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Mr. Maurice Moore
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New York State Department of Environmental Protection
270 Michigan Ave.
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August 31, 2016

Subject: 2016 January – June Semiannual Performance Monitoring Report
Essex/Hope Site, Jamestown, New York
CH2M HILL Project No. 671439

Dear Mr. Moore:

This letter report summarizes the January through June 2016 operation performance period for the remedial system at the Essex/Hope Site in Jamestown, New York. This report is submitted in accordance with the Performance Monitoring Plan (PMP) prepared by URS Corporation dated March 2014. The PMP continues through 2017.

General Operations

During the reporting period, approximately 801,692 gallons of groundwater were treated and discharged to the City of Jamestown publicly owned treatment works (POTW). Because of system sedimentation within the extraction pumps, loss of performance was intermittently experienced in January, February, and May 2016.

Operational issues observed and maintenance performed during the reporting period included:

- RW-3S was offline from November 30, 2015 through March 9, 2016, because of pump variable speed controller issues. The pump controller was replaced on March 9, 2016.
- RW-6D and RW-2D were shut off from January 21 to January 26, 2016, because of plugged lines and flow meters. The pumps were cleaned and the respective lines were back flushed on January 26, 2016.
- The entire system was offline for 5 days from January 29 to February 3, 2016, because of a high level alarm in the equalization tank.
- RW-6D was shut off from February 10 to March 9, 2016, because of excessive sedimentation, which caused the pump motor to burn out. The pump motor was replaced on March 9, 2016.
- A faulty totalizer meter was replaced on March 15, 2016.
- RW-2D, RW-2S, and RW-3S were shut off on May 25, 2016, because of lack of flow. RW-2D and RW-3S level floats and pumps were pulled, cleaned, and put back online on June 2, 2016. RW-2S had a failed motor and remained off until June 29, 2016, when a new pump motor was installed.

- The recovery wells experienced other minor periodic shutdowns for mechanical and electrical repairs, equipment replacement, or maintenance.

Besides the issues described above, there were no major disruptions in normal operating conditions during the reporting period. As shown on Figure 1, the pumping rates and discharge volumes for the reporting period were generally consistent with historical rates for RW-1S, RW-2D, and RW-3S. Extraction rates for RW-2S have declined below the long-term average rate, potentially because of the operational issues described above. While pumping rates at RW-6D were less than observed in 2015, the first half 2016 pumping rate was higher than the average long-term pumping rate at this well. Improvements in performance are being achieved by weekly pump and flow meter maintenance and replacement. The following sections discuss the data on groundwater quality sampling and groundwater flow.

Groundwater Flow Evaluation

Water level measurements were collected on March 1 and June 7, 2016. Attachment 1 contains the water level data. Figures 2 through 5 are groundwater contour maps illustrating pumping conditions during the reporting period. Groundwater contours were hand-contoured and considered the effects of the pumping wells, although water level elevations from the pumping wells were not used.

Shallow recovery wells RW-1S and RW-2S were pumping at a combined rate of approximately 1.4 gallons per minute (gpm) in March 2016, and RW-1S and RW-3S were pumping at a combined rate of 0.1 gpm in June 2016. In March 2016, the pumping of RW-1S and RW-2S resulted in capturing shallow groundwater in the north parking lot area, while the lower pumping rates in June 2016 resulted in a smaller portion of shallow groundwater being captured in the north parking lot. Pumping rates in June 2016 were affected due to RW-3S being offline for most of the reporting period and RW-2S being shut-off during the weeks prior to collecting water levels. Shallow groundwater flow was generally to the northeast in areas not captured by the pumping of the shallow recovery wells.

Deep recovery well RW-2D was pumping at an average rate of 2.41 gpm in March 2016, and RW-2D and RW-6D were pumping at a combined rate of 2.9 gpm in June 2016. Groundwater flow near the pumping wells (i.e., RW-2D in March 2016, and RW-2D and RW-6D in June 2016) was toward those wells, with a general northeasterly flow direction in areas outside the capture zones. Groundwater elevations in the shallow aquifer were generally higher than elevations in the deep aquifer, indicating a potential downward vertical gradient, although the presence of the silty clay aquitard between the two aquifers under most of the site is expected to limit vertical flow between the two aquifers.

Water Quality Results

Performance monitoring for 2016 includes semiannual sampling of the recovery wells during the first and third quarters as well as monthly influent and effluent sampling of the treatment system. Recovery well sampling was conducted on April 14, 2016. TestAmerica Laboratories of Edison, New Jersey, analyzed the samples for volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (USEPA) Method 8260B.

The total toxic organics measured in the deep recovery wells were higher than the total toxic organics measured in the shallow wells, which is consistent with past results. As shown on Figure 6, approximately 137 pounds of VOCs were removed in the first half of 2016. The rate of VOC mass removal in the first half of 2016 was 0.75 pound per day (lb/day), slightly less than the rate achieved in 2015 (0.94 lb/day) but similar to the rates achieved in 2013 and 2014. Mass removal rates have increased through time because of increasing mass removal at RW-6D; the lower pumping rate achieved at RW-6D in 2016 resulted in the lower mass removal rate in 2016 compared to 2015. The other wells have had steady to declining mass removal rates. Consistent with recent results, 99.9 percent of the mass removal in the first half of 2016 was from the deep extraction wells (136.97 pounds) compared to

the shallow wells (0.1 pound). Table 1 summarizes the recovery well analytical results for the reporting period, and Attachment 2 contains the laboratory reports.

In accordance with the City of Jamestown Board of Public Utilities (BPU) Industrial Wastewater Discharge Permit Number 26 (Permit), the treatment system is monitored for pH and VOCs to ensure compliance with the discharge requirements. Sampling points include the influent, primary carbon effluent, and secondary carbon effluent (discharge to POTW). These points are sampled each month and reported to the Jamestown BPU semiannually. The BPU was onsite on June 2, 2016, to install a new remote read discharge meter, and on June 23, 2016, to take samples from the system effluent discharged to POTW. In accordance with the BPU Permit, a semiannual report was submitted to the City of Jamestown on July 22, 2016, providing the first half of 2016 sampling results. Tables 2 through 4 summarize the groundwater treatment system data. These tables represent the system influent, individual carbon vessel effluent, and post-carbon (system discharge to POTW) concentrations. There were no discharge exceedances during this reporting period.

This letter report has been prepared to satisfy the reporting requirements stipulated in the PMP and to evaluate remediation effectiveness on a semiannual basis. If you have any questions or would like additional information, please call me at (617) 626-7013.

Sincerely,

Kyle Block
Project Manager

cc: Tim King/The Dow Chemical Company
Matt Forcucci/New York State Department of Health
Jennifer Dougherty, Esq./Division of Environmental Enforcement
Carlo J. Montisano/Custom Production Manufacturing, Inc.
Brian Carling/CH2M HILL

Tables

TABLE 1

2016 2nd Quarter Semiannual Recovery Well Sampling Analytical Results

Essex/Hope Site, Jamestown, New York

Volatile Organic Compounds - Method 8260A (µg/L)	Units	Site GW RAOs	RW-1S	RW-2S	RW-2D	RW-3S	RW-6D
Acetone	µg/L	--	ND	ND	**78**	ND	**36,000**
Benzene	µg/L	--	ND	ND	**7.3**	**11**	**81**
2-Butanone (MEK)	µg/L	--	ND	ND	ND	ND	**240**
Carbon Disulfide	µg/L	--	ND	ND	ND	ND	ND
Chloromethane	µg/L	--	ND	ND	ND	ND	ND
Isopropylbenzene (Cumene)	µg/L	--	ND	ND	ND	**12**	ND
1,1-Dichloroethane	µg/L	--	ND	ND	ND	ND	ND
1,1-Dichloroethene	µg/L	--	**1.5**	ND	**14**	ND	**58**
cis-1,2-Dichloroethene	µg/L	--	**240**	**5.3**	**2,400 D**	**1.7**	**19,000 D**
trans-1,2-Dichloroethene	µg/L	5	**2.3**	ND	**35**	ND	**200**
Ethylbenzene	µg/L	5	ND	ND	ND	**11**	ND
4-Methyl-2-pentanone (MIBK)	µg/L	--	ND	ND	ND	ND	ND
Methylene Chloride	µg/L	--	ND	ND	ND	ND	ND
Tetrachloroethene	µg/L	--	ND	ND	ND	ND	ND
Toluene	µg/L	5	ND	ND	**0.66 J**	ND	ND
Trichloroethene	µg/L	5	**60**	**4.4**	**1,900 D**	**4.3**	**21,000 D**
Vinyl Chloride	µg/L	5	**16**	**0.35 J**	**370**	**0.54 J**	**2,700**
Total Xylenes	µg/L	5	ND	ND	ND	**24.3**	ND

Notes:

D = Sample results obtained from a dilution

J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

ND = Not detected/detected below minimum laboratory reporting limit

Site GW RAOs = Site Groundwater Remedial Action Objectives

µg/L = micrograms per liter

Samples collected on April 13, 2016

TABLE 2

January - December 2016 Pre Carbon Monitoring Data

Essex/Hope Site, Jamestown, New York

Parameter	Units	Sample Date					
		January 11	February 11	March 15	April 13	May 10	June 7
Acetone	µg/L	**6,800 D**	ND	**7,000 D**	**7,400 D**	**7,600**	**7,100**
Benzene	µg/L	**12**	**5.1**	**11**	**21**	**24**	**22**
2-Butanone (MEK)	µg/L	ND	ND	ND	**31**	ND	ND
Chloroform	µg/L	**0.33 J**	ND	ND	ND	ND	ND
Chloromethane	µg/L	ND	ND	ND	ND	ND	ND
Isopropylbenzene (Cumene)	µg/L	ND	ND	ND	**0.44 J**	ND	ND
1,1-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	µg/L	**8.9**	**11**	**11**	**18**	**22**	**20**
cis-1,2-Dichloroethene	µg/L	**2,400 D**	**1,900 D**	**2,600 D**	**4,100 D**	**6,400 D**	**6,600 D**
trans-1,2-Dichloroethene	µg/L	**49**	**18**	**37**	**51**	**100**	**82**
Ethylbenzene	µg/L	ND	ND	ND	**0.4 J**	ND	ND
Methylene Chloride	µg/L	ND	**0.32 J**	ND	ND	ND	ND
Toluene	µg/L	**0.45 J**	**0.46 J**	**0.43 J**	**0.89 J**	**1.3 J**	ND
Trichloroethene	µg/L	**1,900 D**	**990 D**	**2,400 D**	**3,100 D**	**4,400 D**	**4,200 D**
Vinyl Chloride	µg/L	**450**	**320**	**470 D**	**680 D**	**1,000**	**890**
Total Xylenes	µg/L	ND	**0.43 J**	ND	**1.1 J**	ND	ND
Pre-Carbon Total VOCs	**µg/L**	**11,621**	**3,245**	**12,529**	**15,404**	**19,547**	**18,914**

Notes:

D = sample results obtained from a dilution

F1 = MS and/or MSD Recovery is outside acceptance limits.

F2 = MS/MSD RPD exceeds control limits

J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

ND = Not detected/detected below minimum laboratory reporting limit

µg/L = micrograms per liter

VOC = volatile organic compound

Pre-carbon results represent system influent

TABLE 3

January - December 2016 Primary Carbon Monitoring Data

Essex/Hope Site, Jamestown, New York

Parameter	Units	Sample Date					
		January 11	February 11	March 15	April 13	May 10	June 7
Acetone	µg/L	**11,000 D**	**11,000 D**	**6,200 D**	**5,900 D**	**300**	**6,300 D**
Benzene	µg/L	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	µg/L	**2.2 J**	**3.7 J**	ND	**23**	ND	**5.4 J**
Chloroform	µg/L	ND	ND	ND	ND	ND	ND
Chloromethane	µg/L	ND	ND	ND	ND	ND	ND
Isopropylbenzene (Cumene)	µg/L	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	µg/L	ND	ND	ND	**1.8**	ND	ND
cis-1,2-Dichloroethene	µg/L	**1.1**	**0.48 J**	**48**	**1,000 D**	**1.7**	**18**
trans-1,2-Dichloroethene	µg/L	ND	ND	ND	**8.7**	ND	ND
Ethylbenzene	µg/L	ND	ND	ND	ND	ND	ND
Methylene Chloride	µg/L	ND	**0.35 J**	ND	ND	ND	ND
Toluene	µg/L	ND	ND	ND	ND	ND	ND
Trichloroethene	µg/L	**0.57 J**	ND	ND	**1.8**	**0.59 J**	**2.3**
Vinyl Chloride	µg/L	**480 D**	**590 D**	**930 D**	**1,100 D**	**770 D**	**2,000 D**
Total Xylenes	µg/L	ND	ND	ND	ND	ND	ND
Primary Carbon Total VOCs	**µg/L**	**11,484**	**11,595**	**7,178**	**8,035**	**1,072**	**8,326**

Notes:

D = Sample results obtained from a dilution

J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

ND = Not detected/detected below minimum laboratory reporting limit

µg/L = Micrograms per liter

VOC = Volatile organic compound

Primary carbon results represent effluent from the primary carbon vessel in the two carbon vessel system

TABLE 4

January - December 2016 Post Carbon (Effluent) Monitoring Data

Essex/Hope Site, Jamestown, New York

Parameter	Units	Sample Date					
		January 11	February 11	March 15	April 13	May 10	June 7
Acetone	µg/L	**11,000 D**	**8,100 D**	**67**	**1,100**	**4.9 J**	**1,800**
Benzene	µg/L	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	µg/L	ND	ND	ND	ND	ND	ND
Chloroform	µg/L	ND	ND	ND	ND	ND	ND
Chloromethane	µg/L	ND	ND	ND	ND	ND	ND
Isopropylbenzene (Cumene)	µg/L	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	µg/L	**1.0**	**0.48 J**	ND	**0.97 J**	**0.98 J**	**0.39 J**
trans-1,2-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/L	ND	ND	ND	ND	ND	ND
Methylene Chloride	µg/L	ND	**0.35 J**	ND	ND	**1.3**	ND
Toluene	µg/L	ND	ND	ND	ND	ND	ND
Trichloroethene	µg/L	**0.58 J**	ND	ND	**0.48 J**	**0.76 J**	ND
Vinyl Chloride	µg/L	**1**	**3.8**	**110**	**320 D**	**1.1**	**9.1**
Total Xylenes	µg/L	ND	ND	ND	ND	ND	ND
Post-Carbon Total VOCs	**µg/L**	**11,003**	**8,105**	**177**	**1,421**	**9**	**1,809**
Post-Carbon TTOs	**µg/L**	**3**	**5**	**110**	**321**	**4**	**9**

Notes:

D = sample results obtained from a dilution

J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approxima

ND = Not detected/detected below minimum laboratory reporting limit

TTOs = total toxic organics

µg/L = micrograms per liter

VOC = volatile organic compound

Post-carbon results represent system effluent from the secondary carbon vessel to the POTW

Post-carbon sample is a laboratory-prepared composite of four grab samples taken at 30-minute intervals

POTW Discharge Limit = 2,130 µg/L TTOs

Figures

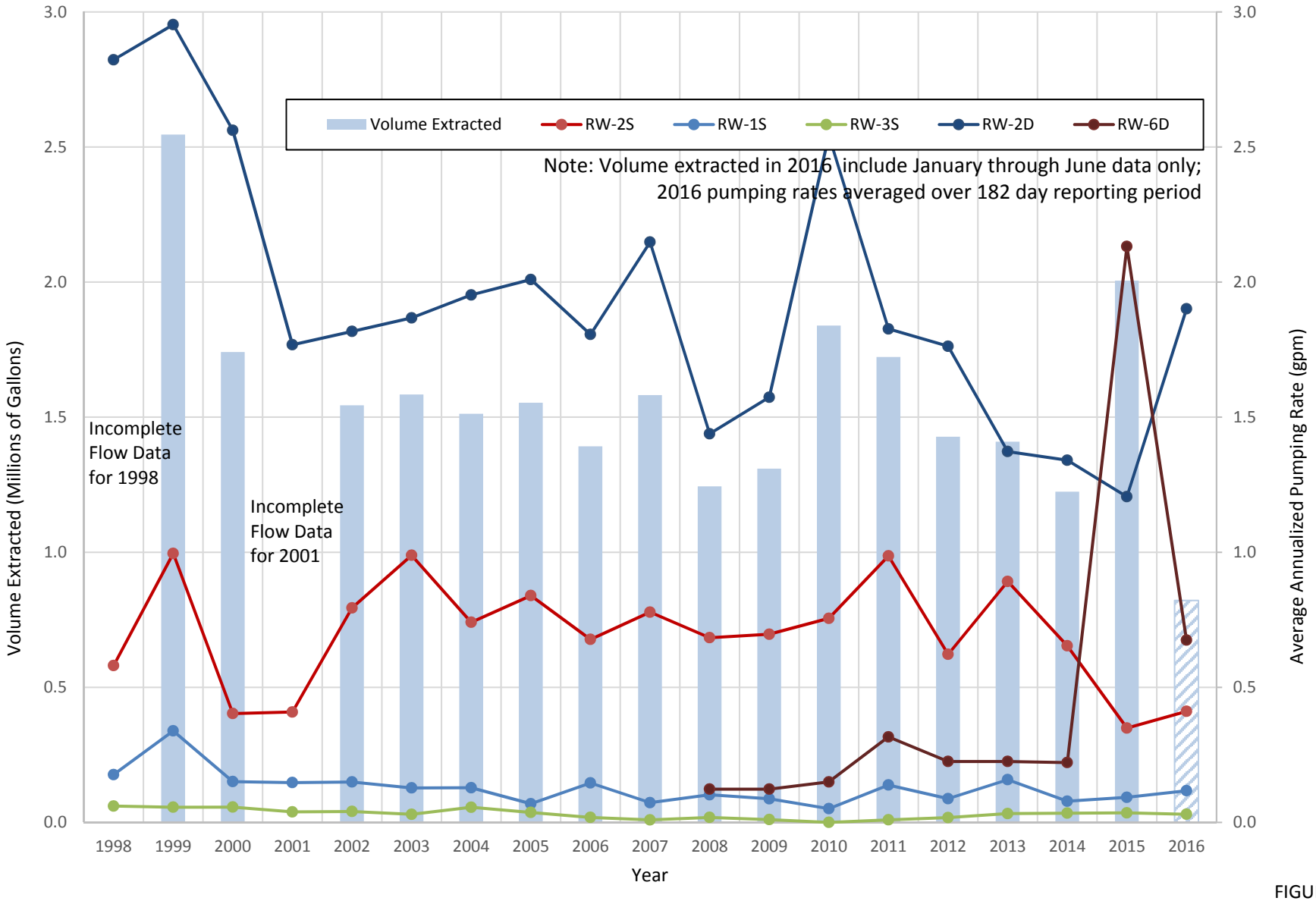

FIGURE 1

Annual Groundwater Extraction by Recovery Well

2016 January - June Semiannual Performance Monitoring Report

Essex/Hope Site, Jamestown, New York

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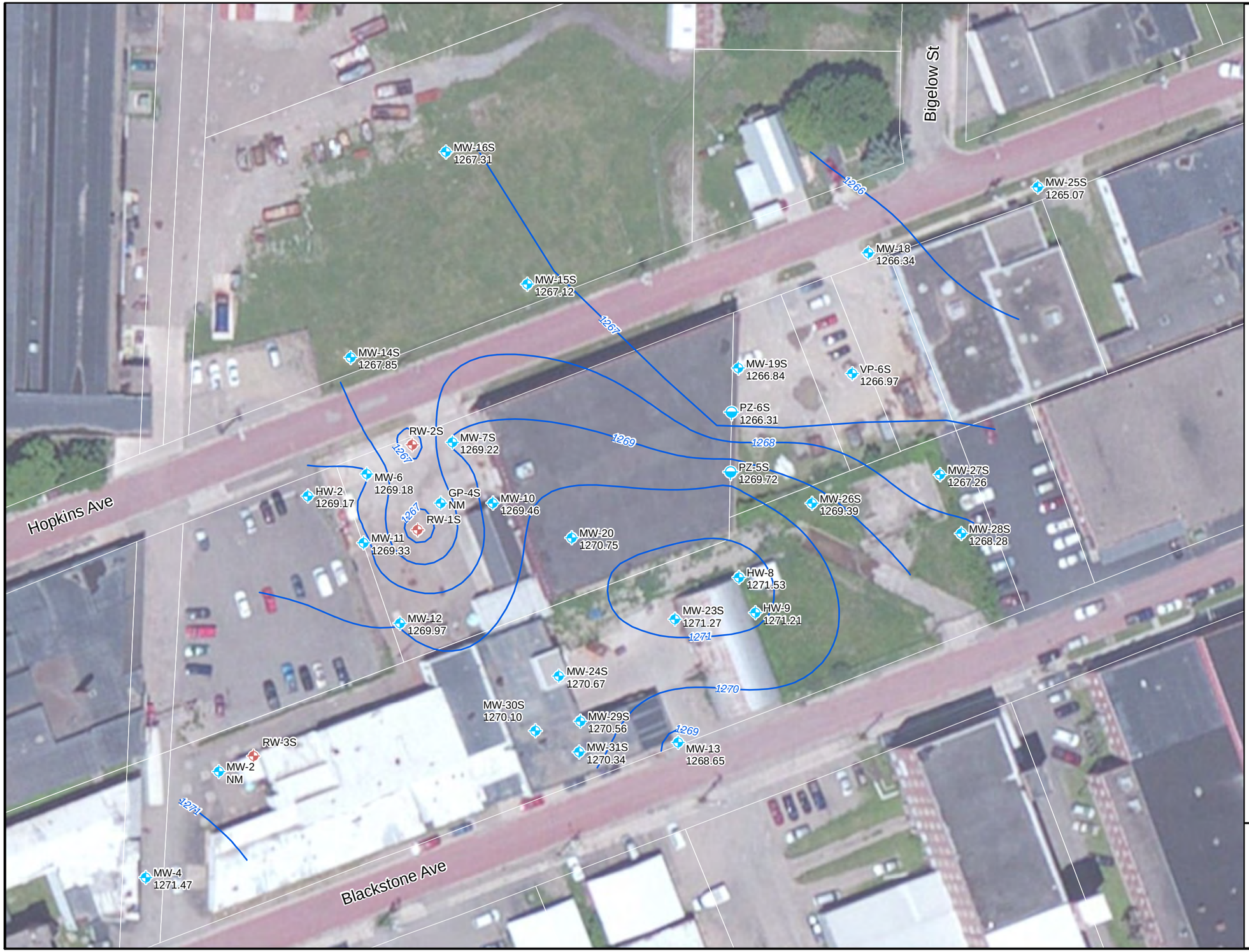

Legend

- Recovery Well

Shallow Sampling Points

- Monitoring Well
- Piezometer
- Groundwater Elevation Contour

Notes:
All elevations in feet above mean sea level, NAVD88.
March 2016 pumping rates (gpm):
RW-1S: 0.24
RW-2S: 1.19
RW-3S: Off-line from 11/30/2015 to 3/9/2016
gpm = gallons per minute

N

0 60 120 Feet

1 inch = 60 feet

FIGURE 2
Shallow WBZ Potentiometric Surface Map, March 1, 2016
2016 January - June Semiannual Performance Monitoring Report
Essex/Hope Site, Jamestown, New York

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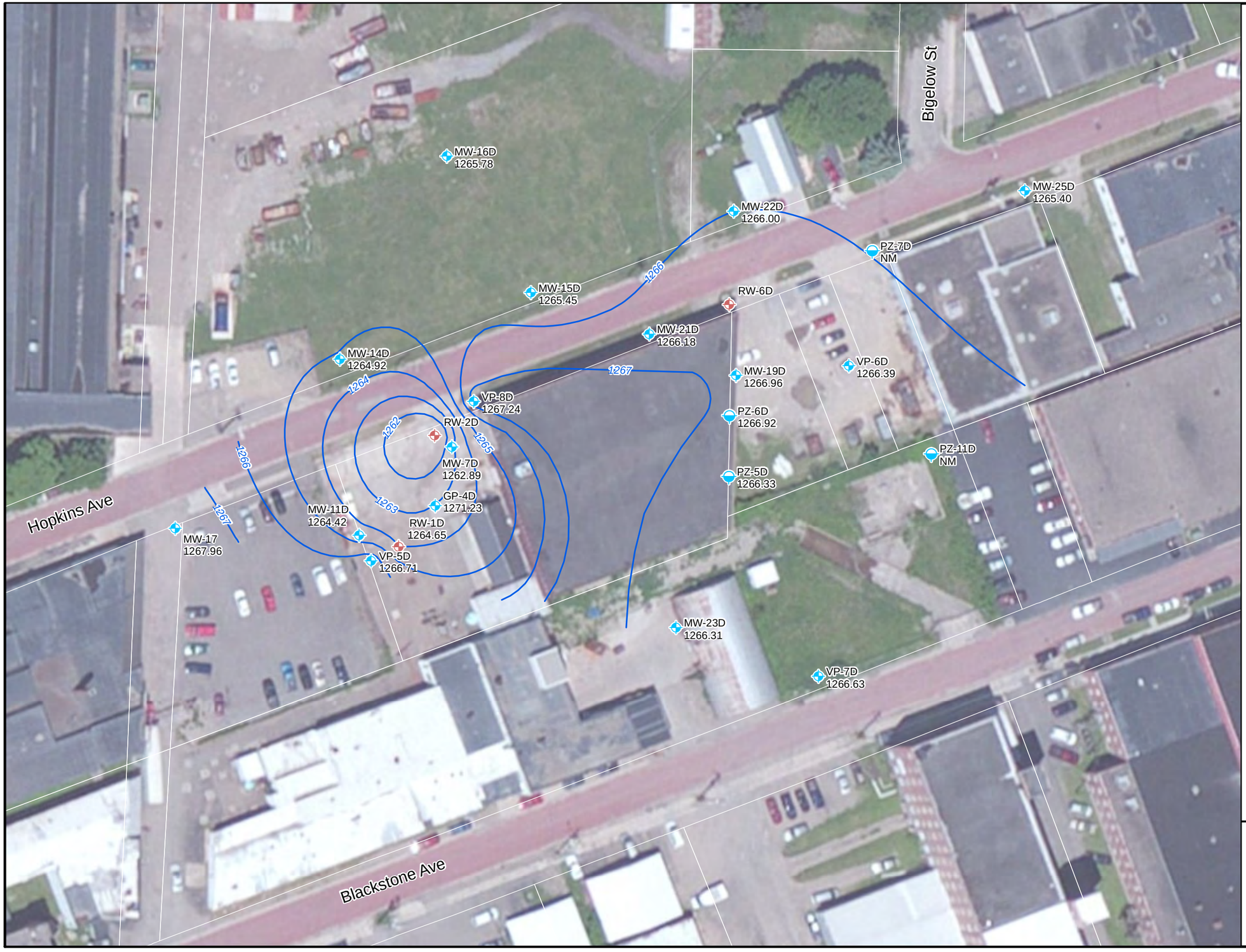

Legend

- Recovery Well

Shallow Sampling Points

- Monitoring Well
- Piezometer
- Groundwater Elevation Contour

Notes:
All elevations in feet above mean sea level, NAVD88.
Water level at GP-4D was not included in contouring.
March 2016 pumping rates (gpm):
RW-2D: 2.41
RW-6D: Off-line from 2/10/2016 to 3/9/2016
gpm = gallons per minute

N

0 60 120 Feet

1 inch = 60 feet

FIGURE 3

Deep WBZ Potentiometric Surface Map, March 1, 2016

2016 January - June Semiannual Performance Monitoring Report

Essex/Hope Site, Jamestown, New York

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Legend

- Recovery Well

Shallow Sampling Points

- Monitoring Well
- Piezometer
- Groundwater Elevation Contour

Notes:
All elevations in feet above mean sea level, NAVD88.
June 2016 pumping rates (gpm):
RW-1S: 0.07
RW-2S: Off-line from 5/9/2016 to 7/21/2016
RW-3S: 0.02
gpm = gallons per minute

N

0 60 120 Feet

1 inch = 60 feet

FIGURE 4
Shallow WBZ Potentiometric Surface Map, June 7, 2016
2016 January - June Semiannual Performance Monitoring Report
Essex/Hope Site, Jamestown, New York

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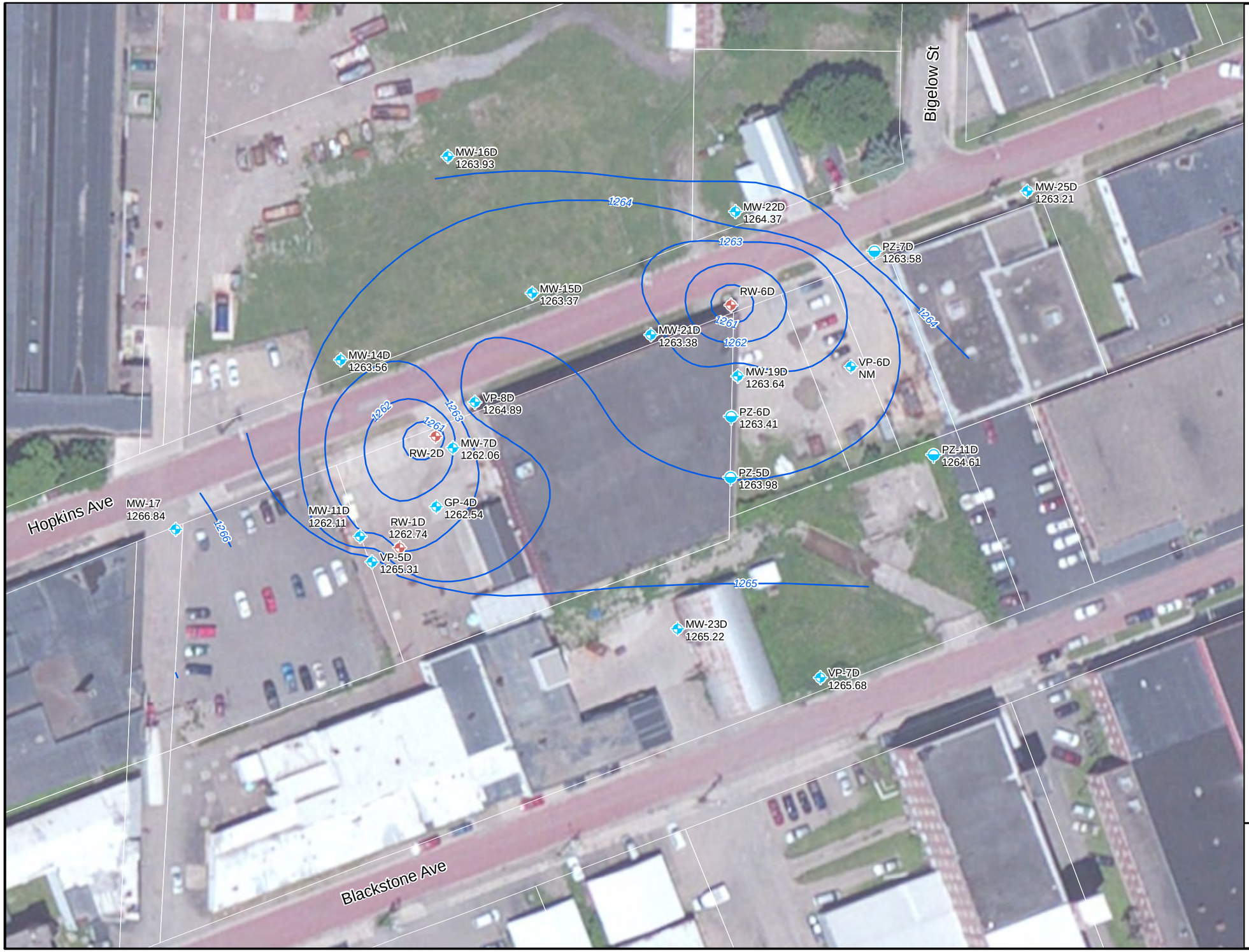

Legend

- Recovery Well

Shallow Sampling Points

- Monitoring Well
- Piezometer
- Groundwater Elevation Contour

Notes:
All elevations in feet above mean sea level, NAVD88.
June 2016 pumping rates (gpm):
RW-2D: 2.14
RW-6D: 0.82
gpm = gallons per minute

N

0 60 120 Feet

1 inch = 60 feet

FIGURE 5
Deep WBZ Potentiometric Surface Map, June 7, 2016
2016 January - June Semiannual Performance Monitoring Report
Essex/Hope Site, Jamestown, New York

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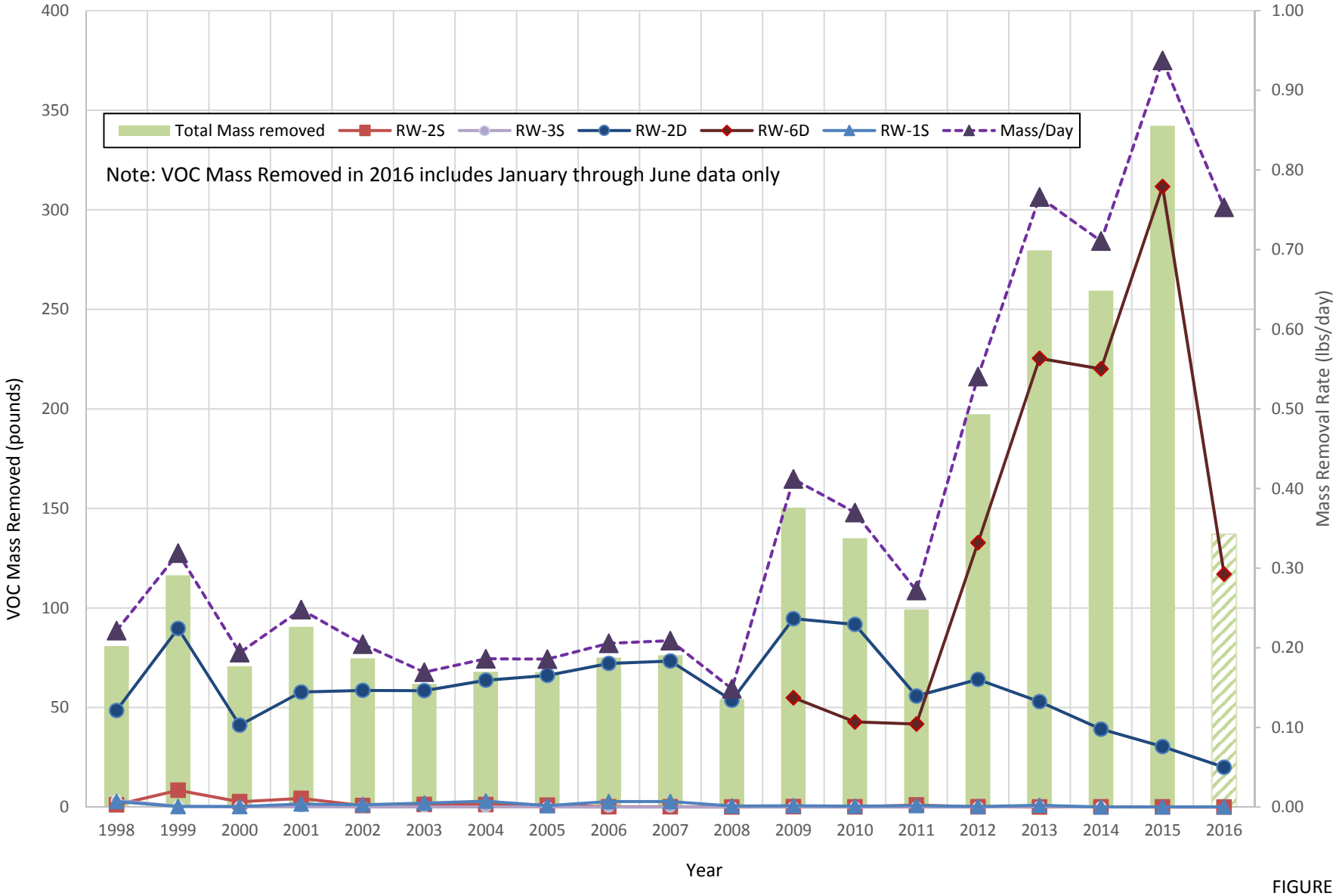

FIGURE 6

Annual VOC Mass Removed by Well

2016 January - June Semiannual Performance Monitoring Report

Essex/Hope Site, Jamestown, New York

Attachment 1
Water Level Measurement Data

Attachment 1. 2016 Water Level Data

Essex/Hope Site, Jamestown, New York

Monitoring Location	Northing	Easting	TOC Elevation (ft msl)	Depth to Top of Screen (ft)	Depth to Bottom of Screen (ft)	Screened Zone	March 1, 2016			June 7, 2016		
							Depth to Water (ft)	Depth to Top of Pump (ft)	Groundwater Elevation (ft msl)	Depth to Water (ft)	Depth to Top of Pump (ft)	Groundwater Elevation (ft msl)
GP-1D	769410.8737	977332.0527	1278.32	--	--	NA	NA	NA	NA	NA	NA	NA
GP-1S	769418.5261	977328.6393	1278.34	8.0	12.8	Shallow	NA	NA	NA	NA	NA	NA
GP-2D	769380.3448	977348.2696	1278.03	30.0	34.8	Deep	NA	NA	NA	NA	NA	NA
GP-2S	769379.1282	977344.6742	1277.97	2.6	12.6	Shallow	NA	NA	NA	NA	NA	NA
GP-3D	769435.1775	977388.0844	1278.15	34.0	38.8	Deep	NA	NA	NA	NA	NA	NA
GP-3S	769439.0114	977385.7122	1278.25	4.0	14.0	Shallow	NA	NA	NA	NA	NA	NA
GP-4D	769400.3568	977281.1157	1277.48	39.0	43.8	Deep	6.25	NA	1271.23	14.94	NA	1262.54
GP-4S	769402.7586	977283.8469	1277.43	10.8	15.8	Shallow	NA	NA	NA	9.13	NA	1268.30
GP-5D	769467.4056	977309.9989	1276.30	36.0	40.8	Deep	NA	NA	NA	NA	NA	NA
GP-5S	769466.3707	977307.3717	1276.79	7.0	11.8	Shallow	NA	NA	NA	NA	NA	NA
GP-7	769539.5322	977376.3625	1276.17	--	--	NA	NA	NA	NA	NA	NA	NA
HW-1	769310.7348	977237.3505	1278.46	--	--	NA	NA	NA	NA	NA	NA	NA
HW-2	769407.3135	977201.188	1280.57	--	--	Shallow	11.40	NA	1269.17	12.25	NA	1268.32
HW-3	769259.8546	977127.7364	1282.60	--	--	NA	NA	NA	NA	NA	NA	NA
HW-6	769321.824	977304.1001	1280.98	--	--	NA	NA	NA	NA	NA	NA	NA
HW-6A	769317.1479	977304.532	1279.85	--	--	NA	NA	NA	NA	NA	NA	NA
HW-8	769356.6284	977469.2374	1277.18	6.0	16.0	Shallow	5.65	NA	1271.53	8.06	NA	1269.12
HW-9	769334.6973	977479.3343	1280.35	6.0	16.0	Shallow	9.14	NA	1271.21	11.64	NA	1268.71
HW-10	769233.13	977139.2685	1279.43	7.0	17.0	Shallow		NA	NA		NA	NA
MW-1	769311.2061	977562.8487	1280.10	--	20.0	Shallow	NA	NA	NA	NA	NA	NA
MW-10	769402.9219	977316.2057	1277.28	8.5	18.5	Shallow	7.82	NA	1269.46	8.61	NA	1268.67
MW-11	769378.0813	977235.7566	1277.13	5.0	15.0	Shallow	7.80	NA	1269.33	10.59	NA	1266.54
MW-11D	769381.9882	977233.7196	1277.17	35.0	45.0	Deep	12.75	NA	1264.42	14.06	NA	1263.11
MW-12	769328.1573	977258.4237	1277.51	4.0	14.0	Shallow	7.54	NA	1269.97	8.99	NA	1268.52
MW-13	769254.1453	977431.3831	1277.65	8.0	18.0	Shallow	9.00	NA	1268.65	10.19	NA	1267.46
MW-14D	769491.9314	977221.6501	1279.40	40.0	50.0	Deep	14.48	NA	1264.92	15.84	NA	1263.56
MW-14S	769493.3395	977227.8574	1279.64	10.0	20.0	Shallow	11.79	NA	1267.85	13.98	NA	1265.66
MW-15D	769533.3173	977340.5714	1278.90	34.0	44.0	Deep	13.45	NA	1265.45	15.53	NA	1263.37
MW-15S	769538.8671	977337.6363	1279.00	10.0	20.0	Shallow	11.88	NA	1267.12	13.99	NA	1265.01
MW-16D	769618.2417	977288.1514	1278.47	36.0	46.0	Deep	12.69	NA	1265.78	14.54	NA	1263.93
MW-16S	769621.109	977287.0901	1278.74	7.0	17.0	Shallow	11.43	NA	1267.31	13.19	NA	1265.55
MW-17	769386.4993	977119.1203	1278.01	--	--	Deep	10.05	NA	1267.96	11.17	NA	1266.84
MW-18	769558.1914	977549.586	1275.05	--	20.0	Shallow	8.71	NA	1266.34	10.41	NA	1264.64
MW-19D	769481.5626	977468.4988	1275.64	34.0	44.0	Deep	8.68	NA	1266.96	12.00	NA	1263.64
MW-19S	769486.6155	977468.8169	1275.95	9.0	19.0	Shallow	9.11	NA	1266.84	11.01	NA	1264.94
MW-2	769235.7996	977145.802	1279.09	--	16.0	Shallow	Dry	NA	NA	9.05	NA	1270.04

Attachment 1. 2016 Water Level Data

Essex/Hope Site, Jamestown, New York

Monitoring Location	Northing	Easting	TOC Elevation (ft msl)	Depth to Top of Screen (ft)	Depth to Bottom of Screen (ft)	Screened Zone	March 1, 2016			June 7, 2016		
							Depth to Water (ft)	Depth to Top of Pump (ft)	Groundwater Elevation (ft msl)	Depth to Water (ft)	Depth to Top of Pump (ft)	Groundwater Elevation (ft msl)
MW-20	769381.2073	977365.2433	1278.10	6.5	11.5	Shallow	7.35	NA	1270.75	9.88	NA	1268.22
MW-21D	769507.3643	977414.361	1275.61	31.5	41.0	Deep	9.43	NA	1266.18	12.23	NA	1263.38
MW-22D	769584.1112	977467.0392	1275.53	32.5	42.0	Deep	9.53	NA	1266.00	11.16	NA	1264.37
MW-23D	769324.6944	977431.0933	1277.36	28.0	37.5	Deep	11.05	NA	1266.31	12.14	NA	1265.22
MW-23S	769330.6539	977429.415	1277.30	5.0	14.5	Shallow	6.03	NA	1271.27	8.15	NA	1269.15
MW-24S	769295.2558	977357.2665	1278.25	5.0	14.5	Shallow	7.58	NA	1270.67	9.05	NA	1269.20
MW-25D	769596.5694	977648.4534	1274.50	31.0	41.0	Deep	9.10	NA	1265.40	11.29	NA	1263.21
MW-25S	769599.3135	977655.0143	1274.30	7.0	17.0	Shallow	9.23	NA	1265.07	11.08	NA	1263.22
MW-26S	769402.5984	977514.5926	1277.09	5.0	15.0	Shallow	7.70	NA	1269.39	10.57	NA	1266.52
MW-27S	769420.4854	977594.2506	1276.46	10.0	20.0	Shallow	9.20	NA	1267.26	10.02	NA	1266.44
MW-28S	769383.882	977607.3036	1276.87	7.0	17.0	Shallow	8.59	NA	1268.28	10.39	NA	1266.48
MW-29S	769267.325	977370.5779	1278.35	4.0	14.0	Shallow	7.79	NA	1270.56	9.21	NA	1269.14
MW-30S	769261.2158	977342.5646	1278.47	--	--	Shallow	8.37	NA	1270.10	9.79	NA	1268.68
MW-31S	769248.0415	977369.7922	1278.29	--	--	Shallow	7.95	NA	1270.34	9.20	NA	1269.09
MW-4	769170.132	977100.4237	1280.70	13.0	18.0	Shallow	9.23	NA	1271.47	10.08	NA	1270.62
MW-6	769420.7881	977237.7868	1277.28	--	--	Shallow	8.10	NA	1269.18	9.58	NA	1267.70
MW-7D	769437.2449	977291.4602	1277.12	35.0	45.0	Deep	14.23	NA	1262.89	15.06	NA	1262.06
MW-7DD	769435.524	977293.5854	1277.09	90.0	100.0	Glacial Till	NA	NA	NA	NA	NA	NA
MW-7S	769440.6505	977291.0643	1277.04	10.0	20.0	Shallow	7.82	NA	1269.22	8.81	NA	1268.23
MW-8	769407.6112	977252.3372	1277.30	39.6	49.6	Deep	NA	NA	NA	NA	NA	NA
PZ-11D	769432.9422	977590.2533	1276.14	21.3	41.3	Deep	9.67	NA	NA	11.53	NA	1264.61
PZ-1D	769442.9506	977285.3708	1277.23	--	--	Deep	NA	NA	NA	NA	NA	NA
PZ-1S	769443.5701	977282.9687	1277.25	--	--	Shallow	NA	NA	NA	NA	NA	NA
PZ-2D	769442.5708	977286.8011	1277.14	--	--	Deep	NA	NA	NA	NA	NA	NA
PZ-3D	769416.9358	977325.1342	1278.35	20.0	40.0	Deep	NA	NA	NA	NA	NA	NA
PZ-4D	769419.6327	977320.1948	1278.24	--	--	Deep	NA	NA	NA	NA	NA	NA
PZ-5D	769418.7691	977464.0019	1275.88	21.5	41.5	Deep	9.55	NA	1266.33	11.90	NA	1263.98
PZ-5S	769422.1501	977463.9155	1275.92	5.5	12.0	Shallow	6.20	NA	1269.72	9.11	NA	1266.81
PZ-6D	769456.5907	977464.4016	1275.91	25.5	45.5	Deep	8.99	NA	1266.92	12.50	NA	1263.41
PZ-6S	769459.2274	977464.5242	1276.09	8.5	13.5	Shallow	9.78	NA	1266.31	11.10	NA	1264.99
PZ-7D	769559.4992	977553.3946	1275.19	22.0	42.0	Deep	NA	NA	NA	11.61	NA	1263.58
RW-1D	769375.0668	977258.1434	1275.87	32.0	57.0	Deep	11.90	NA	1263.97	13.13	NA	1262.74
RW-1S	769386.1229	977269.3599	1275.36	10.5	16.0	Shallow	9.10	11.50	1266.26	11.00	11.50	1264.36
RW-2D	769444.1559	977280.6959	1275.92	27.0	42.0	Deep	28.80	36.90	1247.12	25.46	36.90	1250.46
RW-2S	769438.9816	977265.9357	1275.89	10.0	15.5	Shallow	9.55	12.70	1266.34	7.63	12.70	1268.26
RW-3S	769245.5478	977167.4284	1277.72	9.0	13.5	Shallow	7.15	8.80	1270.57	7.90	8.80	1269.82

Attachment 1. 2016 Water Level Data

Essex/Hope Site, Jamestown, New York

Monitoring Location	Northing	Easting	TOC Elevation (ft msl)	Depth to Top of Screen (ft)	Depth to Bottom of Screen (ft)	Screened Zone	March 1, 2016			June 7, 2016		
							Depth to Water (ft)	Depth to Top of Pump (ft)	Groundwater Elevation (ft msl)	Depth to Water (ft)	Depth to Top of Pump (ft)	Groundwater Elevation (ft msl)
RW-6D	769525.8852	977464.2172	1274.95	--	--	Deep	8.60	NA	1266.35	24.10	NA	1250.85
VP-1S	769423.0383	977327.4439	1278.26	--	--	NA	NA	NA	NA	NA	NA	NA
VP-4S	769357.392	977390.1809	1278.25	--	--	NA	NA	NA	NA	NA	NA	NA
VP-5D	769366.3076	977241.1208	1277.53	12.5	34.3	Deep	10.82	NA	1266.71	12.22	NA	1265.31
VP-6D	769487.6379	977538.8183	1276.11	29.5	39.5	Deep	9.72	NA	1266.39	NR	NA	NA
VP-6S	769483.3297	977539.5934	1276.08	18.3	24.0	Shallow	9.11	NA	1266.97	11.20	NA	1264.88
VP-7D	769294.3214	977519.7338	1278.22	20.4	39.3	Deep	11.59	NA	1266.63	12.54	NA	1265.68
VP-8D	769465.5145	977305.112	1276.69	20.0	39.0	Deep	9.45	NA	1267.24	11.80	NA	1264.89

Notes:

NA = Not Applicable

CNL = Could not locate

RW-4S, RW-5S taken offline in October 2002 for UST Removal.

