARB-OW-211B-020516	7	3	2	2													

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: Ben Trask	Signature:	Signature:	[ ] Rush
Printed Name: Ben Trask	Printed Name: Ryan Brown	Printed Name:	
Firm: FTS	Firm: TAP	Firm:	[X] Standard
Date/Time: 02/05/2016 1052	Date/Time: 2/6/16 0845	Date/Time:	

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 201146

[redacted]

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(412) 728-8378
Laboratory:	TAPIT		Carnegie, PA 15106		ggelzhiser.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP														Notes:
				Preservative	HCL	None														
				Total Bottle Count																
02/05/2016	0832	GW	CARB-OW-212B-020516	5	3	2														
02/05/2016	0844	GW	CARB-EB-02-020516	5	3	2														

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature:	Signature:	Signature:	Signature:	[ ] Rush
Printed Name: Graham Gelzhiser	Printed Name:	Printed Name:	Printed Name:	
Firm FTS	Firm TAP	Firm	Firm	[X] Standard
Date/Time: 02/05/2016 0922	Date/Time: 2/6/16 0845	Date/Time:	Date/Time:	

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 101092

[redacted]

Project Name: Carbondale 2016 1SA Sampling
Project Number: OM-0414-16
Laboratory: TAPIT
Shipment Method FEDEX
Program: Carbondale 2016 1SA Sampling_001

Company: Field & Technical Services
Address: 200 Third Avenue
Carnegie, PA 15106
(412) 279-3363

Client: Beazer East, Inc.
Contact: (412) 680-4312
brick.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP	8290-Dioxins/Furans	Notes:
				Preservative	HCL	None	None	
				Total Bottle Count				
02/05/2016	0000	GW	CARB-TB-02-020516	2	2	0	0	
02/05/2016	0858	GW	CARB-OW-209B-020516	7	3	2	2	
02/05/2016	0858	GW	CARB-OW-209B-MS/MSD-020516	14	6	4	4	

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature:	[ ] Rush
Printed Name: Brendan Rick	Printed Name: Ryan Butler	Printed Name:	
Firm: FTS	Firm: FTS	Firm:	[X] Standard
Date/Time: 02/05/2016 1112	Date/Time: 2/6/16 0845	Date/Time:	

180-51978 Chain of Custody

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FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.#

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(724) 858-5953
Laboratory:	TAPIT		Carnegie, PA 15106		btrask.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP	8290-Dioxins/Furans													Notes:
				Preservative	HCL	None	None													
				Total Bottle Count																
02/05/2016	0846	GW	CARB-OW-211A-020516	7	3	2	2													
02/05/2016	1009	GW	CARB-OW-211B-020516	7	3	2	2													

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: Ben Trask	Signature:	Signature:	[ ] Rush
Printed Name: Ben Trask	Printed Name: Ryan Brown	Printed Name:	[X] Standard
Firm: FTS	Firm: TAP	Firm:	
Date/Time: 02/05/2016 1052	Date/Time: 2/6/16 0845	Date/Time:	

ORIGIN ID:MWAA (412) 963-7058
TESTAMERICA PITTSBURGH

SEE CHEERS 5 BEFORE BILL
301 ALPHA DR
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE: 05FEB16
ACTWGT: 49.10 LB
CAD: /POS1621
DIMS: 20x12x12 IN

BILL SENDER

TO

TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238

(512) 756-6001 REF:
INV:
PO: DEPT:

FedEx Express

1 of 2

TRK# 0200 8081 8311 2616

MASTER

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO AGCA

15238
PA-US PIT

ORIGIN ID:MWAA (412) 963-7058
TESTAMERICA PITTSBURGH

SEE CHEERS 5 BEFORE BILL
301 ALPHA DR
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE: 05FEB16
ACTWGT: 69.60 LB
CAD: /POS1621
DIMS: 20x12x12 IN

BILL SENDER

TO

TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238

(512) 756-6001 REF:
PO: DEPT:

FedEx Express

MPS# 0601 7623 1717 6310
Mstr# 8081 8311 2616 0200

SATURDAY 12:00
PRIORITY OVERNIGH

XO AGCA

15238
PA-US PIT

Uncorrected temp 3.8 °C
Thermometer ID 1
CF 0 Initials RB
PT-WI-SR-001 effective 7/26/13

Uncorrected temp 5.6 °C
Thermometer ID 1
CF 0 Initials RB
PT-WI-SR-001 effective 7/26/13

180-51978 Waybill

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 180-51978-2

Login Number: 51978
List Number: 1
Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

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 (excluding tests with immediate HTs)	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.	True	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 180-51978-2

Login Number: 51978
List Number: 2
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento
List Creation: 02/09/16 01:17 PM

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.	N/A	
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 (excluding tests with immediate HTs)	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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-51995-1
Client Project/Site: Carbondale, IL - Semiannual GW

For:
Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie

Authorized for release by:
2/26/2016 11:06:28 AM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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Have a Question? Ask The Expert

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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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Case Narrative

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Job ID: 180-51995-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-51995-1

Comments
No additional comments.

Receipt
The samples were received on 2/5/2016 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.4º C, 3.9º C, 4.2º C and 4.6º C.

GC/MS VOA
Method(s) 8260B: The following sample was diluted due to the abundance of non-target analytes: CARB-OW-205A-020416 (180-51995-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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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
CFL	Contains Free Liquid
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)

Certification Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Laboratory: TestAmerica Pittsburgh

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	200005	06-30-16

Sample Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-51995-1	CARB-TB-01-020416	Water	02/04/16 00:00	02/05/16 08:30
180-51995-2	CARB-OW-207A-020416	Water	02/04/16 11:29	02/05/16 08:30
180-51995-3	CARB-OW-206A-020416	Water	02/04/16 12:25	02/05/16 08:30
180-51995-4	CARB-OW-205A-020416	Water	02/04/16 13:38	02/05/16 08:30
180-51995-5	CARB-OW-207B-020416	Water	02/04/16 14:58	02/05/16 08:30
180-51995-6	CARB-OW-212A-020416	Water	02/04/16 16:08	02/05/16 08:30
180-51995-7	CARB-M-99A-020416	Water	02/04/16 20:00	02/05/16 08:30
180-51995-11	CARB-OW-209A-020416	Water	02/04/16 15:54	02/05/16 08:30
180-51995-12	CARB-OW-99B-020416	Water	02/04/16 20:20	02/05/16 08:30
180-51995-13	CARB-OW-208A-020416	Water	02/04/16 12:17	02/05/16 08:30
180-51995-14	CARB-OW-EB-01-020416	Water	02/04/16 12:34	02/05/16 08:30
180-51995-15	CARB-OW-208B-020416	Water	02/04/16 13:20	02/05/16 08:30
180-51995-16	CARB-OW-210A-020416	Water	02/04/16 14:40	02/05/16 08:30
180-51995-17	CARB-OW-210B-020416	Water	02/04/16 16:24	02/05/16 08:30

Method Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PIT

Protocol References:

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

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Client Sample ID: CARB-TB-01-020416 — Lab Sample ID: 180-51995-1

Date Collected: 02/04/16 00:00 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168211	02/12/16 13:45	DLF	TAL PIT
	Instrument ID: CHHP6									

Client Sample ID: CARB-OW-207A-020416 — Lab Sample ID: 180-51995-2

Date Collected: 02/04/16 11:29 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168211	02/12/16 13:22	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Prep	3520C			240 mL	0.25 mL	168023	02/10/16 10:39	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	240 mL	0.25 mL	168808	02/21/16 19:00	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-206A-020416 — Lab Sample ID: 180-51995-3

Date Collected: 02/04/16 12:25 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168211	02/12/16 15:14	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Prep	3520C			240 mL	0.25 mL	168023	02/10/16 10:40	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	240 mL	0.25 mL	168808	02/21/16 19:29	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-205A-020416 — Lab Sample ID: 180-51995-4

Date Collected: 02/04/16 13:38 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	5 mL	5 mL	168211	02/12/16 15:41	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Prep	3520C			230 mL	0.25 mL	168023	02/10/16 10:40	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	230 mL	0.25 mL	168808	02/21/16 19:57	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-207B-020416 — Lab Sample ID: 180-51995-5

Date Collected: 02/04/16 14:58 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168211	02/12/16 16:08	DLF	TAL PIT
	Instrument ID: CHHP6									

Lab Chronicle

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Client Sample ID: CARB-OW-207B-020416 — Lab Sample ID: 180-51995-5

Date Collected: 02/04/16 14:58 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			240 mL	0.25 mL	168023	02/10/16 10:40	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	240 mL	0.25 mL	168808	02/21/16 20:25	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-212A-020416 — Lab Sample ID: 180-51995-6

Date Collected: 02/04/16 16:08 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168211	02/12/16 16:33	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Prep	3520C			240 mL	0.25 mL	168023	02/10/16 10:40	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	240 mL	0.25 mL	168808	02/21/16 20:54	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-M-99A-020416 — Lab Sample ID: 180-51995-7

Date Collected: 02/04/16 20:00 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 14:42	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Prep	3520C			240 mL	0.25 mL	168023	02/10/16 10:40	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	240 mL	0.25 mL	168808	02/21/16 21:22	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-209A-020416 — Lab Sample ID: 180-51995-11

Date Collected: 02/04/16 15:54 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 15:06	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Prep	3520C			270 mL	0.25 mL	168023	02/10/16 10:40	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	270 mL	0.25 mL	168808	02/21/16 21:50	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-99B-020416 — Lab Sample ID: 180-51995-12

Date Collected: 02/04/16 20:20 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 15:30	DLF	TAL PIT

Lab Chronicle

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Client Sample ID: CARB-OW-99B-020416 — Lab Sample ID: 180-51995-12

Date Collected: 02/04/16 20:20 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 15:30	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Prep	3520C			270 mL	0.25 mL	168023	02/10/16 10:40	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	270 mL	0.25 mL	168827	02/22/16 12:26	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-208A-020416 — Lab Sample ID: 180-51995-13

Date Collected: 02/04/16 12:17 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 15:54	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Prep	3520C			240 mL	0.25 mL	168023	02/10/16 10:40	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	240 mL	0.25 mL	168827	02/22/16 12:54	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-EB-01-020416 — Lab Sample ID: 180-51995-14

Date Collected: 02/04/16 12:34 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 16:18	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Prep	3520C			240 mL	0.25 mL	168023	02/10/16 10:40	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	240 mL	0.25 mL	168827	02/22/16 13:22	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-208B-020416 — Lab Sample ID: 180-51995-15

Date Collected: 02/04/16 13:20 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 16:43	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Prep	3520C			240 mL	0.25 mL	168023	02/10/16 10:40	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	240 mL	0.25 mL	168827	02/22/16 13:51	VVP	TAL PIT
	Instrument ID: CH731									

Lab Chronicle

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Client Sample ID: CARB-OW-210A-020416

Lab Sample ID: 180-51995-16
Date Collected: 02/04/16 14:40
Matrix: Water
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 17:07	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Prep	3520C			240 mL	0.25 mL	168023	02/10/16 10:40	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	240 mL	0.25 mL	168827	02/22/16 14:19	VVP	TAL PIT
	Instrument ID: CH731									

Client Sample ID: CARB-OW-210B-020416

Lab Sample ID: 180-51995-17
Date Collected: 02/04/16 16:24
Matrix: Water
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	168514	02/17/16 17:31	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Prep	3520C			250 mL	0.25 mL	168023	02/10/16 10:40	BJT	TAL PIT
Total/NA	Analysis	8270D LL		1	250 mL	0.25 mL	168827	02/22/16 14:47	VVP	TAL PIT
	Instrument ID: CH731									

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

BJT = Bill Trout

Batch Type: Analysis

DLF = Donald Ferguson

VVP = Vincent Piccolino

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Client Sample ID: CARB-TB-01-020416

Lab Sample ID: 180-51995-1
Date Collected: 02/04/16 00:00
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/12/16 13:45	1
Ethylbenzene	ND		1.0		ug/L			02/12/16 13:45	1
Toluene	ND		1.0		ug/L			02/12/16 13:45	1
Xylenes, Total	ND		3.0		ug/L			02/12/16 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*72 - 134*		*02/12/16 13:45*	*1*
Toluene-d8 (Surr)	*109*		*80 - 120*		*02/12/16 13:45*	*1*
4-Bromofluorobenzene (Surr)	*101*		*72 - 120*		*02/12/16 13:45*	*1*
Dibromofluoromethane (Surr)	*107*		*77 - 127*		*02/12/16 13:45*	*1*

Client Sample ID: CARB-OW-207A-020416

Lab Sample ID: 180-51995-2
Date Collected: 02/04/16 11:29
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/12/16 13:22	1
Ethylbenzene	ND		1.0		ug/L			02/12/16 13:22	1
Toluene	ND		1.0		ug/L			02/12/16 13:22	1
Xylenes, Total	ND		3.0		ug/L			02/12/16 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*72 - 134*		*02/12/16 13:22*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*02/12/16 13:22*	*1*
4-Bromofluorobenzene (Surr)	*99*		*72 - 120*		*02/12/16 13:22*	*1*
Dibromofluoromethane (Surr)	*105*		*77 - 127*		*02/12/16 13:22*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Acenaphthylene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Anthracene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Benzo[a]anthracene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Benzo[b]fluoranthene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Benzo[k]fluoranthene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Benzo[g,h,i]perylene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Benzo[a]pyrene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Chrysene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Dibenz(a,h)anthracene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Fluoranthene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Fluorene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Indeno[1,2,3-cd]pyrene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Naphthalene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:39	02/21/16 19:00	1
Phenanthrene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1
Pyrene	ND		0.21		ug/L		02/10/16 10:39	02/21/16 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*46*		*28 - 109*	*02/10/16 10:39*	*02/21/16 19:00*	*1*

Client Sample ID: CARB-OW-207A-020416

Lab Sample ID: 180-51995-2
Date Collected: 02/04/16 11:29
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*41*		*20 - 105*	*02/10/16 10:39*	*02/21/16 19:00*	*1*
2,4,6-Tribromophenol (Surr)	*49*		*30 - 118*	*02/10/16 10:39*	*02/21/16 19:00*	*1*
Nitrobenzene-d5 (Surr)	*53*		*27 - 114*	*02/10/16 10:39*	*02/21/16 19:00*	*1*
Phenol-d5 (Surr)	*45*		*25 - 105*	*02/10/16 10:39*	*02/21/16 19:00*	*1*
Terphenyl-d14 (Surr)	*54*		*20 - 118*	*02/10/16 10:39*	*02/21/16 19:00*	*1*

Client Sample ID: CARB-OW-206A-020416

Lab Sample ID: 180-51995-3
Date Collected: 02/04/16 12:25
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/12/16 15:14	1
Ethylbenzene	ND		1.0		ug/L			02/12/16 15:14	1
Toluene	ND		1.0		ug/L			02/12/16 15:14	1
Xylenes, Total	ND		3.0		ug/L			02/12/16 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*72 - 134*		*02/12/16 15:14*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*02/12/16 15:14*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 120*		*02/12/16 15:14*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 127*		*02/12/16 15:14*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Acenaphthylene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Anthracene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Benzo[a]anthracene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Benzo[b]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Benzo[k]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Benzo[g,h,i]perylene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Benzo[a]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Chrysene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Dibenz(a,h)anthracene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Fluorene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Indeno[1,2,3-cd]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Naphthalene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:40	02/21/16 19:29	1
Phenanthrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1
Pyrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 19:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*44*		*28 - 109*	*02/10/16 10:40*	*02/21/16 19:29*	*1*
2-Fluorophenol (Surr)	*37*		*20 - 105*	*02/10/16 10:40*	*02/21/16 19:29*	*1*
2,4,6-Tribromophenol (Surr)	*47*		*30 - 118*	*02/10/16 10:40*	*02/21/16 19:29*	*1*
Nitrobenzene-d5 (Surr)	*51*		*27 - 114*	*02/10/16 10:40*	*02/21/16 19:29*	*1*
Phenol-d5 (Surr)	*39*		*25 - 105*	*02/10/16 10:40*	*02/21/16 19:29*	*1*
Terphenyl-d14 (Surr)	*56*		*20 - 118*	*02/10/16 10:40*	*02/21/16 19:29*	*1*

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Client Sample ID: CARB-OW-205A-020416

Lab Sample ID: 180-51995-4
Date Collected: 02/04/16 13:38
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**7.4**		5.0		ug/L			02/12/16 15:41	5
Ethylbenzene	**14**		5.0		ug/L			02/12/16 15:41	5
Toluene	ND		5.0		ug/L			02/12/16 15:41	5
Xylenes, Total	ND		15		ug/L			02/12/16 15:41	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*72 - 134*		*02/12/16 15:41*	*5*
Toluene-d8 (Surr)	*102*		*80 - 120*		*02/12/16 15:41*	*5*
4-Bromofluorobenzene (Surr)	*102*		*72 - 120*		*02/12/16 15:41*	*5*
Dibromofluoromethane (Surr)	*102*		*77 - 127*		*02/12/16 15:41*	*5*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**21**		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Acenaphthylene	**0.39**		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Anthracene	**0.82**		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Benzo[a]anthracene	ND		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Benzo[b]fluoranthene	ND		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Benzo[k]fluoranthene	ND		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Benzo[g,h,i]perylene	ND		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Benzo[a]pyrene	ND		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Chrysene	ND		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Dibenz(a,h)anthracene	ND		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Fluoranthene	**0.39**		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Fluorene	**11**		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Indeno[1,2,3-cd]pyrene	ND		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Naphthalene	**36**		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Pentachlorophenol	ND		1.1		ug/L		02/10/16 10:40	02/21/16 19:57	1
Phenanthrene	**5.1**		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1
Pyrene	ND		0.22		ug/L		02/10/16 10:40	02/21/16 19:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*28 - 109*	*02/10/16 10:40*	*02/21/16 19:57*	*1*
2-Fluorophenol (Surr)	*51*		*20 - 105*	*02/10/16 10:40*	*02/21/16 19:57*	*1*
2,4,6-Tribromophenol (Surr)	*72*		*30 - 118*	*02/10/16 10:40*	*02/21/16 19:57*	*1*
Nitrobenzene-d5 (Surr)	*64*		*27 - 114*	*02/10/16 10:40*	*02/21/16 19:57*	*1*
Phenol-d5 (Surr)	*56*		*25 - 105*	*02/10/16 10:40*	*02/21/16 19:57*	*1*
Terphenyl-d14 (Surr)	*62*		*20 - 118*	*02/10/16 10:40*	*02/21/16 19:57*	*1*

Client Sample ID: CARB-OW-207B-020416

Lab Sample ID: 180-51995-5
Date Collected: 02/04/16 14:58
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/12/16 16:08	1
Ethylbenzene	ND		1.0		ug/L			02/12/16 16:08	1
Toluene	ND		1.0		ug/L			02/12/16 16:08	1
Xylenes, Total	ND		3.0		ug/L			02/12/16 16:08	1

Client Sample ID: CARB-OW-207B-020416

Lab Sample ID: 180-51995-5
Date Collected: 02/04/16 14:58
Matrix: Water
Date Received: 02/05/16 08:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		72 - 134		02/12/16 16:08	1
Toluene-d8 (Surr)	100		80 - 120		02/12/16 16:08	1
4-Bromofluorobenzene (Surr)	98		72 - 120		02/12/16 16:08	1
Dibromofluoromethane (Surr)	101		77 - 127		02/12/16 16:08	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Acenaphthylene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Anthracene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Benzo[a]anthracene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Benzo[b]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Benzo[k]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Benzo[g,h,i]perylene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Benzo[a]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Chrysene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Dibenz(a,h)anthracene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Fluorene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Indeno[1,2,3-cd]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Naphthalene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:40	02/21/16 20:25	1
Phenanthrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1
Pyrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	72		28 - 109	02/10/16 10:40	02/21/16 20:25	1
2-Fluorophenol (Surr)	67		20 - 105	02/10/16 10:40	02/21/16 20:25	1
2,4,6-Tribromophenol (Surr)	83		30 - 118	02/10/16 10:40	02/21/16 20:25	1
Nitrobenzene-d5 (Surr)	86		27 - 114	02/10/16 10:40	02/21/16 20:25	1
Phenol-d5 (Surr)	74		25 - 105	02/10/16 10:40	02/21/16 20:25	1
Terphenyl-d14 (Surr)	83		20 - 118	02/10/16 10:40	02/21/16 20:25	1

Client Sample ID: CARB-OW-212A-020416

Lab Sample ID: 180-51995-6
Date Collected: 02/04/16 16:08
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/12/16 16:33	1
Ethylbenzene	ND		1.0		ug/L			02/12/16 16:33	1
Toluene	ND		1.0		ug/L			02/12/16 16:33	1
Xylenes, Total	ND		3.0		ug/L			02/12/16 16:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		72 - 134		02/12/16 16:33	1
Toluene-d8 (Surr)	105		80 - 120		02/12/16 16:33	1
4-Bromofluorobenzene (Surr)	98		72 - 120		02/12/16 16:33	1
Dibromofluoromethane (Surr)	98		77 - 127		02/12/16 16:33	1

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Client Sample ID: CARB-OW-212A-020416

Lab Sample ID: 180-51995-6
Date Collected: 02/04/16 16:08
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Acenaphthylene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Anthracene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Benzo[a]anthracene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Benzo[b]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Benzo[k]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Benzo[g,h,i]perylene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Benzo[a]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Chrysene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Dibenz(a,h)anthracene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Fluorene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Indeno[1,2,3-cd]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Naphthalene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:40	02/21/16 20:54	1
Phenanthrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1
Pyrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*74*		*28 - 109*	*02/10/16 10:40*	*02/21/16 20:54*	*1*
2-Fluorophenol (Surr)	*69*		*20 - 105*	*02/10/16 10:40*	*02/21/16 20:54*	*1*
2,4,6-Tribromophenol (Surr)	*88*		*30 - 118*	*02/10/16 10:40*	*02/21/16 20:54*	*1*
Nitrobenzene-d5 (Surr)	*88*		*27 - 114*	*02/10/16 10:40*	*02/21/16 20:54*	*1*
Phenol-d5 (Surr)	*76*		*25 - 105*	*02/10/16 10:40*	*02/21/16 20:54*	*1*
Terphenyl-d14 (Surr)	*85*		*20 - 118*	*02/10/16 10:40*	*02/21/16 20:54*	*1*

Client Sample ID: CARB-M-99A-020416

Lab Sample ID: 180-51995-7
Date Collected: 02/04/16 20:00
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 14:42	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 14:42	1
Toluene	ND		1.0		ug/L			02/17/16 14:42	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 14:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*72 - 134*		*02/17/16 14:42*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*02/17/16 14:42*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 120*		*02/17/16 14:42*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 127*		*02/17/16 14:42*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Acenaphthylene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Anthracene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Benzo[a]anthracene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Benzo[b]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1

Client Sample ID: CARB-M-99A-020416

Lab Sample ID: 180-51995-7
Date Collected: 02/04/16 20:00
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Benzo[g,h,i]perylene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Benzo[a]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Chrysene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Dibenz(a,h)anthracene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Fluorene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Indeno[1,2,3-cd]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Naphthalene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:40	02/21/16 21:22	1
Phenanthrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1
Pyrene	ND		0.21		ug/L		02/10/16 10:40	02/21/16 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*47*		*28 - 109*	*02/10/16 10:40*	*02/21/16 21:22*	*1*
2-Fluorophenol (Surr)	*43*		*20 - 105*	*02/10/16 10:40*	*02/21/16 21:22*	*1*
2,4,6-Tribromophenol (Surr)	*57*		*30 - 118*	*02/10/16 10:40*	*02/21/16 21:22*	*1*
Nitrobenzene-d5 (Surr)	*54*		*27 - 114*	*02/10/16 10:40*	*02/21/16 21:22*	*1*
Phenol-d5 (Surr)	*48*		*25 - 105*	*02/10/16 10:40*	*02/21/16 21:22*	*1*
Terphenyl-d14 (Surr)	*59*		*20 - 118*	*02/10/16 10:40*	*02/21/16 21:22*	*1*