Wells RW-4S, TW-01, and HW-7 destroyed during UST removal operations.

Attachment 2
Laboratory Certificates of Analysis

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

TestAmerica Job ID: 460-107425-1
Client Project/Site: Essex - Dow Jamestown, NY

For:
CH2M Hill Constructors, Inc.
18 Tremont St
Suite 700
Boston, Massachusetts 02108

Attn: Mr. Kyle Block

Kristin B DeGraw

Authorized for release by:
1/15/2016 9:08:06 AM

Kristin DeGraw, Project Manager II
(732)593-2555
kristin.degraw@testamericainc.com

Table of Contents

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex - Dow Jamestown, NY

TestAmerica Job ID: 460-107425-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)

Job ID: 460-107425-1

Laboratory: TestAmerica Edison

Narrative

CASE NARRATIVE

Client: CH2M Hill Constructors, Inc.

Project: Essex - Dow Jamestown, NY

Report Number: 460-107425-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

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

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

RECEIPT

The samples were received on 1/12/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

Sample time on one vial for sample #1 is 1:35 not 13:50 as recorded on the COC. The sample collection time was logged and reported as per the COC.

VOLATILE ORGANICS

Samples Pre-Carb (460-107425-1), Primary-Eff (460-107425-2), Post-Carb (460-107425-7) and Trip Blank (460-107425-8) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 01/14/2016.

Samples Pre-Carb (460-107425-1)[5X], Primary-Eff (460-107425-2)[5X] and Post-Carb (460-107425-7)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Volatile organics analysis.

All other quality control parameters were within the acceptance limits.

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex - Dow Jamestown, NY

TestAmerica Job ID: 460-107425-1

Client Sample ID: Pre-Carb — Lab Sample ID: 460-107425-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	8.9		1.0	0.34	ug/L	1		8260C	Total/NA
1,2-Dichloroethene, trans-	49		1.0	0.18	ug/L	1		8260C	Total/NA
Benzene	12		1.0	0.090	ug/L	1		8260C	Total/NA
Bromodichloromethane	0.30	J	1.0	0.15	ug/L	1		8260C	Total/NA
Chloroform	0.33	J	1.0	0.22	ug/L	1		8260C	Total/NA
Dibromochloromethane	0.28	J	1.0	0.22	ug/L	1		8260C	Total/NA
Toluene	0.45	J	1.0	0.25	ug/L	1		8260C	Total/NA
Vinyl chloride	450		1.0	0.060	ug/L	1		8260C	Total/NA
1,2-Dichloroethene, cis- - DL	2400	D	5.0	1.3	ug/L	5		8260C	Total/NA
Acetone - DL	6800	D	50	5.4	ug/L	5		8260C	Total/NA
Trichloroethene - DL	1900	D	5.0	1.1	ug/L	5		8260C	Total/NA

Client Sample ID: Primary-Eff — Lab Sample ID: 460-107425-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	1.1		1.0	0.26	ug/L	1		8260C	Total/NA
2-Butanone (MEK)	2.2	J	10	2.2	ug/L	1		8260C	Total/NA
Trichloroethene	0.57	J	1.0	0.22	ug/L	1		8260C	Total/NA
Acetone - DL	11000	D	50	5.4	ug/L	5		8260C	Total/NA
Vinyl chloride - DL	480	D	5.0	0.30	ug/L	5		8260C	Total/NA

Client Sample ID: Post-Carb — Lab Sample ID: 460-107425-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	1.0		1.0	0.26	ug/L	1		8260C	Total/NA
Trichloroethene	0.58	J	1.0	0.22	ug/L	1		8260C	Total/NA
Vinyl chloride	1.0		1.0	0.060	ug/L	1		8260C	Total/NA
Acetone - DL	11000	D	50	5.4	ug/L	5		8260C	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 460-107425-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	1.4		1.0	0.26	ug/L	1		8260C	Total/NA
Methylene Chloride	0.90	J	1.0	0.21	ug/L	1		8260C	Total/NA
Trichloroethene	2.4		1.0	0.22	ug/L	1		8260C	Total/NA
Vinyl chloride	1.0		1.0	0.060	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Pre-Carb

Date Collected: 01/11/16 13:50
Date Received: 01/12/16 10:00

Lab Sample ID: 460-107425-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			01/14/16 19:07	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			01/14/16 19:07	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			01/14/16 19:07	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			01/14/16 19:07	1
1,1-Dichloroethene	**8.9**		1.0	0.34	ug/L			01/14/16 19:07	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			01/14/16 19:07	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			01/14/16 19:07	1
1,2-Dichloroethene, trans-	**49**		1.0	0.18	ug/L			01/14/16 19:07	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/14/16 19:07	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			01/14/16 19:07	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			01/14/16 19:07	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			01/14/16 19:07	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			01/14/16 19:07	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			01/14/16 19:07	1
2-Hexanone	0.72	U	10	0.72	ug/L			01/14/16 19:07	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			01/14/16 19:07	1
Benzene	**12**		1.0	0.090	ug/L			01/14/16 19:07	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			01/14/16 19:07	1
Bromodichloromethane	**0.30**	**J**	1.0	0.15	ug/L			01/14/16 19:07	1
Bromoform	0.18	U	1.0	0.18	ug/L			01/14/16 19:07	1
Bromomethane	0.18	U	1.0	0.18	ug/L			01/14/16 19:07	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			01/14/16 19:07	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			01/14/16 19:07	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			01/14/16 19:07	1
Chloroethane	0.37	U	1.0	0.37	ug/L			01/14/16 19:07	1
Chloroform	**0.33**	**J**	1.0	0.22	ug/L			01/14/16 19:07	1
Chloromethane	0.22	U	1.0	0.22	ug/L			01/14/16 19:07	1
Dibromochloromethane	**0.28**	**J**	1.0	0.22	ug/L			01/14/16 19:07	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/14/16 19:07	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			01/14/16 19:07	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			01/14/16 19:07	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			01/14/16 19:07	1
o-Xylene	0.32	U	1.0	0.32	ug/L			01/14/16 19:07	1
Styrene	0.17	U	1.0	0.17	ug/L			01/14/16 19:07	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			01/14/16 19:07	1
Toluene	**0.45**	**J**	1.0	0.25	ug/L			01/14/16 19:07	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			01/14/16 19:07	1
Vinyl chloride	**450**		1.0	0.060	ug/L			01/14/16 19:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 137*		*01/14/16 19:07*	*1*
4-Bromofluorobenzene	*104*		*70 - 131*		*01/14/16 19:07*	*1*
Dibromofluoromethane (Surr)	*100*		*72 - 136*		*01/14/16 19:07*	*1*
Toluene-d8 (Surr)	*101*		*74 - 120*		*01/14/16 19:07*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, cis-	**2400**	**D**	5.0	1.3	ug/L			01/14/16 06:08	5
Acetone	**6800**	**D**	50	5.4	ug/L			01/14/16 06:08	5
Trichloroethene	**1900**	**D**	5.0	1.1	ug/L			01/14/16 06:08	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*109*	*D*	*70 - 137*		*01/14/16 06:08*	*5*
4-Bromofluorobenzene	*101*	*D*	*70 - 131*		*01/14/16 06:08*	*5*
Dibromofluoromethane (Surr)	*101*	*D*	*72 - 136*		*01/14/16 06:08*	*5*
Toluene-d8 (Surr)	*103*	*D*	*74 - 120*		*01/14/16 06:08*	*5*

Client Sample ID: Primary-Eff

Lab Sample ID: 460-107425-2

Date Collected: 01/11/16 13:55

Matrix: Water

Date Received: 01/12/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			01/14/16 05:43	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			01/14/16 05:43	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			01/14/16 05:43	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			01/14/16 05:43	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			01/14/16 05:43	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			01/14/16 05:43	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			01/14/16 05:43	1
1,2-Dichloroethene, cis-	**1.1**		1.0	0.26	ug/L			01/14/16 05:43	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			01/14/16 05:43	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/14/16 05:43	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			01/14/16 05:43	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			01/14/16 05:43	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			01/14/16 05:43	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			01/14/16 05:43	1
2-Butanone (MEK)	**2.2**	**J**	10	2.2	ug/L			01/14/16 05:43	1
2-Hexanone	0.72	U	10	0.72	ug/L			01/14/16 05:43	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			01/14/16 05:43	1
Benzene	0.090	U	1.0	0.090	ug/L			01/14/16 05:43	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			01/14/16 05:43	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			01/14/16 05:43	1
Bromoform	0.18	U	1.0	0.18	ug/L			01/14/16 05:43	1
Bromomethane	0.18	U	1.0	0.18	ug/L			01/14/16 05:43	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			01/14/16 05:43	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			01/14/16 05:43	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			01/14/16 05:43	1
Chloroethane	0.37	U	1.0	0.37	ug/L			01/14/16 05:43	1
Chloroform	0.22	U	1.0	0.22	ug/L			01/14/16 05:43	1
Chloromethane	0.22	U	1.0	0.22	ug/L			01/14/16 05:43	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			01/14/16 05:43	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/14/16 05:43	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			01/14/16 05:43	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			01/14/16 05:43	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			01/14/16 05:43	1
o-Xylene	0.32	U	1.0	0.32	ug/L			01/14/16 05:43	1
Styrene	0.17	U	1.0	0.17	ug/L			01/14/16 05:43	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			01/14/16 05:43	1
Toluene	0.25	U	1.0	0.25	ug/L			01/14/16 05:43	1
Trichloroethene	**0.57**	**J**	1.0	0.22	ug/L			01/14/16 05:43	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			01/14/16 05:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 137*		*01/14/16 05:43*	*1*
4-Bromofluorobenzene	*101*		*70 - 131*		*01/14/16 05:43*	*1*
Dibromofluoromethane (Surr)	*97*		*72 - 136*		*01/14/16 05:43*	*1*

Client Sample ID: Primary-Eff

Date Collected: 01/11/16 13:55
Date Received: 01/12/16 10:00

Lab Sample ID: 460-107425-2
Matrix: Water

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*74 - 120*		*01/14/16 05:43*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**11000**	**D**	50	5.4	ug/L			01/14/16 05:17	5
Vinyl chloride	**480**	**D**	5.0	0.30	ug/L			01/14/16 05:17	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*	*D*	*70 - 137*		*01/14/16 05:17*	*5*
4-Bromofluorobenzene	*103*	*D*	*70 - 131*		*01/14/16 05:17*	*5*
Dibromofluoromethane (Surr)	*99*	*D*	*72 - 136*		*01/14/16 05:17*	*5*
Toluene-d8 (Surr)	*103*	*D*	*74 - 120*		*01/14/16 05:17*	*5*

Client Sample ID: Post-Carb

Date Collected: 01/11/16 14:00
Date Received: 01/12/16 10:00

Lab Sample ID: 460-107425-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			01/14/16 02:43	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			01/14/16 02:43	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			01/14/16 02:43	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			01/14/16 02:43	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			01/14/16 02:43	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			01/14/16 02:43	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			01/14/16 02:43	1
1,2-Dichloroethene, cis-	**1.0**		1.0	0.26	ug/L			01/14/16 02:43	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			01/14/16 02:43	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/14/16 02:43	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			01/14/16 02:43	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			01/14/16 02:43	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			01/14/16 02:43	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			01/14/16 02:43	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			01/14/16 02:43	1
2-Hexanone	0.72	U	10	0.72	ug/L			01/14/16 02:43	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			01/14/16 02:43	1
Benzene	0.090	U	1.0	0.090	ug/L			01/14/16 02:43	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			01/14/16 02:43	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			01/14/16 02:43	1
Bromoform	0.18	U	1.0	0.18	ug/L			01/14/16 02:43	1
Bromomethane	0.18	U	1.0	0.18	ug/L			01/14/16 02:43	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			01/14/16 02:43	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			01/14/16 02:43	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			01/14/16 02:43	1
Chloroethane	0.37	U	1.0	0.37	ug/L			01/14/16 02:43	1
Chloroform	0.22	U	1.0	0.22	ug/L			01/14/16 02:43	1
Chloromethane	0.22	U	1.0	0.22	ug/L			01/14/16 02:43	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			01/14/16 02:43	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/14/16 02:43	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			01/14/16 02:43	1

Client Sample ID: Post-Carb

Lab Sample ID: 460-107425-7

Date Collected: 01/11/16 14:00

Matrix: Water

Date Received: 01/12/16 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.21	U	1.0	0.21	ug/L			01/14/16 02:43	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			01/14/16 02:43	1
o-Xylene	0.32	U	1.0	0.32	ug/L			01/14/16 02:43	1
Styrene	0.17	U	1.0	0.17	ug/L			01/14/16 02:43	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			01/14/16 02:43	1
Toluene	0.25	U	1.0	0.25	ug/L			01/14/16 02:43	1
Trichloroethene	**0.58**	**J**	1.0	0.22	ug/L			01/14/16 02:43	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			01/14/16 02:43	1
Vinyl chloride	**1.0**		1.0	0.060	ug/L			01/14/16 02:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 137*		*01/14/16 02:43*	*1*
4-Bromofluorobenzene	*100*		*70 - 131*		*01/14/16 02:43*	*1*
Dibromofluoromethane (Surr)	*101*		*72 - 136*		*01/14/16 02:43*	*1*
Toluene-d8 (Surr)	*103*		*74 - 120*		*01/14/16 02:43*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**11000**	**D**	50	5.4	ug/L			01/14/16 17:49	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*	*D*	*70 - 137*		*01/14/16 17:49*	*5*
4-Bromofluorobenzene	*100*	*D*	*70 - 131*		*01/14/16 17:49*	*5*
Dibromofluoromethane (Surr)	*103*	*D*	*72 - 136*		*01/14/16 17:49*	*5*
Toluene-d8 (Surr)	*100*	*D*	*74 - 120*		*01/14/16 17:49*	*5*

Client Sample ID: Trip Blank

Lab Sample ID: 460-107425-8

Date Collected: 01/11/16 15:30

Matrix: Water

Date Received: 01/12/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			01/14/16 01:25	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			01/14/16 01:25	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			01/14/16 01:25	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			01/14/16 01:25	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			01/14/16 01:25	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			01/14/16 01:25	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			01/14/16 01:25	1
1,2-Dichloroethene, cis-	**1.4**		1.0	0.26	ug/L			01/14/16 01:25	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			01/14/16 01:25	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/14/16 01:25	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			01/14/16 01:25	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			01/14/16 01:25	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			01/14/16 01:25	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			01/14/16 01:25	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			01/14/16 01:25	1
2-Hexanone	0.72	U	10	0.72	ug/L			01/14/16 01:25	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			01/14/16 01:25	1
Acetone	1.1	U	10	1.1	ug/L			01/14/16 01:25	1

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex - Dow Jamestown, NY

TestAmerica Job ID: 460-107425-1

Client Sample ID: Trip Blank
Date Collected: 01/11/16 15:30
Date Received: 01/12/16 10:00

Lab Sample ID: 460-107425-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.090	U	1.0	0.090	ug/L			01/14/16 01:25	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			01/14/16 01:25	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			01/14/16 01:25	1
Bromoform	0.18	U	1.0	0.18	ug/L			01/14/16 01:25	1
Bromomethane	0.18	U	1.0	0.18	ug/L			01/14/16 01:25	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			01/14/16 01:25	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			01/14/16 01:25	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			01/14/16 01:25	1
Chloroethane	0.37	U	1.0	0.37	ug/L			01/14/16 01:25	1
Chloroform	0.22	U	1.0	0.22	ug/L			01/14/16 01:25	1
Chloromethane	0.22	U	1.0	0.22	ug/L			01/14/16 01:25	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			01/14/16 01:25	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/14/16 01:25	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			01/14/16 01:25	1
Methylene Chloride	**0.90**	**J**	1.0	0.21	ug/L			01/14/16 01:25	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			01/14/16 01:25	1
o-Xylene	0.32	U	1.0	0.32	ug/L			01/14/16 01:25	1
Styrene	0.17	U	1.0	0.17	ug/L			01/14/16 01:25	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			01/14/16 01:25	1
Toluene	0.25	U	1.0	0.25	ug/L			01/14/16 01:25	1
Trichloroethene	**2.4**		1.0	0.22	ug/L			01/14/16 01:25	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			01/14/16 01:25	1
Vinyl chloride	**1.0**		1.0	0.060	ug/L			01/14/16 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 137*		*01/14/16 01:25*	*1*
4-Bromofluorobenzene	*101*		*70 - 131*		*01/14/16 01:25*	*1*
Dibromofluoromethane (Surr)	*103*		*72 - 136*		*01/14/16 01:25*	*1*
Toluene-d8 (Surr)	*103*		*74 - 120*		*01/14/16 01:25*	*1*

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex - Dow Jamestown, NY

TestAmerica Job ID: 460-107425-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-137)	(70-131)	(72-136)	(74-120)
460-107425-1 - DL	Pre-Carb	109 D	101 D	101 D	103 D
460-107425-1	Pre-Carb	99	104	100	101
460-107425-2 - DL	Primary-Eff	106 D	103 D	99 D	103 D
460-107425-2	Primary-Eff	107	101	97	103
460-107425-7	Post-Carb	108	100	101	103
460-107425-7 - DL	Post-Carb	99 D	100 D	103 D	100 D
460-107425-8	Trip Blank	108	101	103	103
LCS 460-345656/3	Lab Control Sample	107	99	102	102
LCS 460-345760/4	Lab Control Sample	106	99	100	102
LCSD 460-345656/4	Lab Control Sample Dup	103	102	100	103
LCSD 460-345760/5	Lab Control Sample Dup	106	100	101	102
MB 460-345656/7	Method Blank	106	98	100	102
MB 460-345760/8	Method Blank	106	102	101	101

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 460-345656/7
Matrix: Water
Analysis Batch: 345656

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			01/13/16 21:59	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			01/13/16 21:59	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			01/13/16 21:59	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			01/13/16 21:59	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			01/13/16 21:59	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			01/13/16 21:59	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			01/13/16 21:59	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			01/13/16 21:59	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			01/13/16 21:59	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/13/16 21:59	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			01/13/16 21:59	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			01/13/16 21:59	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			01/13/16 21:59	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			01/13/16 21:59	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			01/13/16 21:59	1
2-Hexanone	0.72	U	10	0.72	ug/L			01/13/16 21:59	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			01/13/16 21:59	1
Acetone	1.1	U	10	1.1	ug/L			01/13/16 21:59	1
Benzene	0.090	U	1.0	0.090	ug/L			01/13/16 21:59	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			01/13/16 21:59	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			01/13/16 21:59	1
Bromoform	0.18	U	1.0	0.18	ug/L			01/13/16 21:59	1
Bromomethane	0.18	U	1.0	0.18	ug/L			01/13/16 21:59	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			01/13/16 21:59	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			01/13/16 21:59	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			01/13/16 21:59	1
Chloroethane	0.37	U	1.0	0.37	ug/L			01/13/16 21:59	1
Chloroform	0.22	U	1.0	0.22	ug/L			01/13/16 21:59	1
Chloromethane	0.22	U	1.0	0.22	ug/L			01/13/16 21:59	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			01/13/16 21:59	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/13/16 21:59	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			01/13/16 21:59	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			01/13/16 21:59	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			01/13/16 21:59	1
o-Xylene	0.32	U	1.0	0.32	ug/L			01/13/16 21:59	1
Styrene	0.17	U	1.0	0.17	ug/L			01/13/16 21:59	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			01/13/16 21:59	1
Toluene	0.25	U	1.0	0.25	ug/L			01/13/16 21:59	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			01/13/16 21:59	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			01/13/16 21:59	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			01/13/16 21:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 137*		*01/13/16 21:59*	*1*
4-Bromofluorobenzene	*98*		*70 - 131*		*01/13/16 21:59*	*1*
Dibromofluoromethane (Surr)	*100*		*72 - 136*		*01/13/16 21:59*	*1*
Toluene-d8 (Surr)	*102*		*74 - 120*		*01/13/16 21:59*	*1*

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

Lab Sample ID: LCS 460-345656/3
Matrix: Water
Analysis Batch: 345656

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	21.0		ug/L		105	76 - 131
1,1,2,2-Tetrachloroethane	20.0	20.7		ug/L		104	65 - 128
1,1,2-Trichloroethane	20.0	21.0		ug/L		105	77 - 122
1,1-Dichloroethane	20.0	21.4		ug/L		107	77 - 129
1,1-Dichloroethene	20.0	20.9		ug/L		104	67 - 133
1,2-Dichlorobenzene	20.0	19.5		ug/L		97	80 - 121
1,2-Dichloroethane	20.0	20.9		ug/L		104	73 - 131
1,2-Dichloroethene, cis-	20.0	19.2		ug/L		96	82 - 127
1,2-Dichloroethene, trans-	20.0	18.1		ug/L		90	78 - 127
1,2-Dichloropropane	20.0	21.6		ug/L		108	75 - 129
1,3-Dichlorobenzene	20.0	19.7		ug/L		98	80 - 120
1,3-Dichloropropene, cis-	20.0	20.5		ug/L		102	72 - 125
1,3-Dichloropropene, trans-	20.0	19.9		ug/L		99	69 - 125
1,4-Dichlorobenzene	20.0	19.7		ug/L		98	79 - 120
2-Butanone (MEK)	100	77.5		ug/L		77	56 - 150
2-Hexanone	100	102		ug/L		102	64 - 150
4-Methyl-2-pentanone (MIBK)	100	108		ug/L		108	77 - 130
Acetone	100	76.1		ug/L		76	19 - 150
Benzene	20.0	21.0		ug/L		105	76 - 125
Bromochloromethane	20.0	17.8		ug/L		89	71 - 137
Bromodichloromethane	20.0	21.3		ug/L		107	78 - 127
Bromoform	20.0	15.7		ug/L		78	65 - 124
Bromomethane	20.0	26.6		ug/L		133	10 - 150
Carbon disulfide	20.0	19.2		ug/L		96	69 - 131
Carbon tetrachloride	20.0	20.6		ug/L		103	71 - 138
Chlorobenzene	20.0	20.8		ug/L		104	80 - 120
Chloroethane	20.0	16.8		ug/L		84	40 - 150
Chloroform	20.0	20.1		ug/L		101	81 - 127
Chloromethane	20.0	21.2		ug/L		106	45 - 150
Dibromochloromethane	20.0	19.6		ug/L		98	78 - 120
Ethylbenzene	20.0	20.5		ug/L		102	80 - 120
Isopropylbenzene	20.0	20.8		ug/L		104	80 - 127
Methylene Chloride	20.0	19.6		ug/L		98	80 - 126
m-Xylene & p-Xylene	20.0	20.6		ug/L		103	80 - 121
o-Xylene	20.0	20.4		ug/L		102	80 - 120
Styrene	20.0	21.2		ug/L		106	75 - 124
Tetrachloroethene	20.0	19.2		ug/L		96	71 - 132
Toluene	20.0	21.7		ug/L		108	80 - 120
Trichloroethene	20.0	19.9		ug/L		100	77 - 127
Trichlorofluoromethane	20.0	18.8		ug/L		94	50 - 150
Vinyl chloride	20.0	19.1		ug/L		95	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 137*
4-Bromofluorobenzene	*99*		*70 - 131*
Dibromofluoromethane (Surr)	*102*		*72 - 136*
Toluene-d8 (Surr)	*102*		*74 - 120*

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

Lab Sample ID: LCSD 460-345656/4
Matrix: Water
Analysis Batch: 345656

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			20.0	21.4		ug/L		107	76 - 131	2	30
1,1,2,2-Tetrachloroethane			20.0	22.2		ug/L		111	65 - 128	7	30
1,1,2-Trichloroethane			20.0	21.1		ug/L		106	77 - 122	1	30
1,1-Dichloroethane			20.0	21.3		ug/L		106	77 - 129	1	30
1,1-Dichloroethene			20.0	20.7		ug/L		104	67 - 133	1	30
1,2-Dichlorobenzene			20.0	20.6		ug/L		103	80 - 121	6	30
1,2-Dichloroethane			20.0	21.0		ug/L		105	73 - 131	0	30
1,2-Dichloroethene, cis-			20.0	20.3		ug/L		102	82 - 127	6	30
1,2-Dichloroethene, trans-			20.0	19.1		ug/L		96	78 - 127	6	30
1,2-Dichloropropane			20.0	22.6		ug/L		113	75 - 129	5	30
1,3-Dichlorobenzene			20.0	20.7		ug/L		104	80 - 120	5	30
1,3-Dichloropropene, cis-			20.0	21.2		ug/L		106	72 - 125	3	30
1,3-Dichloropropene, trans-			20.0	21.0		ug/L		105	69 - 125	5	30
1,4-Dichlorobenzene			20.0	20.7		ug/L		103	79 - 120	5	30
2-Butanone (MEK)			100	81.0		ug/L		81	56 - 150	4	30
2-Hexanone			100	103		ug/L		103	64 - 150	1	30
4-Methyl-2-pentanone (MIBK)			100	107		ug/L		107	77 - 130	1	30
Acetone			100	74.6		ug/L		75	19 - 150	2	30
Benzene			20.0	21.6		ug/L		108	76 - 125	3	30
Bromochloromethane			20.0	18.3		ug/L		92	71 - 137	3	30
Bromodichloromethane			20.0	22.5		ug/L		112	78 - 127	5	30
Bromoform			20.0	18.1		ug/L		91	65 - 124	14	30
Bromomethane			20.0	25.1		ug/L		126	10 - 150	6	30
Carbon disulfide			20.0	19.8		ug/L		99	69 - 131	3	30
Carbon tetrachloride			20.0	21.2		ug/L		106	71 - 138	3	30
Chlorobenzene			20.0	21.2		ug/L		106	80 - 120	2	30
Chloroethane			20.0	18.4		ug/L		92	40 - 150	9	30
Chloroform			20.0	20.4		ug/L		102	81 - 127	1	30
Chloromethane			20.0	21.5		ug/L		107	45 - 150	1	30
Dibromochloromethane			20.0	19.9		ug/L		100	78 - 120	2	30
Ethylbenzene			20.0	21.0		ug/L		105	80 - 120	3	30
Isopropylbenzene			20.0	21.7		ug/L		109	80 - 127	4	30
Methylene Chloride			20.0	20.0		ug/L		100	80 - 126	2	30
m-Xylene & p-Xylene			20.0	21.2		ug/L		106	80 - 121	3	30
o-Xylene			20.0	20.9		ug/L		105	80 - 120	3	30
Styrene			20.0	21.4		ug/L		107	75 - 124	1	30
Tetrachloroethene			20.0	20.2		ug/L		101	71 - 132	5	30
Toluene			20.0	22.2		ug/L		111	80 - 120	2	30
Trichloroethene			20.0	20.2		ug/L		101	77 - 127	1	30
Trichlorofluoromethane			20.0	19.4		ug/L		97	50 - 150	3	30
Vinyl chloride			20.0	19.7		ug/L		98	53 - 142	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 137*
4-Bromofluorobenzene	*102*		*70 - 131*
Dibromofluoromethane (Surr)	*100*		*72 - 136*
Toluene-d8 (Surr)	*103*		*74 - 120*

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

Lab Sample ID: MB 460-345760/8
Matrix: Water
Analysis Batch: 345760

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			01/14/16 11:25	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			01/14/16 11:25	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			01/14/16 11:25	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			01/14/16 11:25	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			01/14/16 11:25	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			01/14/16 11:25	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			01/14/16 11:25	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			01/14/16 11:25	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			01/14/16 11:25	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/14/16 11:25	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			01/14/16 11:25	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			01/14/16 11:25	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			01/14/16 11:25	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			01/14/16 11:25	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			01/14/16 11:25	1
2-Hexanone	0.72	U	10	0.72	ug/L			01/14/16 11:25	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			01/14/16 11:25	1
Acetone	1.1	U	10	1.1	ug/L			01/14/16 11:25	1
Benzene	0.090	U	1.0	0.090	ug/L			01/14/16 11:25	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			01/14/16 11:25	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			01/14/16 11:25	1
Bromoform	0.18	U	1.0	0.18	ug/L			01/14/16 11:25	1
Bromomethane	0.18	U	1.0	0.18	ug/L			01/14/16 11:25	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			01/14/16 11:25	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			01/14/16 11:25	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			01/14/16 11:25	1
Chloroethane	0.37	U	1.0	0.37	ug/L			01/14/16 11:25	1
Chloroform	0.22	U	1.0	0.22	ug/L			01/14/16 11:25	1
Chloromethane	0.22	U	1.0	0.22	ug/L			01/14/16 11:25	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			01/14/16 11:25	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/14/16 11:25	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			01/14/16 11:25	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			01/14/16 11:25	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			01/14/16 11:25	1
o-Xylene	0.32	U	1.0	0.32	ug/L			01/14/16 11:25	1
Styrene	0.17	U	1.0	0.17	ug/L			01/14/16 11:25	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			01/14/16 11:25	1
Toluene	0.25	U	1.0	0.25	ug/L			01/14/16 11:25	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			01/14/16 11:25	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			01/14/16 11:25	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			01/14/16 11:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 137*		*01/14/16 11:25*	*1*
4-Bromofluorobenzene	*102*		*70 - 131*		*01/14/16 11:25*	*1*
Dibromofluoromethane (Surr)	*101*		*72 - 136*		*01/14/16 11:25*	*1*
Toluene-d8 (Surr)	*101*		*74 - 120*		*01/14/16 11:25*	*1*

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

Lab Sample ID: LCS 460-345760/4
Matrix: Water
Analysis Batch: 345760

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	21.6		ug/L		108	76 - 131
1,1,2,2-Tetrachloroethane	20.0	21.6		ug/L		108	65 - 128
1,1,2-Trichloroethane	20.0	21.3		ug/L		106	77 - 122
1,1-Dichloroethane	20.0	21.8		ug/L		109	77 - 129
1,1-Dichloroethene	20.0	20.0		ug/L		100	67 - 133
1,2-Dichlorobenzene	20.0	20.0		ug/L		100	80 - 121
1,2-Dichloroethane	20.0	21.2		ug/L		106	73 - 131
1,2-Dichloroethene, cis-	20.0	19.6		ug/L		98	82 - 127
1,2-Dichloroethene, trans-	20.0	18.7		ug/L		94	78 - 127
1,2-Dichloropropane	20.0	22.2		ug/L		111	75 - 129
1,3-Dichlorobenzene	20.0	20.5		ug/L		102	80 - 120
1,3-Dichloropropene, cis-	20.0	21.4		ug/L		107	72 - 125
1,3-Dichloropropene, trans-	20.0	21.6		ug/L		108	69 - 125
1,4-Dichlorobenzene	20.0	20.0		ug/L		100	79 - 120
2-Butanone (MEK)	100	81.0		ug/L		81	56 - 150
2-Hexanone	100	102		ug/L		102	64 - 150
4-Methyl-2-pentanone (MIBK)	100	108		ug/L		108	77 - 130
Acetone	100	75.9		ug/L		76	19 - 150
Benzene	20.0	21.6		ug/L		108	76 - 125
Bromochloromethane	20.0	17.8		ug/L		89	71 - 137
Bromodichloromethane	20.0	21.6		ug/L		108	78 - 127
Bromoform	20.0	16.7		ug/L		83	65 - 124
Bromomethane	20.0	26.3		ug/L		132	10 - 150
Carbon disulfide	20.0	19.0		ug/L		95	69 - 131
Carbon tetrachloride	20.0	20.8		ug/L		104	71 - 138
Chlorobenzene	20.0	21.1		ug/L		105	80 - 120
Chloroethane	20.0	17.4		ug/L		87	40 - 150
Chloroform	20.0	20.0		ug/L		100	81 - 127
Chloromethane	20.0	21.0		ug/L		105	45 - 150
Dibromochloromethane	20.0	19.1		ug/L		95	78 - 120
Ethylbenzene	20.0	20.5		ug/L		103	80 - 120
Isopropylbenzene	20.0	21.3		ug/L		107	80 - 127
Methylene Chloride	20.0	20.0		ug/L		100	80 - 126
m-Xylene & p-Xylene	20.0	20.8		ug/L		104	80 - 121
o-Xylene	20.0	20.9		ug/L		104	80 - 120
Styrene	20.0	21.2		ug/L		106	75 - 124
Tetrachloroethene	20.0	19.7		ug/L		99	71 - 132
Toluene	20.0	21.8		ug/L		109	80 - 120
Trichloroethene	20.0	19.8		ug/L		99	77 - 127
Trichlorofluoromethane	20.0	19.0		ug/L		95	50 - 150
Vinyl chloride	20.0	18.8		ug/L		94	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 137*
4-Bromofluorobenzene	*99*		*70 - 131*
Dibromofluoromethane (Surr)	*100*		*72 - 136*
Toluene-d8 (Surr)	*102*		*74 - 120*

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

Lab Sample ID: LCSD 460-345760/5
Matrix: Water
Analysis Batch: 345760

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			20.0	22.6		ug/L		113	76 - 131	4	30
1,1,2,2-Tetrachloroethane			20.0	22.2		ug/L		111	65 - 128	3	30
1,1,2-Trichloroethane			20.0	21.3		ug/L		106	77 - 122	0	30
1,1-Dichloroethane			20.0	22.4		ug/L		112	77 - 129	3	30
1,1-Dichloroethene			20.0	20.5		ug/L		102	67 - 133	2	30
1,2-Dichlorobenzene			20.0	20.6		ug/L		103	80 - 121	3	30
1,2-Dichloroethane			20.0	21.8		ug/L		109	73 - 131	3	30
1,2-Dichloroethene, cis-			20.0	20.4		ug/L		102	82 - 127	4	30
1,2-Dichloroethene, trans-			20.0	19.8		ug/L		99	78 - 127	6	30
1,2-Dichloropropane			20.0	23.1		ug/L		115	75 - 129	4	30
1,3-Dichlorobenzene			20.0	20.5		ug/L		103	80 - 120	0	30
1,3-Dichloropropene, cis-			20.0	22.6		ug/L		113	72 - 125	6	30
1,3-Dichloropropene, trans-			20.0	22.3		ug/L		112	69 - 125	3	30
1,4-Dichlorobenzene			20.0	20.7		ug/L		104	79 - 120	4	30
2-Butanone (MEK)			100	84.2		ug/L		84	56 - 150	4	30
2-Hexanone			100	102		ug/L		102	64 - 150	0	30
4-Methyl-2-pentanone (MIBK)			100	107		ug/L		107	77 - 130	1	30
Acetone			100	73.7		ug/L		74	19 - 150	3	30
Benzene			20.0	22.2		ug/L		111	76 - 125	3	30
Bromochloromethane			20.0	18.5		ug/L		93	71 - 137	4	30
Bromodichloromethane			20.0	22.0		ug/L		110	78 - 127	2	30
Bromoform			20.0	18.3		ug/L		91	65 - 124	9	30
Bromomethane			20.0	24.0		ug/L		120	10 - 150	9	30
Carbon disulfide			20.0	19.6		ug/L		98	69 - 131	3	30
Carbon tetrachloride			20.0	20.4		ug/L		102	71 - 138	2	30
Chlorobenzene			20.0	21.8		ug/L		109	80 - 120	4	30
Chloroethane			20.0	19.3		ug/L		96	40 - 150	10	30
Chloroform			20.0	21.3		ug/L		107	81 - 127	7	30
Chloromethane			20.0	23.3		ug/L		117	45 - 150	10	30
Dibromochloromethane			20.0	20.3		ug/L		101	78 - 120	6	30
Ethylbenzene			20.0	21.8		ug/L		109	80 - 120	6	30
Isopropylbenzene			20.0	21.9		ug/L		109	80 - 127	2	30
Methylene Chloride			20.0	20.8		ug/L		104	80 - 126	4	30
m-Xylene & p-Xylene			20.0	21.7		ug/L		109	80 - 121	4	30
o-Xylene			20.0	20.8		ug/L		104	80 - 120	0	30
Styrene			20.0	21.8		ug/L		109	75 - 124	3	30
Tetrachloroethene			20.0	20.1		ug/L		100	71 - 132	2	30
Toluene			20.0	22.6		ug/L		113	80 - 120	4	30
Trichloroethene			20.0	21.1		ug/L		105	77 - 127	6	30
Trichlorofluoromethane			20.0	20.0		ug/L		100	50 - 150	5	30
Vinyl chloride			20.0	20.1		ug/L		101	53 - 142	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 137*
4-Bromofluorobenzene	*100*		*70 - 131*
Dibromofluoromethane (Surr)	*101*		*72 - 136*
Toluene-d8 (Surr)	*102*		*74 - 120*

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex - Dow Jamestown, NY

TestAmerica Job ID: 460-107425-1

GC/MS VOA

Analysis Batch: 345656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-107425-1 - DL	Pre-Carb	Total/NA	Water	8260C	
460-107425-2 - DL	Primary-Eff	Total/NA	Water	8260C	
460-107425-2	Primary-Eff	Total/NA	Water	8260C	
460-107425-7	Post-Carb	Total/NA	Water	8260C	
460-107425-8	Trip Blank	Total/NA	Water	8260C	
LCS 460-345656/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 460-345656/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 460-345656/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 345760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-107425-1	Pre-Carb	Total/NA	Water	8260C	
460-107425-7 - DL	Post-Carb	Total/NA	Water	8260C	
LCS 460-345760/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 460-345760/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 460-345760/8	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex - Dow Jamestown, NY

TestAmerica Job ID: 460-107425-1

Client Sample ID: Pre-Carb
Lab Sample ID: 460-107425-1
Date Collected: 01/11/16 13:50
Matrix: Water
Date Received: 01/12/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	5	345656	01/14/16 06:08	EMM	TAL EDI
Total/NA	Analysis	8260C		1	345760	01/14/16 19:07	MZS	TAL EDI

Client Sample ID: Primary-Eff
Lab Sample ID: 460-107425-2
Date Collected: 01/11/16 13:55
Matrix: Water
Date Received: 01/12/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	5	345656	01/14/16 05:17	EMM	TAL EDI
Total/NA	Analysis	8260C		1	345656	01/14/16 05:43	EMM	TAL EDI

Client Sample ID: Post-Carb
Lab Sample ID: 460-107425-7
Date Collected: 01/11/16 14:00
Matrix: Water
Date Received: 01/12/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	345656	01/14/16 02:43	EMM	TAL EDI
Total/NA	Analysis	8260C	DL	5	345760	01/14/16 17:49	MZS	TAL EDI

Client Sample ID: Trip Blank
Lab Sample ID: 460-107425-8
Date Collected: 01/11/16 15:30
Matrix: Water
Date Received: 01/12/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	345656	01/14/16 01:25	EMM	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Certification Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex - Dow Jamestown, NY

TestAmerica Job ID: 460-107425-1

Laboratory: TestAmerica Edison

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11452	03-31-16

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex - Dow Jamestown, NY

TestAmerica Job ID: 460-107425-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL EDI

Protocol References:

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

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex - Dow Jamestown, NY

TestAmerica Job ID: 460-107425-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-107425-1	Pre-Carb	Water	01/11/16 13:50	01/12/16 10:00
460-107425-2	Primary-Eff	Water	01/11/16 13:55	01/12/16 10:00
460-107425-7	Post-Carb	Water	01/11/16 14:00	01/12/16 10:00
460-107425-8	Trip Blank	Water	01/11/16 15:30	01/12/16 10:00

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page 1 of 1

Name (for report and invoice): Kyle Block

Company: CH2M HILL

Address: 18 Tremont St. Suite 700

City: Boston MA State: 02108

Phone: 617-626-7013 Fax: 810-224-5077

Samplers Name (Printed): Jed Gowin

P. O. #

Site/Project Identification: Essex hop' Pow Jamestown

State (Location of site): NJ: ☐ NY: ☒ Other:

Regulatory Program: DKQP: ☐

Analysis Turnaround Time: Standard ☒

Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐

ANALYSIS REQUESTED (ENTER 'X' BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No:
Job No: 107425

Sample Identification	Date	Time	Matrix	No. of Cont.	VOC's 8260	Sample Numbers
Pre-Carb	1/11/16	1350	GW	3	X	-1
Primary-EFF	↓	1355	↓	↓	X	-2
Post - Carb 1	↓	1400	↓	↓	X	-3
Post - Carb 2	↓	1430	↓	↓	X	-4
Post - Carb 3	↓	1500	↓	↓	X	-5
Post - Carb 4	↓	1530	↓	↓	X	-6 -7
Trip Blank				2	X	-8 7

460-107425 Chain of Custody

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH, 6 = Other ______, 7 = Other ______

Soil:

Water:

Special Instructions: Composite all 4 Post Carb Samples in lab & Report as Post-Carb

Water Metals Filtered (Yes/No)? NR

Relinquished by	Company	Date / Time	Received by	Company
[signature]	CH2M HILL	1/11/16 1600	1)	
2) [signature]		1/12/16 1000	2) [signature]	TA Edison
3)			3)	1/12/16 1000
4)			4)	

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132), Massachusetts (M-NJ312), North Carolina (No. 578)

IR #56 1.0/3.0°C

TAL-0016 (07/11)

TestAmerica Edison
Receipt Temperature and pH Log

Page 1 of 1

Job Number: 107425

Number of Coolers: ______ IR Gun #: ______

Cooler Temperatures

Cooler #1:	°C	°C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: ______

Preservative Name/Conc.: ______ Volume of Preservative used (ml): ______

Lot # of Preservative(s): ______ Expiration Date: ______

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

* *Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

EDS-WI-038, Rev 4, 06/09/2014

Initials: SB **Date:** 1/12/16

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc.