Client Sample ID: CARB-OW-209A-020416

Lab Sample ID: 180-51995-11
Date Collected: 02/04/16 15:54
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 15:06	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 15:06	1
Toluene	ND		1.0		ug/L			02/17/16 15:06	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*72 - 134*		*02/17/16 15:06*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*02/17/16 15:06*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 120*		*02/17/16 15:06*	*1*
Dibromofluoromethane (Surr)	*100*		*77 - 127*		*02/17/16 15:06*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Acenaphthylene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Anthracene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Benzo[a]anthracene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Benzo[b]fluoranthene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Benzo[k]fluoranthene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Benzo[g,h,i]perylene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Benzo[a]pyrene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Chrysene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Dibenz(a,h)anthracene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1

Client Sample ID: CARB-OW-209A-020416

Lab Sample ID: 180-51995-11
Date Collected: 02/04/16 15:54
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Fluorene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Indeno[1,2,3-cd]pyrene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Naphthalene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Pentachlorophenol	ND		0.93		ug/L		02/10/16 10:40	02/21/16 21:50	1
Phenanthrene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1
Pyrene	ND		0.19		ug/L		02/10/16 10:40	02/21/16 21:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*75*		*28 - 109*	*02/10/16 10:40*	*02/21/16 21:50*	*1*
2-Fluorophenol (Surr)	*74*		*20 - 105*	*02/10/16 10:40*	*02/21/16 21:50*	*1*
2,4,6-Tribromophenol (Surr)	*93*		*30 - 118*	*02/10/16 10:40*	*02/21/16 21:50*	*1*
Nitrobenzene-d5 (Surr)	*90*		*27 - 114*	*02/10/16 10:40*	*02/21/16 21:50*	*1*
Phenol-d5 (Surr)	*80*		*25 - 105*	*02/10/16 10:40*	*02/21/16 21:50*	*1*
Terphenyl-d14 (Surr)	*91*		*20 - 118*	*02/10/16 10:40*	*02/21/16 21:50*	*1*

Client Sample ID: CARB-OW-99B-020416

Lab Sample ID: 180-51995-12
Date Collected: 02/04/16 20:20
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 15:30	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 15:30	1
Toluene	ND		1.0		ug/L			02/17/16 15:30	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 15:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*72 - 134*		*02/17/16 15:30*	*1*
Toluene-d8 (Surr)	*111*		*80 - 120*		*02/17/16 15:30*	*1*
4-Bromofluorobenzene (Surr)	*105*		*72 - 120*		*02/17/16 15:30*	*1*
Dibromofluoromethane (Surr)	*100*		*77 - 127*		*02/17/16 15:30*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Acenaphthylene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Anthracene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Benzo[a]anthracene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Benzo[b]fluoranthene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Benzo[k]fluoranthene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Benzo[g,h,i]perylene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Benzo[a]pyrene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Chrysene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Dibenz(a,h)anthracene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Fluoranthene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Fluorene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Indeno[1,2,3-cd]pyrene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Naphthalene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Pentachlorophenol	ND		0.93		ug/L		02/10/16 10:40	02/22/16 12:26	1

Client Sample ID: CARB-OW-99B-020416

Lab Sample ID: 180-51995-12
Date Collected: 02/04/16 20:20
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1
Pyrene	ND		0.19		ug/L		02/10/16 10:40	02/22/16 12:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*45*		*28 - 109*	*02/10/16 10:40*	*02/22/16 12:26*	*1*
2-Fluorophenol (Surr)	*41*		*20 - 105*	*02/10/16 10:40*	*02/22/16 12:26*	*1*
2,4,6-Tribromophenol (Surr)	*55*		*30 - 118*	*02/10/16 10:40*	*02/22/16 12:26*	*1*
Nitrobenzene-d5 (Surr)	*52*		*27 - 114*	*02/10/16 10:40*	*02/22/16 12:26*	*1*
Phenol-d5 (Surr)	*47*		*25 - 105*	*02/10/16 10:40*	*02/22/16 12:26*	*1*
Terphenyl-d14 (Surr)	*61*		*20 - 118*	*02/10/16 10:40*	*02/22/16 12:26*	*1*

Client Sample ID: CARB-OW-208A-020416

Lab Sample ID: 180-51995-13
Date Collected: 02/04/16 12:17
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 15:54	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 15:54	1
Toluene	ND		1.0		ug/L			02/17/16 15:54	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*72 - 134*		*02/17/16 15:54*	*1*
Toluene-d8 (Surr)	*112*		*80 - 120*		*02/17/16 15:54*	*1*
4-Bromofluorobenzene (Surr)	*103*		*72 - 120*		*02/17/16 15:54*	*1*
Dibromofluoromethane (Surr)	*99*		*77 - 127*		*02/17/16 15:54*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Acenaphthylene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Anthracene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Benzo[a]anthracene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Benzo[b]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Benzo[k]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Benzo[g,h,i]perylene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Benzo[a]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Chrysene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Dibenz(a,h)anthracene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Fluorene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Indeno[1,2,3-cd]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Naphthalene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:40	02/22/16 12:54	1
Phenanthrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1
Pyrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 12:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*53*		*28 - 109*	*02/10/16 10:40*	*02/22/16 12:54*	*1*
2-Fluorophenol (Surr)	*51*		*20 - 105*	*02/10/16 10:40*	*02/22/16 12:54*	*1*

Client Sample ID: CARB-OW-208A-020416

Lab Sample ID: 180-51995-13
Date Collected: 02/04/16 12:17
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*63*		*30 - 118*	*02/10/16 10:40*	*02/22/16 12:54*	*1*
Nitrobenzene-d5 (Surr)	*60*		*27 - 114*	*02/10/16 10:40*	*02/22/16 12:54*	*1*
Phenol-d5 (Surr)	*57*		*25 - 105*	*02/10/16 10:40*	*02/22/16 12:54*	*1*
Terphenyl-d14 (Surr)	*63*		*20 - 118*	*02/10/16 10:40*	*02/22/16 12:54*	*1*

Client Sample ID: CARB-OW-EB-01-020416

Lab Sample ID: 180-51995-14
Date Collected: 02/04/16 12:34
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 16:18	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 16:18	1
Toluene	ND		1.0		ug/L			02/17/16 16:18	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 16:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*72 - 134*		*02/17/16 16:18*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*02/17/16 16:18*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 120*		*02/17/16 16:18*	*1*
Dibromofluoromethane (Surr)	*103*		*77 - 127*		*02/17/16 16:18*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Acenaphthylene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Anthracene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Benzo[a]anthracene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Benzo[b]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Benzo[k]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Benzo[g,h,i]perylene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Benzo[a]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Chrysene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Dibenz(a,h)anthracene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Fluorene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Indeno[1,2,3-cd]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Naphthalene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:40	02/22/16 13:22	1
Phenanthrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1
Pyrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*70*		*28 - 109*	*02/10/16 10:40*	*02/22/16 13:22*	*1*
2-Fluorophenol (Surr)	*70*		*20 - 105*	*02/10/16 10:40*	*02/22/16 13:22*	*1*
2,4,6-Tribromophenol (Surr)	*83*		*30 - 118*	*02/10/16 10:40*	*02/22/16 13:22*	*1*
Nitrobenzene-d5 (Surr)	*80*		*27 - 114*	*02/10/16 10:40*	*02/22/16 13:22*	*1*
Phenol-d5 (Surr)	*76*		*25 - 105*	*02/10/16 10:40*	*02/22/16 13:22*	*1*
Terphenyl-d14 (Surr)	*80*		*20 - 118*	*02/10/16 10:40*	*02/22/16 13:22*	*1*

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Client Sample ID: CARB-OW-208B-020416

Lab Sample ID: 180-51995-15
Date Collected: 02/04/16 13:20
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 16:43	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 16:43	1
Toluene	ND		1.0		ug/L			02/17/16 16:43	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*72 - 134*		*02/17/16 16:43*	*1*
Toluene-d8 (Surr)	*110*		*80 - 120*		*02/17/16 16:43*	*1*
4-Bromofluorobenzene (Surr)	*101*		*72 - 120*		*02/17/16 16:43*	*1*
Dibromofluoromethane (Surr)	*103*		*77 - 127*		*02/17/16 16:43*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Acenaphthylene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Anthracene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Benzo[a]anthracene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Benzo[b]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Benzo[k]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Benzo[g,h,i]perylene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Benzo[a]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Chrysene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Dibenz(a,h)anthracene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Fluorene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Indeno[1,2,3-cd]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Naphthalene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:40	02/22/16 13:51	1
Phenanthrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1
Pyrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 13:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*50*		*28 - 109*	*02/10/16 10:40*	*02/22/16 13:51*	*1*
2-Fluorophenol (Surr)	*55*		*20 - 105*	*02/10/16 10:40*	*02/22/16 13:51*	*1*
2,4,6-Tribromophenol (Surr)	*68*		*30 - 118*	*02/10/16 10:40*	*02/22/16 13:51*	*1*
Nitrobenzene-d5 (Surr)	*65*		*27 - 114*	*02/10/16 10:40*	*02/22/16 13:51*	*1*
Phenol-d5 (Surr)	*60*		*25 - 105*	*02/10/16 10:40*	*02/22/16 13:51*	*1*
Terphenyl-d14 (Surr)	*67*		*20 - 118*	*02/10/16 10:40*	*02/22/16 13:51*	*1*

Client Sample ID: CARB-OW-210A-020416

Lab Sample ID: 180-51995-16
Date Collected: 02/04/16 14:40
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 17:07	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 17:07	1
Toluene	ND		1.0		ug/L			02/17/16 17:07	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 17:07	1

Client Sample ID: CARB-OW-210A-020416

Lab Sample ID: 180-51995-16
Date Collected: 02/04/16 14:40
Matrix: Water
Date Received: 02/05/16 08:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		72 - 134		02/17/16 17:07	1
Toluene-d8 (Surr)	108		80 - 120		02/17/16 17:07	1
4-Bromofluorobenzene (Surr)	99		72 - 120		02/17/16 17:07	1
Dibromofluoromethane (Surr)	104		77 - 127		02/17/16 17:07	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Acenaphthylene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Anthracene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Benzo[a]anthracene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Benzo[b]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Benzo[k]fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Benzo[g,h,i]perylene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Benzo[a]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Chrysene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Dibenz(a,h)anthracene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Fluoranthene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Fluorene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Indeno[1,2,3-cd]pyrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Naphthalene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:40	02/22/16 14:19	1
Phenanthrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1
Pyrene	ND		0.21		ug/L		02/10/16 10:40	02/22/16 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	62		28 - 109	02/10/16 10:40	02/22/16 14:19	1
2-Fluorophenol (Surr)	64		20 - 105	02/10/16 10:40	02/22/16 14:19	1
2,4,6-Tribromophenol (Surr)	78		30 - 118	02/10/16 10:40	02/22/16 14:19	1
Nitrobenzene-d5 (Surr)	78		27 - 114	02/10/16 10:40	02/22/16 14:19	1
Phenol-d5 (Surr)	71		25 - 105	02/10/16 10:40	02/22/16 14:19	1
Terphenyl-d14 (Surr)	75		20 - 118	02/10/16 10:40	02/22/16 14:19	1

Client Sample ID: CARB-OW-210B-020416

Lab Sample ID: 180-51995-17
Date Collected: 02/04/16 16:24
Matrix: Water
Date Received: 02/05/16 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 17:31	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 17:31	1
Toluene	ND		1.0		ug/L			02/17/16 17:31	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 17:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		72 - 134		02/17/16 17:31	1
Toluene-d8 (Surr)	109		80 - 120		02/17/16 17:31	1
4-Bromofluorobenzene (Surr)	101		72 - 120		02/17/16 17:31	1
Dibromofluoromethane (Surr)	102		77 - 127		02/17/16 17:31	1

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

Client Sample ID: CARB-OW-210B-020416

Lab Sample ID: 180-51995-17

Date Collected: 02/04/16 16:24

Matrix: Water

Date Received: 02/05/16 08:30

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Acenaphthylene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Anthracene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Benzo[a]anthracene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Benzo[b]fluoranthene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Benzo[k]fluoranthene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Benzo[g,h,i]perylene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Benzo[a]pyrene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Chrysene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Dibenz(a,h)anthracene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Fluoranthene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Fluorene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Indeno[1,2,3-cd]pyrene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Naphthalene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:40	02/22/16 14:47	1
Phenanthrene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1
Pyrene	ND		0.20		ug/L		02/10/16 10:40	02/22/16 14:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*57*		*28 - 109*	*02/10/16 10:40*	*02/22/16 14:47*	*1*
2-Fluorophenol (Surr)	*55*		*20 - 105*	*02/10/16 10:40*	*02/22/16 14:47*	*1*
2,4,6-Tribromophenol (Surr)	*68*		*30 - 118*	*02/10/16 10:40*	*02/22/16 14:47*	*1*
Nitrobenzene-d5 (Surr)	*69*		*27 - 114*	*02/10/16 10:40*	*02/22/16 14:47*	*1*
Phenol-d5 (Surr)	*60*		*25 - 105*	*02/10/16 10:40*	*02/22/16 14:47*	*1*
Terphenyl-d14 (Surr)	*69*		*20 - 118*	*02/10/16 10:40*	*02/22/16 14:47*	*1*

QC Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

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

Lab Sample ID: MB 180-168211/4
Matrix: Water
Analysis Batch: 168211

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/12/16 12:21	1
Ethylbenzene	ND		1.0		ug/L			02/12/16 12:21	1
Toluene	ND		1.0		ug/L			02/12/16 12:21	1
Xylenes, Total	ND		3.0		ug/L			02/12/16 12:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*72 - 134*		*02/12/16 12:21*	*1*
Toluene-d8 (Surr)	*109*		*80 - 120*		*02/12/16 12:21*	*1*
4-Bromofluorobenzene (Surr)	*107*		*72 - 120*		*02/12/16 12:21*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 127*		*02/12/16 12:21*	*1*

Lab Sample ID: LCS 180-168211/7
Matrix: Water
Analysis Batch: 168211

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.4		ug/L		104	80 - 121
Ethylbenzene	10.0	8.81		ug/L		88	80 - 123
Toluene	10.0	9.69		ug/L		97	80 - 125
Xylenes, Total	20.0	17.4		ug/L		87	80 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 134*
Toluene-d8 (Surr)	*91*		*80 - 120*
4-Bromofluorobenzene (Surr)	*91*		*72 - 120*
Dibromofluoromethane (Surr)	*96*		*77 - 127*

Lab Sample ID: LCSD 180-168211/8
Matrix: Water
Analysis Batch: 168211

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
Benzene	10.0	10.3		ug/L		103	80 - 121	0	15
Ethylbenzene	10.0	8.61		ug/L		86	80 - 123	2	15
Toluene	10.0	9.71		ug/L		97	80 - 125	0	15
Xylenes, Total	20.0	17.4		ug/L		87	80 - 123	0	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*72 - 134*
Toluene-d8 (Surr)	*89*		*80 - 120*
4-Bromofluorobenzene (Surr)	*93*		*72 - 120*
Dibromofluoromethane (Surr)	*94*		*77 - 127*

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

Lab Sample ID: MB 180-168514/4
Matrix: Water
Analysis Batch: 168514

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			02/17/16 11:42	1
Ethylbenzene	ND		1.0		ug/L			02/17/16 11:42	1
Toluene	ND		1.0		ug/L			02/17/16 11:42	1
Xylenes, Total	ND		3.0		ug/L			02/17/16 11:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*72 - 134*		*02/17/16 11:42*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*02/17/16 11:42*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 120*		*02/17/16 11:42*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 127*		*02/17/16 11:42*	*1*

Lab Sample ID: LCS 180-168514/7
Matrix: Water
Analysis Batch: 168514

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	11.2		ug/L		112	80 - 121
Ethylbenzene	10.0	10.3		ug/L		103	80 - 123
Toluene	10.0	11.6		ug/L		116	80 - 125
Xylenes, Total	20.0	20.4		ug/L		102	80 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*72 - 134*
Toluene-d8 (Surr)	*108*		*80 - 120*
4-Bromofluorobenzene (Surr)	*102*		*72 - 120*
Dibromofluoromethane (Surr)	*95*		*77 - 127*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 180-168023/1-A
Matrix: Water
Analysis Batch: 168808

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 168023

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Acenaphthylene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Anthracene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Benzo[a]anthracene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Benzo[b]fluoranthene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Benzo[k]fluoranthene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Benzo[g,h,i]perylene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Benzo[a]pyrene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Chrysene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Dibenz(a,h)anthracene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Fluoranthene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Fluorene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Indeno[1,2,3-cd]pyrene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: MB 180-168023/1-A
Matrix: Water
Analysis Batch: 168808

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 168023

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Pentachlorophenol	ND		1.0		ug/L		02/10/16 10:39	02/21/16 11:26	1
Phenanthrene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1
Pyrene	ND		0.20		ug/L		02/10/16 10:39	02/21/16 11:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*58*		*28 - 109*	*02/10/16 10:39*	*02/21/16 11:26*	*1*
2-Fluorophenol (Surr)	*61*		*20 - 105*	*02/10/16 10:39*	*02/21/16 11:26*	*1*
2,4,6-Tribromophenol (Surr)	*58*		*30 - 118*	*02/10/16 10:39*	*02/21/16 11:26*	*1*
Nitrobenzene-d5 (Surr)	*64*		*27 - 114*	*02/10/16 10:39*	*02/21/16 11:26*	*1*
Phenol-d5 (Surr)	*62*		*25 - 105*	*02/10/16 10:39*	*02/21/16 11:26*	*1*
Terphenyl-d14 (Surr)	*72*		*20 - 118*	*02/10/16 10:39*	*02/21/16 11:26*	*1*

Lab Sample ID: LCS 180-168023/2-A
Matrix: Water
Analysis Batch: 168808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 168023

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	20.0	12.9		ug/L		64	47 - 100
Acenaphthylene	20.0	13.7		ug/L		69	47 - 100
Anthracene	20.0	14.1		ug/L		70	49 - 100
Benzo[a]anthracene	20.0	13.7		ug/L		68	50 - 100
Benzo[b]fluoranthene	20.0	12.8		ug/L		64	43 - 100
Benzo[k]fluoranthene	20.0	14.0		ug/L		70	47 - 100
Benzo[g,h,i]perylene	20.0	14.5		ug/L		73	48 - 100
Benzo[a]pyrene	20.0	13.9		ug/L		70	47 - 100
Chrysene	20.0	13.6		ug/L		68	49 - 100
Dibenz(a,h)anthracene	20.0	14.5		ug/L		72	48 - 100
Fluoranthene	20.0	14.7		ug/L		74	48 - 100
Fluorene	20.0	13.6		ug/L		68	48 - 100
Indeno[1,2,3-cd]pyrene	20.0	14.3		ug/L		72	47 - 100
Naphthalene	20.0	13.5		ug/L		68	44 - 100
Pentachlorophenol	40.0	32.4		ug/L		81	36 - 105
Phenanthrene	20.0	13.4		ug/L		67	48 - 100
Pyrene	20.0	13.5		ug/L		68	44 - 100

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*65*		*28 - 109*
2-Fluorophenol (Surr)	*70*		*20 - 105*
2,4,6-Tribromophenol (Surr)	*74*		*30 - 118*
Nitrobenzene-d5 (Surr)	*75*		*27 - 114*
Phenol-d5 (Surr)	*69*		*25 - 105*
Terphenyl-d14 (Surr)	*68*		*20 - 118*

QC Association Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-1

GC/MS VOA

Analysis Batch: 168211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51995-1	CARB-TB-01-020416	Total/NA	Water	8260B	
180-51995-2	CARB-OW-207A-020416	Total/NA	Water	8260B	
180-51995-3	CARB-OW-206A-020416	Total/NA	Water	8260B	
180-51995-4	CARB-OW-205A-020416	Total/NA	Water	8260B	
180-51995-5	CARB-OW-207B-020416	Total/NA	Water	8260B	
180-51995-6	CARB-OW-212A-020416	Total/NA	Water	8260B	
LCS 180-168211/7	Lab Control Sample	Total/NA	Water	8260B	
LCSD 180-168211/8	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 180-168211/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 168514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51995-7	CARB-M-99A-020416	Total/NA	Water	8260B	
180-51995-11	CARB-OW-209A-020416	Total/NA	Water	8260B	
180-51995-12	CARB-OW-99B-020416	Total/NA	Water	8260B	
180-51995-13	CARB-OW-208A-020416	Total/NA	Water	8260B	
180-51995-14	CARB-OW-EB-01-020416	Total/NA	Water	8260B	
180-51995-15	CARB-OW-208B-020416	Total/NA	Water	8260B	
180-51995-16	CARB-OW-210A-020416	Total/NA	Water	8260B	
180-51995-17	CARB-OW-210B-020416	Total/NA	Water	8260B	
LCS 180-168514/7	Lab Control Sample	Total/NA	Water	8260B	
MB 180-168514/4	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 168023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51995-2	CARB-OW-207A-020416	Total/NA	Water	3520C	
180-51995-3	CARB-OW-206A-020416	Total/NA	Water	3520C	
180-51995-4	CARB-OW-205A-020416	Total/NA	Water	3520C	
180-51995-5	CARB-OW-207B-020416	Total/NA	Water	3520C	
180-51995-6	CARB-OW-212A-020416	Total/NA	Water	3520C	
180-51995-7	CARB-M-99A-020416	Total/NA	Water	3520C	
180-51995-11	CARB-OW-209A-020416	Total/NA	Water	3520C	
180-51995-12	CARB-OW-99B-020416	Total/NA	Water	3520C	
180-51995-13	CARB-OW-208A-020416	Total/NA	Water	3520C	
180-51995-14	CARB-OW-EB-01-020416	Total/NA	Water	3520C	
180-51995-15	CARB-OW-208B-020416	Total/NA	Water	3520C	
180-51995-16	CARB-OW-210A-020416	Total/NA	Water	3520C	
180-51995-17	CARB-OW-210B-020416	Total/NA	Water	3520C	
LCS 180-168023/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 180-168023/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 168808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51995-2	CARB-OW-207A-020416	Total/NA	Water	8270D LL	168023
180-51995-3	CARB-OW-206A-020416	Total/NA	Water	8270D LL	168023
180-51995-4	CARB-OW-205A-020416	Total/NA	Water	8270D LL	168023
180-51995-5	CARB-OW-207B-020416	Total/NA	Water	8270D LL	168023
180-51995-6	CARB-OW-212A-020416	Total/NA	Water	8270D LL	168023

GC/MS Semi VOA (Continued)

Analysis Batch: 168808 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51995-7	CARB-M-99A-020416	Total/NA	Water	8270D LL	168023
180-51995-11	CARB-OW-209A-020416	Total/NA	Water	8270D LL	168023
LCS 180-168023/2-A	Lab Control Sample	Total/NA	Water	8270D LL	168023
MB 180-168023/1-A	Method Blank	Total/NA	Water	8270D LL	168023

Analysis Batch: 168827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51995-12	CARB-OW-99B-020416	Total/NA	Water	8270D LL	168023
180-51995-13	CARB-OW-208A-020416	Total/NA	Water	8270D LL	168023
180-51995-14	CARB-OW-EB-01-020416	Total/NA	Water	8270D LL	168023
180-51995-15	CARB-OW-208B-020416	Total/NA	Water	8270D LL	168023
180-51995-16	CARB-OW-210A-020416	Total/NA	Water	8270D LL	168023
180-51995-17	CARB-OW-210B-020416	Total/NA	Water	8270D LL	168023

180-51995 Chain of Custody

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 201144

[redacted]

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(412) 728-8378
Laboratory:	TAPIT		Carnegie, PA 15106		ggelzhiser.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP															
				Preservative	HCL	None															
				Total Bottle Count																	Notes:
02/04/2016	0000	GW	CARB-TB-01-020416	2	2	0															
02/04/2016	1129	GW	CARB-OW-207A-020416	5	3	2															
02/04/2016	1225	GW	CARB-OW-206A-020416	5	3	2															
02/04/2016	1338	GW	CARB-OW-205A-020416	5	3	2															
02/04/2016	1458	GW	CARB-OW-207B-020416	5	3	2															
02/04/2016	1606	GW	CARB-OW-212A-020416	5	3	2															
02/04/2016	2000	GW	CARB-M-99A-020416	5	3	2															