Job Number: 460-107425-1

Login Number: 107425
List Number: 1
Creator: Lysy, Susan

List Source: TestAmerica Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	566149
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	3.0°C IR#5
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.	False	See NCM
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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.	N/A	
Samples do not require splitting or compositing.	False	COMPOSITE REQUIRED
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

TestAmerica Job ID: 460-108985-1
Client Project/Site: Essex Hope Jamestown, NY

For:
CH2M Hill Constructors, Inc.
18 Tremont St
Suite 700
Boston, Massachusetts 02108

Attn: Mr. Kyle Block

Charlene Isaac

Authorized for release by:
2/26/2016 1:58:01 PM
Shalini Williams, Project Management Assistant II
shalini.williams@testamericainc.com

Designee for

Kristin DeGraw, Project Manager II
(732)593-2555
kristin.degraw@testamericainc.com

Table of Contents

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-108985-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

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)

Job ID: 460-108985-1

Laboratory: TestAmerica Edison

Narrative

CASE NARRATIVE

Client: CH2M Hill Constructors, Inc.

Project: Essex Hope Jamestown, NY

Report Number: 460-108985-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

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

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

RECEIPT

The samples were received on 2/12/2016 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANICS

Samples Pre-Carb_20160211 (460-108985-1), Primary-Eff_20160211 (460-108985-2), POST-CARB_20160211_COMPOSITE (460-108985-7) and TRIP BLANK_20160211 (460-108985-8) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 02/24/2016 and 02/25/2016.

The laboratory control sample duplicate (LCSD) for batch analytical batch 460-352460 recovered outside control limits for the following analyte: 1,1-Dichloroethane. This analyte was not detected in the associated samples; therefore, the data have been reported.

1,1-Dichloroethane failed the recovery criteria low for LCSD 460-352460/4.

Acetone failed the recovery criteria low for the MSD of sample POST-CARB_20160211_COMPOSITEMSD (460-108985-7) in batch 460-352156. The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

Samples Pre-Carb_20160211 (460-108985-1)[5X], Primary-Eff_20160211 (460-108985-2)[5X] and POST-CARB_20160211_COMPOSITE (460-108985-7)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Volatile organics analysis.

All other quality control parameters were within the acceptance limits

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-108985-1

Client Sample ID: Pre-Carb_20160211 — Lab Sample ID: 460-108985-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	11		1.0	0.34	ug/L	1		8260C	Total/NA
1,2-Dichloroethene, trans-	18		1.0	0.18	ug/L	1		8260C	Total/NA
Benzene	5.1		1.0	0.090	ug/L	1		8260C	Total/NA
Methylene Chloride	0.32	J	1.0	0.21	ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	0.43	J	10	0.28	ug/L	1		8260C	Total/NA
Toluene	0.46	J	1.0	0.25	ug/L	1		8260C	Total/NA
Vinyl chloride	320		1.0	0.060	ug/L	1		8260C	Total/NA
1,2-Dichloroethene, cis- - DL	1900	D	5.0	1.3	ug/L	5		8260C	Total/NA
Trichloroethene - DL	990	D	5.0	1.1	ug/L	5		8260C	Total/NA

Client Sample ID: Primary-Eff_20160211 — Lab Sample ID: 460-108985-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	0.48	J	1.0	0.26	ug/L	1		8260C	Total/NA
2-Butanone (MEK)	3.7	J	10	2.2	ug/L	1		8260C	Total/NA
Chloroethane	2.1		1.0	0.37	ug/L	1		8260C	Total/NA
Methylene Chloride	0.35	J	1.0	0.21	ug/L	1		8260C	Total/NA
Acetone - DL	11000	D	50	5.4	ug/L	5		8260C	Total/NA
Vinyl chloride - DL	590	D	5.0	0.30	ug/L	5		8260C	Total/NA

Client Sample ID: POST-CARB_20160211_COMPOSITE — Lab Sample ID: 460-108985-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	0.48	J	1.0	0.26	ug/L	1		8260C	Total/NA
Methylene Chloride	0.35	J	1.0	0.21	ug/L	1		8260C	Total/NA
Vinyl chloride	3.8		1.0	0.060	ug/L	1		8260C	Total/NA
Acetone - DL	8100	D	50	5.4	ug/L	5		8260C	Total/NA

Client Sample ID: TRIP BLANK_20160211 — Lab Sample ID: 460-108985-8

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: Pre-Carb_20160211
Date Collected: 02/11/16 09:00
Date Received: 02/12/16 09:15

Lab Sample ID: 460-108985-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			02/24/16 15:30	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			02/24/16 15:30	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			02/24/16 15:30	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			02/24/16 15:30	1
1,1-Dichloroethene	**11**		1.0	0.34	ug/L			02/24/16 15:30	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			02/24/16 15:30	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			02/24/16 15:30	1
1,2-Dichloroethene, trans-	**18**		1.0	0.18	ug/L			02/24/16 15:30	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			02/24/16 15:30	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			02/24/16 15:30	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			02/24/16 15:30	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			02/24/16 15:30	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			02/24/16 15:30	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			02/24/16 15:30	1
2-Hexanone	0.72	U	10	0.72	ug/L			02/24/16 15:30	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			02/24/16 15:30	1
Acetone	1.1	U	10	1.1	ug/L			02/24/16 15:30	1
Benzene	**5.1**		1.0	0.090	ug/L			02/24/16 15:30	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			02/24/16 15:30	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			02/24/16 15:30	1
Bromoform	0.18	U	1.0	0.18	ug/L			02/24/16 15:30	1
Bromomethane	0.18	U	1.0	0.18	ug/L			02/24/16 15:30	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			02/24/16 15:30	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			02/24/16 15:30	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			02/24/16 15:30	1
Chloroethane	0.37	U	1.0	0.37	ug/L			02/24/16 15:30	1
Chloroform	0.22	U	1.0	0.22	ug/L			02/24/16 15:30	1
Chloromethane	0.22	U	1.0	0.22	ug/L			02/24/16 15:30	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			02/24/16 15:30	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			02/24/16 15:30	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			02/24/16 15:30	1
Methylene Chloride	**0.32**	**J**	1.0	0.21	ug/L			02/24/16 15:30	1
m-Xylene & p-Xylene	**0.43**	**J**	10	0.28	ug/L			02/24/16 15:30	1
o-Xylene	0.32	U	1.0	0.32	ug/L			02/24/16 15:30	1
Styrene	0.17	U	1.0	0.17	ug/L			02/24/16 15:30	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			02/24/16 15:30	1
Toluene	**0.46**	**J**	1.0	0.25	ug/L			02/24/16 15:30	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			02/24/16 15:30	1
Vinyl chloride	**320**		1.0	0.060	ug/L			02/24/16 15:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 137*		*02/24/16 15:30*	*1*
4-Bromofluorobenzene	*98*		*70 - 131*		*02/24/16 15:30*	*1*
Dibromofluoromethane (Surr)	*106*		*72 - 136*		*02/24/16 15:30*	*1*
Toluene-d8 (Surr)	*102*		*74 - 120*		*02/24/16 15:30*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, cis-	**1900**	**D**	5.0	1.3	ug/L			02/24/16 14:17	5
Trichloroethene	**990**	**D**	5.0	1.1	ug/L			02/24/16 14:17	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*100*	*D*	*70 - 137*		*02/24/16 14:17*	*5*
4-Bromofluorobenzene	*101*	*D*	*70 - 131*		*02/24/16 14:17*	*5*
Dibromofluoromethane (Surr)	*103*	*D*	*72 - 136*		*02/24/16 14:17*	*5*
Toluene-d8 (Surr)	*106*	*D*	*74 - 120*		*02/24/16 14:17*	*5*

Client Sample ID: Primary-Eff_20160211

Lab Sample ID: 460-108985-2

Date Collected: 02/11/16 09:05

Matrix: Water

Date Received: 02/12/16 09:15

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			02/25/16 15:33	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			02/25/16 15:33	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			02/25/16 15:33	1
1,1-Dichloroethane	0.24	U *	1.0	0.24	ug/L			02/25/16 15:33	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			02/25/16 15:33	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			02/25/16 15:33	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			02/25/16 15:33	1
1,2-Dichloroethene, cis-	**0.48**	**J**	1.0	0.26	ug/L			02/25/16 15:33	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			02/25/16 15:33	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			02/25/16 15:33	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			02/25/16 15:33	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			02/25/16 15:33	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			02/25/16 15:33	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			02/25/16 15:33	1
2-Butanone (MEK)	**3.7**	**J**	10	2.2	ug/L			02/25/16 15:33	1
2-Hexanone	0.72	U	10	0.72	ug/L			02/25/16 15:33	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			02/25/16 15:33	1
Benzene	0.090	U	1.0	0.090	ug/L			02/25/16 15:33	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			02/25/16 15:33	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			02/25/16 15:33	1
Bromoform	0.18	U	1.0	0.18	ug/L			02/25/16 15:33	1
Bromomethane	0.18	U	1.0	0.18	ug/L			02/25/16 15:33	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			02/25/16 15:33	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			02/25/16 15:33	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			02/25/16 15:33	1
Chloroethane	**2.1**		1.0	0.37	ug/L			02/25/16 15:33	1
Chloroform	0.22	U	1.0	0.22	ug/L			02/25/16 15:33	1
Chloromethane	0.22	U	1.0	0.22	ug/L			02/25/16 15:33	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			02/25/16 15:33	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			02/25/16 15:33	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			02/25/16 15:33	1
Methylene Chloride	**0.35**	**J**	1.0	0.21	ug/L			02/25/16 15:33	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			02/25/16 15:33	1
o-Xylene	0.32	U	1.0	0.32	ug/L			02/25/16 15:33	1
Styrene	0.17	U	1.0	0.17	ug/L			02/25/16 15:33	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			02/25/16 15:33	1
Toluene	0.25	U	1.0	0.25	ug/L			02/25/16 15:33	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			02/25/16 15:33	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			02/25/16 15:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 137*		*02/25/16 15:33*	*1*
4-Bromofluorobenzene	*98*		*70 - 131*		*02/25/16 15:33*	*1*
Dibromofluoromethane (Surr)	*99*		*72 - 136*		*02/25/16 15:33*	*1*

Client Sample ID: Primary-Eff_20160211

Lab Sample ID: 460-108985-2
Date Collected: 02/11/16 09:05
Matrix: Water
Date Received: 02/12/16 09:15

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*93*		*74 - 120*		*02/25/16 15:33*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**11000**	**D**	50	5.4	ug/L			02/24/16 13:53	5
Vinyl chloride	**590**	**D**	5.0	0.30	ug/L			02/24/16 13:53	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*107*	*D*	*70 - 137*		*02/24/16 13:53*	*5*
4-Bromofluorobenzene	*109*	*D*	*70 - 131*		*02/24/16 13:53*	*5*
Dibromofluoromethane (Surr)	*112*	*D*	*72 - 136*		*02/24/16 13:53*	*5*
Toluene-d8 (Surr)	*115*	*D*	*74 - 120*		*02/24/16 13:53*	*5*

Client Sample ID: POST-CARB_20160211_COMPOSITE

Lab Sample ID: 460-108985-7
Date Collected: 02/11/16 09:00
Matrix: Water
Date Received: 02/12/16 09:15

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			02/25/16 15:08	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			02/25/16 15:08	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			02/25/16 15:08	1
1,1-Dichloroethane	0.24	U *	1.0	0.24	ug/L			02/25/16 15:08	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			02/25/16 15:08	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			02/25/16 15:08	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			02/25/16 15:08	1
1,2-Dichloroethene, cis-	**0.48**	**J**	1.0	0.26	ug/L			02/25/16 15:08	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			02/25/16 15:08	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			02/25/16 15:08	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			02/25/16 15:08	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			02/25/16 15:08	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			02/25/16 15:08	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			02/25/16 15:08	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			02/25/16 15:08	1
2-Hexanone	0.72	U	10	0.72	ug/L			02/25/16 15:08	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			02/25/16 15:08	1
Benzene	0.090	U	1.0	0.090	ug/L			02/25/16 15:08	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			02/25/16 15:08	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			02/25/16 15:08	1
Bromoform	0.18	U	1.0	0.18	ug/L			02/25/16 15:08	1
Bromomethane	0.18	U	1.0	0.18	ug/L			02/25/16 15:08	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			02/25/16 15:08	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			02/25/16 15:08	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			02/25/16 15:08	1
Chloroethane	0.37	U	1.0	0.37	ug/L			02/25/16 15:08	1
Chloroform	0.22	U	1.0	0.22	ug/L			02/25/16 15:08	1
Chloromethane	0.22	U	1.0	0.22	ug/L			02/25/16 15:08	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			02/25/16 15:08	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			02/25/16 15:08	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			02/25/16 15:08	1

Client Sample ID: POST-CARB_20160211_COMPOSITE

Lab Sample ID: 460-108985-7
Date Collected: 02/11/16 09:00
Matrix: Water
Date Received: 02/12/16 09:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	**0.35**	**J**	1.0	0.21	ug/L			02/25/16 15:08	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			02/25/16 15:08	1
o-Xylene	0.32	U	1.0	0.32	ug/L			02/25/16 15:08	1
Styrene	0.17	U	1.0	0.17	ug/L			02/25/16 15:08	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			02/25/16 15:08	1
Toluene	0.25	U	1.0	0.25	ug/L			02/25/16 15:08	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			02/25/16 15:08	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			02/25/16 15:08	1
Vinyl chloride	**3.8**		1.0	0.060	ug/L			02/25/16 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 137*		*02/25/16 15:08*	*1*
4-Bromofluorobenzene	*96*		*70 - 131*		*02/25/16 15:08*	*1*
Dibromofluoromethane (Surr)	*96*		*72 - 136*		*02/25/16 15:08*	*1*
Toluene-d8 (Surr)	*92*		*74 - 120*		*02/25/16 15:08*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**8100**	**D**	50	5.4	ug/L			02/24/16 14:41	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*	*D*	*70 - 137*		*02/24/16 14:41*	*5*
4-Bromofluorobenzene	*103*	*D*	*70 - 131*		*02/24/16 14:41*	*5*
Dibromofluoromethane (Surr)	*100*	*D*	*72 - 136*		*02/24/16 14:41*	*5*
Toluene-d8 (Surr)	*109*	*D*	*74 - 120*		*02/24/16 14:41*	*5*

Client Sample ID: TRIP BLANK_20160211

Lab Sample ID: 460-108985-8
Date Collected: 02/11/16 00:00
Matrix: Water
Date Received: 02/12/16 09:15

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			02/24/16 12:15	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			02/24/16 12:15	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			02/24/16 12:15	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			02/24/16 12:15	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			02/24/16 12:15	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			02/24/16 12:15	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			02/24/16 12:15	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			02/24/16 12:15	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			02/24/16 12:15	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			02/24/16 12:15	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			02/24/16 12:15	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			02/24/16 12:15	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			02/24/16 12:15	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			02/24/16 12:15	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			02/24/16 12:15	1
2-Hexanone	0.72	U	10	0.72	ug/L			02/24/16 12:15	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			02/24/16 12:15	1
Acetone	1.1	U	10	1.1	ug/L			02/24/16 12:15	1

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-108985-1

Client Sample ID: TRIP BLANK_20160211
Date Collected: 02/11/16 00:00
Date Received: 02/12/16 09:15

Lab Sample ID: 460-108985-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.090	U	1.0	0.090	ug/L			02/24/16 12:15	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			02/24/16 12:15	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			02/24/16 12:15	1
Bromoform	0.18	U	1.0	0.18	ug/L			02/24/16 12:15	1
Bromomethane	0.18	U	1.0	0.18	ug/L			02/24/16 12:15	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			02/24/16 12:15	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			02/24/16 12:15	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			02/24/16 12:15	1
Chloroethane	0.37	U	1.0	0.37	ug/L			02/24/16 12:15	1
Chloroform	0.22	U	1.0	0.22	ug/L			02/24/16 12:15	1
Chloromethane	0.22	U	1.0	0.22	ug/L			02/24/16 12:15	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			02/24/16 12:15	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			02/24/16 12:15	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			02/24/16 12:15	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			02/24/16 12:15	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			02/24/16 12:15	1
o-Xylene	0.32	U	1.0	0.32	ug/L			02/24/16 12:15	1
Styrene	0.17	U	1.0	0.17	ug/L			02/24/16 12:15	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			02/24/16 12:15	1
Toluene	0.25	U	1.0	0.25	ug/L			02/24/16 12:15	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			02/24/16 12:15	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			02/24/16 12:15	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			02/24/16 12:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 137*		*02/24/16 12:15*	*1*
4-Bromofluorobenzene	*98*		*70 - 131*		*02/24/16 12:15*	*1*
Dibromofluoromethane (Surr)	*100*		*72 - 136*		*02/24/16 12:15*	*1*
Toluene-d8 (Surr)	*106*		*74 - 120*		*02/24/16 12:15*	*1*

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-108985-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-137)	(70-131)	(72-136)	(74-120)
460-108985-1 - DL	Pre-Carb_20160211	100 D	101 D	103 D	106 D
460-108985-1	Pre-Carb_20160211	97	98	106	102
460-108985-2 - DL	Primary-Eff_20160211	107 D	109 D	112 D	115 D
460-108985-2	Primary-Eff_20160211	90	98	99	93
460-108985-7 - DL	POST-CARB_20160211_COMPOSITE	96 D	103 D	100 D	109 D
460-108985-7	POST-CARB_20160211_COMPOSITE	89	96	96	92
460-108985-7 MS	POST-CARB_20160211_COMPOSITE	105	107	104	108
460-108985-7 MSD	POST-CARB_20160211_COMPOSITE	101	104	102	103
460-108985-8	TRIP BLANK_20160211	98	98	100	106
LCS 460-352156/4	Lab Control Sample	106	108	108	111
LCS 460-352460/3	Lab Control Sample	96	104	97	95
LCSD 460-352460/4	Lab Control Sample Dup	94	101	94	95
MB 460-352156/7	Method Blank	96	97	99	103
MB 460-352460/7	Method Blank	88	98	96	94

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 460-352156/7
Matrix: Water
Analysis Batch: 352156

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			02/24/16 10:38	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			02/24/16 10:38	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			02/24/16 10:38	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			02/24/16 10:38	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			02/24/16 10:38	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			02/24/16 10:38	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			02/24/16 10:38	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			02/24/16 10:38	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			02/24/16 10:38	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			02/24/16 10:38	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			02/24/16 10:38	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			02/24/16 10:38	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			02/24/16 10:38	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			02/24/16 10:38	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			02/24/16 10:38	1
2-Hexanone	0.72	U	10	0.72	ug/L			02/24/16 10:38	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			02/24/16 10:38	1
Acetone	1.1	U	10	1.1	ug/L			02/24/16 10:38	1
Benzene	0.090	U	1.0	0.090	ug/L			02/24/16 10:38	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			02/24/16 10:38	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			02/24/16 10:38	1
Bromoform	0.18	U	1.0	0.18	ug/L			02/24/16 10:38	1
Bromomethane	0.18	U	1.0	0.18	ug/L			02/24/16 10:38	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			02/24/16 10:38	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			02/24/16 10:38	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			02/24/16 10:38	1
Chloroethane	0.37	U	1.0	0.37	ug/L			02/24/16 10:38	1
Chloroform	0.22	U	1.0	0.22	ug/L			02/24/16 10:38	1
Chloromethane	0.22	U	1.0	0.22	ug/L			02/24/16 10:38	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			02/24/16 10:38	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			02/24/16 10:38	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			02/24/16 10:38	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			02/24/16 10:38	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			02/24/16 10:38	1
o-Xylene	0.32	U	1.0	0.32	ug/L			02/24/16 10:38	1
Styrene	0.17	U	1.0	0.17	ug/L			02/24/16 10:38	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			02/24/16 10:38	1
Toluene	0.25	U	1.0	0.25	ug/L			02/24/16 10:38	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			02/24/16 10:38	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			02/24/16 10:38	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			02/24/16 10:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 137*		*02/24/16 10:38*	*1*
4-Bromofluorobenzene	*97*		*70 - 131*		*02/24/16 10:38*	*1*
Dibromofluoromethane (Surr)	*99*		*72 - 136*		*02/24/16 10:38*	*1*
Toluene-d8 (Surr)	*103*		*74 - 120*		*02/24/16 10:38*	*1*

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

Lab Sample ID: LCS 460-352156/4
Matrix: Water
Analysis Batch: 352156

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	19.5		ug/L		98	76 - 131
1,1,2,2-Tetrachloroethane	20.0	22.9		ug/L		115	65 - 128
1,1,2-Trichloroethane	20.0	21.6		ug/L		108	77 - 122
1,1-Dichloroethane	20.0	21.8		ug/L		109	77 - 129
1,1-Dichloroethene	20.0	19.0		ug/L		95	67 - 133
1,2-Dichlorobenzene	20.0	21.5		ug/L		107	80 - 121
1,2-Dichloroethane	20.0	19.8		ug/L		99	73 - 131
1,2-Dichloroethene, cis-	20.0	21.1		ug/L		106	82 - 127
1,2-Dichloroethene, trans-	20.0	20.6		ug/L		103	78 - 127
1,2-Dichloropropane	20.0	21.4		ug/L		107	75 - 129
1,3-Dichlorobenzene	20.0	21.5		ug/L		108	80 - 120
1,3-Dichloropropene, cis-	20.0	21.7		ug/L		109	72 - 125
1,3-Dichloropropene, trans-	20.0	21.7		ug/L		109	69 - 125
1,4-Dichlorobenzene	20.0	20.8		ug/L		104	79 - 120
2-Butanone (MEK)	100	93.0		ug/L		93	56 - 150
2-Hexanone	100	105		ug/L		105	64 - 150
4-Methyl-2-pentanone (MIBK)	100	106		ug/L		106	77 - 130
Acetone	100	102		ug/L		102	19 - 150
Benzene	20.0	22.1		ug/L		110	76 - 125
Bromochloromethane	20.0	21.5		ug/L		108	71 - 137
Bromodichloromethane	20.0	19.5		ug/L		97	78 - 127
Bromoform	20.0	20.5		ug/L		102	65 - 124
Bromomethane	20.0	14.9		ug/L		74	10 - 150
Carbon disulfide	20.0	19.3		ug/L		96	69 - 131
Carbon tetrachloride	20.0	17.1		ug/L		85	71 - 138
Chlorobenzene	20.0	20.7		ug/L		103	80 - 120
Chloroethane	20.0	19.8		ug/L		99	40 - 150
Chloroform	20.0	20.6		ug/L		103	81 - 127
Chloromethane	20.0	20.5		ug/L		102	45 - 150
Dibromochloromethane	20.0	20.0		ug/L		100	78 - 120
Ethylbenzene	20.0	21.4		ug/L		107	80 - 120
Isopropylbenzene	20.0	21.9		ug/L		110	80 - 127
Methylene Chloride	20.0	21.3		ug/L		106	80 - 126
m-Xylene & p-Xylene	20.0	22.3		ug/L		112	80 - 121
o-Xylene	20.0	21.9		ug/L		109	80 - 120
Styrene	20.0	21.4		ug/L		107	75 - 124
Tetrachloroethene	20.0	20.9		ug/L		104	71 - 132
Toluene	20.0	21.0		ug/L		105	80 - 120
Trichloroethene	20.0	18.6		ug/L		93	77 - 127
Trichlorofluoromethane	20.0	17.2		ug/L		86	50 - 150
Vinyl chloride	20.0	17.9		ug/L		90	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 137*
4-Bromofluorobenzene	*108*		*70 - 131*
Dibromofluoromethane (Surr)	*108*		*72 - 136*
Toluene-d8 (Surr)	*111*		*74 - 120*

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

Lab Sample ID: 460-108985-7 MS
Matrix: Water
Analysis Batch: 352156

Client Sample ID: POST-CARB_20160211_COMPOSITE
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	1.4	U	200	195		ug/L		98	76 - 131
1,1,2,2-Tetrachloroethane	0.95	U	200	217		ug/L		108	65 - 128
1,1,2-Trichloroethane	0.40	U	200	198		ug/L		99	77 - 122
1,1-Dichloroethane	1.2	U	200	217		ug/L		108	77 - 129
1,1-Dichloroethene	1.7	U	200	203		ug/L		101	67 - 133
1,2-Dichlorobenzene	1.1	U	200	209		ug/L		104	80 - 121
1,2-Dichloroethane	1.3	U	200	190		ug/L		95	73 - 131
1,2-Dichloroethene, cis-	1.3	U	200	225		ug/L		112	82 - 127
1,2-Dichloroethene, trans-	0.90	U	200	218		ug/L		109	78 - 127
1,2-Dichloropropane	0.90	U	200	206		ug/L		103	75 - 129
1,3-Dichlorobenzene	1.7	U	200	213		ug/L		106	80 - 120
1,3-Dichloropropene, cis-	0.80	U	200	200		ug/L		100	72 - 125
1,3-Dichloropropene, trans-	0.95	U	200	202		ug/L		101	69 - 125
1,4-Dichlorobenzene	1.7	U	200	204		ug/L		102	79 - 120
2-Butanone (MEK)	11	U	1000	946		ug/L		95	56 - 150
2-Hexanone	3.6	U	1000	1010		ug/L		101	64 - 150
4-Methyl-2-pentanone (MIBK)	3.2	U	1000	1020		ug/L		102	77 - 130
Acetone	8100	D	1000	8590	4	ug/L		47	19 - 150
Benzene	0.45	U	200	213		ug/L		106	76 - 125
Bromochloromethane	1.5	U	200	202		ug/L		101	71 - 137
Bromodichloromethane	0.75	U	200	195		ug/L		97	78 - 127
Bromoform	0.90	U	200	191		ug/L		96	65 - 124
Bromomethane	0.90	U	200	130		ug/L		65	10 - 150
Carbon disulfide	1.1	U	200	203		ug/L		102	69 - 131
Carbon tetrachloride	1.7	U	200	175		ug/L		88	71 - 138
Chlorobenzene	1.2	U	200	205		ug/L		102	80 - 120
Chloroethane	1.9	U	200	225		ug/L		112	40 - 150
Chloroform	1.1	U	200	203		ug/L		101	81 - 127
Chloromethane	1.1	U	200	193		ug/L		96	45 - 150
Dibromochloromethane	1.1	U	200	193		ug/L		96	78 - 120
Ethylbenzene	1.5	U	200	211		ug/L		106	80 - 120
Isopropylbenzene	1.6	U	200	219		ug/L		109	80 - 127
Methylene Chloride	1.1	U	200	216		ug/L		108	80 - 126
m-Xylene & p-Xylene	1.4	U	200	209		ug/L		104	80 - 121
o-Xylene	1.6	U	200	207		ug/L		103	80 - 120
Styrene	0.85	U	200	212		ug/L		106	75 - 124
Tetrachloroethene	0.60	U	200	204		ug/L		102	71 - 132
Toluene	1.3	U	200	206		ug/L		103	80 - 120
Trichloroethene	1.1	U	200	216		ug/L		108	77 - 127
Trichlorofluoromethane	0.75	U	200	171		ug/L		85	50 - 150
Vinyl chloride	1.9	J D	200	215		ug/L		107	53 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 137*
4-Bromofluorobenzene	*107*		*70 - 131*
Dibromofluoromethane (Surr)	*104*		*72 - 136*
Toluene-d8 (Surr)	*108*		*74 - 120*

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

Lab Sample ID: 460-108985-7 MSD
Matrix: Water
Analysis Batch: 352156

Client Sample ID: POST-CARB_20160211_COMPOSITE
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	1.4	U	200	192		ug/L		96	76 - 131	2	30
1,1,2,2-Tetrachloroethane	0.95	U	200	215		ug/L		107	65 - 128	1	30
1,1,2-Trichloroethane	0.40	U	200	197		ug/L		99	77 - 122	0	30
1,1-Dichloroethane	1.2	U	200	213		ug/L		107	77 - 129	2	30
1,1-Dichloroethene	1.7	U	200	198		ug/L		99	67 - 133	2	30
1,2-Dichlorobenzene	1.1	U	200	205		ug/L		102	80 - 121	2	30
1,2-Dichloroethane	1.3	U	200	190		ug/L		95	73 - 131	0	30
1,2-Dichloroethene, cis-	1.3	U	200	213		ug/L		107	82 - 127	5	30
1,2-Dichloroethene, trans-	0.90	U	200	213		ug/L		107	78 - 127	2	30
1,2-Dichloropropane	0.90	U	200	196		ug/L		98	75 - 129	5	30
1,3-Dichlorobenzene	1.7	U	200	208		ug/L		104	80 - 120	2	30
1,3-Dichloropropene, cis-	0.80	U	200	194		ug/L		97	72 - 125	3	30
1,3-Dichloropropene, trans-	0.95	U	200	202		ug/L		101	69 - 125	0	30
1,4-Dichlorobenzene	1.7	U	200	199		ug/L		100	79 - 120	3	30
2-Butanone (MEK)	11	U	1000	915		ug/L		92	56 - 150	3	30
2-Hexanone	3.6	U	1000	980		ug/L		98	64 - 150	3	30
4-Methyl-2-pentanone (MIBK)	3.2	U	1000	995		ug/L		99	77 - 130	3	30
Acetone	8100	D	1000	8080	4	ug/L		-4	19 - 150	6	30
Benzene	0.45	U	200	209		ug/L		104	76 - 125	2	30
Bromochloromethane	1.5	U	200	200		ug/L		100	71 - 137	1	30
Bromodichloromethane	0.75	U	200	189		ug/L		94	78 - 127	3	30
Bromoform	0.90	U	200	189		ug/L		94	65 - 124	1	30
Bromomethane	0.90	U	200	133		ug/L		67	10 - 150	2	30
Carbon disulfide	1.1	U	200	201		ug/L		101	69 - 131	1	30
Carbon tetrachloride	1.7	U	200	171		ug/L		86	71 - 138	2	30
Chlorobenzene	1.2	U	200	199		ug/L		100	80 - 120	3	30
Chloroethane	1.9	U	200	212		ug/L		106	40 - 150	6	30
Chloroform	1.1	U	200	197		ug/L		99	81 - 127	3	30
Chloromethane	1.1	U	200	186		ug/L		93	45 - 150	3	30
Dibromochloromethane	1.1	U	200	189		ug/L		95	78 - 120	2	30
Ethylbenzene	1.5	U	200	209		ug/L		104	80 - 120	1	30
Isopropylbenzene	1.6	U	200	213		ug/L		106	80 - 127	3	30
Methylene Chloride	1.1	U	200	211		ug/L		106	80 - 126	2	30
m-Xylene & p-Xylene	1.4	U	200	200		ug/L		100	80 - 121	4	30
o-Xylene	1.6	U	200	206		ug/L		103	80 - 120	1	30
Styrene	0.85	U	200	207		ug/L		103	75 - 124	2	30
Tetrachloroethene	0.60	U	200	197		ug/L		99	71 - 132	3	30
Toluene	1.3	U	200	202		ug/L		101	80 - 120	2	30
Trichloroethene	1.1	U	200	199		ug/L		100	77 - 127	8	30
Trichlorofluoromethane	0.75	U	200	170		ug/L		85	50 - 150	1	30
Vinyl chloride	1.9	J D	200	188		ug/L		93	53 - 142	13	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 137*
4-Bromofluorobenzene	*104*		*70 - 131*
Dibromofluoromethane (Surr)	*102*		*72 - 136*
Toluene-d8 (Surr)	*103*		*74 - 120*

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

Lab Sample ID: MB 460-352460/7
Matrix: Water
Analysis Batch: 352460

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			02/25/16 14:44	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			02/25/16 14:44	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			02/25/16 14:44	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			02/25/16 14:44	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			02/25/16 14:44	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			02/25/16 14:44	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			02/25/16 14:44	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			02/25/16 14:44	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			02/25/16 14:44	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			02/25/16 14:44	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			02/25/16 14:44	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			02/25/16 14:44	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			02/25/16 14:44	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			02/25/16 14:44	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			02/25/16 14:44	1
2-Hexanone	0.72	U	10	0.72	ug/L			02/25/16 14:44	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			02/25/16 14:44	1
Acetone	1.1	U	10	1.1	ug/L			02/25/16 14:44	1
Benzene	0.090	U	1.0	0.090	ug/L			02/25/16 14:44	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			02/25/16 14:44	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			02/25/16 14:44	1
Bromoform	0.18	U	1.0	0.18	ug/L			02/25/16 14:44	1
Bromomethane	0.18	U	1.0	0.18	ug/L			02/25/16 14:44	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			02/25/16 14:44	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			02/25/16 14:44	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			02/25/16 14:44	1
Chloroethane	0.37	U	1.0	0.37	ug/L			02/25/16 14:44	1
Chloroform	0.22	U	1.0	0.22	ug/L			02/25/16 14:44	1
Chloromethane	0.22	U	1.0	0.22	ug/L			02/25/16 14:44	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			02/25/16 14:44	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			02/25/16 14:44	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			02/25/16 14:44	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			02/25/16 14:44	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			02/25/16 14:44	1
o-Xylene	0.32	U	1.0	0.32	ug/L			02/25/16 14:44	1
Styrene	0.17	U	1.0	0.17	ug/L			02/25/16 14:44	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			02/25/16 14:44	1
Toluene	0.25	U	1.0	0.25	ug/L			02/25/16 14:44	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			02/25/16 14:44	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			02/25/16 14:44	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			02/25/16 14:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 137*		*02/25/16 14:44*	*1*
4-Bromofluorobenzene	*98*		*70 - 131*		*02/25/16 14:44*	*1*
Dibromofluoromethane (Surr)	*96*		*72 - 136*		*02/25/16 14:44*	*1*
Toluene-d8 (Surr)	*94*		*74 - 120*		*02/25/16 14:44*	*1*

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

Lab Sample ID: LCS 460-352460/3
Matrix: Water
Analysis Batch: 352460

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	18.5		ug/L		92	76 - 131
1,1,2,2-Tetrachloroethane	20.0	19.0		ug/L		95	65 - 128
1,1,2-Trichloroethane	20.0	18.0		ug/L		90	77 - 122
1,1-Dichloroethane	20.0	16.2		ug/L		81	77 - 129
1,1-Dichloroethene	20.0	18.7		ug/L		93	67 - 133
1,2-Dichlorobenzene	20.0	20.4		ug/L		102	80 - 121
1,2-Dichloroethane	20.0	18.3		ug/L		92	73 - 131
1,2-Dichloroethene, cis-	20.0	19.2		ug/L		96	82 - 127
1,2-Dichloroethene, trans-	20.0	19.3		ug/L		97	78 - 127
1,2-Dichloropropane	20.0	18.7		ug/L		94	75 - 129
1,3-Dichlorobenzene	20.0	20.7		ug/L		104	80 - 120
1,3-Dichloropropene, cis-	20.0	18.4		ug/L		92	72 - 125
1,3-Dichloropropene, trans-	20.0	19.0		ug/L		95	69 - 125
1,4-Dichlorobenzene	20.0	19.7		ug/L		98	79 - 120
2-Butanone (MEK)	100	101		ug/L		101	56 - 150
2-Hexanone	100	105		ug/L		105	64 - 150
4-Methyl-2-pentanone (MIBK)	100	104		ug/L		104	77 - 130
Acetone	100	88.6		ug/L		89	19 - 150
Benzene	20.0	17.9		ug/L		89	76 - 125
Bromochloromethane	20.0	20.0		ug/L		100	71 - 137
Bromodichloromethane	20.0	19.3		ug/L		96	78 - 127
Bromoform	20.0	19.3		ug/L		97	65 - 124
Bromomethane	20.0	18.9		ug/L		95	10 - 150
Carbon disulfide	20.0	18.1		ug/L		91	69 - 131
Carbon tetrachloride	20.0	17.6		ug/L		88	71 - 138
Chlorobenzene	20.0	19.7		ug/L		99	80 - 120
Chloroethane	20.0	18.6		ug/L		93	40 - 150
Chloroform	20.0	18.3		ug/L		91	81 - 127
Chloromethane	20.0	21.1		ug/L		106	45 - 150
Dibromochloromethane	20.0	18.6		ug/L		93	78 - 120
Ethylbenzene	20.0	21.3		ug/L		106	80 - 120
Isopropylbenzene	20.0	21.5		ug/L		108	80 - 127
Methylene Chloride	20.0	19.1		ug/L		95	80 - 126
m-Xylene & p-Xylene	20.0	20.5		ug/L		102	80 - 121
o-Xylene	20.0	20.5		ug/L		103	80 - 120
Styrene	20.0	20.8		ug/L		104	75 - 124
Tetrachloroethene	20.0	20.2		ug/L		101	71 - 132
Toluene	20.0	19.2		ug/L		96	80 - 120
Trichloroethene	20.0	19.7		ug/L		98	77 - 127
Trichlorofluoromethane	20.0	19.2		ug/L		96	50 - 150
Vinyl chloride	20.0	18.9		ug/L		95	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 137*
4-Bromofluorobenzene	*104*		*70 - 131*
Dibromofluoromethane (Surr)	*97*		*72 - 136*
Toluene-d8 (Surr)	*95*		*74 - 120*

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

Lab Sample ID: LCSD 460-352460/4
Matrix: Water
Analysis Batch: 352460

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			20.0	18.3		ug/L		91	76 - 131	1	30
1,1,2,2-Tetrachloroethane			20.0	18.7		ug/L		93	65 - 128	2	30
1,1,2-Trichloroethane			20.0	18.7		ug/L		93	77 - 122	4	30
1,1-Dichloroethane			20.0	15.2	*	ug/L		76	77 - 129	6	30
1,1-Dichloroethene			20.0	17.7		ug/L		89	67 - 133	5	30
1,2-Dichlorobenzene			20.0	20.3		ug/L		101	80 - 121	0	30
1,2-Dichloroethane			20.0	17.8		ug/L		89	73 - 131	3	30
1,2-Dichloroethene, cis-			20.0	18.8		ug/L		94	82 - 127	2	30
1,2-Dichloroethene, trans-			20.0	19.4		ug/L		97	78 - 127	1	30
1,2-Dichloropropane			20.0	18.6		ug/L		93	75 - 129	1	30
1,3-Dichlorobenzene			20.0	20.1		ug/L		100	80 - 120	3	30
1,3-Dichloropropene, cis-			20.0	18.1		ug/L		90	72 - 125	2	30
1,3-Dichloropropene, trans-			20.0	18.5		ug/L		92	69 - 125	3	30
1,4-Dichlorobenzene			20.0	19.4		ug/L		97	79 - 120	1	30
2-Butanone (MEK)			100	101		ug/L		101	56 - 150	0	30
2-Hexanone			100	110		ug/L		110	64 - 150	4	30
4-Methyl-2-pentanone (MIBK)			100	111		ug/L		111	77 - 130	7	30
Acetone			100	93.1		ug/L		93	19 - 150	5	30
Benzene			20.0	17.9		ug/L		90	76 - 125	0	30
Bromochloromethane			20.0	18.9		ug/L		95	71 - 137	6	30
Bromodichloromethane			20.0	18.9		ug/L		94	78 - 127	2	30
Bromoform			20.0	19.3		ug/L		96	65 - 124	0	30
Bromomethane			20.0	20.1		ug/L		101	10 - 150	6	30
Carbon disulfide			20.0	17.1		ug/L		86	69 - 131	6	30
Carbon tetrachloride			20.0	16.9		ug/L		85	71 - 138	4	30
Chlorobenzene			20.0	19.5		ug/L		97	80 - 120	1	30
Chloroethane			20.0	18.9		ug/L		94	40 - 150	2	30
Chloroform			20.0	18.1		ug/L		90	81 - 127	1	30
Chloromethane			20.0	20.1		ug/L		101	45 - 150	5	30
Dibromochloromethane			20.0	18.1		ug/L		90	78 - 120	3	30
Ethylbenzene			20.0	20.3		ug/L		102	80 - 120	5	30
Isopropylbenzene			20.0	20.6		ug/L		103	80 - 127	4	30
Methylene Chloride			20.0	18.9		ug/L		94	80 - 126	1	30
m-Xylene & p-Xylene			20.0	19.8		ug/L		99	80 - 121	3	30
o-Xylene			20.0	20.8		ug/L		104	80 - 120	1	30
Styrene			20.0	20.3		ug/L		102	75 - 124	2	30
Tetrachloroethene			20.0	20.0		ug/L		100	71 - 132	1	30
Toluene			20.0	18.6		ug/L		93	80 - 120	3	30
Trichloroethene			20.0	19.3		ug/L		96	77 - 127	2	30
Trichlorofluoromethane			20.0	17.7		ug/L		88	50 - 150	8	30
Vinyl chloride			20.0	17.7		ug/L		88	53 - 142	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 137*
4-Bromofluorobenzene	*101*		*70 - 131*
Dibromofluoromethane (Surr)	*94*		*72 - 136*
Toluene-d8 (Surr)	*95*		*74 - 120*

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-108985-1

GC/MS VOA

Analysis Batch: 352156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-108985-1 - DL	Pre-Carb_20160211	Total/NA	Water	8260C	
460-108985-1	Pre-Carb_20160211	Total/NA	Water	8260C	
460-108985-2 - DL	Primary-Eff_20160211	Total/NA	Water	8260C	
460-108985-7 - DL	POST-CARB_20160211_COMPOSITE	Total/NA	Water	8260C	
460-108985-7 MS	POST-CARB_20160211_COMPOSITE	Total/NA	Water	8260C	
460-108985-7 MSD	POST-CARB_20160211_COMPOSITE	Total/NA	Water	8260C	
460-108985-8	TRIP BLANK_20160211	Total/NA	Water	8260C	
LCS 460-352156/4	Lab Control Sample	Total/NA	Water	8260C	
MB 460-352156/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 352460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-108985-2	Primary-Eff_20160211	Total/NA	Water	8260C	
460-108985-7	POST-CARB_20160211_COMPOSITE	Total/NA	Water	8260C	
LCS 460-352460/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 460-352460/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 460-352460/7	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-108985-1

Client Sample ID: Pre-Carb_20160211

Lab Sample ID: 460-108985-1
Matrix: Water
Date Collected: 02/11/16 09:00
Date Received: 02/12/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	5	352156	02/24/16 14:17	SZD	TAL EDI
Total/NA	Analysis	8260C		1	352156	02/24/16 15:30	SZD	TAL EDI

Client Sample ID: Primary-Eff_20160211

Lab Sample ID: 460-108985-2
Matrix: Water
Date Collected: 02/11/16 09:05
Date Received: 02/12/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	5	352156	02/24/16 13:53	SZD	TAL EDI
Total/NA	Analysis	8260C		1	352460	02/25/16 15:33	SZD	TAL EDI

Client Sample ID: POST-CARB_20160211_COMPOSITE

Lab Sample ID: 460-108985-7
Matrix: Water
Date Collected: 02/11/16 09:00
Date Received: 02/12/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	5	352156	02/24/16 14:41	SZD	TAL EDI
Total/NA	Analysis	8260C		1	352460	02/25/16 15:08	SZD	TAL EDI

Client Sample ID: TRIP BLANK_20160211

Lab Sample ID: 460-108985-8
Matrix: Water
Date Collected: 02/11/16 00:00
Date Received: 02/12/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	352156	02/24/16 12:15	SZD	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Certification Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-108985-1

Laboratory: TestAmerica Edison

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11452	03-31-16

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-108985-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL EDI

Protocol References:

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

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-108985-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-108985-1	Pre-Carb_20160211	Water	02/11/16 09:00	02/12/16 09:15
460-108985-2	Primary-Eff_20160211	Water	02/11/16 09:05	02/12/16 09:15
460-108985-7	POST-CARB_20160211_COMPOSITE	Water	02/11/16 09:00	02/12/16 09:15
460-108985-8	TRIP BLANK_20160211	Water	02/11/16 00:00	02/12/16 09:15

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

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THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

2/26/2016

Name (for report and invoice) Kyle Block	Samplers Name (Printed) Jon Gowing	Site/Project Identification Essex Hope Jamestown
Company CH2M Hill	P. O. #	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program: DKQP: ☐
Address 18 Tremont St. Suite 700	Analysis Turnaround Time: Standard ☒	
City Boston State MA 02108	Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone (617)626-7013 Fax (810) 229-5071		

Sample Identification	Date	Time	Matrix	No. of Cont.	ANALYSIS REQUESTED: VOCs 8260	LAB USE ONLY Sample Numbers
Pre-Carb_20160211	02/11/16	0900	GW	3	X	-1
Primary-Eff_20160211		0905		3	X	-2
Post-Carb_20160211_1		0900		3	X	-3
Post-Carb_20160211_2		0930		3	X	-4
Post-Carb_20160211_3		1000		3	X	-5
Post-Carb_20160211_4		1030		3	X	-6 -7
TripBlank_20160211		—		2	X	~~-8~~

LAB USE ONLY Project No: Job No: 108985

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH 6 = Other _____, 7 = Other _____ Soil: Water:

Special Instructions: Composite 4 Post Carb samples in lab & Report as. POST-CARB-COMPOSITE_20160211

Water Metals Filtered (Yes/No)? NR

Relinquished by	Company	Date / Time	Received by	Company
	CH2M Hill	2/11/16 1100	1) Tadey	
Relinquished by 2)	Company	Date / Time 2/12/16 09:15	Received by 2) Amy Meyers	Company IAS
Relinquished by 3)		Date / Time	Received by 3)	Company 2/12/16 09:15
Relinquished by 4)		Date / Time	Received by 4) 16/2.6 · 16	Company Client Custody Seal

460-108985 Chain of Custody

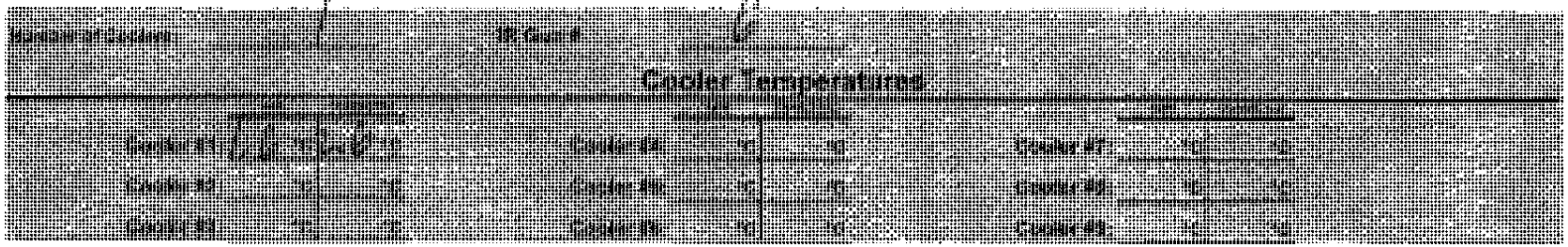
Lab , New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

Massachusetts (M-NJ312), North Carolina (No. 578)

TAL - 0016 (0715)

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 108985



TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: _____ Date: 2/17/16

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc.

Job Number: 460-108985-1

Login Number: 108985
List Number: 1
Creator: Lysy, Susan

List Source: TestAmerica Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
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	2.6°C IR#6
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.	N/A	
Samples do not require splitting or compositing.	False	COMPOSITE REQUIRED
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

TestAmerica Job ID: 460-110624-1
Client Project/Site: Essex Hope Jamestown, NY

For:
CH2M Hill Constructors, Inc.
18 Tremont St
Suite 700
Boston, Massachusetts 02108

Attn: Mr. Kyle Block

Charlene Isaac

Authorized for release by:
3/30/2016 10:35:06 AM
Shalini Williams, Project Management Assistant II
shalini.williams@testamericainc.com

Designee for

Kristin DeGraw, Project Manager II
(732)593-2555
kristin.degraw@testamericainc.com

Table of Contents

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-110624-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

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)

Job ID: 460-110624-1

Laboratory: TestAmerica Edison

Narrative

CASE NARRATIVE

Client: CH2M Hill Constructors, Inc.

Project: Essex Hope Jamestown, NY

Report Number: 460-110624-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

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

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

RECEIPT

The samples were received on 3/16/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANICS

Samples Pre-Carb_20160315 (460-110624-1), Primary-Eff_20160315 (460-110624-2), POST-CARB-COMPOSITE_20160315 (460-110624-7) and TRIP BLANK_20160315 (460-110624-8) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 03/26/2016, 03/27/2016 and 03/28/2016.

Several analytes exceeded the RPD limit for the MSD of sample 460-110513-5 in batch 460-358816.

Vinyl chloride failed the recovery criteria low for the MS/MSD of sample POST-CARB-COMPOSITE_20160315MS (460-110624-7) in batch 460-359205. Chloroethane failed the recovery criteria high.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

Samples Pre-Carb_20160315 (460-110624-1)[10X] and Primary-Eff_20160315 (460-110624-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Volatile organics analysis.

All other quality control parameters were within the acceptance limits.

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-110624-1

Client Sample ID: Pre-Carb_20160315 — Lab Sample ID: 460-110624-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	11		1.0	0.34	ug/L	1		8260C	Total/NA
1,2-Dichloroethene, trans-	37		1.0	0.18	ug/L	1		8260C	Total/NA
Benzene	11		1.0	0.090	ug/L	1		8260C	Total/NA
Toluene	0.43	J	1.0	0.25	ug/L	1		8260C	Total/NA
1,2-Dichloroethene, cis- - DL	2600	D	10	2.6	ug/L	10		8260C	Total/NA
Acetone - DL	7000	D	100	11	ug/L	10		8260C	Total/NA
Trichloroethene - DL	2400	D	10	2.2	ug/L	10		8260C	Total/NA
Vinyl chloride - DL	470	D	10	0.60	ug/L	10		8260C	Total/NA

Client Sample ID: Primary-Eff_20160315 — Lab Sample ID: 460-110624-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	48		1.0	0.26	ug/L	1		8260C	Total/NA
Acetone - DL	6200	D	50	5.4	ug/L	5		8260C	Total/NA
Vinyl chloride - DL	930	D	5.0	0.30	ug/L	5		8260C	Total/NA

Client Sample ID: POST-CARB-COMPOSITE_20160315 — Lab Sample ID: 460-110624-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	67		10	1.1	ug/L	1		8260C	Total/NA
Vinyl chloride	110		1.0	0.060	ug/L	1		8260C	Total/NA

Client Sample ID: TRIP BLANK_20160315 — Lab Sample ID: 460-110624-8

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: Pre-Carb_20160315

Lab Sample ID: 460-110624-1

Date Collected: 03/15/16 12:50

Matrix: Water

Date Received: 03/16/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			03/27/16 13:40	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			03/27/16 13:40	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			03/27/16 13:40	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			03/27/16 13:40	1
1,1-Dichloroethene	**11**		1.0	0.34	ug/L			03/27/16 13:40	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			03/27/16 13:40	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/27/16 13:40	1
1,2-Dichloroethene, trans-	**37**		1.0	0.18	ug/L			03/27/16 13:40	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			03/27/16 13:40	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			03/27/16 13:40	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			03/27/16 13:40	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			03/27/16 13:40	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			03/27/16 13:40	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			03/27/16 13:40	1
2-Hexanone	0.72	U	10	0.72	ug/L			03/27/16 13:40	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			03/27/16 13:40	1
Benzene	**11**		1.0	0.090	ug/L			03/27/16 13:40	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			03/27/16 13:40	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			03/27/16 13:40	1
Bromoform	0.18	U	1.0	0.18	ug/L			03/27/16 13:40	1
Bromomethane	0.18	U	1.0	0.18	ug/L			03/27/16 13:40	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			03/27/16 13:40	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			03/27/16 13:40	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			03/27/16 13:40	1
Chloroethane	0.37	U	1.0	0.37	ug/L			03/27/16 13:40	1
Chloroform	0.22	U	1.0	0.22	ug/L			03/27/16 13:40	1
Chloromethane	0.22	U	1.0	0.22	ug/L			03/27/16 13:40	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			03/27/16 13:40	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			03/27/16 13:40	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			03/27/16 13:40	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			03/27/16 13:40	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			03/27/16 13:40	1
o-Xylene	0.32	U	1.0	0.32	ug/L			03/27/16 13:40	1
Styrene	0.17	U	1.0	0.17	ug/L			03/27/16 13:40	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			03/27/16 13:40	1
Toluene	**0.43**	**J**	1.0	0.25	ug/L			03/27/16 13:40	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			03/27/16 13:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 137*		*03/27/16 13:40*	*1*
4-Bromofluorobenzene	*105*		*70 - 131*		*03/27/16 13:40*	*1*
Dibromofluoromethane (Surr)	*104*		*72 - 136*		*03/27/16 13:40*	*1*
Toluene-d8 (Surr)	*97*		*74 - 120*		*03/27/16 13:40*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, cis-	**2600**	**D**	10	2.6	ug/L			03/28/16 22:06	10
Acetone	**7000**	**D**	100	11	ug/L			03/28/16 22:06	10
Trichloroethene	**2400**	**D**	10	2.2	ug/L			03/28/16 22:06	10
Vinyl chloride	**470**	**D**	10	0.60	ug/L			03/28/16 22:06	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*93*	*D*	*70 - 137*		*03/28/16 22:06*	*10*
4-Bromofluorobenzene	*100*	*D*	*70 - 131*		*03/28/16 22:06*	*10*
Dibromofluoromethane (Surr)	*100*	*D*	*72 - 136*		*03/28/16 22:06*	*10*
Toluene-d8 (Surr)	*93*	*D*	*74 - 120*		*03/28/16 22:06*	*10*

Client Sample ID: Primary-Eff_20160315

Lab Sample ID: 460-110624-2

Date Collected: 03/15/16 12:55

Matrix: Water

Date Received: 03/16/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			03/28/16 21:38	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			03/28/16 21:38	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			03/28/16 21:38	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			03/28/16 21:38	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/28/16 21:38	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			03/28/16 21:38	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/28/16 21:38	1
1,2-Dichloroethene, cis-	**48**		1.0	0.26	ug/L			03/28/16 21:38	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			03/28/16 21:38	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			03/28/16 21:38	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			03/28/16 21:38	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			03/28/16 21:38	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			03/28/16 21:38	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			03/28/16 21:38	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			03/28/16 21:38	1
2-Hexanone	0.72	U	10	0.72	ug/L			03/28/16 21:38	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			03/28/16 21:38	1
Benzene	0.090	U	1.0	0.090	ug/L			03/28/16 21:38	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			03/28/16 21:38	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			03/28/16 21:38	1
Bromoform	0.18	U	1.0	0.18	ug/L			03/28/16 21:38	1
Bromomethane	0.18	U	1.0	0.18	ug/L			03/28/16 21:38	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			03/28/16 21:38	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			03/28/16 21:38	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			03/28/16 21:38	1
Chloroethane	0.37	U	1.0	0.37	ug/L			03/28/16 21:38	1
Chloroform	0.22	U	1.0	0.22	ug/L			03/28/16 21:38	1
Chloromethane	0.22	U	1.0	0.22	ug/L			03/28/16 21:38	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			03/28/16 21:38	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			03/28/16 21:38	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			03/28/16 21:38	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			03/28/16 21:38	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			03/28/16 21:38	1
o-Xylene	0.32	U	1.0	0.32	ug/L			03/28/16 21:38	1
Styrene	0.17	U	1.0	0.17	ug/L			03/28/16 21:38	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			03/28/16 21:38	1
Toluene	0.25	U	1.0	0.25	ug/L			03/28/16 21:38	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			03/28/16 21:38	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			03/28/16 21:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 137*		*03/28/16 21:38*	*1*
4-Bromofluorobenzene	*107*		*70 - 131*		*03/28/16 21:38*	*1*
Dibromofluoromethane (Surr)	*100*		*72 - 136*		*03/28/16 21:38*	*1*

Client Sample ID: Primary-Eff_20160315

Lab Sample ID: 460-110624-2
Date Collected: 03/15/16 12:55
Matrix: Water
Date Received: 03/16/16 10:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*93*		*74 - 120*		*03/28/16 21:38*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**6200**	**D**	50	5.4	ug/L			03/26/16 17:40	5
Vinyl chloride	**930**	**D**	5.0	0.30	ug/L			03/26/16 17:40	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*91*	*D*	*70 - 137*		*03/26/16 17:40*	*5*
4-Bromofluorobenzene	*99*	*D*	*70 - 131*		*03/26/16 17:40*	*5*
Dibromofluoromethane (Surr)	*104*	*D*	*72 - 136*		*03/26/16 17:40*	*5*
Toluene-d8 (Surr)	*94*	*D*	*74 - 120*		*03/26/16 17:40*	*5*

Client Sample ID: POST-CARB-COMPOSITE_20160315

Lab Sample ID: 460-110624-7
Date Collected: 03/15/16 13:00
Matrix: Water
Date Received: 03/16/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			03/28/16 21:10	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			03/28/16 21:10	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			03/28/16 21:10	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			03/28/16 21:10	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/28/16 21:10	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			03/28/16 21:10	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/28/16 21:10	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			03/28/16 21:10	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			03/28/16 21:10	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			03/28/16 21:10	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			03/28/16 21:10	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			03/28/16 21:10	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			03/28/16 21:10	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			03/28/16 21:10	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			03/28/16 21:10	1
2-Hexanone	0.72	U	10	0.72	ug/L			03/28/16 21:10	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			03/28/16 21:10	1
Acetone	**67**		10	1.1	ug/L			03/28/16 21:10	1
Benzene	0.090	U	1.0	0.090	ug/L			03/28/16 21:10	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			03/28/16 21:10	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			03/28/16 21:10	1
Bromoform	0.18	U	1.0	0.18	ug/L			03/28/16 21:10	1
Bromomethane	0.18	U	1.0	0.18	ug/L			03/28/16 21:10	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			03/28/16 21:10	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			03/28/16 21:10	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			03/28/16 21:10	1
Chloroethane	0.37	U F1	1.0	0.37	ug/L			03/28/16 21:10	1
Chloroform	0.22	U	1.0	0.22	ug/L			03/28/16 21:10	1
Chloromethane	0.22	U	1.0	0.22	ug/L			03/28/16 21:10	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			03/28/16 21:10	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			03/28/16 21:10	1

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-110624-1

Client Sample ID: POST-CARB-COMPOSITE_20160315

Lab Sample ID: 460-110624-7
Date Collected: 03/15/16 13:00
Matrix: Water
Date Received: 03/16/16 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			03/28/16 21:10	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			03/28/16 21:10	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			03/28/16 21:10	1
o-Xylene	0.32	U	1.0	0.32	ug/L			03/28/16 21:10	1
Styrene	0.17	U	1.0	0.17	ug/L			03/28/16 21:10	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			03/28/16 21:10	1
Toluene	0.25	U	1.0	0.25	ug/L			03/28/16 21:10	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			03/28/16 21:10	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			03/28/16 21:10	1
Vinyl chloride	**110**		1.0	0.060	ug/L			03/28/16 21:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 137*		*03/28/16 21:10*	*1*
4-Bromofluorobenzene	*99*		*70 - 131*		*03/28/16 21:10*	*1*
Dibromofluoromethane (Surr)	*100*		*72 - 136*		*03/28/16 21:10*	*1*
Toluene-d8 (Surr)	*92*		*74 - 120*		*03/28/16 21:10*	*1*

Client Sample ID: TRIP BLANK_20160315

Lab Sample ID: 460-110624-8
Date Collected: 03/15/16 00:00
Matrix: Water
Date Received: 03/16/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			03/28/16 20:43	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			03/28/16 20:43	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			03/28/16 20:43	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			03/28/16 20:43	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/28/16 20:43	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			03/28/16 20:43	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/28/16 20:43	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			03/28/16 20:43	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			03/28/16 20:43	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			03/28/16 20:43	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			03/28/16 20:43	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			03/28/16 20:43	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			03/28/16 20:43	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			03/28/16 20:43	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			03/28/16 20:43	1
2-Hexanone	0.72	U	10	0.72	ug/L			03/28/16 20:43	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			03/28/16 20:43	1
Acetone	1.1	U	10	1.1	ug/L			03/28/16 20:43	1
Benzene	0.090	U	1.0	0.090	ug/L			03/28/16 20:43	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			03/28/16 20:43	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			03/28/16 20:43	1
Bromoform	0.18	U	1.0	0.18	ug/L			03/28/16 20:43	1
Bromomethane	0.18	U	1.0	0.18	ug/L			03/28/16 20:43	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			03/28/16 20:43	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			03/28/16 20:43	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			03/28/16 20:43	1
Chloroethane	0.37	U	1.0	0.37	ug/L			03/28/16 20:43	1

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-110624-1

Client Sample ID: TRIP BLANK_20160315
Date Collected: 03/15/16 00:00
Date Received: 03/16/16 10:00

Lab Sample ID: 460-110624-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	0.22	U	1.0	0.22	ug/L			03/28/16 20:43	1
Chloromethane	0.22	U	1.0	0.22	ug/L			03/28/16 20:43	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			03/28/16 20:43	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			03/28/16 20:43	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			03/28/16 20:43	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			03/28/16 20:43	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			03/28/16 20:43	1
o-Xylene	0.32	U	1.0	0.32	ug/L			03/28/16 20:43	1
Styrene	0.17	U	1.0	0.17	ug/L			03/28/16 20:43	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			03/28/16 20:43	1
Toluene	0.25	U	1.0	0.25	ug/L			03/28/16 20:43	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			03/28/16 20:43	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			03/28/16 20:43	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			03/28/16 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 137*		*03/28/16 20:43*	*1*
4-Bromofluorobenzene	*100*		*70 - 131*		*03/28/16 20:43*	*1*
Dibromofluoromethane (Surr)	*103*		*72 - 136*		*03/28/16 20:43*	*1*
Toluene-d8 (Surr)	*94*		*74 - 120*		*03/28/16 20:43*	*1*

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-110624-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-137)	(70-131)	(72-136)	(74-120)
460-110513-B-5 MS	Matrix Spike	92	96	99	93
460-110513-B-5 MSD	Matrix Spike Duplicate	92	94	100	94
460-110624-1	Pre-Carb_20160315	97	105	104	97
460-110624-1 - DL	Pre-Carb_20160315	93 D	100 D	100 D	93 D
460-110624-2 - DL	Primary-Eff_20160315	91 D	99 D	104 D	94 D
460-110624-2	Primary-Eff_20160315	93	107	100	93
460-110624-7	POST-CARB-COMPOSITE_20160315	94	99	100	92
460-110624-7 MS	POST-CARB-COMPOSITE_20160315	93	99	100	95
460-110624-7 MSD	POST-CARB-COMPOSITE_20160315	93	102	100	97
460-110624-8	TRIP BLANK_20160315	95	100	103	94
LCS 460-358816/3	Lab Control Sample	100	114	108	103
LCS 460-358970/3	Lab Control Sample	93	96	98	92
LCS 460-359205/3	Lab Control Sample	93	97	102	95
LCSD 460-358970/4	Lab Control Sample Dup	93	96	102	95
MB 460-358816/8	Method Blank	97	105	104	95
MB 460-358970/7	Method Blank	92	102	104	94
MB 460-359205/7	Method Blank	97	102	107	94

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 460-358816/8
Matrix: Water
Analysis Batch: 358816

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			03/26/16 09:22	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			03/26/16 09:22	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			03/26/16 09:22	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			03/26/16 09:22	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/26/16 09:22	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			03/26/16 09:22	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/26/16 09:22	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			03/26/16 09:22	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			03/26/16 09:22	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			03/26/16 09:22	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			03/26/16 09:22	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			03/26/16 09:22	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			03/26/16 09:22	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			03/26/16 09:22	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			03/26/16 09:22	1
2-Hexanone	0.72	U	10	0.72	ug/L			03/26/16 09:22	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			03/26/16 09:22	1
Acetone	1.1	U	10	1.1	ug/L			03/26/16 09:22	1
Benzene	0.090	U	1.0	0.090	ug/L			03/26/16 09:22	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			03/26/16 09:22	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			03/26/16 09:22	1
Bromoform	0.18	U	1.0	0.18	ug/L			03/26/16 09:22	1
Bromomethane	0.18	U	1.0	0.18	ug/L			03/26/16 09:22	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			03/26/16 09:22	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			03/26/16 09:22	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			03/26/16 09:22	1
Chloroethane	0.37	U	1.0	0.37	ug/L			03/26/16 09:22	1
Chloroform	0.22	U	1.0	0.22	ug/L			03/26/16 09:22	1
Chloromethane	0.22	U	1.0	0.22	ug/L			03/26/16 09:22	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			03/26/16 09:22	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			03/26/16 09:22	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			03/26/16 09:22	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			03/26/16 09:22	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			03/26/16 09:22	1
o-Xylene	0.32	U	1.0	0.32	ug/L			03/26/16 09:22	1
Styrene	0.17	U	1.0	0.17	ug/L			03/26/16 09:22	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			03/26/16 09:22	1
Toluene	0.25	U	1.0	0.25	ug/L			03/26/16 09:22	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			03/26/16 09:22	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			03/26/16 09:22	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			03/26/16 09:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 137*		*03/26/16 09:22*	*1*
4-Bromofluorobenzene	*105*		*70 - 131*		*03/26/16 09:22*	*1*
Dibromofluoromethane (Surr)	*104*		*72 - 136*		*03/26/16 09:22*	*1*
Toluene-d8 (Surr)	*95*		*74 - 120*		*03/26/16 09:22*	*1*

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

Lab Sample ID: LCS 460-358816/3
Matrix: Water
Analysis Batch: 358816

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	21.1		ug/L		106	76 - 131
1,1,2,2-Tetrachloroethane	20.0	17.4		ug/L		87	65 - 128
1,1,2-Trichloroethane	20.0	20.4		ug/L		102	77 - 122
1,1-Dichloroethane	20.0	19.6		ug/L		98	77 - 129
1,1-Dichloroethene	20.0	19.5		ug/L		97	67 - 133
1,2-Dichlorobenzene	20.0	20.5		ug/L		102	80 - 121
1,2-Dichloroethane	20.0	18.9		ug/L		94	73 - 131
1,2-Dichloroethene, cis-	20.0	19.7		ug/L		98	82 - 127
1,2-Dichloroethene, trans-	20.0	20.0		ug/L		100	78 - 127
1,2-Dichloropropane	20.0	18.9		ug/L		95	75 - 129
1,3-Dichlorobenzene	20.0	20.7		ug/L		103	80 - 120
1,3-Dichloropropene, cis-	20.0	20.5		ug/L		102	72 - 125
1,3-Dichloropropene, trans-	20.0	21.0		ug/L		105	69 - 125
1,4-Dichlorobenzene	20.0	20.6		ug/L		103	79 - 120
2-Butanone (MEK)	100	106		ug/L		106	56 - 150
2-Hexanone	100	93.9		ug/L		94	64 - 150
4-Methyl-2-pentanone (MIBK)	100	94.5		ug/L		94	77 - 130
Acetone	100	104		ug/L		104	19 - 150
Benzene	20.0	20.4		ug/L		102	76 - 125
Bromochloromethane	20.0	21.4		ug/L		107	71 - 137
Bromodichloromethane	20.0	20.4		ug/L		102	78 - 127
Bromoform	20.0	21.6		ug/L		108	65 - 124
Bromomethane	20.0	19.4		ug/L		97	10 - 150
Carbon disulfide	20.0	18.7		ug/L		93	69 - 131
Carbon tetrachloride	20.0	22.1		ug/L		110	71 - 138
Chlorobenzene	20.0	19.9		ug/L		100	80 - 120
Chloroethane	20.0	17.2		ug/L		86	40 - 150
Chloroform	20.0	19.5		ug/L		97	81 - 127
Chloromethane	20.0	18.3		ug/L		92	45 - 150
Dibromochloromethane	20.0	22.3		ug/L		111	78 - 120
Ethylbenzene	20.0	20.9		ug/L		105	80 - 120
Isopropylbenzene	20.0	22.8		ug/L		114	80 - 127
Methylene Chloride	20.0	20.5		ug/L		102	80 - 126
m-Xylene & p-Xylene	20.0	22.2		ug/L		111	80 - 121
o-Xylene	20.0	21.6		ug/L		108	80 - 120
Styrene	20.0	21.8		ug/L		109	75 - 124
Tetrachloroethene	20.0	23.5		ug/L		118	71 - 132
Toluene	20.0	19.8		ug/L		99	80 - 120
Trichloroethene	20.0	21.7		ug/L		109	77 - 127
Trichlorofluoromethane	20.0	20.2		ug/L		101	50 - 150
Vinyl chloride	20.0	18.9		ug/L		95	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 137*
4-Bromofluorobenzene	*114*		*70 - 131*
Dibromofluoromethane (Surr)	*108*		*72 - 136*
Toluene-d8 (Surr)	*103*		*74 - 120*

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

Lab Sample ID: 460-110513-B-5 MS
Matrix: Water
Analysis Batch: 358816

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.28	U	200	183		ug/L		91	76 - 131
1,1,2,2-Tetrachloroethane	0.19	U	200	165		ug/L		82	65 - 128
1,1,2-Trichloroethane	0.080	U	200	167		ug/L		83	77 - 122
1,1-Dichloroethane	0.24	U	200	169		ug/L		85	77 - 129
1,1-Dichloroethene	0.34	U	200	176		ug/L		88	67 - 133
1,2-Dichlorobenzene	0.22	U	200	174		ug/L		87	80 - 121
1,2-Dichloroethane	0.25	U	200	168		ug/L		84	73 - 131
1,2-Dichloroethene, cis-	0.26	U	200	170		ug/L		85	82 - 127
1,2-Dichloroethene, trans-	0.18	U	200	170		ug/L		85	78 - 127
1,2-Dichloropropane	0.18	U	200	166		ug/L		83	75 - 129
1,3-Dichlorobenzene	0.33	U	200	180		ug/L		90	80 - 120
1,3-Dichloropropene, cis-	0.16	U	200	162		ug/L		81	72 - 125
1,3-Dichloropropene, trans-	0.19	U	200	168		ug/L		84	69 - 125
1,4-Dichlorobenzene	0.33	U	200	175		ug/L		88	79 - 120
2-Butanone (MEK)	2.2	U	1000	939		ug/L		94	56 - 150
2-Hexanone	0.72	U	1000	877		ug/L		88	64 - 150
4-Methyl-2-pentanone (MIBK)	0.63	U	1000	876		ug/L		88	77 - 130
Acetone	1.1	U	1000	900		ug/L		90	19 - 150
Benzene	0.090	U	200	164		ug/L		82	76 - 125
Bromochloromethane	0.30	U	200	183		ug/L		92	71 - 137
Bromodichloromethane	0.15	U	200	175		ug/L		87	78 - 127
Bromoform	0.18	U F2	200	164		ug/L		82	65 - 124
Bromomethane	0.18	U F2	200	168		ug/L		84	10 - 150
Carbon disulfide	0.22	U	200	164		ug/L		82	69 - 131
Carbon tetrachloride	0.33	U	200	195		ug/L		98	71 - 138
Chlorobenzene	0.24	U	200	169		ug/L		85	80 - 120
Chloroethane	0.37	U F2	200	155		ug/L		78	40 - 150
Chloroform	0.22	U	200	171		ug/L		86	81 - 127
Chloromethane	0.22	U F2	200	151		ug/L		76	45 - 150
Dibromochloromethane	0.22	U	200	181		ug/L		91	78 - 120
Ethylbenzene	0.30	U	200	180		ug/L		90	80 - 120
Isopropylbenzene	0.32	U	200	179		ug/L		89	80 - 127
Methylene Chloride	0.21	U	200	178		ug/L		89	80 - 126
m-Xylene & p-Xylene	0.28	U	200	205		ug/L		103	80 - 121
o-Xylene	0.32	U	200	178		ug/L		89	80 - 120
Styrene	0.17	U	200	171		ug/L		85	75 - 124
Tetrachloroethene	0.12	U	200	192		ug/L		96	71 - 132
Toluene	0.25	U	200	194		ug/L		97	80 - 120
Trichloroethene	0.22	U	200	183		ug/L		91	77 - 127
Trichlorofluoromethane	0.15	U F2	200	176		ug/L		88	50 - 150
Vinyl chloride	0.060	U F2	200	163		ug/L		81	53 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 137*
4-Bromofluorobenzene	*96*		*70 - 131*
Dibromofluoromethane (Surr)	*99*		*72 - 136*
Toluene-d8 (Surr)	*93*		*74 - 120*

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

Lab Sample ID: 460-110513-B-5 MSD
Matrix: Water
Analysis Batch: 358816

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.28	U	200	238		ug/L		119	76 - 131	26	30
1,1,2,2-Tetrachloroethane	0.19	U	200	204		ug/L		102	65 - 128	21	30
1,1,2-Trichloroethane	0.080	U	200	218		ug/L		109	77 - 122	27	30
1,1-Dichloroethane	0.24	U	200	212		ug/L		106	77 - 129	23	30
1,1-Dichloroethene	0.34	U	200	226		ug/L		113	67 - 133	25	30
1,2-Dichlorobenzene	0.22	U	200	216		ug/L		108	80 - 121	22	30
1,2-Dichloroethane	0.25	U	200	211		ug/L		106	73 - 131	23	30
1,2-Dichloroethene, cis-	0.26	U	200	215		ug/L		108	82 - 127	24	30
1,2-Dichloroethene, trans-	0.18	U	200	214		ug/L		107	78 - 127	23	30
1,2-Dichloropropane	0.18	U	200	216		ug/L		108	75 - 129	26	30
1,3-Dichlorobenzene	0.33	U	200	222		ug/L		111	80 - 120	21	30
1,3-Dichloropropene, cis-	0.16	U	200	212		ug/L		106	72 - 125	27	30
1,3-Dichloropropene, trans-	0.19	U	200	217		ug/L		109	69 - 125	26	30
1,4-Dichlorobenzene	0.33	U	200	219		ug/L		110	79 - 120	22	30
2-Butanone (MEK)	2.2	U	1000	1220		ug/L		122	56 - 150	26	30
2-Hexanone	0.72	U	1000	1100		ug/L		110	64 - 150	22	30
4-Methyl-2-pentanone (MIBK)	0.63	U	1000	1120		ug/L		112	77 - 130	24	30
Acetone	1.1	U	1000	1130		ug/L		113	19 - 150	23	30
Benzene	0.090	U	200	208		ug/L		104	76 - 125	23	30
Bromochloromethane	0.30	U	200	233		ug/L		117	71 - 137	24	30
Bromodichloromethane	0.15	U	200	224		ug/L		112	78 - 127	25	30
Bromoform	0.18	U F2	200	229	F2	ug/L		115	65 - 124	33	30
Bromomethane	0.18	U F2	200	243	F2	ug/L		122	10 - 150	37	30
Carbon disulfide	0.22	U	200	213		ug/L		106	69 - 131	26	30
Carbon tetrachloride	0.33	U	200	250		ug/L		125	71 - 138	25	30
Chlorobenzene	0.24	U	200	216		ug/L		108	80 - 120	24	30
Chloroethane	0.37	U F2	200	220	F2	ug/L		110	40 - 150	35	30
Chloroform	0.22	U	200	216		ug/L		108	81 - 127	23	30
Chloromethane	0.22	U F2	200	247	F2	ug/L		123	45 - 150	48	30
Dibromochloromethane	0.22	U	200	230		ug/L		115	78 - 120	24	30
Ethylbenzene	0.30	U	200	217		ug/L		109	80 - 120	19	30
Isopropylbenzene	0.32	U	200	221		ug/L		111	80 - 127	21	30
Methylene Chloride	0.21	U	200	220		ug/L		110	80 - 126	21	30
m-Xylene & p-Xylene	0.28	U	200	228		ug/L		114	80 - 121	11	30
o-Xylene	0.32	U	200	223		ug/L		111	80 - 120	22	30
Styrene	0.17	U	200	217		ug/L		109	75 - 124	24	30
Tetrachloroethene	0.12	U	200	244		ug/L		122	71 - 132	24	30
Toluene	0.25	U	200	220		ug/L		110	80 - 120	12	30
Trichloroethene	0.22	U	200	231		ug/L		115	77 - 127	23	30
Trichlorofluoromethane	0.15	U F2	200	259	F2	ug/L		130	50 - 150	38	30
Vinyl chloride	0.060	U F2	200	232	F2	ug/L		116	53 - 142	35	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 137*
4-Bromofluorobenzene	*94*		*70 - 131*
Dibromofluoromethane (Surr)	*100*		*72 - 136*
Toluene-d8 (Surr)	*94*		*74 - 120*

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

Lab Sample ID: MB 460-358970/7
Matrix: Water
Analysis Batch: 358970

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			03/27/16 07:13	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			03/27/16 07:13	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			03/27/16 07:13	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			03/27/16 07:13	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/27/16 07:13	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			03/27/16 07:13	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/27/16 07:13	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			03/27/16 07:13	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			03/27/16 07:13	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			03/27/16 07:13	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			03/27/16 07:13	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			03/27/16 07:13	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			03/27/16 07:13	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			03/27/16 07:13	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			03/27/16 07:13	1
2-Hexanone	0.72	U	10	0.72	ug/L			03/27/16 07:13	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			03/27/16 07:13	1
Acetone	1.1	U	10	1.1	ug/L			03/27/16 07:13	1
Benzene	0.090	U	1.0	0.090	ug/L			03/27/16 07:13	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			03/27/16 07:13	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			03/27/16 07:13	1
Bromoform	0.18	U	1.0	0.18	ug/L			03/27/16 07:13	1
Bromomethane	0.18	U	1.0	0.18	ug/L			03/27/16 07:13	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			03/27/16 07:13	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			03/27/16 07:13	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			03/27/16 07:13	1
Chloroethane	0.37	U	1.0	0.37	ug/L			03/27/16 07:13	1
Chloroform	0.22	U	1.0	0.22	ug/L			03/27/16 07:13	1
Chloromethane	0.22	U	1.0	0.22	ug/L			03/27/16 07:13	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			03/27/16 07:13	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			03/27/16 07:13	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			03/27/16 07:13	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			03/27/16 07:13	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			03/27/16 07:13	1
o-Xylene	0.32	U	1.0	0.32	ug/L			03/27/16 07:13	1
Styrene	0.17	U	1.0	0.17	ug/L			03/27/16 07:13	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			03/27/16 07:13	1
Toluene	0.25	U	1.0	0.25	ug/L			03/27/16 07:13	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			03/27/16 07:13	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			03/27/16 07:13	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			03/27/16 07:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 137*		*03/27/16 07:13*	*1*
4-Bromofluorobenzene	*102*		*70 - 131*		*03/27/16 07:13*	*1*
Dibromofluoromethane (Surr)	*104*		*72 - 136*		*03/27/16 07:13*	*1*
Toluene-d8 (Surr)	*94*		*74 - 120*		*03/27/16 07:13*	*1*

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

Lab Sample ID: LCS 460-358970/3
Matrix: Water
Analysis Batch: 358970

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	21.5		ug/L		107	76 - 131
1,1,2,2-Tetrachloroethane	20.0	17.9		ug/L		89	65 - 128
1,1,2-Trichloroethane	20.0	19.6		ug/L		98	77 - 122
1,1-Dichloroethane	20.0	19.4		ug/L		97	77 - 129
1,1-Dichloroethene	20.0	19.9		ug/L		99	67 - 133
1,2-Dichlorobenzene	20.0	20.0		ug/L		100	80 - 121
1,2-Dichloroethane	20.0	18.7		ug/L		94	73 - 131
1,2-Dichloroethene, cis-	20.0	20.1		ug/L		100	82 - 127
1,2-Dichloroethene, trans-	20.0	19.3		ug/L		96	78 - 127
1,2-Dichloropropane	20.0	19.2		ug/L		96	75 - 129
1,3-Dichlorobenzene	20.0	20.7		ug/L		103	80 - 120
1,3-Dichloropropene, cis-	20.0	19.4		ug/L		97	72 - 125
1,3-Dichloropropene, trans-	20.0	19.7		ug/L		99	69 - 125
1,4-Dichlorobenzene	20.0	20.1		ug/L		100	79 - 120
2-Butanone (MEK)	100	105		ug/L		105	56 - 150
2-Hexanone	100	93.5		ug/L		93	64 - 150
4-Methyl-2-pentanone (MIBK)	100	92.5		ug/L		92	77 - 130
Acetone	100	107		ug/L		107	19 - 150
Benzene	20.0	19.2		ug/L		96	76 - 125
Bromochloromethane	20.0	21.2		ug/L		106	71 - 137
Bromodichloromethane	20.0	19.8		ug/L		99	78 - 127
Bromoform	20.0	20.5		ug/L		103	65 - 124
Bromomethane	20.0	18.8		ug/L		94	10 - 150
Carbon disulfide	20.0	19.2		ug/L		96	69 - 131
Carbon tetrachloride	20.0	22.1		ug/L		111	71 - 138
Chlorobenzene	20.0	18.9		ug/L		94	80 - 120
Chloroethane	20.0	19.0		ug/L		95	40 - 150
Chloroform	20.0	19.9		ug/L		99	81 - 127
Chloromethane	20.0	19.3		ug/L		96	45 - 150
Dibromochloromethane	20.0	21.0		ug/L		105	78 - 120
Ethylbenzene	20.0	19.3		ug/L		96	80 - 120
Isopropylbenzene	20.0	20.8		ug/L		104	80 - 127
Methylene Chloride	20.0	20.6		ug/L		103	80 - 126
m-Xylene & p-Xylene	20.0	20.0		ug/L		100	80 - 121
o-Xylene	20.0	20.1		ug/L		100	80 - 120
Styrene	20.0	20.1		ug/L		100	75 - 124
Tetrachloroethene	20.0	22.6		ug/L		113	71 - 132
Toluene	20.0	19.1		ug/L		95	80 - 120
Trichloroethene	20.0	21.4		ug/L		107	77 - 127
Trichlorofluoromethane	20.0	22.7		ug/L		114	50 - 150
Vinyl chloride	20.0	20.3		ug/L		101	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 137*
4-Bromofluorobenzene	*96*		*70 - 131*
Dibromofluoromethane (Surr)	*98*		*72 - 136*
Toluene-d8 (Surr)	*92*		*74 - 120*

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

Lab Sample ID: LCSD 460-358970/4
Matrix: Water
Analysis Batch: 358970

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			20.0	20.8		ug/L		104	76 - 131	3	30
1,1,2,2-Tetrachloroethane			20.0	18.7		ug/L		94	65 - 128	5	30
1,1,2-Trichloroethane			20.0	18.9		ug/L		95	77 - 122	3	30
1,1-Dichloroethane			20.0	19.0		ug/L		95	77 - 129	2	30
1,1-Dichloroethene			20.0	20.1		ug/L		100	67 - 133	1	30
1,2-Dichlorobenzene			20.0	19.4		ug/L		97	80 - 121	3	30
1,2-Dichloroethane			20.0	18.6		ug/L		93	73 - 131	1	30
1,2-Dichloroethene, cis-			20.0	19.3		ug/L		96	82 - 127	4	30
1,2-Dichloroethene, trans-			20.0	19.3		ug/L		96	78 - 127	0	30
1,2-Dichloropropane			20.0	18.8		ug/L		94	75 - 129	2	30
1,3-Dichlorobenzene			20.0	20.1		ug/L		100	80 - 120	3	30
1,3-Dichloropropene, cis-			20.0	19.1		ug/L		95	72 - 125	2	30
1,3-Dichloropropene, trans-			20.0	19.5		ug/L		98	69 - 125	1	30
1,4-Dichlorobenzene			20.0	19.7		ug/L		99	79 - 120	2	30
2-Butanone (MEK)			100	102		ug/L		102	56 - 150	3	30
2-Hexanone			100	90.8		ug/L		91	64 - 150	3	30
4-Methyl-2-pentanone (MIBK)			100	89.9		ug/L		90	77 - 130	3	30
Acetone			100	102		ug/L		102	19 - 150	5	30
Benzene			20.0	18.7		ug/L		93	76 - 125	3	30
Bromochloromethane			20.0	19.4		ug/L		97	71 - 137	9	30
Bromodichloromethane			20.0	19.4		ug/L		97	78 - 127	2	30
Bromoform			20.0	20.8		ug/L		104	65 - 124	1	30
Bromomethane			20.0	18.2		ug/L		91	10 - 150	3	30
Carbon disulfide			20.0	18.9		ug/L		95	69 - 131	1	30
Carbon tetrachloride			20.0	22.1		ug/L		111	71 - 138	0	30
Chlorobenzene			20.0	19.1		ug/L		95	80 - 120	1	30
Chloroethane			20.0	17.5		ug/L		87	40 - 150	8	30
Chloroform			20.0	19.1		ug/L		95	81 - 127	4	30
Chloromethane			20.0	19.8		ug/L		99	45 - 150	3	30
Dibromochloromethane			20.0	20.0		ug/L		100	78 - 120	5	30
Ethylbenzene			20.0	19.7		ug/L		99	80 - 120	2	30
Isopropylbenzene			20.0	20.0		ug/L		100	80 - 127	4	30
Methylene Chloride			20.0	20.0		ug/L		100	80 - 126	3	30
m-Xylene & p-Xylene			20.0	19.5		ug/L		97	80 - 121	2	30
o-Xylene			20.0	18.7		ug/L		94	80 - 120	7	30
Styrene			20.0	19.2		ug/L		96	75 - 124	4	30
Tetrachloroethene			20.0	22.0		ug/L		110	71 - 132	3	30
Toluene			20.0	18.8		ug/L		94	80 - 120	2	30
Trichloroethene			20.0	20.7		ug/L		104	77 - 127	3	30
Trichlorofluoromethane			20.0	23.2		ug/L		116	50 - 150	2	30
Vinyl chloride			20.0	19.8		ug/L		99	53 - 142	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 137*
4-Bromofluorobenzene	*96*		*70 - 131*
Dibromofluoromethane (Surr)	*102*		*72 - 136*
Toluene-d8 (Surr)	*95*		*74 - 120*

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

Lab Sample ID: MB 460-359205/7
Matrix: Water
Analysis Batch: 359205

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			03/28/16 20:15	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			03/28/16 20:15	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			03/28/16 20:15	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			03/28/16 20:15	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/28/16 20:15	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			03/28/16 20:15	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/28/16 20:15	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			03/28/16 20:15	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			03/28/16 20:15	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			03/28/16 20:15	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			03/28/16 20:15	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			03/28/16 20:15	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			03/28/16 20:15	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			03/28/16 20:15	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			03/28/16 20:15	1
2-Hexanone	0.72	U	10	0.72	ug/L			03/28/16 20:15	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			03/28/16 20:15	1
Acetone	1.1	U	10	1.1	ug/L			03/28/16 20:15	1
Benzene	0.090	U	1.0	0.090	ug/L			03/28/16 20:15	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			03/28/16 20:15	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			03/28/16 20:15	1
Bromoform	0.18	U	1.0	0.18	ug/L			03/28/16 20:15	1
Bromomethane	0.18	U	1.0	0.18	ug/L			03/28/16 20:15	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			03/28/16 20:15	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			03/28/16 20:15	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			03/28/16 20:15	1
Chloroethane	0.37	U	1.0	0.37	ug/L			03/28/16 20:15	1
Chloroform	0.22	U	1.0	0.22	ug/L			03/28/16 20:15	1
Chloromethane	0.22	U	1.0	0.22	ug/L			03/28/16 20:15	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			03/28/16 20:15	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			03/28/16 20:15	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			03/28/16 20:15	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			03/28/16 20:15	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			03/28/16 20:15	1
o-Xylene	0.32	U	1.0	0.32	ug/L			03/28/16 20:15	1
Styrene	0.17	U	1.0	0.17	ug/L			03/28/16 20:15	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			03/28/16 20:15	1
Toluene	0.25	U	1.0	0.25	ug/L			03/28/16 20:15	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			03/28/16 20:15	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			03/28/16 20:15	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			03/28/16 20:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 137*		*03/28/16 20:15*	*1*
4-Bromofluorobenzene	*102*		*70 - 131*		*03/28/16 20:15*	*1*
Dibromofluoromethane (Surr)	*107*		*72 - 136*		*03/28/16 20:15*	*1*
Toluene-d8 (Surr)	*94*		*74 - 120*		*03/28/16 20:15*	*1*

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

Lab Sample ID: LCS 460-359205/3
Matrix: Water
Analysis Batch: 359205

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	21.1		ug/L		106	76 - 131
1,1,2,2-Tetrachloroethane	20.0	18.8		ug/L		94	65 - 128
1,1,2-Trichloroethane	20.0	19.2		ug/L		96	77 - 122
1,1-Dichloroethane	20.0	19.7		ug/L		98	77 - 129
1,1-Dichloroethene	20.0	20.5		ug/L		102	67 - 133
1,2-Dichlorobenzene	20.0	19.9		ug/L		99	80 - 121
1,2-Dichloroethane	20.0	18.5		ug/L		93	73 - 131
1,2-Dichloroethene, cis-	20.0	19.3		ug/L		97	82 - 127
1,2-Dichloroethene, trans-	20.0	19.3		ug/L		96	78 - 127
1,2-Dichloropropane	20.0	19.4		ug/L		97	75 - 129
1,3-Dichlorobenzene	20.0	20.7		ug/L		104	80 - 120
1,3-Dichloropropene, cis-	20.0	19.9		ug/L		99	72 - 125
1,3-Dichloropropene, trans-	20.0	19.9		ug/L		100	69 - 125
1,4-Dichlorobenzene	20.0	20.5		ug/L		103	79 - 120
2-Butanone (MEK)	100	108		ug/L		108	56 - 150
2-Hexanone	100	99.4		ug/L		99	64 - 150
4-Methyl-2-pentanone (MIBK)	100	99.6		ug/L		100	77 - 130
Acetone	100	92.4		ug/L		92	19 - 150
Benzene	20.0	19.6		ug/L		98	76 - 125
Bromochloromethane	20.0	20.0		ug/L		100	71 - 137
Bromodichloromethane	20.0	20.0		ug/L		100	78 - 127
Bromoform	20.0	20.0		ug/L		100	65 - 124
Bromomethane	20.0	21.1		ug/L		105	10 - 150
Carbon disulfide	20.0	19.2		ug/L		96	69 - 131
Carbon tetrachloride	20.0	22.0		ug/L		110	71 - 138
Chlorobenzene	20.0	19.4		ug/L		97	80 - 120
Chloroethane	20.0	18.6		ug/L		93	40 - 150
Chloroform	20.0	19.7		ug/L		99	81 - 127
Chloromethane	20.0	21.7		ug/L		109	45 - 150
Dibromochloromethane	20.0	20.6		ug/L		103	78 - 120
Ethylbenzene	20.0	20.1		ug/L		101	80 - 120
Isopropylbenzene	20.0	21.4		ug/L		107	80 - 127
Methylene Chloride	20.0	20.1		ug/L		100	80 - 126
m-Xylene & p-Xylene	20.0	20.6		ug/L		103	80 - 121
o-Xylene	20.0	19.7		ug/L		99	80 - 120
Styrene	20.0	20.0		ug/L		100	75 - 124
Tetrachloroethene	20.0	22.1		ug/L		110	71 - 132
Toluene	20.0	19.4		ug/L		97	80 - 120
Trichloroethene	20.0	21.2		ug/L		106	77 - 127
Trichlorofluoromethane	20.0	22.9		ug/L		114	50 - 150
Vinyl chloride	20.0	20.8		ug/L		104	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 137*
4-Bromofluorobenzene	*97*		*70 - 131*
Dibromofluoromethane (Surr)	*102*		*72 - 136*
Toluene-d8 (Surr)	*95*		*74 - 120*