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature:	Signature: Delia Watson	Signature:	Signature:	[ ] Rush
Printed Name: Graham Gelzhiser	Printed Name: Debra Watson	Printed Name:	Printed Name:	[X] Standard
Firm: FTS	Firm: TAPIT	Firm:	Firm:	
Date/Time: 02/04/2016 1757	Date/Time: 2-5-16 8:30	Date/Time:	Date/Time:	

Page 1 of 1

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 101090

[redacted]

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(412) 680-4312
Laboratory:	TAPIT		Carnegie, PA 15106		brick.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260-Dichlorodifluoromethane	8260B-BTEX	8270C TL-PAHs+PCP													Notes:
				Preservative	None															
				Total Bottle Count																
02/04/2016	1202	GW	CARB-OW-102B-020416	2	2	0	0													
02/04/2016	1303	GW	CARB-OW-035B-020416	2	2	0	0													
02/04/2016	1450	GW	CARB-OW-022BR-020416	2	2	0	0													
02/04/2016	1554	GW	CARB-OW-209A-020416	7	2	3	2													
02/04/2016	2020	GW	CARB-OW-99B-020416	7	2	3	2													

rec'd

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: [signature]	Signature:	Signature: [signature]	Rush
Printed Name: Brendan Rick	Printed Name:	Printed Name: Debbie Watson	
Firm FTS	Firm	Firm TAP	Standard X
Date/Time: 02/04/2016 1749	Date/Time:	Date/Time: 2-5-16 8:30	

Page 1 of 1

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# [redacted]

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(724) 858-5953
Laboratory:	TAPIT		Carnegie, PA 15106		btrask.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP	8290-Dioxins/Furans													Notes:
				Preservative	HCL	None														
				Total Bottle Count																
02/04/2016	1217	GW	CARB-OW-208A-020416	5	3	2	0													
02/04/2016	1234	GW	CARB-EB-01-020416	5	3	2	0													
02/04/2016	1320	GW	CARB-OW-208B-020416	5	3	2	0													
02/04/2016	1440	GW	CARB-OW-210A-020416	7	3	2	2													
02/04/2016	1624	GW	CARB-OW-210B-020416	7	3	2	2													

recvd by -

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: Ben Trask	Signature:	Signature: Debbie Watson	[ ] Rush
Printed Name: Ben Trask	Printed Name:	Printed Name: Debbie Watson	[X] Standard
Firm: FTS	Firm	Firm: TAP	
Date/Time: 02/04/2016 1707	Date/Time:	Date/Time: 2-5-16 8:30	

Page 1 of 1

ORIGIN ID:MWAA (412) 963-7058
TESTAMERICA PITTSBURGH

SEE CHEERS 5 BEFORE BILL
301 ALPHA DR
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE: 04FEB16
ACTWGT: 65.80 LB
CAD: /POS1621
DIMS: 18x12x10 IN

BILL SENDER

TO

TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(512) 756-6001 REF:
INV:
PO: DEPT:

FedEx Express

1 of 4

TRK# 0200 8081 8311 2649

MASTER

FRI - 05 FEB 10:30A
PRIORITY OVERNIGHT

XLAGCA

15238
PA-US PIT

Uncorrected temp
Thermometer ID
0
CF
Initials
PT-WI-SR-001 effective 7/26/13

4.2°C

ORIGIN ID:MWAA (412) 963-7058
TESTAMERICA PITTSBURGH
SEE CHEERS 5 BEFORE BILL
301 ALPHA DR
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE: 04FEB16
ACTWGT: 60.10 LB
CAD: /POS1621
DIMS: 18x12x10 IN
BILL SENDER

TO

TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(512) 766-6001
INV:
PO:
REF:
DEPT:

FedEx Express

2 of 4
MPS# 0681 7823 1282 9973
Mstr# 8081 8311 2649

XH AGCA

0200

FRI - 05 FEB 10:30A
PRIORITY OVERNIGHT

15238
PA-US PIT

Uncorrected temp
Thermometer ID
CF
Initials

PT-WI-SR-001 effective 7/26/13

180-51995 Waybill

ORIGIN ID:MWAA (412) 963-7058
TESTAMERICA PITTSBURGH

SEE CHEERS 5 BEFORE BILL
301 ALPHA DR
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE: 04FEB16
ACTWGT: 53.00 LB
CAD: 7POS1621
DIMS: 18x12x10 IN

BILL SENDER

TO

TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(412) 766-6001
INV:
PO:
REF:
DEPT:

FedEx Express

3 of 4
MPS# 0681 7823 1282 9984
Mstr# 8081 8311 2649

FRI - 05 FEB 10:30A
PRIORITY OVERNIGHT

0200

XH AGCA

15238
PA-US PIT

Uncorrected temp 2.6 °C
Thermometer ID
CF 0 Initials
PT-WI-SR-001 effective 7/28/15

2365

IRONMENTAL TES

ORIGIN ID:MWAA (412) 963-7058
TESTAMERICA PITTSBURGH
SEE CHEERS 5 BEFORE BILL
301 ALPHA DR
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE: 04FEB16
ACTWGT: 58.10 LB
CAD: /POS1621
DIMS: 18x12x10 IN
BILL SENDER

TO

TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(512) 756-6001

INV:
PO:
REF:
DEPT:

FedEx Express

4 of 4

MPS# 0681 7823 1282 9995
Mstr# 8081 8311 2649

FRI - 05 FEB 10:30A
PRIORITY OVERNIGHT

XH AGCA

0200

15238
PA-US PIT

Uncorrected temp
Thermometer ID
°F °C

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 101090

[redacted]

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(412) 380-4312
Laboratory:	TAPIT		Carnegie, PA 15106		brick.2005@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260-Oxygenates	8260 BTEX	8270C-LL PAHs-PCP													
				Preservative	None															
				Total Bottle Count																Notes:
02/04/2016	1202	GW	CARB-OW-1028-020416	2	2	0	0													~~180-51995~~ -5
02/04/2016	1303	GW	CARB-OW-0358-020416	2	2	0	0													
02/04/2016	1400	GW	CARB-OW-0225R-020416	2	2	0	0													
02/04/2016	1554	GW	CARB-OW-209A-020416	7	2	3	2													
02/04/2016	2030	GW	CARB-OW-999-020416	7	2	3	2													

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: [signature]	Signature:	Signature: [signature]	Rush
Printed Name: Brendan Rick	Printed Name:	Printed Name: Delaric Watson	
Firm: FTS	Firm:	Firm: TAP	X Standard
Date/Time: 02/04/2016 1749	Date/Time:	Date/Time: 2-5-16 8:30	

rec'd

Page 1 of 1

Relinquish [signature] 2/8/16 1700 [signature] 2/9/16 945

180-51995 Chain of Custody

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# [redacted]

Project Name: Carbondale 2016 1SA Sampling
Project Number: OM-0414-16
Laboratory: TAPIT
Shipment Method FEDEX
Program: Carbondale 2016 1SA Sampling_001

Company: Field & Technical Services
Address: 200 Third Avenue
Carnegie, PA 15106
(412) 279-3363

Client: Beazer East, Inc
Contact: (724) 858-5953
btrask.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs/PCP	8290-Dioxins/Furans													Notes:
				Preservative	HCL	None														
				Total Bottle Count																
02/04/2016	1217	GW	CARB-OW-208A-020416	5	3	2	0													
02/04/2016	1234	GW	CARB-EB-01-020416	5	3	2	0													
02/04/2016	1320	GW	CARB-OW-208B-020416	5	3	2	0													
02/04/2016	1440	GW	CARB-OW-210A-020416	7	3	2	2													1530 - 5448
02/04/2016	1624	GW	CARB-OW-210B-020416	7	3	2	2													

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: Ben Trask	Signature:	Signature: Debbie Watson	[ ] Rush
Printed Name: Ben Trask	Printed Name:	Printed Name: Debbie Watson	[x] Standard
Firm: FTS	Firm:	Firm: TAP	
Date/Time: 02/04/2016 1707	Date/Time:	Date/Time: 2-5-16 8:30	

Received by

Page 1 of 1

Relinquish. 2/8/16 2/9/16 945

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 101090
[redacted]

Project Name:	Carbondale 2016 1SA Sampling	Company	Field & Technical Services	Client	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact	(412) 660-4312
Laboratory:	TAPIT		Carnegie, PA 15106		brick.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260-Benzene/Toluene	8270-BTEX	8270-1,2,4-TMB/PCP	Notes:
				Preservative	None			
				Total Bottle Count				
02/04/2016	1300	GW	CARB GW-100B-020416	2	2	0	0	
02/04/2016	1305	GW	CARB-GW 035B-020416	2	2	0	0	
02/04/2016	1100	GW	CARB-GW-039BR 020416	3	2	0	0	
02/04/2016	1254	GW	CARB-GW-039A 020416	7	2	3	2	
02/04/2016	2000	GW	CARB GW-99B-020416	7	2	3	2	

180-51995

recv'd

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: [signature]	Signature:	Signature: [signature]	[ ] Rush
Printed Name: Brendan Rick	Printed Name:	Printed Name: [signature]	[x] Standard
Firm: FTS	Firm:	Firm: TAP	
Date/Time: 02/04/2016 1740	Date/Time:	Date/Time: 2-5-16 8:30	

Page 1 of 1

Relinquish [signature] 2/8/16 1700 [signature] 2/9/16 945

180-51995 Chain of Custody

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# [redacted]

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(724) 858-5953
Laboratory:	TAPIT		Carnegie, PA 15106		btrask.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP	8290 Dioxins/Furans	Notes
				Preservative	HCL	None		
				Total Bottle Count				
02/04/2016	1217	GW	CARB-OW-208A-020416	5	3	2	0	
02/04/2016	1234	GW	CARB-EB-01-020416	5	3	2	0	
02/04/2016	1320	GW	CARB-OW-208B-020416	5	3	2	0	
02/04/2016	1440	GW	CARB-OW-210A-020416	7	3	2	2	
02/04/2016	1624	GW	CARB-OW-210B-020416	7	3	2	2	1630 - 1648 - 16 17

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: Ben Trask	Signature:	Signature: Debbie Watson (recvd by)	[ ] Rush
Printed Name: Ben Trask	Printed Name:	Printed Name: Debbie Watson	[X] Standard
Firm: FTS	Firm:	Firm: TAP	
Date/Time: 02/04/2016 1707	Date/Time:	Date/Time: 2-5-16 8:30	

Page 1 of 1

Ben Trask 02/8/16 17:00

2/9/16 9:45

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 180-51995-1

Login Number: 51995
List Number: 1
Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

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 (excluding tests with immediate HTs)	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.	True	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-51995-2
Client Project/Site: Carbondale, IL - Semiannual GW

For:
Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie

Authorized for release by:
2/29/2016 6:54:55 AM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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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Receipt Checklists 27

Job ID: 180-51995-2

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-51995-2

Comments
No additional comments.

Receipt
The samples were received on 2/5/2016 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.4º C, 3.9º C, 4.2º C and 4.6º C.

Dioxin
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-2

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
CFL	Contains Free Liquid
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)

Certification Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-2

Laboratory: TestAmerica Pittsburgh

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	200005	06-30-16

Laboratory: TestAmerica Sacramento

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	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-16
Arizona	State Program	9	AZ0708	08-11-16
Arkansas DEQ	State Program	6	88-0691	06-17-16
California	State Program	9	2897	01-31-17
Colorado	State Program	8	N/A	08-31-16
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-16
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	05-31-16
Louisiana	NELAP	6	30612	06-30-16
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA44	07-31-16
New Jersey	NELAP	2	CA005	06-30-16
New York	NELAP	2	11666	04-01-16
Oregon	NELAP	10	CA200005	01-29-17
Pennsylvania	NELAP	3	9947	03-31-16
Texas	NELAP	6	T104704399-15-9	05-31-16
US Fish & Wildlife	Federal		LE148388-0	10-31-16
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-16
Utah	NELAP	8	QUAN1	02-28-17
Virginia	NELAP Secondary AB	3	460278	03-14-16
Washington	State Program	10	C581	05-04-16
West Virginia (DW)	State Program	3	9930C	12-31-16
Wyoming	State Program	8	8TMS-Q	01-29-16 *

* Certification renewal pending - certification considered valid.