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

Lab Sample ID: 460-110624-7 MS
Matrix: Water
Analysis Batch: 359205

Client Sample ID: POST-CARB-COMPOSITE_20160315
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.28	U	20.0	20.5		ug/L		103	76 - 131
1,1,2,2-Tetrachloroethane	0.19	U	20.0	17.9		ug/L		89	65 - 128
1,1,2-Trichloroethane	0.080	U	20.0	18.5		ug/L		93	77 - 122
1,1-Dichloroethane	0.24	U	20.0	18.6		ug/L		93	77 - 129
1,1-Dichloroethene	0.34	U	20.0	19.1		ug/L		95	67 - 133
1,2-Dichlorobenzene	0.22	U	20.0	18.3		ug/L		92	80 - 121
1,2-Dichloroethane	0.25	U	20.0	17.8		ug/L		89	73 - 131
1,2-Dichloroethene, cis-	0.26	U	20.0	19.1		ug/L		96	82 - 127
1,2-Dichloroethene, trans-	0.18	U	20.0	18.3		ug/L		91	78 - 127
1,2-Dichloropropane	0.18	U	20.0	17.9		ug/L		89	75 - 129
1,3-Dichlorobenzene	0.33	U	20.0	19.1		ug/L		95	80 - 120
1,3-Dichloropropene, cis-	0.16	U	20.0	18.2		ug/L		91	72 - 125
1,3-Dichloropropene, trans-	0.19	U	20.0	18.5		ug/L		93	69 - 125
1,4-Dichlorobenzene	0.33	U	20.0	18.5		ug/L		93	79 - 120
2-Butanone (MEK)	2.2	U	100	96.5		ug/L		96	56 - 150
2-Hexanone	0.72	U	100	89.8		ug/L		90	64 - 150
4-Methyl-2-pentanone (MIBK)	0.63	U	100	91.5		ug/L		91	77 - 130
Acetone	67		100	156		ug/L		89	19 - 150
Benzene	0.090	U	20.0	18.2		ug/L		91	76 - 125
Bromochloromethane	0.30	U	20.0	19.2		ug/L		96	71 - 137
Bromodichloromethane	0.15	U	20.0	19.2		ug/L		96	78 - 127
Bromoform	0.18	U	20.0	19.6		ug/L		98	65 - 124
Bromomethane	0.18	U	20.0	8.99		ug/L		45	10 - 150
Carbon disulfide	0.22	U	20.0	18.6		ug/L		93	69 - 131
Carbon tetrachloride	0.33	U	20.0	19.9		ug/L		99	71 - 138
Chlorobenzene	0.24	U	20.0	18.2		ug/L		91	80 - 120
Chloroethane	0.37	U F1	20.0	99.9	F1	ug/L		500	40 - 150
Chloroform	0.22	U	20.0	18.5		ug/L		93	81 - 127
Chloromethane	0.22	U	20.0	19.3		ug/L		97	45 - 150
Dibromochloromethane	0.22	U	20.0	19.6		ug/L		98	78 - 120
Ethylbenzene	0.30	U	20.0	18.8		ug/L		94	80 - 120
Isopropylbenzene	0.32	U	20.0	19.7		ug/L		99	80 - 127
Methylene Chloride	0.21	U	20.0	19.0		ug/L		95	80 - 126
m-Xylene & p-Xylene	0.28	U	20.0	19.4		ug/L		97	80 - 121
o-Xylene	0.32	U	20.0	19.0		ug/L		95	80 - 120
Styrene	0.17	U	20.0	18.9		ug/L		95	75 - 124
Tetrachloroethene	0.12	U	20.0	21.4		ug/L		107	71 - 132
Toluene	0.25	U	20.0	18.6		ug/L		93	80 - 120
Trichloroethene	0.22	U	20.0	20.9		ug/L		104	77 - 127
Trichlorofluoromethane	0.15	U	20.0	20.0		ug/L		100	50 - 150
Vinyl chloride	110		20.0	105	4	ug/L		-48	53 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 137*
4-Bromofluorobenzene	*99*		*70 - 131*
Dibromofluoromethane (Surr)	*100*		*72 - 136*
Toluene-d8 (Surr)	*95*		*74 - 120*

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

Lab Sample ID: 460-110624-7 MSD
Matrix: Water
Analysis Batch: 359205

Client Sample ID: POST-CARB-COMPOSITE_20160315
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.28	U	20.0	19.5		ug/L		97	76 - 131	5	30
1,1,2,2-Tetrachloroethane	0.19	U	20.0	18.2		ug/L		91	65 - 128	2	30
1,1,2-Trichloroethane	0.080	U	20.0	18.8		ug/L		94	77 - 122	2	30
1,1-Dichloroethane	0.24	U	20.0	18.1		ug/L		91	77 - 129	3	30
1,1-Dichloroethene	0.34	U	20.0	18.5		ug/L		92	67 - 133	3	30
1,2-Dichlorobenzene	0.22	U	20.0	18.4		ug/L		92	80 - 121	1	30
1,2-Dichloroethane	0.25	U	20.0	17.9		ug/L		90	73 - 131	1	30
1,2-Dichloroethene, cis-	0.26	U	20.0	18.8		ug/L		94	82 - 127	2	30
1,2-Dichloroethene, trans-	0.18	U	20.0	18.0		ug/L		90	78 - 127	2	30
1,2-Dichloropropane	0.18	U	20.0	17.8		ug/L		89	75 - 129	0	30
1,3-Dichlorobenzene	0.33	U	20.0	19.1		ug/L		95	80 - 120	0	30
1,3-Dichloropropene, cis-	0.16	U	20.0	18.2		ug/L		91	72 - 125	0	30
1,3-Dichloropropene, trans-	0.19	U	20.0	18.9		ug/L		94	69 - 125	2	30
1,4-Dichlorobenzene	0.33	U	20.0	18.5		ug/L		92	79 - 120	0	30
2-Butanone (MEK)	2.2	U	100	101		ug/L		101	56 - 150	4	30
2-Hexanone	0.72	U	100	94.0		ug/L		94	64 - 150	5	30
4-Methyl-2-pentanone (MIBK)	0.63	U	100	92.7		ug/L		93	77 - 130	1	30
Acetone	67		100	153		ug/L		86	19 - 150	2	30
Benzene	0.090	U	20.0	18.0		ug/L		90	76 - 125	1	30
Bromochloromethane	0.30	U	20.0	19.5		ug/L		98	71 - 137	1	30
Bromodichloromethane	0.15	U	20.0	19.1		ug/L		95	78 - 127	1	30
Bromoform	0.18	U	20.0	19.9		ug/L		100	65 - 124	2	30
Bromomethane	0.18	U	20.0	10.1		ug/L		50	10 - 150	11	30
Carbon disulfide	0.22	U	20.0	18.2		ug/L		91	69 - 131	3	30
Carbon tetrachloride	0.33	U	20.0	20.0		ug/L		100	71 - 138	0	30
Chlorobenzene	0.24	U	20.0	18.2		ug/L		91	80 - 120	0	30
Chloroethane	0.37	U F1	20.0	101	F1	ug/L		506	40 - 150	1	30
Chloroform	0.22	U	20.0	18.1		ug/L		91	81 - 127	2	30
Chloromethane	0.22	U	20.0	18.8		ug/L		94	45 - 150	3	30
Dibromochloromethane	0.22	U	20.0	19.5		ug/L		98	78 - 120	0	30
Ethylbenzene	0.30	U	20.0	18.3		ug/L		91	80 - 120	3	30
Isopropylbenzene	0.32	U	20.0	20.1		ug/L		101	80 - 127	2	30
Methylene Chloride	0.21	U	20.0	18.1		ug/L		91	80 - 126	5	30
m-Xylene & p-Xylene	0.28	U	20.0	19.3		ug/L		97	80 - 121	0	30
o-Xylene	0.32	U	20.0	19.1		ug/L		95	80 - 120	0	30
Styrene	0.17	U	20.0	19.0		ug/L		95	75 - 124	0	30
Tetrachloroethene	0.12	U	20.0	21.2		ug/L		106	71 - 132	1	30
Toluene	0.25	U	20.0	18.3		ug/L		92	80 - 120	1	30
Trichloroethene	0.22	U	20.0	19.6		ug/L		98	77 - 127	7	30
Trichlorofluoromethane	0.15	U	20.0	19.1		ug/L		96	50 - 150	4	30
Vinyl chloride	110		20.0	102	4	ug/L		-63	53 - 142	3	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 137*
4-Bromofluorobenzene	*102*		*70 - 131*
Dibromofluoromethane (Surr)	*100*		*72 - 136*
Toluene-d8 (Surr)	*97*		*74 - 120*

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-110624-1

GC/MS VOA

Analysis Batch: 358816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-110513-B-5 MS	Matrix Spike	Total/NA	Water	8260C	
460-110513-B-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
460-110624-2 - DL	Primary-Eff_20160315	Total/NA	Water	8260C	
LCS 460-358816/3	Lab Control Sample	Total/NA	Water	8260C	
MB 460-358816/8	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 358970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-110624-1	Pre-Carb_20160315	Total/NA	Water	8260C	
LCS 460-358970/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 460-358970/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 460-358970/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 359205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-110624-1 - DL	Pre-Carb_20160315	Total/NA	Water	8260C	
460-110624-2	Primary-Eff_20160315	Total/NA	Water	8260C	
460-110624-7	POST-CARB-COMPOSITE_20160315	Total/NA	Water	8260C	
460-110624-7 MS	POST-CARB-COMPOSITE_20160315	Total/NA	Water	8260C	
460-110624-7 MSD	POST-CARB-COMPOSITE_20160315	Total/NA	Water	8260C	
460-110624-8	TRIP BLANK_20160315	Total/NA	Water	8260C	
LCS 460-359205/3	Lab Control Sample	Total/NA	Water	8260C	
MB 460-359205/7	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-110624-1

Client Sample ID: Pre-Carb_20160315
Lab Sample ID: 460-110624-1
Date Collected: 03/15/16 12:50
Matrix: Water
Date Received: 03/16/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	358970	03/27/16 13:40	AAT	TAL EDI
Total/NA	Analysis	8260C	DL	10	359205	03/28/16 22:06	MZS	TAL EDI

Client Sample ID: Primary-Eff_20160315
Lab Sample ID: 460-110624-2
Date Collected: 03/15/16 12:55
Matrix: Water
Date Received: 03/16/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	5	358816	03/26/16 17:40	AAT	TAL EDI
Total/NA	Analysis	8260C		1	359205	03/28/16 21:38	MZS	TAL EDI

Client Sample ID: POST-CARB-COMPOSITE_20160315
Lab Sample ID: 460-110624-7
Date Collected: 03/15/16 13:00
Matrix: Water
Date Received: 03/16/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	359205	03/28/16 21:10	MZS	TAL EDI

Client Sample ID: TRIP BLANK_20160315
Lab Sample ID: 460-110624-8
Date Collected: 03/15/16 00:00
Matrix: Water
Date Received: 03/16/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	359205	03/28/16 20:43	MZS	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Certification Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-110624-1

Laboratory: TestAmerica Edison

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11452	03-31-16

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-110624-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL EDI

Protocol References:

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

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-110624-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-110624-1	Pre-Carb_20160315	Water	03/15/16 12:50	03/16/16 10:00
460-110624-2	Primary-Eff_20160315	Water	03/15/16 12:55	03/16/16 10:00
460-110624-7	POST-CARB-COMPOSITE_20160315	Water	03/15/16 13:00	03/16/16 10:00
460-110624-8	TRIP BLANK_20160315	Water	03/15/16 00:00	03/16/16 10:00

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

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CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice): Kyle Block	Samplers Name (Printed): Jon Gowing	Site/Project Identification: Essex Hoa Jamestown
Company: CH2M HILL	P. O. #	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program: DKQP: ☐
Address: 18 Tremont St. Suite 300	Analysis Turnaround Time: Standard ☒	LAB USE ONLY Project No:
City: Boston State: MA 02108	Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	Job No: 110624
Phone: (617) 626-7013 Fax: (810) 229-5031		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of Cont.	VOCs 8260	Sample Numbers
Pre-CARB_20160315	03/15/16	1250	GW	3	X	-1
Primary-EFF_20160315		1255		3	X	-2
POST-CARB_20160315_1		1300		3	X	-3
POST-CARB_20160315_2		1330		3	X	-4
POST-CARB_20160315_3		1400		3	X	-5
POST-CARB_20160315_4		1430		3	X	-6, -7
TRIP BLANK_20160315		—		2	X	-8

460-110624 Chain of Custody

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH Soil:
6 = Other _____, 7 = Other _____ Water:

Special Instructions Composite all 4 POST-CARB Samples in LAB, Report as POST-CARB-Composite_20160315 Water Metals Filtered (Yes/No)? NR

Relinquished by	Company	Date / Time	Received by	Company
	CH2MHILL	3/15/16 @1500	1)	
Relinquished by 2)	Company	Date / Time 3/16/16 10:00	Received by 2)	Company TAL
Relinquished by 3)	Company	Date / Time	Received by 3)	Company 3/16/16
Relinquished by 4)	Company	Date / Time	Received by 4) 1.6 / 2.0 °C	Company 1600

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). TAL - 0016 (0715)

Massachusetts (M-NJ312), North Carolina (No. 578)

TestAmerica Edison
Receipt Temperature and pH Log

Page 1 of 1

Job Number: 110624

Cooler Temperatures

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

EDS-WI-038, Rev 4, 06/09/2014

Initials: BV Date: 3/18/16

3/30/2016

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc.

Job Number: 460-110624-1

Login Number: 110624
List Number: 1
Creator: Lysy, Susan

List Source: TestAmerica Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
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	2.0°C IR#6
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.	N/A	
Samples do not require splitting or compositing.	False	COMPOSITE REQUIRED
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

TestAmerica Job ID: 460-112452-1
Client Project/Site: Essex Hope Jamestown, NY

For:
CH2M Hill Constructors, Inc.
18 Tremont St
Suite 700
Boston, Massachusetts 02108

Attn: Mr. Kyle Block

Kristin B DeGraw

Authorized for release by:
4/28/2016 12:02:53 PM

Kristin DeGraw, Project Manager II
(732)593-2555
kristin.degraw@testamericainc.com

Table of Contents

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-112452-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

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)

Job ID: 460-112452-1

Laboratory: TestAmerica Edison

Narrative

CASE NARRATIVE

Client: CH2M Hill Constructors, Inc.

Project: Essex Hope Jamestown, NY

Report Number: 460-112452-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

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

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

RECEIPT

The samples were received on 4/15/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

One vial for sample #5 received without label.

VOLATILE ORGANICS

Samples Pre-Carb_20160413 (460-112452-1), Primary-Eff_20160413 (460-112452-2), POST-CARB-COMPOSITE_20160413 (460-112452-7), RW-6D_20160413 (460-112452-8), RW-3S_20160413 (460-112452-9), RW-1S_20160413 (460-112452-10), RW-2D_20160413 (460-112452-11), RW-2S_20160413 (460-112452-12) and TRIP BLANK_20160413 (460-112452-13) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 04/26/2016 and 04/27/2016.

Vinyl chloride failed the recovery criteria low for the MS/MSD of sample POST-CARB-COMPOSITE_20160413MS (460-112452-7) in batch 460-364917.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

Samples Pre-Carb_20160413 (460-112452-1)[10X], Primary-Eff_20160413 (460-112452-2)[5X], POST-CARB-COMPOSITE_20160413 (460-112452-7)[2X], RW-6D_20160413 (460-112452-8)[20X], RW-6D_20160413 (460-112452-8)[200X], RW-2D_20160413 (460-112452-11)[2X] and RW-2D_20160413 (460-112452-11)[25X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Volatile organics analysis.

Job ID: 460-112452-1 (Continued)

Laboratory: TestAmerica Edison (Continued)

All other quality control parameters were within the acceptance limits.

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-112452-1

Client Sample ID: Pre-Carb_20160413 — Lab Sample ID: 460-112452-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	18		1.0	0.34	ug/L	1		8260C	Total/NA
1,2-Dichloroethene, trans-	51		1.0	0.18	ug/L	1		8260C	Total/NA
2-Butanone (MEK)	31		10	2.2	ug/L	1		8260C	Total/NA
Benzene	21		1.0	0.090	ug/L	1		8260C	Total/NA
Ethylbenzene	0.40	J	1.0	0.30	ug/L	1		8260C	Total/NA
Isopropylbenzene	0.44	J	1.0	0.32	ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	1.1	J	10	0.28	ug/L	1		8260C	Total/NA
Toluene	0.89	J	1.0	0.25	ug/L	1		8260C	Total/NA
1,2-Dichloroethene, cis- - DL	4100	D	10	2.6	ug/L	10		8260C	Total/NA
Acetone - DL	7400	D	100	11	ug/L	10		8260C	Total/NA
Trichloroethene - DL	3100	D	10	2.2	ug/L	10		8260C	Total/NA
Vinyl chloride - DL	680	D	10	0.60	ug/L	10		8260C	Total/NA

Client Sample ID: Primary-Eff_20160413 — Lab Sample ID: 460-112452-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	1.8		1.0	0.34	ug/L	1		8260C	Total/NA
1,2-Dichloroethene, trans-	8.7		1.0	0.18	ug/L	1		8260C	Total/NA
2-Butanone (MEK)	23		10	2.2	ug/L	1		8260C	Total/NA
Trichloroethene	1.8		1.0	0.22	ug/L	1		8260C	Total/NA
1,2-Dichloroethene, cis- - DL	1000	D	5.0	1.3	ug/L	5		8260C	Total/NA
Acetone - DL	5900	D	50	5.4	ug/L	5		8260C	Total/NA
Vinyl chloride - DL	1100	D	5.0	0.30	ug/L	5		8260C	Total/NA

Client Sample ID: POST-CARB-COMPOSITE_20160413 — Lab Sample ID: 460-112452-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	0.97	J	1.0	0.26	ug/L	1		8260C	Total/NA
Acetone	1100		10	1.1	ug/L	1		8260C	Total/NA
Trichloroethene	0.48	J	1.0	0.22	ug/L	1		8260C	Total/NA
Vinyl chloride - DL	320	D	2.0	0.12	ug/L	2		8260C	Total/NA

Client Sample ID: RW-6D_20160413 — Lab Sample ID: 460-112452-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	58		20	6.8	ug/L	20		8260C	Total/NA
1,2-Dichloroethene, trans-	200		20	3.6	ug/L	20		8260C	Total/NA
2-Butanone (MEK)	240		200	44	ug/L	20		8260C	Total/NA
Acetone	36000		200	21	ug/L	20		8260C	Total/NA
Benzene	81		20	1.8	ug/L	20		8260C	Total/NA
Vinyl chloride	2700		20	1.2	ug/L	20		8260C	Total/NA
1,2-Dichloroethene, cis- - DL	19000	D	200	52	ug/L	200		8260C	Total/NA
Trichloroethene - DL	21000	D	200	44	ug/L	200		8260C	Total/NA

Client Sample ID: RW-3S_20160413 — Lab Sample ID: 460-112452-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	1.7		1.0	0.26	ug/L	1		8260C	Total/NA
Benzene	11		1.0	0.090	ug/L	1		8260C	Total/NA
Ethylbenzene	11		1.0	0.30	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Edison

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-112452-1

Client Sample ID: RW-3S_20160413 (Continued) — Lab Sample ID: 460-112452-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Isopropylbenzene	12		1.0	0.32	ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	23		10	0.28	ug/L	1		8260C	Total/NA
o-Xylene	1.3		1.0	0.32	ug/L	1		8260C	Total/NA
Trichloroethene	4.3		1.0	0.22	ug/L	1		8260C	Total/NA
Vinyl chloride	0.54	J	1.0	0.060	ug/L	1		8260C	Total/NA

Client Sample ID: RW-1S_20160413 — Lab Sample ID: 460-112452-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	1.5		1.0	0.34	ug/L	1		8260C	Total/NA
1,2-Dichloroethene, cis-	240		1.0	0.26	ug/L	1		8260C	Total/NA
1,2-Dichloroethene, trans-	2.3		1.0	0.18	ug/L	1		8260C	Total/NA
Trichloroethene	60		1.0	0.22	ug/L	1		8260C	Total/NA
Vinyl chloride	16		1.0	0.060	ug/L	1		8260C	Total/NA

Client Sample ID: RW-2D_20160413 — Lab Sample ID: 460-112452-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	14		2.0	0.68	ug/L	2		8260C	Total/NA
1,2-Dichloroethene, trans-	35		2.0	0.36	ug/L	2		8260C	Total/NA
Acetone	78		20	2.1	ug/L	2		8260C	Total/NA
Benzene	7.3		2.0	0.18	ug/L	2		8260C	Total/NA
Toluene	0.66	J	2.0	0.50	ug/L	2		8260C	Total/NA
Vinyl chloride	370		2.0	0.12	ug/L	2		8260C	Total/NA
1,2-Dichloroethene, cis- - DL	2400	D	25	6.5	ug/L	25		8260C	Total/NA
Trichloroethene - DL	1900	D	25	5.5	ug/L	25		8260C	Total/NA

Client Sample ID: RW-2S_20160413 — Lab Sample ID: 460-112452-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	5.3		1.0	0.26	ug/L	1		8260C	Total/NA
Trichloroethene	4.4		1.0	0.22	ug/L	1		8260C	Total/NA
Vinyl chloride	0.35	J	1.0	0.060	ug/L	1		8260C	Total/NA

Client Sample ID: TRIP BLANK_20160413 — Lab Sample ID: 460-112452-13

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: Pre-Carb_20160413
Date Collected: 04/13/16 14:20
Date Received: 04/15/16 10:00

Lab Sample ID: 460-112452-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/27/16 07:30	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/27/16 07:30	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/27/16 07:30	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/27/16 07:30	1
1,1-Dichloroethene	**18**		1.0	0.34	ug/L			04/27/16 07:30	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			04/27/16 07:30	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/27/16 07:30	1
1,2-Dichloroethene, trans-	**51**		1.0	0.18	ug/L			04/27/16 07:30	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/27/16 07:30	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			04/27/16 07:30	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			04/27/16 07:30	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			04/27/16 07:30	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			04/27/16 07:30	1
2-Butanone (MEK)	**31**		10	2.2	ug/L			04/27/16 07:30	1
2-Hexanone	0.72	U	10	0.72	ug/L			04/27/16 07:30	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			04/27/16 07:30	1
Benzene	**21**		1.0	0.090	ug/L			04/27/16 07:30	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			04/27/16 07:30	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/27/16 07:30	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/27/16 07:30	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/27/16 07:30	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/27/16 07:30	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/27/16 07:30	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/27/16 07:30	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/27/16 07:30	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/27/16 07:30	1
Chloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 07:30	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 07:30	1
Ethylbenzene	**0.40**	**J**	1.0	0.30	ug/L			04/27/16 07:30	1
Isopropylbenzene	**0.44**	**J**	1.0	0.32	ug/L			04/27/16 07:30	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/27/16 07:30	1
m-Xylene & p-Xylene	**1.1**	**J**	10	0.28	ug/L			04/27/16 07:30	1
o-Xylene	0.32	U	1.0	0.32	ug/L			04/27/16 07:30	1
Styrene	0.17	U	1.0	0.17	ug/L			04/27/16 07:30	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/27/16 07:30	1
Toluene	**0.89**	**J**	1.0	0.25	ug/L			04/27/16 07:30	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			04/27/16 07:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 137*		*04/27/16 07:30*	*1*
4-Bromofluorobenzene	*94*		*70 - 131*		*04/27/16 07:30*	*1*
Dibromofluoromethane (Surr)	*99*		*72 - 136*		*04/27/16 07:30*	*1*
Toluene-d8 (Surr)	*99*		*74 - 120*		*04/27/16 07:30*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, cis-	**4100**	**D**	10	2.6	ug/L			04/27/16 05:43	10
Acetone	**7400**	**D**	100	11	ug/L			04/27/16 05:43	10
Trichloroethene	**3100**	**D**	10	2.2	ug/L			04/27/16 05:43	10
Vinyl chloride	**680**	**D**	10	0.60	ug/L			04/27/16 05:43	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*108*	*D*	*70 - 137*		*04/27/16 05:43*	*10*
4-Bromofluorobenzene	*93*	*D*	*70 - 131*		*04/27/16 05:43*	*10*
Dibromofluoromethane (Surr)	*100*	*D*	*72 - 136*		*04/27/16 05:43*	*10*
Toluene-d8 (Surr)	*97*	*D*	*74 - 120*		*04/27/16 05:43*	*10*

Client Sample ID: Primary-Eff_20160413

Date Collected: 04/13/16 14:25
Date Received: 04/15/16 10:00

Lab Sample ID: 460-112452-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/27/16 07:03	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/27/16 07:03	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/27/16 07:03	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/27/16 07:03	1
1,1-Dichloroethene	**1.8**		1.0	0.34	ug/L			04/27/16 07:03	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			04/27/16 07:03	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/27/16 07:03	1
1,2-Dichloroethene, trans-	**8.7**		1.0	0.18	ug/L			04/27/16 07:03	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/27/16 07:03	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			04/27/16 07:03	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			04/27/16 07:03	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			04/27/16 07:03	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			04/27/16 07:03	1
2-Butanone (MEK)	**23**		10	2.2	ug/L			04/27/16 07:03	1
2-Hexanone	0.72	U	10	0.72	ug/L			04/27/16 07:03	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			04/27/16 07:03	1
Benzene	0.090	U	1.0	0.090	ug/L			04/27/16 07:03	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			04/27/16 07:03	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/27/16 07:03	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/27/16 07:03	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/27/16 07:03	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/27/16 07:03	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/27/16 07:03	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/27/16 07:03	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/27/16 07:03	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/27/16 07:03	1
Chloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 07:03	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 07:03	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/27/16 07:03	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/27/16 07:03	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/27/16 07:03	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			04/27/16 07:03	1
o-Xylene	0.32	U	1.0	0.32	ug/L			04/27/16 07:03	1
Styrene	0.17	U	1.0	0.17	ug/L			04/27/16 07:03	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/27/16 07:03	1
Toluene	0.25	U	1.0	0.25	ug/L			04/27/16 07:03	1
Trichloroethene	**1.8**		1.0	0.22	ug/L			04/27/16 07:03	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			04/27/16 07:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 137*		*04/27/16 07:03*	*1*
4-Bromofluorobenzene	*94*		*70 - 131*		*04/27/16 07:03*	*1*
Dibromofluoromethane (Surr)	*104*		*72 - 136*		*04/27/16 07:03*	*1*
Toluene-d8 (Surr)	*98*		*74 - 120*		*04/27/16 07:03*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, cis-	**1000**	**D**	5.0	1.3	ug/L			04/27/16 05:17	5
Acetone	**5900**	**D**	50	5.4	ug/L			04/27/16 05:17	5
Vinyl chloride	**1100**	**D**	5.0	0.30	ug/L			04/27/16 05:17	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*	*D*	*70 - 137*		*04/27/16 05:17*	*5*
4-Bromofluorobenzene	*94*	*D*	*70 - 131*		*04/27/16 05:17*	*5*
Dibromofluoromethane (Surr)	*96*	*D*	*72 - 136*		*04/27/16 05:17*	*5*
Toluene-d8 (Surr)	*98*	*D*	*74 - 120*		*04/27/16 05:17*	*5*

Client Sample ID: POST-CARB-COMPOSITE_20160413

Lab Sample ID: 460-112452-7

Date Collected: 04/13/16 14:20

Matrix: Water

Date Received: 04/15/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/27/16 01:44	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/27/16 01:44	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/27/16 01:44	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/27/16 01:44	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/27/16 01:44	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			04/27/16 01:44	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/27/16 01:44	1
1,2-Dichloroethene, cis-	**0.97**	**J**	1.0	0.26	ug/L			04/27/16 01:44	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			04/27/16 01:44	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/27/16 01:44	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			04/27/16 01:44	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			04/27/16 01:44	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			04/27/16 01:44	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			04/27/16 01:44	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			04/27/16 01:44	1
2-Hexanone	0.72	U	10	0.72	ug/L			04/27/16 01:44	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			04/27/16 01:44	1
Acetone	**1100**		10	1.1	ug/L			04/27/16 01:44	1
Benzene	0.090	U	1.0	0.090	ug/L			04/27/16 01:44	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			04/27/16 01:44	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/27/16 01:44	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/27/16 01:44	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/27/16 01:44	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/27/16 01:44	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/27/16 01:44	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/27/16 01:44	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/27/16 01:44	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/27/16 01:44	1
Chloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 01:44	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 01:44	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/27/16 01:44	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/27/16 01:44	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/27/16 01:44	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			04/27/16 01:44	1
o-Xylene	0.32	U	1.0	0.32	ug/L			04/27/16 01:44	1
Styrene	0.17	U	1.0	0.17	ug/L			04/27/16 01:44	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/27/16 01:44	1
Toluene	0.25	U	1.0	0.25	ug/L			04/27/16 01:44	1

Client Sample ID: POST-CARB-COMPOSITE_20160413

Lab Sample ID: 460-112452-7
Date Collected: 04/13/16 14:20
Matrix: Water
Date Received: 04/15/16 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**0.48**	**J**	1.0	0.22	ug/L			04/27/16 01:44	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			04/27/16 01:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 137*		*04/27/16 01:44*	*1*
4-Bromofluorobenzene	*97*		*70 - 131*		*04/27/16 01:44*	*1*
Dibromofluoromethane (Surr)	*102*		*72 - 136*		*04/27/16 01:44*	*1*
Toluene-d8 (Surr)	*103*		*74 - 120*		*04/27/16 01:44*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**320**	**D**	2.0	0.12	ug/L			04/27/16 15:15	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*	*D*	*70 - 137*		*04/27/16 15:15*	*2*
4-Bromofluorobenzene	*86*	*D*	*70 - 131*		*04/27/16 15:15*	*2*
Dibromofluoromethane (Surr)	*92*	*D*	*72 - 136*		*04/27/16 15:15*	*2*
Toluene-d8 (Surr)	*92*	*D*	*74 - 120*		*04/27/16 15:15*	*2*

Client Sample ID: RW-6D_20160413

Lab Sample ID: 460-112452-8
Date Collected: 04/13/16 13:30
Matrix: Water
Date Received: 04/15/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	5.6	U	20	5.6	ug/L			04/27/16 07:56	20
1,1,2,2-Tetrachloroethane	3.8	U	20	3.8	ug/L			04/27/16 07:56	20
1,1,2-Trichloroethane	1.6	U	20	1.6	ug/L			04/27/16 07:56	20
1,1-Dichloroethane	4.8	U	20	4.8	ug/L			04/27/16 07:56	20
1,1-Dichloroethene	**58**		20	6.8	ug/L			04/27/16 07:56	20
1,2-Dichlorobenzene	4.4	U	20	4.4	ug/L			04/27/16 07:56	20
1,2-Dichloroethane	5.0	U	20	5.0	ug/L			04/27/16 07:56	20
1,2-Dichloroethene, trans-	**200**		20	3.6	ug/L			04/27/16 07:56	20
1,2-Dichloropropane	3.6	U	20	3.6	ug/L			04/27/16 07:56	20
1,3-Dichlorobenzene	6.6	U	100	6.6	ug/L			04/27/16 07:56	20
1,3-Dichloropropene, cis-	3.2	U	20	3.2	ug/L			04/27/16 07:56	20
1,3-Dichloropropene, trans-	3.8	U	20	3.8	ug/L			04/27/16 07:56	20
1,4-Dichlorobenzene	6.6	U	20	6.6	ug/L			04/27/16 07:56	20
2-Butanone (MEK)	**240**		200	44	ug/L			04/27/16 07:56	20
2-Hexanone	14	U	200	14	ug/L			04/27/16 07:56	20
4-Methyl-2-pentanone (MIBK)	13	U	200	13	ug/L			04/27/16 07:56	20
Acetone	**36000**		200	21	ug/L			04/27/16 07:56	20
Benzene	**81**		20	1.8	ug/L			04/27/16 07:56	20
Bromochloromethane	6.0	U	20	6.0	ug/L			04/27/16 07:56	20
Bromodichloromethane	3.0	U	20	3.0	ug/L			04/27/16 07:56	20
Bromoform	3.6	U	20	3.6	ug/L			04/27/16 07:56	20
Bromomethane	3.6	U	20	3.6	ug/L			04/27/16 07:56	20
Carbon disulfide	4.4	U	20	4.4	ug/L			04/27/16 07:56	20
Carbon tetrachloride	6.6	U	20	6.6	ug/L			04/27/16 07:56	20
Chlorobenzene	4.8	U	20	4.8	ug/L			04/27/16 07:56	20

Client Sample ID: RW-6D_20160413

Lab Sample ID: 460-112452-8

Date Collected: 04/13/16 13:30

Matrix: Water

Date Received: 04/15/16 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	7.4	U	20	7.4	ug/L			04/27/16 07:56	20
Chloroform	4.4	U	20	4.4	ug/L			04/27/16 07:56	20
Chloromethane	4.4	U	20	4.4	ug/L			04/27/16 07:56	20
Dibromochloromethane	4.4	U	20	4.4	ug/L			04/27/16 07:56	20
Ethylbenzene	6.0	U	20	6.0	ug/L			04/27/16 07:56	20
Isopropylbenzene	6.4	U	20	6.4	ug/L			04/27/16 07:56	20
Methylene Chloride	4.2	U	20	4.2	ug/L			04/27/16 07:56	20
m-Xylene & p-Xylene	5.6	U	200	5.6	ug/L			04/27/16 07:56	20
o-Xylene	6.4	U	20	6.4	ug/L			04/27/16 07:56	20
Styrene	3.4	U	20	3.4	ug/L			04/27/16 07:56	20
Tetrachloroethene	2.4	U	20	2.4	ug/L			04/27/16 07:56	20
Toluene	5.0	U	20	5.0	ug/L			04/27/16 07:56	20
Trichlorofluoromethane	3.0	U	20	3.0	ug/L			04/27/16 07:56	20
Vinyl chloride	**2700**		20	1.2	ug/L			04/27/16 07:56	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 137*		*04/27/16 07:56*	*20*
4-Bromofluorobenzene	*95*		*70 - 131*		*04/27/16 07:56*	*20*
Dibromofluoromethane (Surr)	*101*		*72 - 136*		*04/27/16 07:56*	*20*
Toluene-d8 (Surr)	*101*		*74 - 120*		*04/27/16 07:56*	*20*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, cis-	**19000**	**D**	200	52	ug/L			04/27/16 06:10	200
Trichloroethene	**21000**	**D**	200	44	ug/L			04/27/16 06:10	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*	*D*	*70 - 137*		*04/27/16 06:10*	*200*
4-Bromofluorobenzene	*97*	*D*	*70 - 131*		*04/27/16 06:10*	*200*
Dibromofluoromethane (Surr)	*101*	*D*	*72 - 136*		*04/27/16 06:10*	*200*
Toluene-d8 (Surr)	*101*	*D*	*74 - 120*		*04/27/16 06:10*	*200*

Client Sample ID: RW-3S_20160413

Lab Sample ID: 460-112452-9

Date Collected: 04/13/16 13:40

Matrix: Water

Date Received: 04/15/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/27/16 00:51	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/27/16 00:51	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/27/16 00:51	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/27/16 00:51	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/27/16 00:51	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			04/27/16 00:51	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/27/16 00:51	1
1,2-Dichloroethene, cis-	**1.7**		1.0	0.26	ug/L			04/27/16 00:51	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			04/27/16 00:51	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/27/16 00:51	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			04/27/16 00:51	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			04/27/16 00:51	1

Client Sample ID: RW-3S_20160413

Lab Sample ID: 460-112452-9

Date Collected: 04/13/16 13:40

Matrix: Water

Date Received: 04/15/16 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			04/27/16 00:51	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			04/27/16 00:51	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			04/27/16 00:51	1
2-Hexanone	0.72	U	10	0.72	ug/L			04/27/16 00:51	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			04/27/16 00:51	1
Acetone	1.1	U	10	1.1	ug/L			04/27/16 00:51	1
Benzene	**11**		1.0	0.090	ug/L			04/27/16 00:51	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			04/27/16 00:51	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/27/16 00:51	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/27/16 00:51	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/27/16 00:51	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/27/16 00:51	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/27/16 00:51	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/27/16 00:51	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/27/16 00:51	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/27/16 00:51	1
Chloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 00:51	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 00:51	1
Ethylbenzene	**11**		1.0	0.30	ug/L			04/27/16 00:51	1
Isopropylbenzene	**12**		1.0	0.32	ug/L			04/27/16 00:51	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/27/16 00:51	1
m-Xylene & p-Xylene	**23**		10	0.28	ug/L			04/27/16 00:51	1
o-Xylene	**1.3**		1.0	0.32	ug/L			04/27/16 00:51	1
Styrene	0.17	U	1.0	0.17	ug/L			04/27/16 00:51	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/27/16 00:51	1
Toluene	0.25	U	1.0	0.25	ug/L			04/27/16 00:51	1
Trichloroethene	**4.3**		1.0	0.22	ug/L			04/27/16 00:51	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			04/27/16 00:51	1
Vinyl chloride	**0.54**	**J**	1.0	0.060	ug/L			04/27/16 00:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 137*		*04/27/16 00:51*	*1*
4-Bromofluorobenzene	*97*		*70 - 131*		*04/27/16 00:51*	*1*
Dibromofluoromethane (Surr)	*100*		*72 - 136*		*04/27/16 00:51*	*1*
Toluene-d8 (Surr)	*98*		*74 - 120*		*04/27/16 00:51*	*1*

Client Sample ID: RW-1S_20160413

Lab Sample ID: 460-112452-10

Date Collected: 04/13/16 13:50

Matrix: Water

Date Received: 04/15/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/27/16 01:18	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/27/16 01:18	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/27/16 01:18	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/27/16 01:18	1
1,1-Dichloroethene	**1.5**		1.0	0.34	ug/L			04/27/16 01:18	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			04/27/16 01:18	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/27/16 01:18	1
1,2-Dichloroethene, cis-	**240**		1.0	0.26	ug/L			04/27/16 01:18	1

Client Sample ID: RW-1S_20160413

Lab Sample ID: 460-112452-10

Date Collected: 04/13/16 13:50

Matrix: Water

Date Received: 04/15/16 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, trans-	**2.3**		1.0	0.18	ug/L			04/27/16 01:18	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/27/16 01:18	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			04/27/16 01:18	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			04/27/16 01:18	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			04/27/16 01:18	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			04/27/16 01:18	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			04/27/16 01:18	1
2-Hexanone	0.72	U	10	0.72	ug/L			04/27/16 01:18	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			04/27/16 01:18	1
Acetone	1.1	U	10	1.1	ug/L			04/27/16 01:18	1
Benzene	0.090	U	1.0	0.090	ug/L			04/27/16 01:18	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			04/27/16 01:18	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/27/16 01:18	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/27/16 01:18	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/27/16 01:18	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/27/16 01:18	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/27/16 01:18	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/27/16 01:18	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/27/16 01:18	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/27/16 01:18	1
Chloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 01:18	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 01:18	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/27/16 01:18	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/27/16 01:18	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/27/16 01:18	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			04/27/16 01:18	1
o-Xylene	0.32	U	1.0	0.32	ug/L			04/27/16 01:18	1
Styrene	0.17	U	1.0	0.17	ug/L			04/27/16 01:18	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/27/16 01:18	1
Toluene	0.25	U	1.0	0.25	ug/L			04/27/16 01:18	1
Trichloroethene	**60**		1.0	0.22	ug/L			04/27/16 01:18	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			04/27/16 01:18	1
Vinyl chloride	**16**		1.0	0.060	ug/L			04/27/16 01:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 137*		*04/27/16 01:18*	*1*
4-Bromofluorobenzene	*96*		*70 - 131*		*04/27/16 01:18*	*1*
Dibromofluoromethane (Surr)	*104*		*72 - 136*		*04/27/16 01:18*	*1*
Toluene-d8 (Surr)	*100*		*74 - 120*		*04/27/16 01:18*	*1*

Client Sample ID: RW-2D_20160413

Lab Sample ID: 460-112452-11

Date Collected: 04/13/16 14:00

Matrix: Water

Date Received: 04/15/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.56	U	2.0	0.56	ug/L			04/27/16 08:23	2
1,1,2,2-Tetrachloroethane	0.38	U	2.0	0.38	ug/L			04/27/16 08:23	2
1,1,2-Trichloroethane	0.16	U	2.0	0.16	ug/L			04/27/16 08:23	2
1,1-Dichloroethane	0.48	U	2.0	0.48	ug/L			04/27/16 08:23	2

Client Sample ID: RW-2D_20160413
Date Collected: 04/13/16 14:00
Date Received: 04/15/16 10:00

Lab Sample ID: 460-112452-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	**14**		2.0	0.68	ug/L			04/27/16 08:23	2
1,2-Dichlorobenzene	0.44	U	2.0	0.44	ug/L			04/27/16 08:23	2
1,2-Dichloroethane	0.50	U	2.0	0.50	ug/L			04/27/16 08:23	2
1,2-Dichloroethene, trans-	**35**		2.0	0.36	ug/L			04/27/16 08:23	2
1,2-Dichloropropane	0.36	U	2.0	0.36	ug/L			04/27/16 08:23	2
1,3-Dichlorobenzene	0.66	U	10	0.66	ug/L			04/27/16 08:23	2
1,3-Dichloropropene, cis-	0.32	U	2.0	0.32	ug/L			04/27/16 08:23	2
1,3-Dichloropropene, trans-	0.38	U	2.0	0.38	ug/L			04/27/16 08:23	2
1,4-Dichlorobenzene	0.66	U	2.0	0.66	ug/L			04/27/16 08:23	2
2-Butanone (MEK)	4.4	U	20	4.4	ug/L			04/27/16 08:23	2
2-Hexanone	1.4	U	20	1.4	ug/L			04/27/16 08:23	2
4-Methyl-2-pentanone (MIBK)	1.3	U	20	1.3	ug/L			04/27/16 08:23	2
Acetone	**78**		20	2.1	ug/L			04/27/16 08:23	2
Benzene	**7.3**		2.0	0.18	ug/L			04/27/16 08:23	2
Bromochloromethane	0.60	U	2.0	0.60	ug/L			04/27/16 08:23	2
Bromodichloromethane	0.30	U	2.0	0.30	ug/L			04/27/16 08:23	2
Bromoform	0.36	U	2.0	0.36	ug/L			04/27/16 08:23	2
Bromomethane	0.36	U	2.0	0.36	ug/L			04/27/16 08:23	2
Carbon disulfide	0.44	U	2.0	0.44	ug/L			04/27/16 08:23	2
Carbon tetrachloride	0.66	U	2.0	0.66	ug/L			04/27/16 08:23	2
Chlorobenzene	0.48	U	2.0	0.48	ug/L			04/27/16 08:23	2
Chloroethane	0.74	U	2.0	0.74	ug/L			04/27/16 08:23	2
Chloroform	0.44	U	2.0	0.44	ug/L			04/27/16 08:23	2
Chloromethane	0.44	U	2.0	0.44	ug/L			04/27/16 08:23	2
Dibromochloromethane	0.44	U	2.0	0.44	ug/L			04/27/16 08:23	2
Ethylbenzene	0.60	U	2.0	0.60	ug/L			04/27/16 08:23	2
Isopropylbenzene	0.64	U	2.0	0.64	ug/L			04/27/16 08:23	2
Methylene Chloride	0.42	U	2.0	0.42	ug/L			04/27/16 08:23	2
m-Xylene & p-Xylene	0.56	U	20	0.56	ug/L			04/27/16 08:23	2
o-Xylene	0.64	U	2.0	0.64	ug/L			04/27/16 08:23	2
Styrene	0.34	U	2.0	0.34	ug/L			04/27/16 08:23	2
Tetrachloroethene	0.24	U	2.0	0.24	ug/L			04/27/16 08:23	2
Toluene	**0.66**	**J**	2.0	0.50	ug/L			04/27/16 08:23	2
Trichlorofluoromethane	0.30	U	2.0	0.30	ug/L			04/27/16 08:23	2
Vinyl chloride	**370**		2.0	0.12	ug/L			04/27/16 08:23	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 137*		*04/27/16 08:23*	*2*
4-Bromofluorobenzene	*97*		*70 - 131*		*04/27/16 08:23*	*2*
Dibromofluoromethane (Surr)	*104*		*72 - 136*		*04/27/16 08:23*	*2*
Toluene-d8 (Surr)	*104*		*74 - 120*		*04/27/16 08:23*	*2*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, cis-	**2400**	**D**	25	6.5	ug/L			04/27/16 06:36	25
Trichloroethene	**1900**	**D**	25	5.5	ug/L			04/27/16 06:36	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*	*D*	*70 - 137*		*04/27/16 06:36*	*25*
4-Bromofluorobenzene	*98*	*D*	*70 - 131*		*04/27/16 06:36*	*25*

Client Sample ID: RW-2D_20160413

Lab Sample ID: 460-112452-11

Date Collected: 04/13/16 14:00

Matrix: Water

Date Received: 04/15/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS - DL (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	*102*	*D*	*72 - 136*		*04/27/16 06:36*	*25*
Toluene-d8 (Surr)	*100*	*D*	*74 - 120*		*04/27/16 06:36*	*25*

Client Sample ID: RW-2S_20160413

Lab Sample ID: 460-112452-12

Date Collected: 04/13/16 14:10

Matrix: Water

Date Received: 04/15/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/27/16 00:24	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/27/16 00:24	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/27/16 00:24	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/27/16 00:24	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/27/16 00:24	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			04/27/16 00:24	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/27/16 00:24	1
1,2-Dichloroethene, cis-	**5.3**		1.0	0.26	ug/L			04/27/16 00:24	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			04/27/16 00:24	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/27/16 00:24	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			04/27/16 00:24	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			04/27/16 00:24	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			04/27/16 00:24	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			04/27/16 00:24	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			04/27/16 00:24	1
2-Hexanone	0.72	U	10	0.72	ug/L			04/27/16 00:24	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			04/27/16 00:24	1
Acetone	1.1	U	10	1.1	ug/L			04/27/16 00:24	1
Benzene	0.090	U	1.0	0.090	ug/L			04/27/16 00:24	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			04/27/16 00:24	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/27/16 00:24	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/27/16 00:24	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/27/16 00:24	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/27/16 00:24	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/27/16 00:24	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/27/16 00:24	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/27/16 00:24	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/27/16 00:24	1
Chloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 00:24	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 00:24	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/27/16 00:24	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/27/16 00:24	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/27/16 00:24	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			04/27/16 00:24	1
o-Xylene	0.32	U	1.0	0.32	ug/L			04/27/16 00:24	1
Styrene	0.17	U	1.0	0.17	ug/L			04/27/16 00:24	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/27/16 00:24	1
Toluene	0.25	U	1.0	0.25	ug/L			04/27/16 00:24	1
Trichloroethene	**4.4**		1.0	0.22	ug/L			04/27/16 00:24	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			04/27/16 00:24	1

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-112452-1

Client Sample ID: RW-2S_20160413

Lab Sample ID: 460-112452-12

Date Collected: 04/13/16 14:10

Matrix: Water

Date Received: 04/15/16 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.35	J	1.0	0.060	ug/L			04/27/16 00:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 137*		*04/27/16 00:24*	*1*
4-Bromofluorobenzene	*93*		*70 - 131*		*04/27/16 00:24*	*1*
Dibromofluoromethane (Surr)	*99*		*72 - 136*		*04/27/16 00:24*	*1*
Toluene-d8 (Surr)	*98*		*74 - 120*		*04/27/16 00:24*	*1*

Client Sample ID: TRIP BLANK_20160413

Lab Sample ID: 460-112452-13

Date Collected: 04/13/16 00:00

Matrix: Water

Date Received: 04/15/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/26/16 23:58	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/26/16 23:58	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/26/16 23:58	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/26/16 23:58	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/26/16 23:58	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			04/26/16 23:58	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/26/16 23:58	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			04/26/16 23:58	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			04/26/16 23:58	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/26/16 23:58	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			04/26/16 23:58	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			04/26/16 23:58	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			04/26/16 23:58	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			04/26/16 23:58	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			04/26/16 23:58	1
2-Hexanone	0.72	U	10	0.72	ug/L			04/26/16 23:58	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			04/26/16 23:58	1
Acetone	1.1	U	10	1.1	ug/L			04/26/16 23:58	1
Benzene	0.090	U	1.0	0.090	ug/L			04/26/16 23:58	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			04/26/16 23:58	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/26/16 23:58	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/26/16 23:58	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/26/16 23:58	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/26/16 23:58	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/26/16 23:58	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/26/16 23:58	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/26/16 23:58	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/26/16 23:58	1
Chloromethane	0.22	U	1.0	0.22	ug/L			04/26/16 23:58	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/26/16 23:58	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/26/16 23:58	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/26/16 23:58	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/26/16 23:58	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			04/26/16 23:58	1
o-Xylene	0.32	U	1.0	0.32	ug/L			04/26/16 23:58	1
Styrene	0.17	U	1.0	0.17	ug/L			04/26/16 23:58	1

Client Sample ID: TRIP BLANK_20160413
Date Collected: 04/13/16 00:00
Date Received: 04/15/16 10:00

Lab Sample ID: 460-112452-13
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/26/16 23:58	1
Toluene	0.25	U	1.0	0.25	ug/L			04/26/16 23:58	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/26/16 23:58	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			04/26/16 23:58	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/26/16 23:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 137*		*04/26/16 23:58*	*1*
4-Bromofluorobenzene	*94*		*70 - 131*		*04/26/16 23:58*	*1*
Dibromofluoromethane (Surr)	*100*		*72 - 136*		*04/26/16 23:58*	*1*
Toluene-d8 (Surr)	*98*		*74 - 120*		*04/26/16 23:58*	*1*

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-112452-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (70-137)	BFB (70-131)	DBFM (72-136)	TOL (74-120)
460-112452-1 - DL	Pre-Carb_20160413	108 D	93 D	100 D	97 D
460-112452-1	Pre-Carb_20160413	103	94	99	99
460-112452-2 - DL	Primary-Eff_20160413	106 D	94 D	96 D	98 D
460-112452-2	Primary-Eff_20160413	110	94	104	98
460-112452-7	POST-CARB-COMPOSITE_20160413	108	97	102	103
460-112452-7 - DL	POST-CARB-COMPOSITE_20160413	97 D	86 D	92 D	92 D
460-112452-7 MS	POST-CARB-COMPOSITE_20160413	108	95	99	100
460-112452-7 MSD	POST-CARB-COMPOSITE_20160413	106	93	100	98
460-112452-8 - DL	RW-6D_20160413	108 D	97 D	101 D	101 D
460-112452-8	RW-6D_20160413	112	95	101	101
460-112452-9	RW-3S_20160413	108	97	100	98
460-112452-10	RW-1S_20160413	107	96	104	100
460-112452-11 - DL	RW-2D_20160413	109 D	98 D	102 D	100 D
460-112452-11	RW-2D_20160413	109	97	104	104
460-112452-12	RW-2S_20160413	105	93	99	98
460-112452-13	TRIP BLANK_20160413	108	94	100	98
LCS 460-364845/3	Lab Control Sample	108	94	101	101
LCS 460-364917/4	Lab Control Sample	109	96	103	99
LCSD 460-364845/4	Lab Control Sample Dup	110	98	104	101
MB 460-364845/6	Method Blank	109	93	102	98
MB 460-364917/7	Method Blank	106	96	99	100

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 460-364845/6
Matrix: Water
Analysis Batch: 364845

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/26/16 23:31	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/26/16 23:31	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/26/16 23:31	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/26/16 23:31	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/26/16 23:31	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			04/26/16 23:31	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/26/16 23:31	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			04/26/16 23:31	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			04/26/16 23:31	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/26/16 23:31	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			04/26/16 23:31	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			04/26/16 23:31	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			04/26/16 23:31	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			04/26/16 23:31	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			04/26/16 23:31	1
2-Hexanone	0.72	U	10	0.72	ug/L			04/26/16 23:31	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			04/26/16 23:31	1
Acetone	1.1	U	10	1.1	ug/L			04/26/16 23:31	1
Benzene	0.090	U	1.0	0.090	ug/L			04/26/16 23:31	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			04/26/16 23:31	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/26/16 23:31	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/26/16 23:31	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/26/16 23:31	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/26/16 23:31	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/26/16 23:31	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/26/16 23:31	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/26/16 23:31	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/26/16 23:31	1
Chloromethane	0.22	U	1.0	0.22	ug/L			04/26/16 23:31	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/26/16 23:31	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/26/16 23:31	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/26/16 23:31	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/26/16 23:31	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			04/26/16 23:31	1
o-Xylene	0.32	U	1.0	0.32	ug/L			04/26/16 23:31	1
Styrene	0.17	U	1.0	0.17	ug/L			04/26/16 23:31	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/26/16 23:31	1
Toluene	0.25	U	1.0	0.25	ug/L			04/26/16 23:31	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/26/16 23:31	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			04/26/16 23:31	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/26/16 23:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 137*		*04/26/16 23:31*	*1*
4-Bromofluorobenzene	*93*		*70 - 131*		*04/26/16 23:31*	*1*
Dibromofluoromethane (Surr)	*102*		*72 - 136*		*04/26/16 23:31*	*1*
Toluene-d8 (Surr)	*98*		*74 - 120*		*04/26/16 23:31*	*1*

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

Lab Sample ID: LCS 460-364845/3
Matrix: Water
Analysis Batch: 364845

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	22.1		ug/L		111	76 - 131
1,1,2,2-Tetrachloroethane	20.0	20.8		ug/L		104	65 - 128
1,1,2-Trichloroethane	20.0	20.4		ug/L		102	77 - 122
1,1-Dichloroethane	20.0	21.8		ug/L		109	77 - 129
1,1-Dichloroethene	20.0	21.6		ug/L		108	67 - 133
1,2-Dichlorobenzene	20.0	21.3		ug/L		107	80 - 121
1,2-Dichloroethane	20.0	22.1		ug/L		110	73 - 131
1,2-Dichloroethene, cis-	20.0	19.5		ug/L		98	82 - 127
1,2-Dichloroethene, trans-	20.0	20.4		ug/L		102	78 - 127
1,2-Dichloropropane	20.0	21.6		ug/L		108	75 - 129
1,3-Dichlorobenzene	20.0	21.2		ug/L		106	80 - 120
1,3-Dichloropropene, cis-	20.0	21.0		ug/L		105	72 - 125
1,3-Dichloropropene, trans-	20.0	21.7		ug/L		108	69 - 125
1,4-Dichlorobenzene	20.0	21.0		ug/L		105	79 - 120
2-Butanone (MEK)	100	94.9		ug/L		95	56 - 150
2-Hexanone	100	93.2		ug/L		93	64 - 150
4-Methyl-2-pentanone (MIBK)	100	110		ug/L		110	77 - 130
Acetone	100	99.5		ug/L		99	19 - 150
Benzene	20.0	22.1		ug/L		111	76 - 125
Bromochloromethane	20.0	20.3		ug/L		102	71 - 137
Bromodichloromethane	20.0	21.3		ug/L		106	78 - 127
Bromoform	20.0	19.2		ug/L		96	65 - 124
Bromomethane	20.0	18.6		ug/L		93	10 - 150
Carbon disulfide	20.0	23.0		ug/L		115	69 - 131
Carbon tetrachloride	20.0	23.1		ug/L		115	71 - 138
Chlorobenzene	20.0	21.0		ug/L		105	80 - 120
Chloroethane	20.0	19.4		ug/L		97	40 - 150
Chloroform	20.0	21.0		ug/L		105	81 - 127
Chloromethane	20.0	21.1		ug/L		105	45 - 150
Dibromochloromethane	20.0	20.4		ug/L		102	78 - 120
Ethylbenzene	20.0	20.2		ug/L		101	80 - 120
Isopropylbenzene	20.0	22.9		ug/L		115	80 - 127
Methylene Chloride	20.0	20.7		ug/L		103	80 - 126
m-Xylene & p-Xylene	20.0	20.8		ug/L		104	80 - 121
o-Xylene	20.0	20.5		ug/L		102	80 - 120
Styrene	20.0	21.9		ug/L		109	75 - 124
Tetrachloroethene	20.0	21.2		ug/L		106	71 - 132
Toluene	20.0	21.9		ug/L		109	80 - 120
Trichloroethene	20.0	21.3		ug/L		106	77 - 127
Trichlorofluoromethane	20.0	22.7		ug/L		113	50 - 150
Vinyl chloride	20.0	21.0		ug/L		105	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 137*
4-Bromofluorobenzene	*94*		*70 - 131*
Dibromofluoromethane (Surr)	*101*		*72 - 136*
Toluene-d8 (Surr)	*101*		*74 - 120*

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

Lab Sample ID: LCSD 460-364845/4
Matrix: Water
Analysis Batch: 364845

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			20.0	21.4		ug/L		107	76 - 131	3	30
1,1,2,2-Tetrachloroethane			20.0	20.3		ug/L		101	65 - 128	3	30
1,1,2-Trichloroethane			20.0	20.1		ug/L		101	77 - 122	1	30
1,1-Dichloroethane			20.0	21.0		ug/L		105	77 - 129	4	30
1,1-Dichloroethene			20.0	21.7		ug/L		108	67 - 133	0	30
1,2-Dichlorobenzene			20.0	20.3		ug/L		102	80 - 121	5	30
1,2-Dichloroethane			20.0	21.6		ug/L		108	73 - 131	2	30
1,2-Dichloroethene, cis-			20.0	19.1		ug/L		95	82 - 127	2	30
1,2-Dichloroethene, trans-			20.0	20.1		ug/L		100	78 - 127	1	30
1,2-Dichloropropane			20.0	20.6		ug/L		103	75 - 129	5	30
1,3-Dichlorobenzene			20.0	20.6		ug/L		103	80 - 120	3	30
1,3-Dichloropropene, cis-			20.0	21.4		ug/L		107	72 - 125	2	30
1,3-Dichloropropene, trans-			20.0	21.5		ug/L		108	69 - 125	1	30
1,4-Dichlorobenzene			20.0	20.1		ug/L		101	79 - 120	4	30
2-Butanone (MEK)			100	94.5		ug/L		95	56 - 150	0	30
2-Hexanone			100	95.6		ug/L		96	64 - 150	3	30
4-Methyl-2-pentanone (MIBK)			100	111		ug/L		111	77 - 130	1	30
Acetone			100	93.7		ug/L		94	19 - 150	6	30
Benzene			20.0	21.6		ug/L		108	76 - 125	2	30
Bromochloromethane			20.0	19.6		ug/L		98	71 - 137	3	30
Bromodichloromethane			20.0	20.9		ug/L		105	78 - 127	2	30
Bromoform			20.0	19.2		ug/L		96	65 - 124	0	30
Bromomethane			20.0	19.4		ug/L		97	10 - 150	4	30
Carbon disulfide			20.0	21.8		ug/L		109	69 - 131	5	30
Carbon tetrachloride			20.0	22.6		ug/L		113	71 - 138	2	30
Chlorobenzene			20.0	20.5		ug/L		103	80 - 120	2	30
Chloroethane			20.0	19.4		ug/L		97	40 - 150	0	30
Chloroform			20.0	21.9		ug/L		109	81 - 127	4	30
Chloromethane			20.0	20.6		ug/L		103	45 - 150	2	30
Dibromochloromethane			20.0	20.4		ug/L		102	78 - 120	0	30
Ethylbenzene			20.0	19.7		ug/L		98	80 - 120	3	30
Isopropylbenzene			20.0	22.2		ug/L		111	80 - 127	3	30
Methylene Chloride			20.0	20.6		ug/L		103	80 - 126	1	30
m-Xylene & p-Xylene			20.0	20.4		ug/L		102	80 - 121	2	30
o-Xylene			20.0	20.0		ug/L		100	80 - 120	3	30
Styrene			20.0	20.8		ug/L		104	75 - 124	5	30
Tetrachloroethene			20.0	20.4		ug/L		102	71 - 132	4	30
Toluene			20.0	20.6		ug/L		103	80 - 120	6	30
Trichloroethene			20.0	21.4		ug/L		107	77 - 127	0	30
Trichlorofluoromethane			20.0	21.5		ug/L		108	50 - 150	5	30
Vinyl chloride			20.0	21.1		ug/L		106	53 - 142	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 137*
4-Bromofluorobenzene	*98*		*70 - 131*
Dibromofluoromethane (Surr)	*104*		*72 - 136*
Toluene-d8 (Surr)	*101*		*74 - 120*

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

Lab Sample ID: MB 460-364917/7
Matrix: Water
Analysis Batch: 364917

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/27/16 13:29	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/27/16 13:29	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/27/16 13:29	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/27/16 13:29	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/27/16 13:29	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			04/27/16 13:29	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/27/16 13:29	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			04/27/16 13:29	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			04/27/16 13:29	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/27/16 13:29	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			04/27/16 13:29	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			04/27/16 13:29	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			04/27/16 13:29	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			04/27/16 13:29	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			04/27/16 13:29	1
2-Hexanone	0.72	U	10	0.72	ug/L			04/27/16 13:29	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			04/27/16 13:29	1
Acetone	1.1	U	10	1.1	ug/L			04/27/16 13:29	1
Benzene	0.090	U	1.0	0.090	ug/L			04/27/16 13:29	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			04/27/16 13:29	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/27/16 13:29	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/27/16 13:29	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/27/16 13:29	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/27/16 13:29	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/27/16 13:29	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/27/16 13:29	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/27/16 13:29	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/27/16 13:29	1
Chloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 13:29	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/27/16 13:29	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/27/16 13:29	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/27/16 13:29	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/27/16 13:29	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			04/27/16 13:29	1
o-Xylene	0.32	U	1.0	0.32	ug/L			04/27/16 13:29	1
Styrene	0.17	U	1.0	0.17	ug/L			04/27/16 13:29	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/27/16 13:29	1
Toluene	0.25	U	1.0	0.25	ug/L			04/27/16 13:29	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/27/16 13:29	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			04/27/16 13:29	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/27/16 13:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 137*		*04/27/16 13:29*	*1*
4-Bromofluorobenzene	*96*		*70 - 131*		*04/27/16 13:29*	*1*
Dibromofluoromethane (Surr)	*99*		*72 - 136*		*04/27/16 13:29*	*1*
Toluene-d8 (Surr)	*100*		*74 - 120*		*04/27/16 13:29*	*1*

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

Lab Sample ID: LCS 460-364917/4
Matrix: Water
Analysis Batch: 364917

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	20.5		ug/L		102	76 - 131
1,1,2,2-Tetrachloroethane	20.0	19.2		ug/L		96	65 - 128
1,1,2-Trichloroethane	20.0	19.0		ug/L		95	77 - 122
1,1-Dichloroethane	20.0	20.9		ug/L		105	77 - 129
1,1-Dichloroethene	20.0	20.8		ug/L		104	67 - 133
1,2-Dichlorobenzene	20.0	20.2		ug/L		101	80 - 121
1,2-Dichloroethane	20.0	21.0		ug/L		105	73 - 131
1,2-Dichloroethene, cis-	20.0	19.2		ug/L		96	82 - 127
1,2-Dichloroethene, trans-	20.0	18.8		ug/L		94	78 - 127
1,2-Dichloropropane	20.0	20.9		ug/L		105	75 - 129
1,3-Dichlorobenzene	20.0	19.8		ug/L		99	80 - 120
1,3-Dichloropropene, cis-	20.0	20.3		ug/L		102	72 - 125
1,3-Dichloropropene, trans-	20.0	20.3		ug/L		102	69 - 125
1,4-Dichlorobenzene	20.0	19.8		ug/L		99	79 - 120
2-Butanone (MEK)	100	84.1		ug/L		84	56 - 150
2-Hexanone	100	89.6		ug/L		90	64 - 150
4-Methyl-2-pentanone (MIBK)	100	104		ug/L		104	77 - 130
Acetone	100	93.4		ug/L		93	19 - 150
Benzene	20.0	21.3		ug/L		106	76 - 125
Bromochloromethane	20.0	20.0		ug/L		100	71 - 137
Bromodichloromethane	20.0	20.6		ug/L		103	78 - 127
Bromoform	20.0	17.3		ug/L		87	65 - 124
Bromomethane	20.0	18.2		ug/L		91	10 - 150
Carbon disulfide	20.0	20.7		ug/L		104	69 - 131
Carbon tetrachloride	20.0	20.0		ug/L		100	71 - 138
Chlorobenzene	20.0	19.8		ug/L		99	80 - 120
Chloroethane	20.0	20.9		ug/L		104	40 - 150
Chloroform	20.0	20.4		ug/L		102	81 - 127
Chloromethane	20.0	21.7		ug/L		109	45 - 150
Dibromochloromethane	20.0	19.0		ug/L		95	78 - 120
Ethylbenzene	20.0	19.1		ug/L		96	80 - 120
Isopropylbenzene	20.0	21.6		ug/L		108	80 - 127
Methylene Chloride	20.0	20.0		ug/L		100	80 - 126
m-Xylene & p-Xylene	20.0	19.5		ug/L		97	80 - 121
o-Xylene	20.0	19.8		ug/L		99	80 - 120
Styrene	20.0	20.9		ug/L		104	75 - 124
Tetrachloroethene	20.0	19.1		ug/L		96	71 - 132
Toluene	20.0	19.9		ug/L		100	80 - 120
Trichloroethene	20.0	21.3		ug/L		106	77 - 127
Trichlorofluoromethane	20.0	20.9		ug/L		104	50 - 150
Vinyl chloride	20.0	21.7		ug/L		109	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 137*
4-Bromofluorobenzene	*96*		*70 - 131*
Dibromofluoromethane (Surr)	*103*		*72 - 136*
Toluene-d8 (Surr)	*99*		*74 - 120*

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

Lab Sample ID: 460-112452-7 MS
Matrix: Water
Analysis Batch: 364917

Client Sample ID: POST-CARB-COMPOSITE_20160413
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.28	U	20.0	21.4		ug/L		107	76 - 131
1,1,2,2-Tetrachloroethane	0.19	U	20.0	20.0		ug/L		100	65 - 128
1,1,2-Trichloroethane	0.080	U	20.0	20.3		ug/L		102	77 - 122
1,1-Dichloroethane	0.24	U	20.0	21.7		ug/L		109	77 - 129
1,1-Dichloroethene	0.34	U	20.0	21.9		ug/L		109	67 - 133
1,2-Dichlorobenzene	0.22	U	20.0	20.2		ug/L		101	80 - 121
1,2-Dichloroethane	0.25	U	20.0	21.4		ug/L		107	73 - 131
1,2-Dichloroethene, cis-	0.97	J	20.0	21.0		ug/L		100	82 - 127
1,2-Dichloroethene, trans-	0.18	U	20.0	21.3		ug/L		106	78 - 127
1,2-Dichloropropane	0.18	U	20.0	21.0		ug/L		105	75 - 129
1,3-Dichlorobenzene	0.33	U	20.0	19.6		ug/L		98	80 - 120
1,3-Dichloropropene, cis-	0.16	U	20.0	20.8		ug/L		104	72 - 125
1,3-Dichloropropene, trans-	0.19	U	20.0	21.2		ug/L		106	69 - 125
1,4-Dichlorobenzene	0.33	U	20.0	20.4		ug/L		102	79 - 120
2-Butanone (MEK)	2.2	U	100	84.6		ug/L		85	56 - 150
2-Hexanone	0.72	U	100	89.2		ug/L		89	64 - 150
4-Methyl-2-pentanone (MIBK)	0.63	U	100	109		ug/L		109	77 - 130
Acetone	1100		100	1120	4	ug/L		52	19 - 150
Benzene	0.090	U	20.0	22.8		ug/L		114	76 - 125
Bromochloromethane	0.30	U	20.0	19.6		ug/L		98	71 - 137
Bromodichloromethane	0.15	U	20.0	21.6		ug/L		108	78 - 127
Bromoform	0.18	U	20.0	18.5		ug/L		93	65 - 124
Bromomethane	0.18	U	20.0	15.9		ug/L		79	10 - 150
Carbon disulfide	0.22	U	20.0	22.6		ug/L		113	69 - 131
Carbon tetrachloride	0.33	U	20.0	22.4		ug/L		112	71 - 138
Chlorobenzene	0.24	U	20.0	20.9		ug/L		104	80 - 120
Chloroethane	0.37	U	20.0	20.5		ug/L		102	40 - 150
Chloroform	0.22	U	20.0	21.7		ug/L		109	81 - 127
Chloromethane	0.22	U	20.0	20.9		ug/L		105	45 - 150
Dibromochloromethane	0.22	U	20.0	21.0		ug/L		105	78 - 120
Ethylbenzene	0.30	U	20.0	20.8		ug/L		104	80 - 120
Isopropylbenzene	0.32	U	20.0	22.9		ug/L		115	80 - 127
Methylene Chloride	0.21	U	20.0	20.5		ug/L		103	80 - 126
m-Xylene & p-Xylene	0.28	U	20.0	21.5		ug/L		108	80 - 121
o-Xylene	0.32	U	20.0	20.4		ug/L		102	80 - 120
Styrene	0.17	U	20.0	21.3		ug/L		107	75 - 124
Tetrachloroethene	0.12	U	20.0	21.1		ug/L		105	71 - 132
Toluene	0.25	U	20.0	21.8		ug/L		109	80 - 120
Trichloroethene	0.48	J	20.0	21.5		ug/L		105	77 - 127
Trichlorofluoromethane	0.15	U	20.0	22.1		ug/L		110	50 - 150
Vinyl chloride	520	E	20.0	474	4	ug/L		-234	53 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 137*
4-Bromofluorobenzene	*95*		*70 - 131*
Dibromofluoromethane (Surr)	*99*		*72 - 136*
Toluene-d8 (Surr)	*100*		*74 - 120*

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

Lab Sample ID: 460-112452-7 MSD
Matrix: Water
Analysis Batch: 364917

Client Sample ID: POST-CARB-COMPOSITE_20160413
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.28	U	20.0	19.7		ug/L		98	76 - 131	9	30
1,1,2,2-Tetrachloroethane	0.19	U	20.0	18.8		ug/L		94	65 - 128	6	30
1,1,2-Trichloroethane	0.080	U	20.0	18.8		ug/L		94	77 - 122	8	30
1,1-Dichloroethane	0.24	U	20.0	19.1		ug/L		96	77 - 129	13	30
1,1-Dichloroethene	0.34	U	20.0	18.9		ug/L		95	67 - 133	15	30
1,2-Dichlorobenzene	0.22	U	20.0	18.8		ug/L		94	80 - 121	7	30
1,2-Dichloroethane	0.25	U	20.0	19.5		ug/L		98	73 - 131	9	30
1,2-Dichloroethene, cis-	0.97	J	20.0	19.1		ug/L		91	82 - 127	9	30
1,2-Dichloroethene, trans-	0.18	U	20.0	18.6		ug/L		93	78 - 127	13	30
1,2-Dichloropropane	0.18	U	20.0	19.7		ug/L		98	75 - 129	6	30
1,3-Dichlorobenzene	0.33	U	20.0	18.7		ug/L		94	80 - 120	5	30
1,3-Dichloropropene, cis-	0.16	U	20.0	18.8		ug/L		94	72 - 125	10	30
1,3-Dichloropropene, trans-	0.19	U	20.0	19.4		ug/L		97	69 - 125	9	30
1,4-Dichlorobenzene	0.33	U	20.0	18.5		ug/L		92	79 - 120	10	30
2-Butanone (MEK)	2.2	U	100	85.9		ug/L		86	56 - 150	2	30
2-Hexanone	0.72	U	100	83.0		ug/L		83	64 - 150	7	30
4-Methyl-2-pentanone (MIBK)	0.63	U	100	99.0		ug/L		99	77 - 130	9	30
Acetone	1100		100	1130	4	ug/L		64	19 - 150	1	30
Benzene	0.090	U	20.0	20.0		ug/L		100	76 - 125	13	30
Bromochloromethane	0.30	U	20.0	18.2		ug/L		91	71 - 137	7	30
Bromodichloromethane	0.15	U	20.0	19.4		ug/L		97	78 - 127	11	30
Bromoform	0.18	U	20.0	17.0		ug/L		85	65 - 124	9	30
Bromomethane	0.18	U	20.0	14.5		ug/L		73	10 - 150	9	30
Carbon disulfide	0.22	U	20.0	20.0		ug/L		100	69 - 131	12	30
Carbon tetrachloride	0.33	U	20.0	20.5		ug/L		103	71 - 138	9	30
Chlorobenzene	0.24	U	20.0	19.4		ug/L		97	80 - 120	7	30
Chloroethane	0.37	U	20.0	19.8		ug/L		99	40 - 150	3	30
Chloroform	0.22	U	20.0	19.5		ug/L		98	81 - 127	11	30
Chloromethane	0.22	U	20.0	19.1		ug/L		96	45 - 150	9	30
Dibromochloromethane	0.22	U	20.0	18.4		ug/L		92	78 - 120	13	30
Ethylbenzene	0.30	U	20.0	18.4		ug/L		92	80 - 120	13	30
Isopropylbenzene	0.32	U	20.0	20.7		ug/L		104	80 - 127	10	30
Methylene Chloride	0.21	U	20.0	19.5		ug/L		97	80 - 126	5	30
m-Xylene & p-Xylene	0.28	U	20.0	19.1		ug/L		95	80 - 121	12	30
o-Xylene	0.32	U	20.0	18.6		ug/L		93	80 - 120	9	30
Styrene	0.17	U	20.0	19.6		ug/L		98	75 - 124	9	30
Tetrachloroethene	0.12	U	20.0	18.3		ug/L		92	71 - 132	14	30
Toluene	0.25	U	20.0	19.5		ug/L		98	80 - 120	11	30
Trichloroethene	0.48	J	20.0	20.6		ug/L		101	77 - 127	4	30
Trichlorofluoromethane	0.15	U	20.0	20.7		ug/L		103	50 - 150	7	30
Vinyl chloride	520	E	20.0	454	4	ug/L		-334	53 - 142	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 137*
4-Bromofluorobenzene	*93*		*70 - 131*
Dibromofluoromethane (Surr)	*100*		*72 - 136*
Toluene-d8 (Surr)	*98*		*74 - 120*

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-112452-1

GC/MS VOA

Analysis Batch: 364845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-112452-1 - DL	Pre-Carb_20160413	Total/NA	Water	8260C	
460-112452-1	Pre-Carb_20160413	Total/NA	Water	8260C	
460-112452-2 - DL	Primary-Eff_20160413	Total/NA	Water	8260C	
460-112452-2	Primary-Eff_20160413	Total/NA	Water	8260C	
460-112452-7	POST-CARB-COMPOSITE_20160413	Total/NA	Water	8260C	
460-112452-8 - DL	RW-6D_20160413	Total/NA	Water	8260C	
460-112452-8	RW-6D_20160413	Total/NA	Water	8260C	
460-112452-9	RW-3S_20160413	Total/NA	Water	8260C	
460-112452-10	RW-1S_20160413	Total/NA	Water	8260C	
460-112452-11 - DL	RW-2D_20160413	Total/NA	Water	8260C	
460-112452-11	RW-2D_20160413	Total/NA	Water	8260C	
460-112452-12	RW-2S_20160413	Total/NA	Water	8260C	
460-112452-13	TRIP BLANK_20160413	Total/NA	Water	8260C	
LCS 460-364845/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 460-364845/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 460-364845/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 364917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-112452-7 - DL	POST-CARB-COMPOSITE_20160413	Total/NA	Water	8260C	
460-112452-7 MS	POST-CARB-COMPOSITE_20160413	Total/NA	Water	8260C	
460-112452-7 MSD	POST-CARB-COMPOSITE_20160413	Total/NA	Water	8260C	
LCS 460-364917/4	Lab Control Sample	Total/NA	Water	8260C	
MB 460-364917/7	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-112452-1

Client Sample ID: Pre-Carb_20160413
Lab Sample ID: 460-112452-1
Date Collected: 04/13/16 14:20
Matrix: Water
Date Received: 04/15/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	10	364845	04/27/16 05:43	DAN	TAL EDI
Total/NA	Analysis	8260C		1	364845	04/27/16 07:30	DAN	TAL EDI

Client Sample ID: Primary-Eff_20160413
Lab Sample ID: 460-112452-2
Date Collected: 04/13/16 14:25
Matrix: Water
Date Received: 04/15/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	5	364845	04/27/16 05:17	DAN	TAL EDI
Total/NA	Analysis	8260C		1	364845	04/27/16 07:03	DAN	TAL EDI

Client Sample ID: POST-CARB-COMPOSITE_20160413
Lab Sample ID: 460-112452-7
Date Collected: 04/13/16 14:20
Matrix: Water
Date Received: 04/15/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	364845	04/27/16 01:44	DAN	TAL EDI
Total/NA	Analysis	8260C	DL	2	364917	04/27/16 15:15	DAN	TAL EDI

Client Sample ID: RW-6D_20160413
Lab Sample ID: 460-112452-8
Date Collected: 04/13/16 13:30
Matrix: Water
Date Received: 04/15/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	200	364845	04/27/16 06:10	DAN	TAL EDI
Total/NA	Analysis	8260C		20	364845	04/27/16 07:56	DAN	TAL EDI

Client Sample ID: RW-3S_20160413
Lab Sample ID: 460-112452-9
Date Collected: 04/13/16 13:40
Matrix: Water
Date Received: 04/15/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	364845	04/27/16 00:51	DAN	TAL EDI

Client Sample ID: RW-1S_20160413
Lab Sample ID: 460-112452-10
Date Collected: 04/13/16 13:50
Matrix: Water
Date Received: 04/15/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	364845	04/27/16 01:18	DAN	TAL EDI

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-112452-1

Client Sample ID: RW-2D_20160413

Lab Sample ID: 460-112452-11

Date Collected: 04/13/16 14:00

Matrix: Water

Date Received: 04/15/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	25	364845	04/27/16 06:36	DAN	TAL EDI
Total/NA	Analysis	8260C		2	364845	04/27/16 08:23	DAN	TAL EDI

Client Sample ID: RW-2S_20160413

Lab Sample ID: 460-112452-12

Date Collected: 04/13/16 14:10

Matrix: Water

Date Received: 04/15/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	364845	04/27/16 00:24	DAN	TAL EDI

Client Sample ID: TRIP BLANK_20160413

Lab Sample ID: 460-112452-13

Date Collected: 04/13/16 00:00

Matrix: Water

Date Received: 04/15/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	364845	04/26/16 23:58	DAN	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Certification Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-112452-1

Laboratory: TestAmerica Edison

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11452	03-31-17

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-112452-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL EDI

Protocol References:

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

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-112452-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-112452-1	Pre-Carb_20160413	Water	04/13/16 14:20	04/15/16 10:00
460-112452-2	Primary-Eff_20160413	Water	04/13/16 14:25	04/15/16 10:00
460-112452-7	POST-CARB-COMPOSITE_20160413	Water	04/13/16 14:20	04/15/16 10:00
460-112452-8	RW-6D_20160413	Water	04/13/16 13:30	04/15/16 10:00
460-112452-9	RW-3S_20160413	Water	04/13/16 13:40	04/15/16 10:00
460-112452-10	RW-1S_20160413	Water	04/13/16 13:50	04/15/16 10:00
460-112452-11	RW-2D_20160413	Water	04/13/16 14:00	04/15/16 10:00
460-112452-12	RW-2S_20160413	Water	04/13/16 14:10	04/15/16 10:00
460-112452-13	TRIP BLANK_20160413	Water	04/13/16 00:00	04/15/16 10:00

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

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THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page 1 of 2

Name (for report and invoice) Kyle Block	Samplers Name (Printed) Jon Gowing	Site/Project Identification Essex Mart Jamestown.
Company CH2M HILL	P. O. #	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program: DKQP: ☐
Address 18 Tremont St Suite 300	Analysis Turnaround Time: Standard ☒	
City Boston State MA 02108	Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone (617) 626-7013 Fax (810) 229-5031		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No:
Job No: 112452

Sample Identification	Date	Time	Matrix	No. of Cont.	VOCs 8260	Sample Numbers
Pre-Carb-20160412	04/13/16	1420	GW	3	X	-1
Primary-Eff-20160413		1425			X	-2
Post-Carb-20160413_1		1430			X	-3
Post-Carb-20160413_2		1500			X	-4
Post-Carb-20160413_3		1530			X	-5
Post-Carb-20160413_4		1600			X	-6
~~Trip Blank-20160413-2~~				2	X	-7

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

Soil:
Water:

Special Instructions Composite all 4 Post-Carb Sample in Lab; Report as Post-Carb-Composite-20160413

Water Metals Filtered (Yes/No)? NR

Relinquished by	Company	Date / Time	Received by	Company
	CH2MHILL	04/14/16 @ 1100	1)	
Relinquished by 2)	Company	Date / Time	Received by 2)	Company TAL
Relinqui 3)		Date / Time	Received by 3)	Company 4/15/16 10.60
Relinqui 4)		Date / Time	Received by 4) Client Custody Seal 1.6/2.6 cG	Company

460-112452 Chain of Custody

Laboratories: New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132), Massachusetts (M-NJ312), North Carolina (No. 578)

TAL - 0016 (0715)

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice): Kyle Block	Samplers Name (Printed): Jim Gowing	Site/Project Identification: Essex Hope Ingestown
Company: CH2MHILL	P. O. #	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program: DKQP: ☐
Address: 1 Tavern St Suite 300	Analysis Turnaround Time: Standard ☒	
City: Boston State: MA 02108	Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone: (617) 626-7013 Fax: (810) 227-5031		

Sample Identification	Date	Time	Matrix	No. of Cont.	VOCs 8260	Sample Numbers
RW-6D_20160413	4/13/16	1330	GW	3	X	-8
RW-3S_20160413		1340		3	X	-9
RW-7S_20160413		1350		3	X	-10
RW-2D_20160413		1400		3	X	-11
RW-2S_20160413		1410		3	X	-12
TRIP BLANK_20160413		—		2	X	-13

LAB USE ONLY
Project No:
Job No: 112452

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____
Soil:
Water:

Special Instructions

Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
	CH2MHILL	04/14/16 1100	1)	
Relinquished by 2)	Company	Date / Time	Received by 2)	Company TAS
Relinquished by 3)	Company	Date / Time	Received by 3)	Company 1.6 / 2.6 °C
Relinquished by 4)	Company	Date / Time	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132), Massachusetts (M-NJ312), North Carolina (No. 578)

TAL - 0016 (0715)

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 112452

Number of Coolers: 1   IR Gun #: 6

Cooler Temperatures

Cooler #1:	2.6 °C	2.6 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: ______________________

Preservative Name/Conc.: ______________________ Volume of Preservative used (ml): ______________________

Lot # of Preservative(s): ______________________ Expiration Date: ______________________

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

* *Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

EDS-WI-038, Rev 4, 06/09/2014

Initials: [initials]   **Date:** 4/20/16

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc.

Job Number: 460-112452-1

Login Number: 112452
List Number: 1
Creator: Lysy, Susan

List Source: TestAmerica Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	client custody seal
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	2.6°C IR#6
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.	False	See NCM
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.	N/A	
Samples do not require splitting or compositing.	False	COMPOSITE REQUIRED
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

TestAmerica Job ID: 460-113754-1
Client Project/Site: Essex Hope Jamestown

For:
CH2M Hill Constructors, Inc.
18 Tremont St
Suite 700
Boston, Massachusetts 02108

Attn: Mr. Kyle Block

Kristin B DeGraw

Authorized for release by:
5/23/2016 11:52:50 AM

Kristin DeGraw, Project Manager II
(732)593-2555
kristin.degraw@testamericainc.com

Table of Contents

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown

TestAmerica Job ID: 460-113754-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)

Job ID: 460-113754-1

Laboratory: TestAmerica Edison

Narrative

CASE NARRATIVE

Client: CH2M Hill Constructors, Inc.

Project: Essex Hope Jamestown

Report Number: 460-113754-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

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

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

RECEIPT

The samples were received on 5/11/2016 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANICS

Samples Pre-Carb_20160510 (460-113754-1), Primary-EFF_20160510 (460-113754-2), POST-CARB_20160510-COMPOSITE (460-113754-7) and TRIPBLANK_20160510 (460-113754-8) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 05/19/2016 and 05/20/2016.

Samples Pre-Carb_20160510 (460-113754-1)[20X], Pre-Carb_20160510 (460-113754-1)[5X] and Primary-EFF_20160510 (460-113754-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Volatile organics analysis.

All other quality control parameters were within the acceptance limits.