Sample Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-51995-8	CARB-OW-102B-020416	Water	02/04/16 12:02	02/05/16 08:30
180-51995-9	CARB-OW-0358-020416	Water	02/04/16 13:03	02/05/16 08:30
180-51995-10	CARB-OW-022BR-020416	Water	02/04/16 14:50	02/05/16 08:30
180-51995-11	CARB-OW-209A-020416	Water	02/04/16 15:54	02/05/16 08:30
180-51995-12	CARB-OW-99B-020416	Water	02/04/16 20:20	02/05/16 08:30
180-51995-16	CARB-OW-210A-020416	Water	02/04/16 14:40	02/05/16 08:30
180-51995-17	CARB-OW-210B-020416	Water	02/04/16 16:24	02/05/16 08:30

Method Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-2

Method	Method Description	Protocol	Laboratory
8290	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC

Protocol References:

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

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Lab Chronicle

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-2

Client Sample ID: CARB-OW-102B-020416 — Lab Sample ID: 180-51995-8

Date Collected: 02/04/16 12:02 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1041.8 mL	20 uL	100246	02/11/16 13:54	DXD	TAL SAC
Total/NA	Analysis	8290		1	1041.8 mL	20 uL	101408	02/23/16 23:56	SMA	TAL SAC
	Instrument ID: 3D5									

Client Sample ID: CARB-OW-0358-020416 — Lab Sample ID: 180-51995-9

Date Collected: 02/04/16 13:03 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1030.3 mL	20 uL	100246	02/11/16 13:54	DXD	TAL SAC
Total/NA	Analysis	8290		1	1030.3 mL	20 uL	101408	02/24/16 00:42	SMA	TAL SAC
	Instrument ID: 3D5									

Client Sample ID: CARB-OW-022BR-020416 — Lab Sample ID: 180-51995-10

Date Collected: 02/04/16 14:50 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1039.4 mL	20 uL	100246	02/11/16 13:54	DXD	TAL SAC
Total/NA	Analysis	8290		1	1039.4 mL	20 uL	101408	02/24/16 01:28	SMA	TAL SAC
	Instrument ID: 3D5									

Client Sample ID: CARB-OW-209A-020416 — Lab Sample ID: 180-51995-11

Date Collected: 02/04/16 15:54 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1002 mL	20 uL	100246	02/11/16 13:54	DXD	TAL SAC
Total/NA	Analysis	8290		1	1002 mL	20 uL	101408	02/24/16 02:14	SMA	TAL SAC
	Instrument ID: 3D5									

Client Sample ID: CARB-OW-99B-020416 — Lab Sample ID: 180-51995-12

Date Collected: 02/04/16 20:20 — **Matrix: Water**
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1020.5 mL	20 uL	100246	02/11/16 13:54	DXD	TAL SAC
Total/NA	Analysis	8290		1	1020.5 mL	20 uL	101664	02/25/16 02:11	SMA	TAL SAC
	Instrument ID: 3D5									

Lab Chronicle

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-2

Client Sample ID: CARB-OW-210A-020416

Lab Sample ID: 180-51995-16
Date Collected: 02/04/16 14:40
Matrix: Water
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1033.9 mL	20 uL	100246	02/11/16 13:54	DXD	TAL SAC
Total/NA	Analysis	8290		1	1033.9 mL	20 uL	101664	02/25/16 02:57	SMA	TAL SAC
	Instrument ID: 3D5									

Client Sample ID: CARB-OW-210B-020416

Lab Sample ID: 180-51995-17
Date Collected: 02/04/16 16:24
Matrix: Water
Date Received: 02/05/16 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1017.1 mL	20 uL	100246	02/11/16 13:54	DXD	TAL SAC
Total/NA	Analysis	8290		1	1017.1 mL	20 uL	101664	02/25/16 03:43	SMA	TAL SAC
	Instrument ID: 3D5									

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Analyst References:

Lab: TAL SAC

Batch Type: Prep

DXD = David Do

Batch Type: Analysis

SMA = Saleh Arghestani

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-2

Client Sample ID: CARB-OW-102B-020416

Lab Sample ID: 180-51995-8
Date Collected: 02/04/16 12:02
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6		pg/L		02/11/16 13:54	02/23/16 23:56	1
2,3,7,8-TCDF	ND		9.6		pg/L		02/11/16 13:54	02/23/16 23:56	1
1,2,3,7,8-PeCDD	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
1,2,3,7,8-PeCDF	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
2,3,4,7,8-PeCDF	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
1,2,3,4,7,8-HxCDD	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
1,2,3,6,7,8-HxCDD	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
1,2,3,7,8,9-HxCDD	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
1,2,3,4,7,8-HxCDF	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
1,2,3,6,7,8-HxCDF	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
2,3,4,6,7,8-HxCDF	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
1,2,3,7,8,9-HxCDF	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
1,2,3,4,6,7,8-HpCDD	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
1,2,3,4,6,7,8-HpCDF	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
1,2,3,4,7,8,9-HpCDF	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
OCDD	ND		96		pg/L		02/11/16 13:54	02/23/16 23:56	1
OCDF	ND		96		pg/L		02/11/16 13:54	02/23/16 23:56	1
Total TCDD	ND		9.6		pg/L		02/11/16 13:54	02/23/16 23:56	1
Total TCDF	ND		9.6		pg/L		02/11/16 13:54	02/23/16 23:56	1
Total PeCDD	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
Total PeCDF	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
Total HxCDD	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
Total HxCDF	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
Total HpCDD	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1
Total HpCDF	ND		48		pg/L		02/11/16 13:54	02/23/16 23:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*75*		*40 - 135*	*02/11/16 13:54*	*02/23/16 23:56*	*1*
13C-2,3,7,8-TCDF	*71*		*40 - 135*	*02/11/16 13:54*	*02/23/16 23:56*	*1*
13C-1,2,3,7,8-PeCDD	*77*		*40 - 135*	*02/11/16 13:54*	*02/23/16 23:56*	*1*
13C-1,2,3,7,8-PeCDF	*75*		*40 - 135*	*02/11/16 13:54*	*02/23/16 23:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*79*		*40 - 135*	*02/11/16 13:54*	*02/23/16 23:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*84*		*40 - 135*	*02/11/16 13:54*	*02/23/16 23:56*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*91*		*40 - 135*	*02/11/16 13:54*	*02/23/16 23:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*89*		*40 - 135*	*02/11/16 13:54*	*02/23/16 23:56*	*1*
13C-OCDD	*82*		*40 - 135*	*02/11/16 13:54*	*02/23/16 23:56*	*1*

Client Sample ID: CARB-OW-0358-020416

Lab Sample ID: 180-51995-9
Date Collected: 02/04/16 13:03
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7		pg/L		02/11/16 13:54	02/24/16 00:42	1
2,3,7,8-TCDF	ND		9.7		pg/L		02/11/16 13:54	02/24/16 00:42	1
1,2,3,7,8-PeCDD	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
1,2,3,7,8-PeCDF	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
2,3,4,7,8-PeCDF	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
1,2,3,4,7,8-HxCDD	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
1,2,3,6,7,8-HxCDD	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1

Client Sample ID: CARB-OW-0358-020416

Lab Sample ID: 180-51995-9
Date Collected: 02/04/16 13:03
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
1,2,3,4,7,8-HxCDF	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
1,2,3,6,7,8-HxCDF	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
2,3,4,6,7,8-HxCDF	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
1,2,3,7,8,9-HxCDF	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
1,2,3,4,6,7,8-HpCDD	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
1,2,3,4,6,7,8-HpCDF	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
1,2,3,4,7,8,9-HpCDF	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
OCDD	**170**		97		pg/L		02/11/16 13:54	02/24/16 00:42	1
OCDF	ND		97		pg/L		02/11/16 13:54	02/24/16 00:42	1
Total TCDD	ND		9.7		pg/L		02/11/16 13:54	02/24/16 00:42	1
Total TCDF	ND		9.7		pg/L		02/11/16 13:54	02/24/16 00:42	1
Total PeCDD	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
Total PeCDF	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
Total HxCDD	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
Total HxCDF	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
Total HpCDD	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1
Total HpCDF	ND		49		pg/L		02/11/16 13:54	02/24/16 00:42	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*77*		*40 - 135*	*02/11/16 13:54*	*02/24/16 00:42*	*1*
13C-2,3,7,8-TCDF	*75*		*40 - 135*	*02/11/16 13:54*	*02/24/16 00:42*	*1*
13C-1,2,3,7,8-PeCDD	*78*		*40 - 135*	*02/11/16 13:54*	*02/24/16 00:42*	*1*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*	*02/11/16 13:54*	*02/24/16 00:42*	*1*
13C-1,2,3,6,7,8-HxCDD	*84*		*40 - 135*	*02/11/16 13:54*	*02/24/16 00:42*	*1*
13C-1,2,3,4,7,8-HxCDF	*90*		*40 - 135*	*02/11/16 13:54*	*02/24/16 00:42*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*103*		*40 - 135*	*02/11/16 13:54*	*02/24/16 00:42*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*98*		*40 - 135*	*02/11/16 13:54*	*02/24/16 00:42*	*1*
13C-OCDD	*95*		*40 - 135*	*02/11/16 13:54*	*02/24/16 00:42*	*1*

Client Sample ID: CARB-OW-022BR-020416

Lab Sample ID: 180-51995-10
Date Collected: 02/04/16 14:50
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6		pg/L		02/11/16 13:54	02/24/16 01:28	1
2,3,7,8-TCDF	ND		9.6		pg/L		02/11/16 13:54	02/24/16 01:28	1
1,2,3,7,8-PeCDD	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
1,2,3,7,8-PeCDF	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
2,3,4,7,8-PeCDF	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
1,2,3,4,7,8-HxCDD	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
1,2,3,6,7,8-HxCDD	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
1,2,3,7,8,9-HxCDD	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
1,2,3,4,7,8-HxCDF	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
1,2,3,6,7,8-HxCDF	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
2,3,4,6,7,8-HxCDF	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
1,2,3,7,8,9-HxCDF	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
1,2,3,4,6,7,8-HpCDD	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
1,2,3,4,6,7,8-HpCDF	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1

Client Sample ID: CARB-OW-022BR-020416

Lab Sample ID: 180-51995-10
Date Collected: 02/04/16 14:50
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
OCDD	ND		96		pg/L		02/11/16 13:54	02/24/16 01:28	1
OCDF	ND		96		pg/L		02/11/16 13:54	02/24/16 01:28	1
Total TCDD	ND		9.6		pg/L		02/11/16 13:54	02/24/16 01:28	1
Total TCDF	ND		9.6		pg/L		02/11/16 13:54	02/24/16 01:28	1
Total PeCDD	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
Total PeCDF	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
Total HxCDD	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
Total HxCDF	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
Total HpCDD	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1
Total HpCDF	ND		48		pg/L		02/11/16 13:54	02/24/16 01:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*77*		*40 - 135*	*02/11/16 13:54*	*02/24/16 01:28*	*1*
13C-2,3,7,8-TCDF	*74*		*40 - 135*	*02/11/16 13:54*	*02/24/16 01:28*	*1*
13C-1,2,3,7,8-PeCDD	*80*		*40 - 135*	*02/11/16 13:54*	*02/24/16 01:28*	*1*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*	*02/11/16 13:54*	*02/24/16 01:28*	*1*
13C-1,2,3,6,7,8-HxCDD	*80*		*40 - 135*	*02/11/16 13:54*	*02/24/16 01:28*	*1*
13C-1,2,3,4,7,8-HxCDF	*88*		*40 - 135*	*02/11/16 13:54*	*02/24/16 01:28*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*99*		*40 - 135*	*02/11/16 13:54*	*02/24/16 01:28*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*96*		*40 - 135*	*02/11/16 13:54*	*02/24/16 01:28*	*1*
13C-OCDD	*99*		*40 - 135*	*02/11/16 13:54*	*02/24/16 01:28*	*1*