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown

TestAmerica Job ID: 460-113754-1

Client Sample ID: Pre-Carb_20160510 — Lab Sample ID: 460-113754-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	22		5.0	1.7	ug/L	5		8260C	Total/NA
1,2-Dichloroethene, trans-	100		5.0	0.90	ug/L	5		8260C	Total/NA
Acetone	7600		50	5.4	ug/L	5		8260C	Total/NA
Benzene	24		5.0	0.45	ug/L	5		8260C	Total/NA
Toluene	1.3	J	5.0	1.3	ug/L	5		8260C	Total/NA
Vinyl chloride	1000		5.0	0.30	ug/L	5		8260C	Total/NA
1,2-Dichloroethene, cis- - DL	6400	D	20	5.2	ug/L	20		8260C	Total/NA
Trichloroethene - DL	4400	D	20	4.4	ug/L	20		8260C	Total/NA

Client Sample ID: Primary-EFF_20160510 — Lab Sample ID: 460-113754-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	1.7		1.0	0.26	ug/L	1		8260C	Total/NA
Acetone	300		10	1.1	ug/L	1		8260C	Total/NA
Tetrachloroethene	0.14	J	1.0	0.12	ug/L	1		8260C	Total/NA
Trichloroethene	0.59	J	1.0	0.22	ug/L	1		8260C	Total/NA
Vinyl chloride - DL	770	D	5.0	0.30	ug/L	5		8260C	Total/NA

Client Sample ID: POST-CARB_20160510-COMPOSITE — Lab Sample ID: 460-113754-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	0.98	J	1.0	0.26	ug/L	1		8260C	Total/NA
Acetone	4.9	J	10	1.1	ug/L	1		8260C	Total/NA
Methylene Chloride	1.3		1.0	0.21	ug/L	1		8260C	Total/NA
Trichloroethene	0.76	J	1.0	0.22	ug/L	1		8260C	Total/NA
Vinyl chloride	1.1		1.0	0.060	ug/L	1		8260C	Total/NA

Client Sample ID: TRIPBLANK_20160510 — Lab Sample ID: 460-113754-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	1.1		1.0	0.26	ug/L	1		8260C	Total/NA
Methylene Chloride	0.24	J	1.0	0.21	ug/L	1		8260C	Total/NA
Trichloroethene	2.4		1.0	0.22	ug/L	1		8260C	Total/NA
Vinyl chloride	0.60	J	1.0	0.060	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Pre-Carb_20160510
Date Collected: 05/10/16 10:10
Date Received: 05/11/16 10:20

Lab Sample ID: 460-113754-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.4	U	5.0	1.4	ug/L			05/20/16 06:52	5
1,1,2,2-Tetrachloroethane	0.95	U	5.0	0.95	ug/L			05/20/16 06:52	5
1,1,2-Trichloroethane	0.40	U	5.0	0.40	ug/L			05/20/16 06:52	5
1,1-Dichloroethane	1.2	U	5.0	1.2	ug/L			05/20/16 06:52	5
1,1-Dichloroethene	**22**		5.0	1.7	ug/L			05/20/16 06:52	5
1,2-Dichlorobenzene	1.1	U	5.0	1.1	ug/L			05/20/16 06:52	5
1,2-Dichloroethane	1.3	U	5.0	1.3	ug/L			05/20/16 06:52	5
1,2-Dichloroethene, trans-	**100**		5.0	0.90	ug/L			05/20/16 06:52	5
1,2-Dichloropropane	0.90	U	5.0	0.90	ug/L			05/20/16 06:52	5
1,3-Dichlorobenzene	1.7	U	25	1.7	ug/L			05/20/16 06:52	5
1,3-Dichloropropene, cis-	0.80	U	5.0	0.80	ug/L			05/20/16 06:52	5
1,3-Dichloropropene, trans-	0.95	U	5.0	0.95	ug/L			05/20/16 06:52	5
1,4-Dichlorobenzene	1.7	U	5.0	1.7	ug/L			05/20/16 06:52	5
2-Butanone (MEK)	11	U	50	11	ug/L			05/20/16 06:52	5
2-Hexanone	3.6	U	50	3.6	ug/L			05/20/16 06:52	5
4-Methyl-2-pentanone (MIBK)	3.2	U	50	3.2	ug/L			05/20/16 06:52	5
Acetone	**7600**		50	5.4	ug/L			05/20/16 06:52	5
Benzene	**24**		5.0	0.45	ug/L			05/20/16 06:52	5
Bromochloromethane	1.5	U	5.0	1.5	ug/L			05/20/16 06:52	5
Bromodichloromethane	0.75	U	5.0	0.75	ug/L			05/20/16 06:52	5
Bromoform	0.90	U	5.0	0.90	ug/L			05/20/16 06:52	5
Bromomethane	0.90	U	5.0	0.90	ug/L			05/20/16 06:52	5
Carbon disulfide	1.1	U	5.0	1.1	ug/L			05/20/16 06:52	5
Carbon tetrachloride	1.7	U	5.0	1.7	ug/L			05/20/16 06:52	5
Chlorobenzene	1.2	U	5.0	1.2	ug/L			05/20/16 06:52	5
Chloroethane	1.9	U	5.0	1.9	ug/L			05/20/16 06:52	5
Chloroform	1.1	U	5.0	1.1	ug/L			05/20/16 06:52	5
Chloromethane	1.1	U	5.0	1.1	ug/L			05/20/16 06:52	5
Dibromochloromethane	1.1	U	5.0	1.1	ug/L			05/20/16 06:52	5
Ethylbenzene	1.5	U	5.0	1.5	ug/L			05/20/16 06:52	5
Isopropylbenzene	1.6	U	5.0	1.6	ug/L			05/20/16 06:52	5
Methylene Chloride	1.1	U	5.0	1.1	ug/L			05/20/16 06:52	5
m-Xylene & p-Xylene	1.4	U	50	1.4	ug/L			05/20/16 06:52	5
o-Xylene	1.6	U	5.0	1.6	ug/L			05/20/16 06:52	5
Styrene	0.85	U	5.0	0.85	ug/L			05/20/16 06:52	5
Tetrachloroethene	0.60	U	5.0	0.60	ug/L			05/20/16 06:52	5
Toluene	**1.3**	**J**	5.0	1.3	ug/L			05/20/16 06:52	5
Trichlorofluoromethane	0.75	U	5.0	0.75	ug/L			05/20/16 06:52	5
Vinyl chloride	**1000**		5.0	0.30	ug/L			05/20/16 06:52	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 137*		*05/20/16 06:52*	*5*
4-Bromofluorobenzene	*98*		*70 - 131*		*05/20/16 06:52*	*5*
Dibromofluoromethane (Surr)	*105*		*72 - 136*		*05/20/16 06:52*	*5*
Toluene-d8 (Surr)	*102*		*74 - 120*		*05/20/16 06:52*	*5*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, cis-	**6400**	**D**	20	5.2	ug/L			05/19/16 16:18	20
Trichloroethene	**4400**	**D**	20	4.4	ug/L			05/19/16 16:18	20

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown

TestAmerica Job ID: 460-113754-1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*110*	*D*	*70 - 137*		*05/19/16 16:18*	*20*
4-Bromofluorobenzene	*98*	*D*	*70 - 131*		*05/19/16 16:18*	*20*
Dibromofluoromethane (Surr)	*102*	*D*	*72 - 136*		*05/19/16 16:18*	*20*
Toluene-d8 (Surr)	*101*	*D*	*74 - 120*		*05/19/16 16:18*	*20*

Client Sample ID: Primary-EFF_20160510

Lab Sample ID: 460-113754-2

Date Collected: 05/10/16 10:20

Matrix: Water

Date Received: 05/11/16 10:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			05/20/16 23:17	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			05/20/16 23:17	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			05/20/16 23:17	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			05/20/16 23:17	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			05/20/16 23:17	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			05/20/16 23:17	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/20/16 23:17	1
1,2-Dichloroethene, cis-	**1.7**		1.0	0.26	ug/L			05/20/16 23:17	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			05/20/16 23:17	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			05/20/16 23:17	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			05/20/16 23:17	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			05/20/16 23:17	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			05/20/16 23:17	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			05/20/16 23:17	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			05/20/16 23:17	1
2-Hexanone	0.72	U	10	0.72	ug/L			05/20/16 23:17	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			05/20/16 23:17	1
Acetone	**300**		10	1.1	ug/L			05/20/16 23:17	1
Benzene	0.090	U	1.0	0.090	ug/L			05/20/16 23:17	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			05/20/16 23:17	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			05/20/16 23:17	1
Bromoform	0.18	U	1.0	0.18	ug/L			05/20/16 23:17	1
Bromomethane	0.18	U	1.0	0.18	ug/L			05/20/16 23:17	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			05/20/16 23:17	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/20/16 23:17	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			05/20/16 23:17	1
Chloroethane	0.37	U	1.0	0.37	ug/L			05/20/16 23:17	1
Chloroform	0.22	U	1.0	0.22	ug/L			05/20/16 23:17	1
Chloromethane	0.22	U	1.0	0.22	ug/L			05/20/16 23:17	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			05/20/16 23:17	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			05/20/16 23:17	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			05/20/16 23:17	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			05/20/16 23:17	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			05/20/16 23:17	1
o-Xylene	0.32	U	1.0	0.32	ug/L			05/20/16 23:17	1
Styrene	0.17	U	1.0	0.17	ug/L			05/20/16 23:17	1
Tetrachloroethene	**0.14**	**J**	1.0	0.12	ug/L			05/20/16 23:17	1
Toluene	0.25	U	1.0	0.25	ug/L			05/20/16 23:17	1
Trichloroethene	**0.59**	**J**	1.0	0.22	ug/L			05/20/16 23:17	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			05/20/16 23:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*118*		*70 - 137*		*05/20/16 23:17*	*1*
4-Bromofluorobenzene	*97*		*70 - 131*		*05/20/16 23:17*	*1*

Client Sample ID: Primary-EFF_20160510

Lab Sample ID: 460-113754-2

Date Collected: 05/10/16 10:20

Matrix: Water

Date Received: 05/11/16 10:20

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*107*		*72 - 136*		*05/20/16 23:17*	*1*
Toluene-d8 (Surr)	*104*		*74 - 120*		*05/20/16 23:17*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**770**	**D**	5.0	0.30	ug/L			05/20/16 22:51	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*	*D*	*70 - 137*		*05/20/16 22:51*	*5*
4-Bromofluorobenzene	*98*	*D*	*70 - 131*		*05/20/16 22:51*	*5*
Dibromofluoromethane (Surr)	*103*	*D*	*72 - 136*		*05/20/16 22:51*	*5*
Toluene-d8 (Surr)	*100*	*D*	*74 - 120*		*05/20/16 22:51*	*5*

Client Sample ID: POST-CARB_20160510-COMPOSITE

Lab Sample ID: 460-113754-7

Date Collected: 05/10/16 10:30

Matrix: Water

Date Received: 05/11/16 10:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			05/19/16 15:26	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			05/19/16 15:26	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			05/19/16 15:26	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			05/19/16 15:26	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			05/19/16 15:26	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			05/19/16 15:26	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/19/16 15:26	1
1,2-Dichloroethene, cis-	**0.98**	**J**	1.0	0.26	ug/L			05/19/16 15:26	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			05/19/16 15:26	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			05/19/16 15:26	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			05/19/16 15:26	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			05/19/16 15:26	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			05/19/16 15:26	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			05/19/16 15:26	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			05/19/16 15:26	1
2-Hexanone	0.72	U	10	0.72	ug/L			05/19/16 15:26	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			05/19/16 15:26	1
Acetone	**4.9**	**J**	10	1.1	ug/L			05/19/16 15:26	1
Benzene	0.090	U	1.0	0.090	ug/L			05/19/16 15:26	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			05/19/16 15:26	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			05/19/16 15:26	1
Bromoform	0.18	U	1.0	0.18	ug/L			05/19/16 15:26	1
Bromomethane	0.18	U	1.0	0.18	ug/L			05/19/16 15:26	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			05/19/16 15:26	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/19/16 15:26	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			05/19/16 15:26	1
Chloroethane	0.37	U	1.0	0.37	ug/L			05/19/16 15:26	1
Chloroform	0.22	U	1.0	0.22	ug/L			05/19/16 15:26	1
Chloromethane	0.22	U	1.0	0.22	ug/L			05/19/16 15:26	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			05/19/16 15:26	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			05/19/16 15:26	1

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown

TestAmerica Job ID: 460-113754-1

Client Sample ID: POST-CARB_20160510-COMPOSITE

Lab Sample ID: 460-113754-7

Date Collected: 05/10/16 10:30

Matrix: Water

Date Received: 05/11/16 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			05/19/16 15:26	1
Methylene Chloride	**1.3**		1.0	0.21	ug/L			05/19/16 15:26	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			05/19/16 15:26	1
o-Xylene	0.32	U	1.0	0.32	ug/L			05/19/16 15:26	1
Styrene	0.17	U	1.0	0.17	ug/L			05/19/16 15:26	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			05/19/16 15:26	1
Toluene	0.25	U	1.0	0.25	ug/L			05/19/16 15:26	1
Trichloroethene	**0.76**	**J**	1.0	0.22	ug/L			05/19/16 15:26	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			05/19/16 15:26	1
Vinyl chloride	**1.1**		1.0	0.060	ug/L			05/19/16 15:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 137*		*05/19/16 15:26*	*1*
4-Bromofluorobenzene	*100*		*70 - 131*		*05/19/16 15:26*	*1*
Dibromofluoromethane (Surr)	*104*		*72 - 136*		*05/19/16 15:26*	*1*
Toluene-d8 (Surr)	*103*		*74 - 120*		*05/19/16 15:26*	*1*

Client Sample ID: TRIPBLANK_20160510

Lab Sample ID: 460-113754-8

Date Collected: 05/10/16 00:00

Matrix: Water

Date Received: 05/11/16 10:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			05/19/16 12:50	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			05/19/16 12:50	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			05/19/16 12:50	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			05/19/16 12:50	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			05/19/16 12:50	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			05/19/16 12:50	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/19/16 12:50	1
1,2-Dichloroethene, cis-	**1.1**		1.0	0.26	ug/L			05/19/16 12:50	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			05/19/16 12:50	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			05/19/16 12:50	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			05/19/16 12:50	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			05/19/16 12:50	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			05/19/16 12:50	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			05/19/16 12:50	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			05/19/16 12:50	1
2-Hexanone	0.72	U	10	0.72	ug/L			05/19/16 12:50	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			05/19/16 12:50	1
Acetone	1.1	U	10	1.1	ug/L			05/19/16 12:50	1
Benzene	0.090	U	1.0	0.090	ug/L			05/19/16 12:50	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			05/19/16 12:50	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			05/19/16 12:50	1
Bromoform	0.18	U	1.0	0.18	ug/L			05/19/16 12:50	1
Bromomethane	0.18	U	1.0	0.18	ug/L			05/19/16 12:50	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			05/19/16 12:50	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/19/16 12:50	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			05/19/16 12:50	1
Chloroethane	0.37	U	1.0	0.37	ug/L			05/19/16 12:50	1

Client Sample ID: TRIPBLANK_20160510
Date Collected: 05/10/16 00:00
Date Received: 05/11/16 10:20

Lab Sample ID: 460-113754-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	0.22	U	1.0	0.22	ug/L			05/19/16 12:50	1
Chloromethane	0.22	U	1.0	0.22	ug/L			05/19/16 12:50	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			05/19/16 12:50	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			05/19/16 12:50	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			05/19/16 12:50	1
Methylene Chloride	**0.24**	**J**	1.0	0.21	ug/L			05/19/16 12:50	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			05/19/16 12:50	1
o-Xylene	0.32	U	1.0	0.32	ug/L			05/19/16 12:50	1
Styrene	0.17	U	1.0	0.17	ug/L			05/19/16 12:50	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			05/19/16 12:50	1
Toluene	0.25	U	1.0	0.25	ug/L			05/19/16 12:50	1
Trichloroethene	**2.4**		1.0	0.22	ug/L			05/19/16 12:50	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			05/19/16 12:50	1
Vinyl chloride	**0.60**	**J**	1.0	0.060	ug/L			05/19/16 12:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 137*		*05/19/16 12:50*	*1*
4-Bromofluorobenzene	*99*		*70 - 131*		*05/19/16 12:50*	*1*
Dibromofluoromethane (Surr)	*101*		*72 - 136*		*05/19/16 12:50*	*1*
Toluene-d8 (Surr)	*102*		*74 - 120*		*05/19/16 12:50*	*1*

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown

TestAmerica Job ID: 460-113754-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (70-137)	BFB (70-131)	DBFM (72-136)	TOL (74-120)
460-113754-1 - DL	Pre-Carb_20160510	110 D	98 D	102 D	101 D
460-113754-1	Pre-Carb_20160510	114	98	105	102
460-113754-2 - DL	Primary-EFF_20160510	112 D	98 D	103 D	100 D
460-113754-2	Primary-EFF_20160510	118	97	107	104
460-113754-7	POST-CARB_20160510-COMPOSITE	111	100	104	103
460-113754-7 MS	POST-CARB_20160510-COMPOSITE	111	99	101	101
460-113754-7 MSD	POST-CARB_20160510-COMPOSITE	108	97	100	100
460-113754-8	TRIPBLANK_20160510	110	99	101	102
460-113803-B-1 MS	Matrix Spike	109	97	100	100
460-113803-B-1 MSD	Matrix Spike Duplicate	111	99	105	103
LCS 460-368877/3	Lab Control Sample	108	98	103	100
LCS 460-368978/3	Lab Control Sample	109	99	101	101
LCS 460-369165/3	Lab Control Sample	114	100	104	102
LCSD 460-368978/4	Lab Control Sample Dup	106	94	100	98
MB 460-368877/7	Method Blank	108	99	98	100
MB 460-368978/7	Method Blank	109	99	102	100
MB 460-369165/7	Method Blank	113	98	104	101

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 460-368877/7
Matrix: Water
Analysis Batch: 368877

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			05/19/16 12:24	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			05/19/16 12:24	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			05/19/16 12:24	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			05/19/16 12:24	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			05/19/16 12:24	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			05/19/16 12:24	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/19/16 12:24	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			05/19/16 12:24	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			05/19/16 12:24	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			05/19/16 12:24	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			05/19/16 12:24	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			05/19/16 12:24	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			05/19/16 12:24	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			05/19/16 12:24	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			05/19/16 12:24	1
2-Hexanone	0.72	U	10	0.72	ug/L			05/19/16 12:24	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			05/19/16 12:24	1
Acetone	1.1	U	10	1.1	ug/L			05/19/16 12:24	1
Benzene	0.090	U	1.0	0.090	ug/L			05/19/16 12:24	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			05/19/16 12:24	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			05/19/16 12:24	1
Bromoform	0.18	U	1.0	0.18	ug/L			05/19/16 12:24	1
Bromomethane	0.18	U	1.0	0.18	ug/L			05/19/16 12:24	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			05/19/16 12:24	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/19/16 12:24	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			05/19/16 12:24	1
Chloroethane	0.37	U	1.0	0.37	ug/L			05/19/16 12:24	1
Chloroform	0.22	U	1.0	0.22	ug/L			05/19/16 12:24	1
Chloromethane	0.22	U	1.0	0.22	ug/L			05/19/16 12:24	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			05/19/16 12:24	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			05/19/16 12:24	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			05/19/16 12:24	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			05/19/16 12:24	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			05/19/16 12:24	1
o-Xylene	0.32	U	1.0	0.32	ug/L			05/19/16 12:24	1
Styrene	0.17	U	1.0	0.17	ug/L			05/19/16 12:24	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			05/19/16 12:24	1
Toluene	0.25	U	1.0	0.25	ug/L			05/19/16 12:24	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			05/19/16 12:24	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			05/19/16 12:24	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			05/19/16 12:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 137*		*05/19/16 12:24*	*1*
4-Bromofluorobenzene	*99*		*70 - 131*		*05/19/16 12:24*	*1*
Dibromofluoromethane (Surr)	*98*		*72 - 136*		*05/19/16 12:24*	*1*
Toluene-d8 (Surr)	*100*		*74 - 120*		*05/19/16 12:24*	*1*

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

Lab Sample ID: LCS 460-368877/3
Matrix: Water
Analysis Batch: 368877

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	21.1		ug/L		106	76 - 131
1,1,2,2-Tetrachloroethane	20.0	20.7		ug/L		103	65 - 128
1,1,2-Trichloroethane	20.0	18.8		ug/L		94	77 - 122
1,1-Dichloroethane	20.0	20.4		ug/L		102	77 - 129
1,1-Dichloroethene	20.0	20.1		ug/L		101	67 - 133
1,2-Dichlorobenzene	20.0	21.7		ug/L		108	80 - 121
1,2-Dichloroethane	20.0	19.9		ug/L		100	73 - 131
1,2-Dichloroethene, cis-	20.0	19.3		ug/L		96	82 - 127
1,2-Dichloroethene, trans-	20.0	19.8		ug/L		99	78 - 127
1,2-Dichloropropane	20.0	19.9		ug/L		100	75 - 129
1,3-Dichlorobenzene	20.0	21.7		ug/L		109	80 - 120
1,3-Dichloropropene, cis-	20.0	18.9		ug/L		95	72 - 125
1,3-Dichloropropene, trans-	20.0	19.5		ug/L		97	69 - 125
1,4-Dichlorobenzene	20.0	21.3		ug/L		106	79 - 120
2-Butanone (MEK)	100	86.3		ug/L		86	56 - 150
2-Hexanone	100	87.2		ug/L		87	64 - 150
4-Methyl-2-pentanone (MIBK)	100	96.9		ug/L		97	77 - 130
Acetone	100	79.3		ug/L		79	19 - 150
Benzene	20.0	20.4		ug/L		102	76 - 125
Bromochloromethane	20.0	19.4		ug/L		97	71 - 137
Bromodichloromethane	20.0	19.9		ug/L		99	78 - 127
Bromoform	20.0	18.2		ug/L		91	65 - 124
Bromomethane	20.0	18.1		ug/L		91	10 - 150
Carbon disulfide	20.0	20.7		ug/L		104	69 - 131
Carbon tetrachloride	20.0	22.4		ug/L		112	71 - 138
Chlorobenzene	20.0	20.2		ug/L		101	80 - 120
Chloroethane	20.0	21.0		ug/L		105	40 - 150
Chloroform	20.0	20.8		ug/L		104	81 - 127
Chloromethane	20.0	19.2		ug/L		96	45 - 150
Dibromochloromethane	20.0	19.2		ug/L		96	78 - 120
Ethylbenzene	20.0	20.7		ug/L		104	80 - 120
Isopropylbenzene	20.0	22.5		ug/L		113	80 - 127
Methylene Chloride	20.0	19.3		ug/L		96	80 - 126
m-Xylene & p-Xylene	20.0	20.5		ug/L		103	80 - 121
o-Xylene	20.0	20.1		ug/L		100	80 - 120
Styrene	20.0	20.6		ug/L		103	75 - 124
Tetrachloroethene	20.0	22.1		ug/L		110	71 - 132
Toluene	20.0	20.7		ug/L		104	80 - 120
Trichloroethene	20.0	20.4		ug/L		102	77 - 127
Trichlorofluoromethane	20.0	18.8		ug/L		94	50 - 150
Vinyl chloride	20.0	20.4		ug/L		102	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 137*
4-Bromofluorobenzene	*98*		*70 - 131*
Dibromofluoromethane (Surr)	*103*		*72 - 136*
Toluene-d8 (Surr)	*100*		*74 - 120*

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

Lab Sample ID: 460-113754-7 MS
Matrix: Water
Analysis Batch: 368877

Client Sample ID: POST-CARB_20160510-COMPOSITE
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.28	U	100	103		ug/L		103	76 - 131
1,1,2,2-Tetrachloroethane	0.19	U	100	104		ug/L		104	65 - 128
1,1,2-Trichloroethane	0.080	U	100	94.0		ug/L		94	77 - 122
1,1-Dichloroethane	0.24	U	100	99.4		ug/L		99	77 - 129
1,1-Dichloroethene	0.34	U	100	100		ug/L		100	67 - 133
1,2-Dichlorobenzene	0.22	U	100	106		ug/L		106	80 - 121
1,2-Dichloroethane	0.25	U	100	98.5		ug/L		99	73 - 131
1,2-Dichloroethene, cis-	0.98	J	100	95.7		ug/L		95	82 - 127
1,2-Dichloroethene, trans-	0.18	U	100	91.9		ug/L		92	78 - 127
1,2-Dichloropropane	0.18	U	100	97.3		ug/L		97	75 - 129
1,3-Dichlorobenzene	0.33	U	100	105		ug/L		105	80 - 120
1,3-Dichloropropene, cis-	0.16	U	100	93.0		ug/L		93	72 - 125
1,3-Dichloropropene, trans-	0.19	U	100	93.9		ug/L		94	69 - 125
1,4-Dichlorobenzene	0.33	U	100	99.7		ug/L		100	79 - 120
2-Butanone (MEK)	2.2	U	500	402		ug/L		80	56 - 150
2-Hexanone	0.72	U	500	413		ug/L		83	64 - 150
4-Methyl-2-pentanone (MIBK)	0.63	U	500	468		ug/L		94	77 - 130
Acetone	4.9	J	500	424		ug/L		84	19 - 150
Benzene	0.090	U	100	102		ug/L		102	76 - 125
Bromochloromethane	0.30	U	100	97.3		ug/L		97	71 - 137
Bromodichloromethane	0.15	U	100	98.1		ug/L		98	78 - 127
Bromoform	0.18	U	100	89.1		ug/L		89	65 - 124
Bromomethane	0.18	U	100	78.8		ug/L		79	10 - 150
Carbon disulfide	0.22	U	100	101		ug/L		101	69 - 131
Carbon tetrachloride	0.33	U	100	112		ug/L		112	71 - 138
Chlorobenzene	0.24	U	100	96.5		ug/L		96	80 - 120
Chloroethane	0.37	U	100	128		ug/L		128	40 - 150
Chloroform	0.22	U	100	101		ug/L		101	81 - 127
Chloromethane	0.22	U	100	97.1		ug/L		97	45 - 150
Dibromochloromethane	0.22	U	100	92.8		ug/L		93	78 - 120
Ethylbenzene	0.30	U	100	97.3		ug/L		97	80 - 120
Isopropylbenzene	0.32	U	100	112		ug/L		112	80 - 127
Methylene Chloride	1.3		100	96.1		ug/L		95	80 - 126
m-Xylene & p-Xylene	0.28	U	100	101		ug/L		101	80 - 121
o-Xylene	0.32	U	100	96.4		ug/L		96	80 - 120
Styrene	0.17	U	100	102		ug/L		102	75 - 124
Tetrachloroethene	0.12	U	100	107		ug/L		107	71 - 132
Toluene	0.25	U	100	101		ug/L		101	80 - 120
Trichloroethene	0.76	J	100	101		ug/L		101	77 - 127
Trichlorofluoromethane	0.15	U	100	103		ug/L		103	50 - 150
Vinyl chloride	1.1		100	103		ug/L		102	53 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 137*
4-Bromofluorobenzene	*99*		*70 - 131*
Dibromofluoromethane (Surr)	*101*		*72 - 136*
Toluene-d8 (Surr)	*101*		*74 - 120*

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

Lab Sample ID: 460-113754-7 MSD
Matrix: Water
Analysis Batch: 368877

Client Sample ID: POST-CARB_20160510-COMPOSITE
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.28	U	100	103		ug/L		103	76 - 131	0	30
1,1,2,2-Tetrachloroethane	0.19	U	100	102		ug/L		102	65 - 128	2	30
1,1,2-Trichloroethane	0.080	U	100	93.5		ug/L		93	77 - 122	1	30
1,1-Dichloroethane	0.24	U	100	98.2		ug/L		98	77 - 129	1	30
1,1-Dichloroethene	0.34	U	100	99.1		ug/L		99	67 - 133	1	30
1,2-Dichlorobenzene	0.22	U	100	101		ug/L		101	80 - 121	5	30
1,2-Dichloroethane	0.25	U	100	98.5		ug/L		98	73 - 131	0	30
1,2-Dichloroethene, cis-	0.98	J	100	91.7		ug/L		91	82 - 127	4	30
1,2-Dichloroethene, trans-	0.18	U	100	92.5		ug/L		92	78 - 127	1	30
1,2-Dichloropropane	0.18	U	100	96.8		ug/L		97	75 - 129	1	30
1,3-Dichlorobenzene	0.33	U	100	101		ug/L		101	80 - 120	4	30
1,3-Dichloropropene, cis-	0.16	U	100	94.5		ug/L		95	72 - 125	2	30
1,3-Dichloropropene, trans-	0.19	U	100	95.2		ug/L		95	69 - 125	1	30
1,4-Dichlorobenzene	0.33	U	100	100		ug/L		100	79 - 120	1	30
2-Butanone (MEK)	2.2	U	500	378		ug/L		76	56 - 150	6	30
2-Hexanone	0.72	U	500	412		ug/L		82	64 - 150	0	30
4-Methyl-2-pentanone (MIBK)	0.63	U	500	454		ug/L		91	77 - 130	3	30
Acetone	4.9	J	500	372		ug/L		73	19 - 150	13	30
Benzene	0.090	U	100	99.2		ug/L		99	76 - 125	2	30
Bromochloromethane	0.30	U	100	94.7		ug/L		95	71 - 137	3	30
Bromodichloromethane	0.15	U	100	96.6		ug/L		97	78 - 127	2	30
Bromoform	0.18	U	100	91.0		ug/L		91	65 - 124	2	30
Bromomethane	0.18	U	100	84.8		ug/L		85	10 - 150	7	30
Carbon disulfide	0.22	U	100	102		ug/L		102	69 - 131	1	30
Carbon tetrachloride	0.33	U	100	109		ug/L		109	71 - 138	3	30
Chlorobenzene	0.24	U	100	94.5		ug/L		94	80 - 120	2	30
Chloroethane	0.37	U	100	117		ug/L		117	40 - 150	9	30
Chloroform	0.22	U	100	98.4		ug/L		98	81 - 127	3	30
Chloromethane	0.22	U	100	96.6		ug/L		97	45 - 150	1	30
Dibromochloromethane	0.22	U	100	93.1		ug/L		93	78 - 120	0	30
Ethylbenzene	0.30	U	100	97.7		ug/L		98	80 - 120	0	30
Isopropylbenzene	0.32	U	100	111		ug/L		111	80 - 127	2	30
Methylene Chloride	1.3		100	95.8		ug/L		95	80 - 126	0	30
m-Xylene & p-Xylene	0.28	U	100	100		ug/L		100	80 - 121	1	30
o-Xylene	0.32	U	100	97.4		ug/L		97	80 - 120	1	30
Styrene	0.17	U	100	102		ug/L		102	75 - 124	0	30
Tetrachloroethene	0.12	U	100	105		ug/L		105	71 - 132	2	30
Toluene	0.25	U	100	101		ug/L		101	80 - 120	0	30
Trichloroethene	0.76	J	100	99.5		ug/L		99	77 - 127	2	30
Trichlorofluoromethane	0.15	U	100	101		ug/L		101	50 - 150	2	30
Vinyl chloride	1.1		100	101		ug/L		99	53 - 142	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 137*
4-Bromofluorobenzene	*97*		*70 - 131*
Dibromofluoromethane (Surr)	*100*		*72 - 136*
Toluene-d8 (Surr)	*100*		*74 - 120*

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

Lab Sample ID: MB 460-368978/7
Matrix: Water
Analysis Batch: 368978

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			05/20/16 00:49	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			05/20/16 00:49	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			05/20/16 00:49	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			05/20/16 00:49	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			05/20/16 00:49	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			05/20/16 00:49	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/20/16 00:49	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			05/20/16 00:49	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			05/20/16 00:49	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			05/20/16 00:49	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			05/20/16 00:49	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			05/20/16 00:49	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			05/20/16 00:49	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			05/20/16 00:49	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			05/20/16 00:49	1
2-Hexanone	0.72	U	10	0.72	ug/L			05/20/16 00:49	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			05/20/16 00:49	1
Acetone	1.1	U	10	1.1	ug/L			05/20/16 00:49	1
Benzene	0.090	U	1.0	0.090	ug/L			05/20/16 00:49	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			05/20/16 00:49	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			05/20/16 00:49	1
Bromoform	0.18	U	1.0	0.18	ug/L			05/20/16 00:49	1
Bromomethane	0.18	U	1.0	0.18	ug/L			05/20/16 00:49	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			05/20/16 00:49	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/20/16 00:49	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			05/20/16 00:49	1
Chloroethane	0.37	U	1.0	0.37	ug/L			05/20/16 00:49	1
Chloroform	0.22	U	1.0	0.22	ug/L			05/20/16 00:49	1
Chloromethane	0.22	U	1.0	0.22	ug/L			05/20/16 00:49	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			05/20/16 00:49	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			05/20/16 00:49	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			05/20/16 00:49	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			05/20/16 00:49	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			05/20/16 00:49	1
o-Xylene	0.32	U	1.0	0.32	ug/L			05/20/16 00:49	1
Styrene	0.17	U	1.0	0.17	ug/L			05/20/16 00:49	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			05/20/16 00:49	1
Toluene	0.25	U	1.0	0.25	ug/L			05/20/16 00:49	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			05/20/16 00:49	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			05/20/16 00:49	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			05/20/16 00:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 137*		*05/20/16 00:49*	*1*
4-Bromofluorobenzene	*99*		*70 - 131*		*05/20/16 00:49*	*1*
Dibromofluoromethane (Surr)	*102*		*72 - 136*		*05/20/16 00:49*	*1*
Toluene-d8 (Surr)	*100*		*74 - 120*		*05/20/16 00:49*	*1*

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

Lab Sample ID: LCS 460-368978/3
Matrix: Water
Analysis Batch: 368978

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	21.0		ug/L		105	76 - 131
1,1,2,2-Tetrachloroethane	20.0	19.6		ug/L		98	65 - 128
1,1,2-Trichloroethane	20.0	18.5		ug/L		92	77 - 122
1,1-Dichloroethane	20.0	19.9		ug/L		100	77 - 129
1,1-Dichloroethene	20.0	20.5		ug/L		103	67 - 133
1,2-Dichlorobenzene	20.0	20.5		ug/L		103	80 - 121
1,2-Dichloroethane	20.0	20.4		ug/L		102	73 - 131
1,2-Dichloroethene, cis-	20.0	18.5		ug/L		92	82 - 127
1,2-Dichloroethene, trans-	20.0	19.0		ug/L		95	78 - 127
1,2-Dichloropropane	20.0	19.6		ug/L		98	75 - 129
1,3-Dichlorobenzene	20.0	20.7		ug/L		103	80 - 120
1,3-Dichloropropene, cis-	20.0	18.7		ug/L		94	72 - 125
1,3-Dichloropropene, trans-	20.0	19.2		ug/L		96	69 - 125
1,4-Dichlorobenzene	20.0	20.7		ug/L		104	79 - 120
2-Butanone (MEK)	100	81.9		ug/L		82	56 - 150
2-Hexanone	100	85.3		ug/L		85	64 - 150
4-Methyl-2-pentanone (MIBK)	100	95.6		ug/L		96	77 - 130
Acetone	100	80.6		ug/L		81	19 - 150
Benzene	20.0	19.9		ug/L		99	76 - 125
Bromochloromethane	20.0	18.8		ug/L		94	71 - 137
Bromodichloromethane	20.0	19.7		ug/L		99	78 - 127
Bromoform	20.0	17.7		ug/L		88	65 - 124
Bromomethane	20.0	16.7		ug/L		84	10 - 150
Carbon disulfide	20.0	20.2		ug/L		101	69 - 131
Carbon tetrachloride	20.0	21.8		ug/L		109	71 - 138
Chlorobenzene	20.0	19.4		ug/L		97	80 - 120
Chloroethane	20.0	20.6		ug/L		103	40 - 150
Chloroform	20.0	20.0		ug/L		100	81 - 127
Chloromethane	20.0	19.1		ug/L		95	45 - 150
Dibromochloromethane	20.0	18.5		ug/L		93	78 - 120
Ethylbenzene	20.0	19.3		ug/L		96	80 - 120
Isopropylbenzene	20.0	22.2		ug/L		111	80 - 127
Methylene Chloride	20.0	19.2		ug/L		96	80 - 126
m-Xylene & p-Xylene	20.0	20.4		ug/L		102	80 - 121
o-Xylene	20.0	19.4		ug/L		97	80 - 120
Styrene	20.0	20.1		ug/L		101	75 - 124
Tetrachloroethene	20.0	21.3		ug/L		107	71 - 132
Toluene	20.0	19.8		ug/L		99	80 - 120
Trichloroethene	20.0	20.1		ug/L		100	77 - 127
Trichlorofluoromethane	20.0	20.9		ug/L		105	50 - 150
Vinyl chloride	20.0	20.2		ug/L		101	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 137*
4-Bromofluorobenzene	*99*		*70 - 131*
Dibromofluoromethane (Surr)	*101*		*72 - 136*
Toluene-d8 (Surr)	*101*		*74 - 120*

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

Lab Sample ID: LCSD 460-368978/4
Matrix: Water
Analysis Batch: 368978

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			20.0	20.6		ug/L		103	76 - 131	2	30
1,1,2,2-Tetrachloroethane			20.0	18.9		ug/L		94	65 - 128	4	30
1,1,2-Trichloroethane			20.0	18.4		ug/L		92	77 - 122	1	30
1,1-Dichloroethane			20.0	19.0		ug/L		95	77 - 129	5	30
1,1-Dichloroethene			20.0	19.9		ug/L		100	67 - 133	3	30
1,2-Dichlorobenzene			20.0	20.1		ug/L		100	80 - 121	2	30
1,2-Dichloroethane			20.0	19.8		ug/L		99	73 - 131	3	30
1,2-Dichloroethene, cis-			20.0	18.0		ug/L		90	82 - 127	3	30
1,2-Dichloroethene, trans-			20.0	18.6		ug/L		93	78 - 127	2	30
1,2-Dichloropropane			20.0	19.2		ug/L		96	75 - 129	2	30
1,3-Dichlorobenzene			20.0	20.2		ug/L		101	80 - 120	2	30
1,3-Dichloropropene, cis-			20.0	18.2		ug/L		91	72 - 125	3	30
1,3-Dichloropropene, trans-			20.0	18.9		ug/L		95	69 - 125	1	30
1,4-Dichlorobenzene			20.0	20.2		ug/L		101	79 - 120	2	30
2-Butanone (MEK)			100	80.2		ug/L		80	56 - 150	2	30
2-Hexanone			100	84.9		ug/L		85	64 - 150	0	30
4-Methyl-2-pentanone (MIBK)			100	95.1		ug/L		95	77 - 130	1	30
Acetone			100	79.7		ug/L		80	19 - 150	1	30
Benzene			20.0	19.5		ug/L		97	76 - 125	2	30
Bromochloromethane			20.0	19.2		ug/L		96	71 - 137	2	30
Bromodichloromethane			20.0	19.6		ug/L		98	78 - 127	0	30
Bromoform			20.0	17.3		ug/L		87	65 - 124	2	30
Bromomethane			20.0	16.1		ug/L		81	10 - 150	4	30
Carbon disulfide			20.0	20.4		ug/L		102	69 - 131	1	30
Carbon tetrachloride			20.0	21.8		ug/L		109	71 - 138	0	30
Chlorobenzene			20.0	19.6		ug/L		98	80 - 120	1	30
Chloroethane			20.0	20.6		ug/L		103	40 - 150	0	30
Chloroform			20.0	19.6		ug/L		98	81 - 127	2	30
Chloromethane			20.0	18.1		ug/L		90	45 - 150	5	30
Dibromochloromethane			20.0	18.3		ug/L		92	78 - 120	1	30
Ethylbenzene			20.0	19.7		ug/L		99	80 - 120	2	30
Isopropylbenzene			20.0	22.3		ug/L		112	80 - 127	1	30
Methylene Chloride			20.0	18.9		ug/L		94	80 - 126	2	30
m-Xylene & p-Xylene			20.0	20.3		ug/L		101	80 - 121	1	30
o-Xylene			20.0	19.9		ug/L		99	80 - 120	2	30
Styrene			20.0	20.4		ug/L		102	75 - 124	1	30
Tetrachloroethene			20.0	21.2		ug/L		106	71 - 132	1	30
Toluene			20.0	20.0		ug/L		100	80 - 120	1	30
Trichloroethene			20.0	20.6		ug/L		103	77 - 127	2	30
Trichlorofluoromethane			20.0	20.1		ug/L		101	50 - 150	4	30
Vinyl chloride			20.0	19.4		ug/L		97	53 - 142	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 137*
4-Bromofluorobenzene	*94*		*70 - 131*
Dibromofluoromethane (Surr)	*100*		*72 - 136*
Toluene-d8 (Surr)	*98*		*74 - 120*

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

Lab Sample ID: MB 460-369165/7
Matrix: Water
Analysis Batch: 369165

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			05/20/16 22:25	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			05/20/16 22:25	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			05/20/16 22:25	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			05/20/16 22:25	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			05/20/16 22:25	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			05/20/16 22:25	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/20/16 22:25	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			05/20/16 22:25	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			05/20/16 22:25	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			05/20/16 22:25	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			05/20/16 22:25	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			05/20/16 22:25	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			05/20/16 22:25	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			05/20/16 22:25	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			05/20/16 22:25	1
2-Hexanone	0.72	U	10	0.72	ug/L			05/20/16 22:25	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			05/20/16 22:25	1
Acetone	1.1	U	10	1.1	ug/L			05/20/16 22:25	1
Benzene	0.090	U	1.0	0.090	ug/L			05/20/16 22:25	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			05/20/16 22:25	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			05/20/16 22:25	1
Bromoform	0.18	U	1.0	0.18	ug/L			05/20/16 22:25	1
Bromomethane	0.18	U	1.0	0.18	ug/L			05/20/16 22:25	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			05/20/16 22:25	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/20/16 22:25	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			05/20/16 22:25	1
Chloroethane	0.37	U	1.0	0.37	ug/L			05/20/16 22:25	1
Chloroform	0.22	U	1.0	0.22	ug/L			05/20/16 22:25	1
Chloromethane	0.22	U	1.0	0.22	ug/L			05/20/16 22:25	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			05/20/16 22:25	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			05/20/16 22:25	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			05/20/16 22:25	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			05/20/16 22:25	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			05/20/16 22:25	1
o-Xylene	0.32	U	1.0	0.32	ug/L			05/20/16 22:25	1
Styrene	0.17	U	1.0	0.17	ug/L			05/20/16 22:25	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			05/20/16 22:25	1
Toluene	0.25	U	1.0	0.25	ug/L			05/20/16 22:25	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			05/20/16 22:25	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			05/20/16 22:25	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			05/20/16 22:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 137*		*05/20/16 22:25*	*1*
4-Bromofluorobenzene	*98*		*70 - 131*		*05/20/16 22:25*	*1*
Dibromofluoromethane (Surr)	*104*		*72 - 136*		*05/20/16 22:25*	*1*
Toluene-d8 (Surr)	*101*		*74 - 120*		*05/20/16 22:25*	*1*

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

Lab Sample ID: LCS 460-369165/3
Matrix: Water
Analysis Batch: 369165

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	22.0		ug/L		110	76 - 131
1,1,2,2-Tetrachloroethane	20.0	21.2		ug/L		106	65 - 128
1,1,2-Trichloroethane	20.0	19.3		ug/L		97	77 - 122
1,1-Dichloroethane	20.0	20.5		ug/L		102	77 - 129
1,1-Dichloroethene	20.0	20.1		ug/L		100	67 - 133
1,2-Dichlorobenzene	20.0	21.4		ug/L		107	80 - 121
1,2-Dichloroethane	20.0	20.6		ug/L		103	73 - 131
1,2-Dichloroethene, cis-	20.0	19.5		ug/L		97	82 - 127
1,2-Dichloroethene, trans-	20.0	19.0		ug/L		95	78 - 127
1,2-Dichloropropane	20.0	20.2		ug/L		101	75 - 129
1,3-Dichlorobenzene	20.0	21.1		ug/L		106	80 - 120
1,3-Dichloropropene, cis-	20.0	19.7		ug/L		99	72 - 125
1,3-Dichloropropene, trans-	20.0	19.9		ug/L		99	69 - 125
1,4-Dichlorobenzene	20.0	21.4		ug/L		107	79 - 120
2-Butanone (MEK)	100	81.8		ug/L		82	56 - 150
2-Hexanone	100	87.3		ug/L		87	64 - 150
4-Methyl-2-pentanone (MIBK)	100	96.7		ug/L		97	77 - 130
Acetone	100	82.7		ug/L		83	19 - 150
Benzene	20.0	20.8		ug/L		104	76 - 125
Bromochloromethane	20.0	19.4		ug/L		97	71 - 137
Bromodichloromethane	20.0	20.8		ug/L		104	78 - 127
Bromoform	20.0	18.8		ug/L		94	65 - 124
Bromomethane	20.0	17.1		ug/L		85	10 - 150
Carbon disulfide	20.0	21.0		ug/L		105	69 - 131
Carbon tetrachloride	20.0	22.8		ug/L		114	71 - 138
Chlorobenzene	20.0	20.2		ug/L		101	80 - 120
Chloroethane	20.0	21.4		ug/L		107	40 - 150
Chloroform	20.0	20.4		ug/L		102	81 - 127
Chloromethane	20.0	20.8		ug/L		104	45 - 150
Dibromochloromethane	20.0	19.4		ug/L		97	78 - 120
Ethylbenzene	20.0	21.0		ug/L		105	80 - 120
Isopropylbenzene	20.0	22.8		ug/L		114	80 - 127
Methylene Chloride	20.0	19.6		ug/L		98	80 - 126
m-Xylene & p-Xylene	20.0	20.6		ug/L		103	80 - 121
o-Xylene	20.0	20.3		ug/L		101	80 - 120
Styrene	20.0	20.9		ug/L		105	75 - 124
Tetrachloroethene	20.0	22.8		ug/L		114	71 - 132
Toluene	20.0	20.8		ug/L		104	80 - 120
Trichloroethene	20.0	19.7		ug/L		99	77 - 127
Trichlorofluoromethane	20.0	22.1		ug/L		111	50 - 150
Vinyl chloride	20.0	21.6		ug/L		108	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 137*
4-Bromofluorobenzene	*100*		*70 - 131*
Dibromofluoromethane (Surr)	*104*		*72 - 136*
Toluene-d8 (Surr)	*102*		*74 - 120*

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

Lab Sample ID: 460-113803-B-1 MS
Matrix: Water
Analysis Batch: 369165

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.28	U	200	213		ug/L		106	76 - 131
1,1,2,2-Tetrachloroethane	0.19	U	200	196		ug/L		98	65 - 128
1,1,2-Trichloroethane	0.080	U	200	191		ug/L		96	77 - 122
1,1-Dichloroethane	0.24	U	200	201		ug/L		100	77 - 129
1,1-Dichloroethene	0.34	U	200	198		ug/L		99	67 - 133
1,2-Dichlorobenzene	0.22	U	200	203		ug/L		101	80 - 121
1,2-Dichloroethane	0.25	U	200	199		ug/L		100	73 - 131
1,2-Dichloroethene, cis-	0.26	U	200	188		ug/L		94	82 - 127
1,2-Dichloroethene, trans-	0.18	U	200	187		ug/L		94	78 - 127
1,2-Dichloropropane	0.18	U	200	197		ug/L		99	75 - 129
1,3-Dichlorobenzene	0.33	U	200	199		ug/L		100	80 - 120
1,3-Dichloropropene, cis-	0.16	U	200	187		ug/L		93	72 - 125
1,3-Dichloropropene, trans-	0.19	U	200	186		ug/L		93	69 - 125
1,4-Dichlorobenzene	0.33	U	200	197		ug/L		99	79 - 120
2-Butanone (MEK)	2.2	U	1000	776		ug/L		78	56 - 150
2-Hexanone	0.72	U	1000	805		ug/L		80	64 - 150
4-Methyl-2-pentanone (MIBK)	0.63	U	1000	942		ug/L		94	77 - 130
Acetone	1.1	U	1000	745		ug/L		74	19 - 150
Benzene	0.090	U	200	203		ug/L		101	76 - 125
Bromochloromethane	0.30	U	200	180		ug/L		90	71 - 137
Bromodichloromethane	0.42	J	200	202		ug/L		101	78 - 127
Bromoform	0.18	U	200	173		ug/L		87	65 - 124
Bromomethane	0.18	U	200	150		ug/L		75	10 - 150
Carbon disulfide	0.22	U	200	203		ug/L		102	69 - 131
Carbon tetrachloride	0.33	U	200	222		ug/L		111	71 - 138
Chlorobenzene	0.24	U	200	193		ug/L		96	80 - 120
Chloroethane	0.37	U	200	202		ug/L		101	40 - 150
Chloroform	4.2		200	203		ug/L		100	81 - 127
Chloromethane	0.22	U	200	191		ug/L		96	45 - 150
Dibromochloromethane	0.22	U	200	185		ug/L		93	78 - 120
Ethylbenzene	0.30	U	200	201		ug/L		100	80 - 120
Isopropylbenzene	0.32	U	200	223		ug/L		112	80 - 127
Methylene Chloride	0.21	U	200	189		ug/L		95	80 - 126
m-Xylene & p-Xylene	0.28	U	200	199		ug/L		100	80 - 121
o-Xylene	0.32	U	200	197		ug/L		98	80 - 120
Styrene	0.17	U	200	202		ug/L		101	75 - 124
Tetrachloroethene	0.12	U	200	229		ug/L		115	71 - 132
Toluene	0.25	U	200	200		ug/L		100	80 - 120
Trichloroethene	0.22	U	200	205		ug/L		102	77 - 127
Trichlorofluoromethane	0.15	U	200	210		ug/L		105	50 - 150
Vinyl chloride	0.060	U	200	204		ug/L		102	53 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 137*
4-Bromofluorobenzene	*97*		*70 - 131*
Dibromofluoromethane (Surr)	*100*		*72 - 136*
Toluene-d8 (Surr)	*100*		*74 - 120*