Client Sample ID: CARB-OW-209A-020416

Lab Sample ID: 180-51995-11
Date Collected: 02/04/16 15:54
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10		pg/L		02/11/16 13:54	02/24/16 02:14	1
2,3,7,8-TCDF	ND		10		pg/L		02/11/16 13:54	02/24/16 02:14	1
1,2,3,7,8-PeCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
1,2,3,7,8-PeCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
2,3,4,7,8-PeCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
1,2,3,4,7,8-HxCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
1,2,3,6,7,8-HxCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
1,2,3,7,8,9-HxCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
1,2,3,4,7,8-HxCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
1,2,3,6,7,8-HxCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
2,3,4,6,7,8-HxCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
1,2,3,7,8,9-HxCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
1,2,3,4,6,7,8-HpCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
1,2,3,4,6,7,8-HpCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
1,2,3,4,7,8,9-HpCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
OCDD	ND		100		pg/L		02/11/16 13:54	02/24/16 02:14	1
OCDF	ND		100		pg/L		02/11/16 13:54	02/24/16 02:14	1
Total TCDD	ND		10		pg/L		02/11/16 13:54	02/24/16 02:14	1
Total TCDF	ND		10		pg/L		02/11/16 13:54	02/24/16 02:14	1
Total PeCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
Total PeCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1

Client Sample ID: CARB-OW-209A-020416

Lab Sample ID: 180-51995-11
Date Collected: 02/04/16 15:54
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
Total HxCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
Total HpCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1
Total HpCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 02:14	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*76*		*40 - 135*	*02/11/16 13:54*	*02/24/16 02:14*	*1*
13C-2,3,7,8-TCDF	*75*		*40 - 135*	*02/11/16 13:54*	*02/24/16 02:14*	*1*
13C-1,2,3,7,8-PeCDD	*78*		*40 - 135*	*02/11/16 13:54*	*02/24/16 02:14*	*1*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*	*02/11/16 13:54*	*02/24/16 02:14*	*1*
13C-1,2,3,6,7,8-HxCDD	*79*		*40 - 135*	*02/11/16 13:54*	*02/24/16 02:14*	*1*
13C-1,2,3,4,7,8-HxCDF	*86*		*40 - 135*	*02/11/16 13:54*	*02/24/16 02:14*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*99*		*40 - 135*	*02/11/16 13:54*	*02/24/16 02:14*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*95*		*40 - 135*	*02/11/16 13:54*	*02/24/16 02:14*	*1*
13C-OCDD	*99*		*40 - 135*	*02/11/16 13:54*	*02/24/16 02:14*	*1*

Client Sample ID: CARB-OW-99B-020416

Lab Sample ID: 180-51995-12
Date Collected: 02/04/16 20:20
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.8		pg/L		02/11/16 13:54	02/25/16 02:11	1
2,3,7,8-TCDF	ND		9.8		pg/L		02/11/16 13:54	02/25/16 02:11	1
1,2,3,7,8-PeCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
1,2,3,7,8-PeCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
2,3,4,7,8-PeCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
1,2,3,4,7,8-HxCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
1,2,3,6,7,8-HxCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
1,2,3,7,8,9-HxCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
1,2,3,4,7,8-HxCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
1,2,3,6,7,8-HxCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
2,3,4,6,7,8-HxCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
1,2,3,7,8,9-HxCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
1,2,3,4,6,7,8-HpCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
1,2,3,4,6,7,8-HpCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
1,2,3,4,7,8,9-HpCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
OCDD	ND		98		pg/L		02/11/16 13:54	02/25/16 02:11	1
OCDF	ND		98		pg/L		02/11/16 13:54	02/25/16 02:11	1
Total TCDD	ND		9.8		pg/L		02/11/16 13:54	02/25/16 02:11	1
Total TCDF	ND		9.8		pg/L		02/11/16 13:54	02/25/16 02:11	1
Total PeCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
Total PeCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
Total HxCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
Total HxCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
Total HpCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1
Total HpCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 02:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*74*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:11*	*1*
13C-2,3,7,8-TCDF	*73*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:11*	*1*

Client Sample ID: CARB-OW-99B-020416

Lab Sample ID: 180-51995-12
Date Collected: 02/04/16 20:20
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,7,8-PeCDD	*74*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:11*	*1*
13C-1,2,3,7,8-PeCDF	*72*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:11*	*1*
13C-1,2,3,6,7,8-HxCDD	*79*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:11*	*1*
13C-1,2,3,4,7,8-HxCDF	*93*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:11*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*83*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:11*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*91*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:11*	*1*
13C-OCDD	*70*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:11*	*1*

Client Sample ID: CARB-OW-210A-020416

Lab Sample ID: 180-51995-16
Date Collected: 02/04/16 14:40
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7		pg/L		02/11/16 13:54	02/25/16 02:57	1
2,3,7,8-TCDF	ND		9.7		pg/L		02/11/16 13:54	02/25/16 02:57	1
1,2,3,7,8-PeCDD	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
1,2,3,7,8-PeCDF	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
2,3,4,7,8-PeCDF	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
1,2,3,4,7,8-HxCDD	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
1,2,3,6,7,8-HxCDD	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
1,2,3,7,8,9-HxCDD	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
1,2,3,4,7,8-HxCDF	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
1,2,3,6,7,8-HxCDF	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
2,3,4,6,7,8-HxCDF	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
1,2,3,7,8,9-HxCDF	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
1,2,3,4,6,7,8-HpCDD	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
1,2,3,4,6,7,8-HpCDF	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
1,2,3,4,7,8,9-HpCDF	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
OCDD	**150**		97		pg/L		02/11/16 13:54	02/25/16 02:57	1
OCDF	ND		97		pg/L		02/11/16 13:54	02/25/16 02:57	1
Total TCDD	ND		9.7		pg/L		02/11/16 13:54	02/25/16 02:57	1
Total TCDF	ND		9.7		pg/L		02/11/16 13:54	02/25/16 02:57	1
Total PeCDD	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
Total PeCDF	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
Total HxCDD	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
Total HxCDF	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
Total HpCDD	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1
Total HpCDF	ND		48		pg/L		02/11/16 13:54	02/25/16 02:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*76*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:57*	*1*
13C-2,3,7,8-TCDF	*75*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:57*	*1*
13C-1,2,3,7,8-PeCDD	*76*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:57*	*1*
13C-1,2,3,7,8-PeCDF	*77*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:57*	*1*
13C-1,2,3,6,7,8-HxCDD	*80*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:57*	*1*
13C-1,2,3,4,7,8-HxCDF	*92*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:57*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*86*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:57*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*94*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:57*	*1*
13C-OCDD	*72*		*40 - 135*	*02/11/16 13:54*	*02/25/16 02:57*	*1*

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-2

Client Sample ID: CARB-OW-210B-020416

Lab Sample ID: 180-51995-17
Date Collected: 02/04/16 16:24
Matrix: Water
Date Received: 02/05/16 08:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.8		pg/L		02/11/16 13:54	02/25/16 03:43	1
2,3,7,8-TCDF	ND		9.8		pg/L		02/11/16 13:54	02/25/16 03:43	1
1,2,3,7,8-PeCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
1,2,3,7,8-PeCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
2,3,4,7,8-PeCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
1,2,3,4,7,8-HxCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
1,2,3,6,7,8-HxCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
1,2,3,7,8,9-HxCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
1,2,3,4,7,8-HxCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
1,2,3,6,7,8-HxCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
2,3,4,6,7,8-HxCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
1,2,3,7,8,9-HxCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
1,2,3,4,6,7,8-HpCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
1,2,3,4,6,7,8-HpCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
1,2,3,4,7,8,9-HpCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
OCDD	ND		98		pg/L		02/11/16 13:54	02/25/16 03:43	1
OCDF	ND		98		pg/L		02/11/16 13:54	02/25/16 03:43	1
Total TCDD	ND		9.8		pg/L		02/11/16 13:54	02/25/16 03:43	1
Total TCDF	ND		9.8		pg/L		02/11/16 13:54	02/25/16 03:43	1
Total PeCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
Total PeCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
Total HxCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
Total HxCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
Total HpCDD	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1
Total HpCDF	ND		49		pg/L		02/11/16 13:54	02/25/16 03:43	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*77*		*40 - 135*	*02/11/16 13:54*	*02/25/16 03:43*	*1*
13C-2,3,7,8-TCDF	*75*		*40 - 135*	*02/11/16 13:54*	*02/25/16 03:43*	*1*
13C-1,2,3,7,8-PeCDD	*76*		*40 - 135*	*02/11/16 13:54*	*02/25/16 03:43*	*1*
13C-1,2,3,7,8-PeCDF	*76*		*40 - 135*	*02/11/16 13:54*	*02/25/16 03:43*	*1*
13C-1,2,3,6,7,8-HxCDD	*82*		*40 - 135*	*02/11/16 13:54*	*02/25/16 03:43*	*1*
13C-1,2,3,4,7,8-HxCDF	*91*		*40 - 135*	*02/11/16 13:54*	*02/25/16 03:43*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*85*		*40 - 135*	*02/11/16 13:54*	*02/25/16 03:43*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*92*		*40 - 135*	*02/11/16 13:54*	*02/25/16 03:43*	*1*
13C-OCDD	*68*		*40 - 135*	*02/11/16 13:54*	*02/25/16 03:43*	*1*

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-100246/1-A
Matrix: Water
Analysis Batch: 101664

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 100246

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10		pg/L		02/11/16 13:54	02/24/16 23:54	1
2,3,7,8-TCDF	ND		10		pg/L		02/11/16 13:54	02/24/16 23:54	1
1,2,3,7,8-PeCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
1,2,3,7,8-PeCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
2,3,4,7,8-PeCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
1,2,3,4,7,8-HxCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
1,2,3,6,7,8-HxCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
1,2,3,7,8,9-HxCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
1,2,3,4,7,8-HxCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
1,2,3,6,7,8-HxCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
2,3,4,6,7,8-HxCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
1,2,3,7,8,9-HxCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
1,2,3,4,6,7,8-HpCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
1,2,3,4,6,7,8-HpCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
1,2,3,4,7,8,9-HpCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
OCDD	ND		100		pg/L		02/11/16 13:54	02/24/16 23:54	1
OCDF	ND		100		pg/L		02/11/16 13:54	02/24/16 23:54	1
Total TCDD	ND		10		pg/L		02/11/16 13:54	02/24/16 23:54	1
Total TCDF	ND		10		pg/L		02/11/16 13:54	02/24/16 23:54	1
Total PeCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
Total PeCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
Total HxCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
Total HxCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
Total HpCDD	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1
Total HpCDF	ND		50		pg/L		02/11/16 13:54	02/24/16 23:54	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*75*		*40 - 135*	*02/11/16 13:54*	*02/24/16 23:54*	*1*
13C-2,3,7,8-TCDF	*73*		*40 - 135*	*02/11/16 13:54*	*02/24/16 23:54*	*1*
13C-1,2,3,7,8-PeCDD	*71*		*40 - 135*	*02/11/16 13:54*	*02/24/16 23:54*	*1*
13C-1,2,3,7,8-PeCDF	*72*		*40 - 135*	*02/11/16 13:54*	*02/24/16 23:54*	*1*
13C-1,2,3,6,7,8-HxCDD	*75*		*40 - 135*	*02/11/16 13:54*	*02/24/16 23:54*	*1*
13C-1,2,3,4,7,8-HxCDF	*85*		*40 - 135*	*02/11/16 13:54*	*02/24/16 23:54*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*76*		*40 - 135*	*02/11/16 13:54*	*02/24/16 23:54*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*83*		*40 - 135*	*02/11/16 13:54*	*02/24/16 23:54*	*1*
13C-OCDD	*58*		*40 - 135*	*02/11/16 13:54*	*02/24/16 23:54*	*1*

Lab Sample ID: LCS 320-100246/2-A
Matrix: Water
Analysis Batch: 101664

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100246

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	215		pg/L		108	72 - 128
2,3,7,8-TCDF	200	219		pg/L		110	67 - 135
1,2,3,7,8-PeCDD	1000	1030		pg/L		103	71 - 135
1,2,3,7,8-PeCDF	1000	1160		pg/L		116	70 - 133
2,3,4,7,8-PeCDF	1000	1160		pg/L		116	69 - 135
1,2,3,4,7,8-HxCDD	1000	1170		pg/L		117	67 - 130

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-100246/2-A
Matrix: Water
Analysis Batch: 101664

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100246

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	1000	1070		pg/L		107	61 - 144
1,2,3,7,8,9-HxCDD	1000	1120		pg/L		112	61 - 140
1,2,3,4,7,8-HxCDF	1000	1100		pg/L		110	69 - 140
1,2,3,6,7,8-HxCDF	1000	1010		pg/L		101	62 - 155
2,3,4,6,7,8-HxCDF	1000	1120		pg/L		112	70 - 146
1,2,3,7,8,9-HxCDF	1000	1120		pg/L		112	71 - 142
1,2,3,4,6,7,8-HpCDD	1000	979		pg/L		98	71 - 134
1,2,3,4,6,7,8-HpCDF	1000	972		pg/L		97	68 - 137
1,2,3,4,7,8,9-HpCDF	1000	904		pg/L		90	74 - 134
OCDD	2000	1720		pg/L		86	72 - 134
OCDF	2000	1830		pg/L		91	65 - 143

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*78*		*40 - 135*
13C-2,3,7,8-TCDF	*79*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*78*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*75*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*79*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*87*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*80*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*87*		*40 - 135*
13C-OCDD	*66*		*40 - 135*

Lab Sample ID: LCSD 320-100246/3-A
Matrix: Water
Analysis Batch: 101664

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 100246

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	200	207		pg/L		104	72 - 128	4	20
2,3,7,8-TCDF	200	207		pg/L		103	67 - 135	6	20
1,2,3,7,8-PeCDD	1000	1080		pg/L		108	71 - 135	5	20
1,2,3,7,8-PeCDF	1000	1160		pg/L		116	70 - 133	0	20
2,3,4,7,8-PeCDF	1000	1150		pg/L		115	69 - 135	1	20
1,2,3,4,7,8-HxCDD	1000	1160		pg/L		116	67 - 130	1	20
1,2,3,6,7,8-HxCDD	1000	1080		pg/L		108	61 - 144	1	20
1,2,3,7,8,9-HxCDD	1000	1110		pg/L		111	61 - 140	1	20
1,2,3,4,7,8-HxCDF	1000	1100		pg/L		110	69 - 140	0	20
1,2,3,6,7,8-HxCDF	1000	1010		pg/L		101	62 - 155	0	20
2,3,4,6,7,8-HxCDF	1000	1100		pg/L		110	70 - 146	2	20
1,2,3,7,8,9-HxCDF	1000	1120		pg/L		112	71 - 142	0	20
1,2,3,4,6,7,8-HpCDD	1000	1010		pg/L		101	71 - 134	3	20
1,2,3,4,6,7,8-HpCDF	1000	998		pg/L		100	68 - 137	3	20
1,2,3,4,7,8,9-HpCDF	1000	917		pg/L		92	74 - 134	1	20
OCDD	2000	1740		pg/L		87	72 - 134	1	20
OCDF	2000	1840		pg/L		92	65 - 143	1	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*76*		*40 - 135*

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-100246/3-A
Matrix: Water
Analysis Batch: 101664

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 100246

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C-2,3,7,8-TCDF	75		40 - 135
13C-1,2,3,7,8-PeCDD	71		40 - 135
13C-1,2,3,7,8-PeCDF	73		40 - 135
13C-1,2,3,6,7,8-HxCDD	76		40 - 135
13C-1,2,3,4,7,8-HxCDF	86		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	86		40 - 135
13C-OCDD	66		40 - 135

QC Association Summary

Client: Field & Technical Services LLC
Project/Site: Carbondale, IL - Semiannual GW

TestAmerica Job ID: 180-51995-2

Specialty Organics

Prep Batch: 100246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51995-8	CARB-OW-102B-020416	Total/NA	Water	8290	
180-51995-9	CARB-OW-0358-020416	Total/NA	Water	8290	
180-51995-10	CARB-OW-022BR-020416	Total/NA	Water	8290	
180-51995-11	CARB-OW-209A-020416	Total/NA	Water	8290	
180-51995-12	CARB-OW-99B-020416	Total/NA	Water	8290	
180-51995-16	CARB-OW-210A-020416	Total/NA	Water	8290	
180-51995-17	CARB-OW-210B-020416	Total/NA	Water	8290	
LCS 320-100246/2-A	Lab Control Sample	Total/NA	Water	8290	
LCSD 320-100246/3-A	Lab Control Sample Dup	Total/NA	Water	8290	
MB 320-100246/1-A	Method Blank	Total/NA	Water	8290	

Analysis Batch: 101408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51995-8	CARB-OW-102B-020416	Total/NA	Water	8290	100246
180-51995-9	CARB-OW-0358-020416	Total/NA	Water	8290	100246
180-51995-10	CARB-OW-022BR-020416	Total/NA	Water	8290	100246
180-51995-11	CARB-OW-209A-020416	Total/NA	Water	8290	100246

Analysis Batch: 101664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-51995-12	CARB-OW-99B-020416	Total/NA	Water	8290	100246
180-51995-16	CARB-OW-210A-020416	Total/NA	Water	8290	100246
180-51995-17	CARB-OW-210B-020416	Total/NA	Water	8290	100246
LCS 320-100246/2-A	Lab Control Sample	Total/NA	Water	8290	100246
LCSD 320-100246/3-A	Lab Control Sample Dup	Total/NA	Water	8290	100246
MB 320-100246/1-A	Method Blank	Total/NA	Water	8290	100246

180-51995 Chain of Custody

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 201144

[redacted]

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(412) 728-8378
Laboratory:	TAPIT		Carnegie, PA 15106		ggelzhiser.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP															
				Preservative	HCL	None															
				Total Bottle Count																	Notes:
02/04/2016	0000	GW	CARB-TB-01-020416	2	2	0															
02/04/2016	1129	GW	CARB-OW-207A-020416	5	3	2															
02/04/2016	1225	GW	CARB-OW-206A-020416	5	3	2															
02/04/2016	1338	GW	CARB-OW-205A-020416	5	3	2															
02/04/2016	1458	GW	CARB-OW-207B-020416	5	3	2															
02/04/2016	1606	GW	CARB-OW-212A-020416	5	3	2															
02/04/2016	2000	GW	CARB-M-99A-020416	5	3	2															

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature:	Signature: Delia Watson	Signature:	Signature:	[ ] Rush
Printed Name: Graham Gelzhiser	Printed Name: Debbie Watson	Printed Name:	Printed Name:	[X] Standard
Firm: FTS	Firm: TAPIT	Firm:	Firm:	
Date/Time: 02/04/2016 1757	Date/Time: 2-5-16 8:30	Date/Time:	Date/Time:	

Page 1 of 1

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 101090

[redacted]

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(412) 680-4312
Laboratory:	TAPIT		Carnegie, PA 15106		brick.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260-Dichlorodifluoromethane	8260B-BTEX	8270C TL-PAHs+PCP													Notes:
				Preservative	None															
				Total Bottle Count																
02/04/2016	1202	GW	CARB-OW-102B-020416	2	2	0	0													
02/04/2016	1303	GW	CARB-OW-035B-020416	2	2	0	0													
02/04/2016	1450	GW	CARB-OW-022BR-020416	2	2	0	0													
02/04/2016	1554	GW	CARB-OW-209A-020416	7	2	3	2													
02/04/2016	2020	GW	CARB-OW-99B-020416	7	2	3	2													

rec'd

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: [signature]	Signature:	Signature: [signature]	Rush
Printed Name: Brendan Rick	Printed Name:	Printed Name: Debbie Watson	
Firm FTS	Firm	Firm TAP	Standard X
Date/Time: 02/04/2016 1749	Date/Time:	Date/Time: 2-5-16 8:30	

Page 1 of 1

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# [redacted]

Project Name:	Carbondale 2016 1SA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0414-16	Address:	200 Third Avenue	Contact:	(724) 858-5953
Laboratory:	TAPIT		Carnegie, PA 15106		btrask.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	Carbondale 2016 1SA Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260B-BTEX	8270C LL-PAHs+PCP	8290-Dioxins/Furans													
				Preservative	HCL	None														
				Total Bottle Count																Notes:
02/04/2016	1217	GW	CARB-OW-208A-020416	5	3	2	0													
02/04/2016	1234	GW	CARB-EB-01-020416	5	3	2	0													
02/04/2016	1320	GW	CARB-OW-208B-020416	5	3	2	0													
02/04/2016	1440	GW	CARB-OW-210A-020416	7	3	2	2													
02/04/2016	1624	GW	CARB-OW-210B-020416	7	3	2	2													

recvd by -

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature: Ben Trask	Signature:	Signature: Debbie Watson	[ ] Rush
Printed Name: Ben Trask	Printed Name:	Printed Name: Debbie Watson	[X] Standard
Firm: FTS	Firm:	Firm: TAP	
Date/Time: 02/04/2016 1707	Date/Time:	Date/Time: 2-5-16 8:30	

Page 1 of 1

ORIGIN ID:MWAA (412) 963-7058
TESTAMERICA PITTSBURGH

SEE CHEERS 5 BEFORE BILL
301 ALPHA DR
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE: 04FEB16
ACTWGT: 65.80 LB
CAD: /POS1621
DIMS: 18x12x10 IN

BILL SENDER

TO

TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238

(512) 756-6001 REF:
INV:
PO: DEPT:

FedEx Express

1 of 4

TRK# 0200 8081 8311 2649

MASTER

FRI - 05 FEB 10:30A
PRIORITY OVERNIGHT

XLAGCA

15238
PA-US PIT

Uncorrected temp
Thermometer ID
CF
Initials
PT-WI-SR-001 effective 7/26/13

4.2°C

ORIGIN ID:MWAA (412) 963-7058
TESTAMERICA PITTSBURGH
SEE CHEERS 5 BEFORE BILL
301 ALPHA DR
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE: 04FEB16
ACTWGT: 60.10 LB
CAD: /POS1621
DIMS: 18x12x10 IN
BILL SENDER

TO

TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(512) 766-6001
INV:
PO:
REF:
DEPT:

FedEx Express

2 of 4
MPS# 0681 7823 1282 9973
Mstr# 8081 8311 2649

XH AGCA

0200

FRI - 05 FEB 10:30A
PRIORITY OVERNIGHT

15238
PA-US PIT

Uncorrected temp
Thermometer ID
CF 0
Initials
PT-WI-SR-001 effective 7/26/13

180-51995 Waybill

ORIGIN ID:MWAA (412) 963-7058
TESTAMERICA PITTSBURGH

SEE CHEERS 5 BEFORE BILL
301 ALPHA DR
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE: 04FEB16
ACTWGT: 53.00 LB
CAD: 7POS1621
DIMS: 18x12x10 IN

BILL SENDER

TO

TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(412) 766-6001
INV:
PO:
REF:
DEPT:

FedEx Express

3 of 4
MPS# 0681 7823 1282 9984
Mstr# 8081 8311 2649

FRI - 05 FEB 10:30A
PRIORITY OVERNIGHT

0200

XH AGCA

15238
PA-US PIT

Uncorrected temp 21.6 °C
Thermometer ID
CF 0
Initials
PT-WI-SR-001 effective 7/28/15

2365

IRONMENTAL TES

ORIGIN ID:MWAA (412) 963-7058
TESTAMERICA PITTSBURGH

SEE CHEERS 5 BEFORE BILL
301 ALPHA DR
PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE: 04FEB16
ACTWGT: 58.10 LB
CAD: /POS1621
DIMS: 18x12x10 IN

BILL SENDER

TO

TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(512) 756-6001

INV:
PO:
REF:
DEPT:

FedEx Express

4 of 4

MPS# 0681 7823 1282 9995
Mstr# 8081 8311 2649

FRI - 05 FEB 10:30A
PRIORITY OVERNIGHT

XH AGCA

0200

15238
PA-US PIT

Uncorrected temp
Thermometer ID
°F °C

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 180-51995-2

Login Number: 51995
List Number: 1
Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

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 (excluding tests with immediate HTs)	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.	True	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 180-51995-2

Login Number: 51995
List Number: 2
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento
List Creation: 02/09/16 01:17 PM

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.	N/A	
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 (excluding tests with immediate HTs)	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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	