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

Lab Sample ID: 460-113803-B-1 MSD
Matrix: Water
Analysis Batch: 369165

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.28	U	200	217		ug/L		109	76 - 131	2	30
1,1,2,2-Tetrachloroethane	0.19	U	200	208		ug/L		104	65 - 128	6	30
1,1,2-Trichloroethane	0.080	U	200	195		ug/L		97	77 - 122	2	30
1,1-Dichloroethane	0.24	U	200	201		ug/L		100	77 - 129	0	30
1,1-Dichloroethene	0.34	U	200	205		ug/L		102	67 - 133	3	30
1,2-Dichlorobenzene	0.22	U	200	205		ug/L		103	80 - 121	1	30
1,2-Dichloroethane	0.25	U	200	209		ug/L		105	73 - 131	5	30
1,2-Dichloroethene, cis-	0.26	U	200	187		ug/L		93	82 - 127	0	30
1,2-Dichloroethene, trans-	0.18	U	200	195		ug/L		98	78 - 127	4	30
1,2-Dichloropropane	0.18	U	200	202		ug/L		101	75 - 129	2	30
1,3-Dichlorobenzene	0.33	U	200	203		ug/L		101	80 - 120	2	30
1,3-Dichloropropene, cis-	0.16	U	200	193		ug/L		96	72 - 125	3	30
1,3-Dichloropropene, trans-	0.19	U	200	195		ug/L		98	69 - 125	5	30
1,4-Dichlorobenzene	0.33	U	200	206		ug/L		103	79 - 120	4	30
2-Butanone (MEK)	2.2	U	1000	797		ug/L		80	56 - 150	3	30
2-Hexanone	0.72	U	1000	855		ug/L		86	64 - 150	6	30
4-Methyl-2-pentanone (MIBK)	0.63	U	1000	970		ug/L		97	77 - 130	3	30
Acetone	1.1	U	1000	799		ug/L		80	19 - 150	7	30
Benzene	0.090	U	200	205		ug/L		102	76 - 125	1	30
Bromochloromethane	0.30	U	200	191		ug/L		96	71 - 137	6	30
Bromodichloromethane	0.42	J	200	207		ug/L		103	78 - 127	2	30
Bromoform	0.18	U	200	175		ug/L		87	65 - 124	1	30
Bromomethane	0.18	U	200	164		ug/L		82	10 - 150	9	30
Carbon disulfide	0.22	U	200	207		ug/L		104	69 - 131	2	30
Carbon tetrachloride	0.33	U	200	233		ug/L		117	71 - 138	5	30
Chlorobenzene	0.24	U	200	194		ug/L		97	80 - 120	1	30
Chloroethane	0.37	U	200	242		ug/L		121	40 - 150	18	30
Chloroform	4.2		200	210		ug/L		103	81 - 127	3	30
Chloromethane	0.22	U	200	198		ug/L		99	45 - 150	3	30
Dibromochloromethane	0.22	U	200	189		ug/L		95	78 - 120	2	30
Ethylbenzene	0.30	U	200	210		ug/L		105	80 - 120	4	30
Isopropylbenzene	0.32	U	200	230		ug/L		115	80 - 127	3	30
Methylene Chloride	0.21	U	200	198		ug/L		99	80 - 126	5	30
m-Xylene & p-Xylene	0.28	U	200	203		ug/L		102	80 - 121	2	30
o-Xylene	0.32	U	200	199		ug/L		99	80 - 120	1	30
Styrene	0.17	U	200	212		ug/L		106	75 - 124	5	30
Tetrachloroethene	0.12	U	200	224		ug/L		112	71 - 132	2	30
Toluene	0.25	U	200	208		ug/L		104	80 - 120	4	30
Trichloroethene	0.22	U	200	200		ug/L		100	77 - 127	2	30
Trichlorofluoromethane	0.15	U	200	214		ug/L		107	50 - 150	2	30
Vinyl chloride	0.060	U	200	213		ug/L		107	53 - 142	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 137*
4-Bromofluorobenzene	*99*		*70 - 131*
Dibromofluoromethane (Surr)	*105*		*72 - 136*
Toluene-d8 (Surr)	*103*		*74 - 120*

GC/MS VOA

Analysis Batch: 368877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-113754-1 - DL	Pre-Carb_20160510	Total/NA	Water	8260C	
460-113754-7	POST-CARB_20160510-COMPOSITE	Total/NA	Water	8260C	
460-113754-7 MS	POST-CARB_20160510-COMPOSITE	Total/NA	Water	8260C	
460-113754-7 MSD	POST-CARB_20160510-COMPOSITE	Total/NA	Water	8260C	
460-113754-8	TRIPBLANK_20160510	Total/NA	Water	8260C	
LCS 460-368877/3	Lab Control Sample	Total/NA	Water	8260C	
MB 460-368877/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 368978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-113754-1	Pre-Carb_20160510	Total/NA	Water	8260C	
LCS 460-368978/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 460-368978/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 460-368978/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 369165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-113754-2 - DL	Primary-EFF_20160510	Total/NA	Water	8260C	
460-113754-2	Primary-EFF_20160510	Total/NA	Water	8260C	
460-113803-B-1 MS	Matrix Spike	Total/NA	Water	8260C	
460-113803-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
LCS 460-369165/3	Lab Control Sample	Total/NA	Water	8260C	
MB 460-369165/7	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown

TestAmerica Job ID: 460-113754-1

Client Sample ID: Pre-Carb_20160510

Lab Sample ID: 460-113754-1
Matrix: Water
Date Collected: 05/10/16 10:10
Date Received: 05/11/16 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	20	368877	05/19/16 16:18	DAN	TAL EDI
Total/NA	Analysis	8260C		5	368978	05/20/16 06:52	DAN	TAL EDI

Client Sample ID: Primary-EFF_20160510

Lab Sample ID: 460-113754-2
Matrix: Water
Date Collected: 05/10/16 10:20
Date Received: 05/11/16 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	5	369165	05/20/16 22:51	MZS	TAL EDI
Total/NA	Analysis	8260C		1	369165	05/20/16 23:17	MZS	TAL EDI

Client Sample ID: POST-CARB_20160510-COMPOSITE

Lab Sample ID: 460-113754-7
Matrix: Water
Date Collected: 05/10/16 10:30
Date Received: 05/11/16 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	368877	05/19/16 15:26	DAN	TAL EDI

Client Sample ID: TRIPBLANK_20160510

Lab Sample ID: 460-113754-8
Matrix: Water
Date Collected: 05/10/16 00:00
Date Received: 05/11/16 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	368877	05/19/16 12:50	DAN	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Certification Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown

TestAmerica Job ID: 460-113754-1

Laboratory: TestAmerica Edison

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11452	03-31-17

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown

TestAmerica Job ID: 460-113754-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL EDI

Protocol References:

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

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown

TestAmerica Job ID: 460-113754-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-113754-1	Pre-Carb_20160510	Water	05/10/16 10:10	05/11/16 10:20
460-113754-2	Primary-EFF_20160510	Water	05/10/16 10:20	05/11/16 10:20
460-113754-7	POST-CARB_20160510-COMPOSITE	Water	05/10/16 10:30	05/11/16 10:20
460-113754-8	TRIPBLANK_20160510	Water	05/10/16 00:00	05/11/16 10:20

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CHAIN OF CUSTODY / ANALYSIS RE

460-113754 Chain of Custody

x: (732) 549-3679

1 of 1

5/23/2016

Name (for report and invoice): Kyle Block	Samplers Name (Printed): Jon Gowing	Site/Project Identification: Essex Hope Jamestown
Company: CH2M Hill	P. O. #	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program: DKQP: ☐
Address: 18 Tremont St. Suite 300	Analysis Turnaround Time: Standard ☒	
City: Boston State: MA 02108	Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone: (617) 626-7013 Fax: (810) 229-5031		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No:
Job No: 113754

Sample Identification	Date	Time	Matrix	No. of Cont.	VOCs 8260	Sample Numbers
Pre-Carb_20160510	5/10/16	1010	GW	3	X	-1
Primary-EFF_20160510		1020		3	X	-2
Post-CARB_20160510_1		1030		3	X	-3
Post-CARB_20160510-2		1100		3	X	-4
Post-CARB_20160510-3		1130		3	X	-5
Post-CARB_20160510-4		1200		3	X	-6
TRIP BLANK_20160510		—		2	X	-8
						-7

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH, 6 = Other _____, 7 = Other _____ Soil: Water:

Special Instructions: Composite all 4 POST-CARB Samples in LAB & Report as POST-CARB_20160510

Water Metals Filtered (Yes/No)? NR

Relinquished by	Company	Date / Time	Received by	Company
1)	CH2M Hill	5/10/16 @ 1300	1)	
2)			2)	T&L
3)			3)	6/11/16 10:20
4)			4) 1.0 / 2.0	C. St 66830

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). Massachusetts (M-NJ312), North Carolina (No. 578)

TAL - 0016 (0715)

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 113754

Number of Coolers: 1 IR Gun # 6

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	1 °C	2 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: _____ Date: 5/11/16

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc.

Job Number: 460-113754-1

Login Number: 113754
List Number: 1
Creator: Rivera, Kenneth

List Source: TestAmerica Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	565830
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	2°C, IR #6
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.	False	Compositing required
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

TestAmerica Job ID: 460-115057-1
Client Project/Site: Essex Hope Jamestown, NY

For:
CH2M Hill Constructors, Inc.
18 Tremont St
Suite 700
Boston, Massachusetts 02108

Attn: Mr. Kyle Block

Kristin B DeGraw

Authorized for release by:
6/20/2016 5:08:00 PM

Kristin DeGraw, Project Manager II
(732)593-2555
kristin.degraw@testamericainc.com

Table of Contents

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-115057-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
U	Indicates the analyte was analyzed for but not detected.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)

Job ID: 460-115057-1

Laboratory: TestAmerica Edison

Narrative

CASE NARRATIVE

Client: CH2M Hill Constructors, Inc.

Project: Essex Hope Jamestown, NY

Report Number: 460-115057-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

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

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

RECEIPT

The samples were received on 6/8/2016 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANICS

Samples Pre-Carb_20160607 (460-115057-1), Primary-Eff_20160607 (460-115057-2), Post-Carb_20160607 (460-115057-7) and TRIPBLANK_20160607 (460-115057-8) were analyzed for Volatile organics in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 06/20/2016.

1,2-Dichloroethene, cis- failed the recovery criteria low for the MS of sample Pre-Carb_20160607MS (460-115057-1) in batch 460-374680. Acetone failed the recovery criteria high.

1,2-Dichloroethene, cis- failed the recovery criteria low for the MSD of sample Pre-Carb_20160607MSD (460-115057-1) in batch 460-374680. Acetone exceeded the RPD limit.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

Samples Pre-Carb_20160607 (460-115057-1)[20X], Pre-Carb_20160607 (460-115057-1)[5X] and Primary-Eff_20160607 (460-115057-2) [5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Volatile organics analysis.

All other quality control parameters were within the acceptance limits.

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-115057-1

Client Sample ID: Pre-Carb_20160607 — Lab Sample ID: 460-115057-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	20		5.0	1.7	ug/L	5		8260C	Total/NA
1,2-Dichloroethene, trans-	82		5.0	0.90	ug/L	5		8260C	Total/NA
Acetone	7100		50	5.4	ug/L	5		8260C	Total/NA
Benzene	22		5.0	0.45	ug/L	5		8260C	Total/NA
Vinyl chloride	890		5.0	0.30	ug/L	5		8260C	Total/NA
1,2-Dichloroethene, cis- - DL	6600	D	20	5.2	ug/L	20		8260C	Total/NA
Trichloroethene - DL	4200	D	20	4.4	ug/L	20		8260C	Total/NA

Client Sample ID: Primary-Eff_20160607 — Lab Sample ID: 460-115057-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	18		1.0	0.26	ug/L	1		8260C	Total/NA
2-Butanone (MEK)	5.4	J	10	2.2	ug/L	1		8260C	Total/NA
Trichloroethene	2.3		1.0	0.22	ug/L	1		8260C	Total/NA
Acetone - DL	6300	D	50	5.4	ug/L	5		8260C	Total/NA
Vinyl chloride - DL	2000	D	5.0	0.30	ug/L	5		8260C	Total/NA

Client Sample ID: Post-Carb_20160607 — Lab Sample ID: 460-115057-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	0.39	J	1.0	0.26	ug/L	1		8260C	Total/NA
Acetone	1800		10	1.1	ug/L	1		8260C	Total/NA
Vinyl chloride	9.1		1.0	0.060	ug/L	1		8260C	Total/NA

Client Sample ID: TRIPBLANK_20160607 — Lab Sample ID: 460-115057-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	0.73	J	1.0	0.26	ug/L	1		8260C	Total/NA
Trichloroethene	0.74	J	1.0	0.22	ug/L	1		8260C	Total/NA
Vinyl chloride	0.30	J	1.0	0.060	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Pre-Carb_20160607
Date Collected: 06/07/16 08:50
Date Received: 06/08/16 09:30

Lab Sample ID: 460-115057-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.4	U	5.0	1.4	ug/L			06/20/16 10:29	5
1,1,2,2-Tetrachloroethane	0.95	U	5.0	0.95	ug/L			06/20/16 10:29	5
1,1,2-Trichloroethane	0.40	U	5.0	0.40	ug/L			06/20/16 10:29	5
1,1-Dichloroethane	1.2	U	5.0	1.2	ug/L			06/20/16 10:29	5
1,1-Dichloroethene	**20**		5.0	1.7	ug/L			06/20/16 10:29	5
1,2-Dichlorobenzene	1.1	U	5.0	1.1	ug/L			06/20/16 10:29	5
1,2-Dichloroethane	1.3	U	5.0	1.3	ug/L			06/20/16 10:29	5
1,2-Dichloroethene, trans-	**82**		5.0	0.90	ug/L			06/20/16 10:29	5
1,2-Dichloropropane	0.90	U	5.0	0.90	ug/L			06/20/16 10:29	5
1,3-Dichlorobenzene	1.7	U	25	1.7	ug/L			06/20/16 10:29	5
1,3-Dichloropropene, cis-	0.80	U	5.0	0.80	ug/L			06/20/16 10:29	5
1,3-Dichloropropene, trans-	0.95	U	5.0	0.95	ug/L			06/20/16 10:29	5
1,4-Dichlorobenzene	1.7	U	5.0	1.7	ug/L			06/20/16 10:29	5
2-Butanone (MEK)	11	U	50	11	ug/L			06/20/16 10:29	5
2-Hexanone	3.6	U	50	3.6	ug/L			06/20/16 10:29	5
4-Methyl-2-pentanone (MIBK)	3.2	U	50	3.2	ug/L			06/20/16 10:29	5
Acetone	**7100**		50	5.4	ug/L			06/20/16 10:29	5
Benzene	**22**		5.0	0.45	ug/L			06/20/16 10:29	5
Bromochloromethane	1.5	U	5.0	1.5	ug/L			06/20/16 10:29	5
Bromodichloromethane	0.75	U	5.0	0.75	ug/L			06/20/16 10:29	5
Bromoform	0.90	U	5.0	0.90	ug/L			06/20/16 10:29	5
Bromomethane	0.90	U	5.0	0.90	ug/L			06/20/16 10:29	5
Carbon disulfide	1.1	U	5.0	1.1	ug/L			06/20/16 10:29	5
Carbon tetrachloride	1.7	U	5.0	1.7	ug/L			06/20/16 10:29	5
Chlorobenzene	1.2	U	5.0	1.2	ug/L			06/20/16 10:29	5
Chloroethane	1.9	U	5.0	1.9	ug/L			06/20/16 10:29	5
Chloroform	1.1	U	5.0	1.1	ug/L			06/20/16 10:29	5
Chloromethane	1.1	U	5.0	1.1	ug/L			06/20/16 10:29	5
Dibromochloromethane	1.1	U	5.0	1.1	ug/L			06/20/16 10:29	5
Ethylbenzene	1.5	U	5.0	1.5	ug/L			06/20/16 10:29	5
Isopropylbenzene	1.6	U	5.0	1.6	ug/L			06/20/16 10:29	5
Methylene Chloride	1.1	U	5.0	1.1	ug/L			06/20/16 10:29	5
m-Xylene & p-Xylene	1.4	U	50	1.4	ug/L			06/20/16 10:29	5
o-Xylene	1.6	U	5.0	1.6	ug/L			06/20/16 10:29	5
Styrene	0.85	U	5.0	0.85	ug/L			06/20/16 10:29	5
Tetrachloroethene	0.60	U	5.0	0.60	ug/L			06/20/16 10:29	5
Toluene	1.3	U	5.0	1.3	ug/L			06/20/16 10:29	5
Trichlorofluoromethane	0.75	U	5.0	0.75	ug/L			06/20/16 10:29	5
Vinyl chloride	**890**		5.0	0.30	ug/L			06/20/16 10:29	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 137*		*06/20/16 10:29*	*5*
4-Bromofluorobenzene	*94*		*70 - 131*		*06/20/16 10:29*	*5*
Dibromofluoromethane (Surr)	*103*		*72 - 136*		*06/20/16 10:29*	*5*
Toluene-d8 (Surr)	*91*		*74 - 120*		*06/20/16 10:29*	*5*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, cis-	**6600**	**D**	20	5.2	ug/L			06/20/16 09:37	20
Trichloroethene	**4200**	**D**	20	4.4	ug/L			06/20/16 09:37	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*101*	*D*	*70 - 137*		*06/20/16 09:37*	*20*
4-Bromofluorobenzene	*95*	*D*	*70 - 131*		*06/20/16 09:37*	*20*
Dibromofluoromethane (Surr)	*103*	*D*	*72 - 136*		*06/20/16 09:37*	*20*
Toluene-d8 (Surr)	*92*	*D*	*74 - 120*		*06/20/16 09:37*	*20*

Client Sample ID: Primary-Eff_20160607

Date Collected: 06/07/16 08:55
Date Received: 06/08/16 09:30

Lab Sample ID: 460-115057-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			06/20/16 10:55	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			06/20/16 10:55	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			06/20/16 10:55	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			06/20/16 10:55	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/20/16 10:55	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			06/20/16 10:55	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/20/16 10:55	1
1,2-Dichloroethene, cis-	**18**		1.0	0.26	ug/L			06/20/16 10:55	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			06/20/16 10:55	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			06/20/16 10:55	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			06/20/16 10:55	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			06/20/16 10:55	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			06/20/16 10:55	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			06/20/16 10:55	1
2-Butanone (MEK)	**5.4**	**J**	10	2.2	ug/L			06/20/16 10:55	1
2-Hexanone	0.72	U	10	0.72	ug/L			06/20/16 10:55	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			06/20/16 10:55	1
Benzene	0.090	U	1.0	0.090	ug/L			06/20/16 10:55	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			06/20/16 10:55	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			06/20/16 10:55	1
Bromoform	0.18	U	1.0	0.18	ug/L			06/20/16 10:55	1
Bromomethane	0.18	U	1.0	0.18	ug/L			06/20/16 10:55	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			06/20/16 10:55	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			06/20/16 10:55	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			06/20/16 10:55	1
Chloroethane	0.37	U	1.0	0.37	ug/L			06/20/16 10:55	1
Chloroform	0.22	U	1.0	0.22	ug/L			06/20/16 10:55	1
Chloromethane	0.22	U	1.0	0.22	ug/L			06/20/16 10:55	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			06/20/16 10:55	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			06/20/16 10:55	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			06/20/16 10:55	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			06/20/16 10:55	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			06/20/16 10:55	1
o-Xylene	0.32	U	1.0	0.32	ug/L			06/20/16 10:55	1
Styrene	0.17	U	1.0	0.17	ug/L			06/20/16 10:55	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			06/20/16 10:55	1
Toluene	0.25	U	1.0	0.25	ug/L			06/20/16 10:55	1
Trichloroethene	**2.3**		1.0	0.22	ug/L			06/20/16 10:55	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			06/20/16 10:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 137*		*06/20/16 10:55*	*1*
4-Bromofluorobenzene	*96*		*70 - 131*		*06/20/16 10:55*	*1*
Dibromofluoromethane (Surr)	*105*		*72 - 136*		*06/20/16 10:55*	*1*

Client Sample ID: Primary-Eff_20160607

Lab Sample ID: 460-115057-2
Date Collected: 06/07/16 08:55
Matrix: Water
Date Received: 06/08/16 09:30

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*94*		*74 - 120*		*06/20/16 10:55*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**6300**	**D**	50	5.4	ug/L			06/20/16 10:03	5
Vinyl chloride	**2000**	**D**	5.0	0.30	ug/L			06/20/16 10:03	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*104*	*D*	*70 - 137*		*06/20/16 10:03*	*5*
4-Bromofluorobenzene	*97*	*D*	*70 - 131*		*06/20/16 10:03*	*5*
Dibromofluoromethane (Surr)	*104*	*D*	*72 - 136*		*06/20/16 10:03*	*5*
Toluene-d8 (Surr)	*91*	*D*	*74 - 120*		*06/20/16 10:03*	*5*

Client Sample ID: Post-Carb_20160607

Lab Sample ID: 460-115057-7
Date Collected: 06/07/16 09:00
Matrix: Water
Date Received: 06/08/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			06/20/16 09:11	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			06/20/16 09:11	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			06/20/16 09:11	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			06/20/16 09:11	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/20/16 09:11	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			06/20/16 09:11	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/20/16 09:11	1
1,2-Dichloroethene, cis-	**0.39**	**J**	1.0	0.26	ug/L			06/20/16 09:11	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			06/20/16 09:11	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			06/20/16 09:11	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			06/20/16 09:11	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			06/20/16 09:11	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			06/20/16 09:11	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			06/20/16 09:11	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			06/20/16 09:11	1
2-Hexanone	0.72	U	10	0.72	ug/L			06/20/16 09:11	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			06/20/16 09:11	1
Acetone	**1800**		10	1.1	ug/L			06/20/16 09:11	1
Benzene	0.090	U	1.0	0.090	ug/L			06/20/16 09:11	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			06/20/16 09:11	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			06/20/16 09:11	1
Bromoform	0.18	U	1.0	0.18	ug/L			06/20/16 09:11	1
Bromomethane	0.18	U	1.0	0.18	ug/L			06/20/16 09:11	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			06/20/16 09:11	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			06/20/16 09:11	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			06/20/16 09:11	1
Chloroethane	0.37	U	1.0	0.37	ug/L			06/20/16 09:11	1
Chloroform	0.22	U	1.0	0.22	ug/L			06/20/16 09:11	1
Chloromethane	0.22	U	1.0	0.22	ug/L			06/20/16 09:11	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			06/20/16 09:11	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			06/20/16 09:11	1

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-115057-1

Client Sample ID: Post-Carb_20160607

Lab Sample ID: 460-115057-7
Date Collected: 06/07/16 09:00
Matrix: Water
Date Received: 06/08/16 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			06/20/16 09:11	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			06/20/16 09:11	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			06/20/16 09:11	1
o-Xylene	0.32	U	1.0	0.32	ug/L			06/20/16 09:11	1
Styrene	0.17	U	1.0	0.17	ug/L			06/20/16 09:11	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			06/20/16 09:11	1
Toluene	0.25	U	1.0	0.25	ug/L			06/20/16 09:11	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			06/20/16 09:11	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			06/20/16 09:11	1
Vinyl chloride	**9.1**		1.0	0.060	ug/L			06/20/16 09:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 137*		*06/20/16 09:11*	*1*
4-Bromofluorobenzene	*95*		*70 - 131*		*06/20/16 09:11*	*1*
Dibromofluoromethane (Surr)	*105*		*72 - 136*		*06/20/16 09:11*	*1*
Toluene-d8 (Surr)	*93*		*74 - 120*		*06/20/16 09:11*	*1*

Client Sample ID: TRIPBLANK_20160607

Lab Sample ID: 460-115057-8
Date Collected: 06/07/16 10:30
Matrix: Water
Date Received: 06/08/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			06/20/16 08:45	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			06/20/16 08:45	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			06/20/16 08:45	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			06/20/16 08:45	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/20/16 08:45	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			06/20/16 08:45	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/20/16 08:45	1
1,2-Dichloroethene, cis-	**0.73**	**J**	1.0	0.26	ug/L			06/20/16 08:45	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			06/20/16 08:45	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			06/20/16 08:45	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			06/20/16 08:45	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			06/20/16 08:45	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			06/20/16 08:45	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			06/20/16 08:45	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			06/20/16 08:45	1
2-Hexanone	0.72	U	10	0.72	ug/L			06/20/16 08:45	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			06/20/16 08:45	1
Acetone	1.1	U	10	1.1	ug/L			06/20/16 08:45	1
Benzene	0.090	U	1.0	0.090	ug/L			06/20/16 08:45	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			06/20/16 08:45	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			06/20/16 08:45	1
Bromoform	0.18	U	1.0	0.18	ug/L			06/20/16 08:45	1
Bromomethane	0.18	U	1.0	0.18	ug/L			06/20/16 08:45	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			06/20/16 08:45	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			06/20/16 08:45	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			06/20/16 08:45	1
Chloroethane	0.37	U	1.0	0.37	ug/L			06/20/16 08:45	1

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-115057-1

Client Sample ID: TRIPBLANK_20160607
Date Collected: 06/07/16 10:30
Date Received: 06/08/16 09:30

Lab Sample ID: 460-115057-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	0.22	U	1.0	0.22	ug/L			06/20/16 08:45	1
Chloromethane	0.22	U	1.0	0.22	ug/L			06/20/16 08:45	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			06/20/16 08:45	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			06/20/16 08:45	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			06/20/16 08:45	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			06/20/16 08:45	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			06/20/16 08:45	1
o-Xylene	0.32	U	1.0	0.32	ug/L			06/20/16 08:45	1
Styrene	0.17	U	1.0	0.17	ug/L			06/20/16 08:45	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			06/20/16 08:45	1
Toluene	0.25	U	1.0	0.25	ug/L			06/20/16 08:45	1
Trichloroethene	**0.74**	**J**	1.0	0.22	ug/L			06/20/16 08:45	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			06/20/16 08:45	1
Vinyl chloride	**0.30**	**J**	1.0	0.060	ug/L			06/20/16 08:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 137*		*06/20/16 08:45*	*1*
4-Bromofluorobenzene	*98*		*70 - 131*		*06/20/16 08:45*	*1*
Dibromofluoromethane (Surr)	*106*		*72 - 136*		*06/20/16 08:45*	*1*
Toluene-d8 (Surr)	*93*		*74 - 120*		*06/20/16 08:45*	*1*

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-115057-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-137)	(70-131)	(72-136)	(74-120)
460-115057-1 - DL	Pre-Carb_20160607	101 D	95 D	103 D	92 D
460-115057-1	Pre-Carb_20160607	103	94	103	91
460-115057-1 MS	Pre-Carb_20160607	104	96	103	93
460-115057-1 MSD	Pre-Carb_20160607	108	100	109	96
460-115057-2 - DL	Primary-Eff_20160607	104 D	97 D	104 D	91 D
460-115057-2	Primary-Eff_20160607	106	96	105	94
460-115057-7	Post-Carb_20160607	107	95	105	93
460-115057-8	TRIPBLANK_20160607	105	98	106	93
LCS 460-374680/3	Lab Control Sample	102	97	105	96
MB 460-374680/7	Method Blank	105	97	107	93

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 460-374680/7
Matrix: Water
Analysis Batch: 374680

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			06/20/16 08:13	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			06/20/16 08:13	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			06/20/16 08:13	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			06/20/16 08:13	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/20/16 08:13	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			06/20/16 08:13	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/20/16 08:13	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			06/20/16 08:13	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			06/20/16 08:13	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			06/20/16 08:13	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			06/20/16 08:13	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			06/20/16 08:13	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			06/20/16 08:13	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			06/20/16 08:13	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			06/20/16 08:13	1
2-Hexanone	0.72	U	10	0.72	ug/L			06/20/16 08:13	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			06/20/16 08:13	1
Acetone	1.1	U	10	1.1	ug/L			06/20/16 08:13	1
Benzene	0.090	U	1.0	0.090	ug/L			06/20/16 08:13	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			06/20/16 08:13	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			06/20/16 08:13	1
Bromoform	0.18	U	1.0	0.18	ug/L			06/20/16 08:13	1
Bromomethane	0.18	U	1.0	0.18	ug/L			06/20/16 08:13	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			06/20/16 08:13	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			06/20/16 08:13	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			06/20/16 08:13	1
Chloroethane	0.37	U	1.0	0.37	ug/L			06/20/16 08:13	1
Chloroform	0.22	U	1.0	0.22	ug/L			06/20/16 08:13	1
Chloromethane	0.22	U	1.0	0.22	ug/L			06/20/16 08:13	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			06/20/16 08:13	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			06/20/16 08:13	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			06/20/16 08:13	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			06/20/16 08:13	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			06/20/16 08:13	1
o-Xylene	0.32	U	1.0	0.32	ug/L			06/20/16 08:13	1
Styrene	0.17	U	1.0	0.17	ug/L			06/20/16 08:13	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			06/20/16 08:13	1
Toluene	0.25	U	1.0	0.25	ug/L			06/20/16 08:13	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			06/20/16 08:13	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			06/20/16 08:13	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			06/20/16 08:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 137*		*06/20/16 08:13*	*1*
4-Bromofluorobenzene	*97*		*70 - 131*		*06/20/16 08:13*	*1*
Dibromofluoromethane (Surr)	*107*		*72 - 136*		*06/20/16 08:13*	*1*
Toluene-d8 (Surr)	*93*		*74 - 120*		*06/20/16 08:13*	*1*

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

Lab Sample ID: LCS 460-374680/3
Matrix: Water
Analysis Batch: 374680

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	20.4		ug/L		102	76 - 131
1,1,2,2-Tetrachloroethane	20.0	18.4		ug/L		92	65 - 128
1,1,2-Trichloroethane	20.0	17.8		ug/L		89	77 - 122
1,1-Dichloroethane	20.0	18.9		ug/L		94	77 - 129
1,1-Dichloroethene	20.0	20.6		ug/L		103	67 - 133
1,2-Dichlorobenzene	20.0	19.3		ug/L		97	80 - 121
1,2-Dichloroethane	20.0	18.8		ug/L		94	73 - 131
1,2-Dichloroethene, cis-	20.0	19.7		ug/L		98	82 - 127
1,2-Dichloroethene, trans-	20.0	19.4		ug/L		97	78 - 127
1,2-Dichloropropane	20.0	19.3		ug/L		97	75 - 129
1,3-Dichlorobenzene	20.0	19.4		ug/L		97	80 - 120
1,3-Dichloropropene, cis-	20.0	16.9		ug/L		85	72 - 125
1,3-Dichloropropene, trans-	20.0	17.8		ug/L		89	69 - 125
1,4-Dichlorobenzene	20.0	19.0		ug/L		95	79 - 120
2-Butanone (MEK)	100	94.7		ug/L		95	56 - 150
2-Hexanone	100	97.0		ug/L		97	64 - 150
4-Methyl-2-pentanone (MIBK)	100	98.6		ug/L		99	77 - 130
Acetone	100	85.8		ug/L		86	19 - 150
Benzene	20.0	18.6		ug/L		93	76 - 125
Bromochloromethane	20.0	19.6		ug/L		98	71 - 137
Bromodichloromethane	20.0	20.0		ug/L		100	78 - 127
Bromoform	20.0	18.6		ug/L		93	65 - 124
Bromomethane	20.0	14.9		ug/L		74	10 - 150
Carbon disulfide	20.0	20.0		ug/L		100	69 - 131
Carbon tetrachloride	20.0	23.0		ug/L		115	71 - 138
Chlorobenzene	20.0	19.2		ug/L		96	80 - 120
Chloroethane	20.0	20.2		ug/L		101	40 - 150
Chloroform	20.0	19.3		ug/L		97	81 - 127
Chloromethane	20.0	17.4		ug/L		87	45 - 150
Dibromochloromethane	20.0	18.6		ug/L		93	78 - 120
Ethylbenzene	20.0	19.5		ug/L		97	80 - 120
Isopropylbenzene	20.0	21.4		ug/L		107	80 - 127
Methylene Chloride	20.0	18.9		ug/L		94	80 - 126
m-Xylene & p-Xylene	20.0	19.5		ug/L		97	80 - 121
o-Xylene	20.0	18.8		ug/L		94	80 - 120
Styrene	20.0	19.2		ug/L		96	75 - 124
Tetrachloroethene	20.0	21.5		ug/L		108	71 - 132
Toluene	20.0	19.5		ug/L		98	80 - 120
Trichloroethene	20.0	20.7		ug/L		103	77 - 127
Trichlorofluoromethane	20.0	20.8		ug/L		104	50 - 150
Vinyl chloride	20.0	18.9		ug/L		95	53 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 137*
4-Bromofluorobenzene	*97*		*70 - 131*
Dibromofluoromethane (Surr)	*105*		*72 - 136*
Toluene-d8 (Surr)	*96*		*74 - 120*

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

Lab Sample ID: 460-115057-1 MS
Matrix: Water
Analysis Batch: 374680

Client Sample ID: Pre-Carb_20160607
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.6	U	500	543		ug/L		109	76 - 131
1,1,2,2-Tetrachloroethane	3.8	U	500	469		ug/L		94	65 - 128
1,1,2-Trichloroethane	1.6	U	500	449		ug/L		90	77 - 122
1,1-Dichloroethane	4.8	U	500	504		ug/L		101	77 - 129
1,1-Dichloroethene	19	J D	500	559		ug/L		108	67 - 133
1,2-Dichlorobenzene	4.4	U	500	479		ug/L		96	80 - 121
1,2-Dichloroethane	5.0	U	500	502		ug/L		100	73 - 131
1,2-Dichloroethene, cis-	6600	D	500	6920	4	ug/L		58	82 - 127
1,2-Dichloroethene, trans-	93	D	500	617		ug/L		105	78 - 127
1,2-Dichloropropane	3.6	U	500	509		ug/L		102	75 - 129
1,3-Dichlorobenzene	6.6	U	500	478		ug/L		96	80 - 120
1,3-Dichloropropene, cis-	3.2	U	500	443		ug/L		89	72 - 125
1,3-Dichloropropene, trans-	3.8	U	500	439		ug/L		88	69 - 125
1,4-Dichlorobenzene	6.6	U	500	474		ug/L		95	79 - 120
2-Butanone (MEK)	44	U	2500	2570		ug/L		103	56 - 150
2-Hexanone	14	U	2500	2250		ug/L		90	64 - 150
4-Methyl-2-pentanone (MIBK)	13	U	2500	2410		ug/L		96	77 - 130
Acetone	8500	F1 D F2	2500	13300	F1	ug/L		195	19 - 150
Benzene	23	D	500	501		ug/L		96	76 - 125
Bromochloromethane	6.0	U	500	520		ug/L		104	71 - 137
Bromodichloromethane	3.0	U	500	523		ug/L		105	78 - 127
Bromoform	3.6	U	500	482		ug/L		96	65 - 124
Bromomethane	3.6	U	500	427		ug/L		85	10 - 150
Carbon disulfide	4.4	U	500	529		ug/L		106	69 - 131
Carbon tetrachloride	6.6	U	500	620		ug/L		124	71 - 138
Chlorobenzene	4.8	U	500	482		ug/L		96	80 - 120
Chloroethane	7.4	U	500	595		ug/L		119	40 - 150
Chloroform	4.4	U	500	531		ug/L		106	81 - 127
Chloromethane	4.4	U	500	464		ug/L		93	45 - 150
Dibromochloromethane	4.4	U	500	465		ug/L		93	78 - 120
Ethylbenzene	6.0	U	500	486		ug/L		97	80 - 120
Isopropylbenzene	6.4	U	500	549		ug/L		110	80 - 127
Methylene Chloride	4.2	U	500	519		ug/L		104	80 - 126
m-Xylene & p-Xylene	5.6	U	500	505		ug/L		101	80 - 121
o-Xylene	6.4	U	500	494		ug/L		99	80 - 120
Styrene	3.4	U	500	497		ug/L		99	75 - 124
Tetrachloroethene	2.4	U	500	544		ug/L		109	71 - 132
Toluene	5.0	U	500	498		ug/L		100	80 - 120
Trichloroethene	4200	D	500	4670	4	ug/L		98	77 - 127
Trichlorofluoromethane	3.0	U	500	556		ug/L		111	50 - 150
Vinyl chloride	910	D	500	1500		ug/L		119	53 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 137*
4-Bromofluorobenzene	*96*		*70 - 131*
Dibromofluoromethane (Surr)	*103*		*72 - 136*
Toluene-d8 (Surr)	*93*		*74 - 120*

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

Lab Sample ID: 460-115057-1 MSD
Matrix: Water
Analysis Batch: 374680

Client Sample ID: Pre-Carb_20160607
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	5.6	U	500	556		ug/L		111	76 - 131	2	30
1,1,2,2-Tetrachloroethane	3.8	U	500	497		ug/L		99	65 - 128	6	30
1,1,2-Trichloroethane	1.6	U	500	468		ug/L		94	77 - 122	4	30
1,1-Dichloroethane	4.8	U	500	512		ug/L		102	77 - 129	2	30
1,1-Dichloroethene	19	J D	500	565		ug/L		109	67 - 133	1	30
1,2-Dichlorobenzene	4.4	U	500	503		ug/L		101	80 - 121	5	30
1,2-Dichloroethane	5.0	U	500	509		ug/L		102	73 - 131	1	30
1,2-Dichloroethene, cis-	6600	D	500	6940	4	ug/L		60	82 - 127	0	30
1,2-Dichloroethene, trans-	93	D	500	625		ug/L		106	78 - 127	1	30
1,2-Dichloropropane	3.6	U	500	518		ug/L		104	75 - 129	2	30
1,3-Dichlorobenzene	6.6	U	500	513		ug/L		103	80 - 120	7	30
1,3-Dichloropropene, cis-	3.2	U	500	454		ug/L		91	72 - 125	3	30
1,3-Dichloropropene, trans-	3.8	U	500	451		ug/L		90	69 - 125	3	30
1,4-Dichlorobenzene	6.6	U	500	503		ug/L		101	79 - 120	6	30
2-Butanone (MEK)	44	U	2500	2730		ug/L		109	56 - 150	6	30
2-Hexanone	14	U	2500	2330		ug/L		93	64 - 150	3	30
4-Methyl-2-pentanone (MIBK)	13	U	2500	2490		ug/L		100	77 - 130	3	30
Acetone	8500	F1 D F2	2500	9660	F2	ug/L		47	19 - 150	32	30
Benzene	23	D	500	513		ug/L		98	76 - 125	3	30
Bromochloromethane	6.0	U	500	541		ug/L		108	71 - 137	4	30
Bromodichloromethane	3.0	U	500	539		ug/L		108	78 - 127	3	30
Bromoform	3.6	U	500	492		ug/L		98	65 - 124	2	30
Bromomethane	3.6	U	500	436		ug/L		87	10 - 150	2	30
Carbon disulfide	4.4	U	500	533		ug/L		107	69 - 131	1	30
Carbon tetrachloride	6.6	U	500	609		ug/L		122	71 - 138	2	30
Chlorobenzene	4.8	U	500	485		ug/L		97	80 - 120	1	30
Chloroethane	7.4	U	500	568		ug/L		114	40 - 150	5	30
Chloroform	4.4	U	500	539		ug/L		108	81 - 127	1	30
Chloromethane	4.4	U	500	474		ug/L		95	45 - 150	2	30
Dibromochloromethane	4.4	U	500	476		ug/L		95	78 - 120	2	30
Ethylbenzene	6.0	U	500	503		ug/L		101	80 - 120	3	30
Isopropylbenzene	6.4	U	500	551		ug/L		110	80 - 127	0	30
Methylene Chloride	4.2	U	500	511		ug/L		102	80 - 126	2	30
m-Xylene & p-Xylene	5.6	U	500	504		ug/L		101	80 - 121	0	30
o-Xylene	6.4	U	500	501		ug/L		100	80 - 120	1	30
Styrene	3.4	U	500	506		ug/L		101	75 - 124	2	30
Tetrachloroethene	2.4	U	500	559		ug/L		112	71 - 132	3	30
Toluene	5.0	U	500	497		ug/L		99	80 - 120	0	30
Trichloroethene	4200	D	500	4730	4	ug/L		111	77 - 127	1	30
Trichlorofluoromethane	3.0	U	500	581		ug/L		116	50 - 150	4	30
Vinyl chloride	910	D	500	1470		ug/L		113	53 - 142	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 137*
4-Bromofluorobenzene	*100*		*70 - 131*
Dibromofluoromethane (Surr)	*109*		*72 - 136*
Toluene-d8 (Surr)	*96*		*74 - 120*

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-115057-1

GC/MS VOA

Analysis Batch: 374680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-115057-1 - DL	Pre-Carb_20160607	Total/NA	Water	8260C	
460-115057-1	Pre-Carb_20160607	Total/NA	Water	8260C	
460-115057-1 MS	Pre-Carb_20160607	Total/NA	Water	8260C	
460-115057-1 MSD	Pre-Carb_20160607	Total/NA	Water	8260C	
460-115057-2 - DL	Primary-Eff_20160607	Total/NA	Water	8260C	
460-115057-2	Primary-Eff_20160607	Total/NA	Water	8260C	
460-115057-7	Post-Carb_20160607	Total/NA	Water	8260C	
460-115057-8	TRIPBLANK_20160607	Total/NA	Water	8260C	
LCS 460-374680/3	Lab Control Sample	Total/NA	Water	8260C	
MB 460-374680/7	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-115057-1

Client Sample ID: Pre-Carb_20160607
Lab Sample ID: 460-115057-1
Date Collected: 06/07/16 08:50
Matrix: Water
Date Received: 06/08/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	20	374680	06/20/16 09:37	AAT	TAL EDI
Total/NA	Analysis	8260C		5	374680	06/20/16 10:29	AAT	TAL EDI

Client Sample ID: Primary-Eff_20160607
Lab Sample ID: 460-115057-2
Date Collected: 06/07/16 08:55
Matrix: Water
Date Received: 06/08/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	5	374680	06/20/16 10:03	AAT	TAL EDI
Total/NA	Analysis	8260C		1	374680	06/20/16 10:55	AAT	TAL EDI

Client Sample ID: Post-Carb_20160607
Lab Sample ID: 460-115057-7
Date Collected: 06/07/16 09:00
Matrix: Water
Date Received: 06/08/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	374680	06/20/16 09:11	AAT	TAL EDI

Client Sample ID: TRIPBLANK_20160607
Lab Sample ID: 460-115057-8
Date Collected: 06/07/16 10:30
Matrix: Water
Date Received: 06/08/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	374680	06/20/16 08:45	AAT	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Certification Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-115057-1

Laboratory: TestAmerica Edison

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11452	03-31-17

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-115057-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL EDI

Protocol References:

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

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Essex Hope Jamestown, NY

TestAmerica Job ID: 460-115057-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-115057-1	Pre-Carb_20160607	Water	06/07/16 08:50	06/08/16 09:30
460-115057-2	Primary-Eff_20160607	Water	06/07/16 08:55	06/08/16 09:30
460-115057-7	Post-Carb_20160607	Water	06/07/16 09:00	06/08/16 09:30
460-115057-8	TRIPBLANK_20160607	Water	06/07/16 10:30	06/08/16 09:30

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice) Kyle Block	Samplers Name (Printed) Jon Gowey	Site/Project Identification Essex Hope Jamestown
Company CH2M HILL	P. O. #	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program: DKQP: ☐
Address 18 Tremont St Suite 300	Analysis Turnaround Time: Standard ☒	
City Boston State MA 02109	Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone (617) 626-7013 Fax (810)229-5031		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No: Job No: 115057

Sample Identification	Date	Time	Matrix	No. of Cont.	8260 VOCs	Sample Numbers
Pre-Carb_20160607	06/07/16	0850	GW	3	X	-1
Pump-ERE_20160607		0855			X	-2
Post-Carb_20160607_1		0900			X	-3
Post-Carb_20160607_2		0930			X	-4
Post-Carb_20160607_3		1000			X	-5
Post-Carb_20160607_4		1030			X	-6, -7
TRIPBLANK_20160607				2	X	-8

460-115057 Chain of Custody

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH Soil:
6 = Other _____, 7 = Other _____ Water:

Special Instructions Composite all 4 Post Carb Samples in LAB Report as Post-CARB_20160607 Water Metals Filtered (Yes/No)? NR

Relinquished by	Company	Date / Time	Received by	Company
1)	CH2MHILL	6/7/16 1300	1)	
Relinquished by 2)	Company	Date / Time 6/8/16 930	Received by 2)	Company TA Edison
Relinquished by 3)	Company	Date / Time	Received by 3)	Company
Relinquished by 4)	Company	Date / Time	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). TAL - 0016 (0715)

Massachusetts (M-NJ312), North Carolina (No. 578)

COC #700463 3.1 °C IR#7

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 115057

Number of Coolers: 1 IR Gun #: 7

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	3.1 °C	3.1 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: _____ Date: 6/8/16

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc.

Job Number: 460-115057-1

Login Number: 115057
List Number: 1
Creator: Lysy, Susan

List Source: TestAmerica Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	700463
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	3.1°C IR#7
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.	N/A	
Samples do not require splitting or compositing.	False	COMPOSITE REQUIRED
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.