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August 25, 2017

Mr. Maurice Moore
Division of Hazardous Waste Management
New York State Department of Environmental Protection
270 Michigan Ave.
Buffalo, NY 14203-2999

Subject: Semiannual Performance Monitoring Report: January through June 2017
Essex/Hope Site, Jamestown, New York

Dear Mr. Moore:

CH2M HILL Engineers, Inc. (CH2M) has prepared this Semiannual Performance Monitoring Report involving the Essex Specialty Products, Inc., facility in Jamestown, New York (Essex/Hope site). This report, prepared in accordance with the March 2014 Performance Monitoring Plan (PMP, developed by URS Corporation), covers the period from January 1 through June 30, 2017. Site monitoring will continue in compliance with the current PMP (URS, 2014), which is effective from 2014 through 2016 and will be revised in 2017 for submittal before year's end.

General Operations and Maintenance

During the reporting period, approximately 801,692 gallons of groundwater were treated and discharged to the City of Jamestown's publicly owned treatment works (POTW). System sedimentation within the extraction pumps caused minor losses of performance that were intermittently experienced in April and May. No noncompliance events occurred between January and June 2017.

Operational issues observed and nonroutine maintenance performed during the reporting period are the following:

- The granular activated carbon (GAC) within the vessels was changed out on January 4, 2017, and the system was off for 24 hours for GAC hydration.
- Well RW-3S was offline from March 23 through June 6, 2017 because of pump variable speed controller issues and low water levels.
- A cracked piping segment on the system's discharge line was replaced on April 4, 2017.
- The entire system was offline for three and half days in April (from April 6 to April 10, 2017) because of a high-level alarm in the equalization tank, and for seven days in June (from June 5 to June 13, 2017) due to an unexpected power loss within the treatment building.
- All five recovery wells experienced other minor periodic shutdowns for mechanical and electrical repairs, equipment replacement, or maintenance.

As shown on Figure 1, the pumping rates and discharge volumes for the reporting period were generally consistent or above historical rates for all active recovery wells (RW-1S, RW-2S, RW-2D, RW-3S, and RW-6D). In 2015 and 2016, extraction rates for RW-2S declined below the long-term average rate of

0.7-gallon per minute (gpm), but subsequently increased upon pump motor replacement on June 29, 2016, with a rate of 1.04 gpm for the first half of 2017. Extraction rates at RW-6D were significantly higher in 2015 and 2016, but declined in 2017 to 0.24-gpm, which is consistent with the historical average rate of 0.26 gpm. RW-3S averaged 0.07-gpm in the first half of 2017. Improvements in performance are being achieved by weekly pump and flow meter maintenance, and as-needed equipment replacement. The recovery wells were inspected on May 24, 2017, and were generally in good condition with minimal sediment accumulation.

The asphalt and concrete covers were inspected on April 28, 2017, and were found to be in good condition. Monthly checks are made from the outside of the 159 Hopkins Avenue residence to ensure the vapor mitigation system fan is in operation. A full inspection conducted on February 16, 2017, found the subslab depressurization system (SSDS) to be in good operating condition. Three air samples were collected (two inside and one outside the 159 Hopkins Avenue residence) over a 24-hour period beginning on April 18, 2017. The results of the sampling indicated that there were no detections above laboratory detection limits for cis-1,2-dichloroethene and trichloroethene within the residence, as detailed in the technical memorandum *159 Hopkins Avenue Mitigation System at the Essex-Hope Site* (CH2M, 2017a) provided to the New York State Department of Environmental Conservation (NYSDEC) for approval on June 16, 2017.

The following sections provide an evaluation of the effectiveness of the remedial measures at the site in terms of treatment system operations and metrics, groundwater elevation, and analytical data collected during the reporting period.

Groundwater Flow Evaluation

Water level measurements were collected on March 13 and June 27, 2017. Attachment 1 contains the water level data. Figures 2 through 5 are groundwater contour maps illustrating pumping conditions during the reporting period. Groundwater elevations were hand-contoured and considered the effects of the pumping wells, although water level elevations from the pumping wells were not used in developing the contours. Consistent with historical measurements, groundwater elevations in the shallow aquifer were generally higher than elevations in the deep aquifer in March and June 2017, indicating a downward vertical gradient. However, the presence of the shallow silty clay in most areas of the site likely impedes or prevents vertical flow between the two aquifers.

RW-1S, RW-2S, and RW-3S were pumping at combined rates of approximately 1.29 and 1.77 gpm in March and June 2017, respectively, resulting in capture of shallow groundwater in the north parking lot area. Although RW-3S was offline from March 23 through June 6, 2017, combined pumping rates in June 2017 were not affected. Shallow groundwater flow was generally to the northeast in areas not captured by the pumping of the shallow recovery wells. Approximate shallow capture zones based on groundwater contours are depicted on Figures 2 and 4; note that groundwater near RW-3S is hydraulically upgradient of RW-1S and RW-2S and is likely captured by those wells.

Deep recovery wells RW-2D and RW-6D were pumping at combined rates of approximately 3.13 and 2.65 gpm in March and June 2017. Groundwater flow near the deep recovery wells (RW-2D and RW-6D) was towards these wells in March and June 2017, with a general northeasterly flow direction in areas outside the capture zones. Approximate deep capture zones based on groundwater contours are depicted on Figures 3 and 5.

Recovery Well and System Sampling Results

Performance monitoring for 2017 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 February 2, 2017. Alpha Analytical, Inc. (Westborough, Massachusetts)

analyzed the samples for volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8260B.

The total toxic organics (TTOs) measured in the influent of the deep recovery wells were higher than the TTOs measured in the influent of the shallow wells, which is consistent with past results. As shown on Figure 6, approximately 72.42 pounds of VOCs were removed in the first half of 2017. The rate of VOC mass removal in the first half of 2017 was 0.40-pound per day (lb/day), which is slightly less than the rate achieved in 2016 (0.52-lb/day) but slightly above the long-term average of 0.35-lb/day. Mass removal rates had increased through time because of increasing extraction volumes and VOC concentrations, including acetone[1]; however, lower pumping rates and significantly decreased acetone concentrations in the groundwater adjacent to at RW-6D in 2017 resulted in a decreased mass removal rate when compared to those achieved in 2015 and 2016. All other active recovery wells (RW-1S, RW-2S, RW-2D, and RW-3S) continue to show steady to slightly declining mass removal rates, as expected. Consistent with recent results, 99.6 percent of the mass removal in the first half of 2017 was from the deep extraction wells (72.13 pounds) compared to the shallow wells (0.29-pound). Table 1 summarizes the recovery well analytical results, and Attachment 2 contains the supporting Laboratory Certificates of Analysis for the reporting period.

In accordance with the City of Jamestown Board of Public Utilities (BPU) Industrial Wastewater Discharge Permit No. 26 (Permit), the treatment system is monitored for pH and VOCs to ensure compliance with the discharge requirements (BPU, 2012). Sampling points include the influent, primary carbon effluent, and secondary carbon effluent (discharge to the POTW). These points are sampled each month and reported to the Jamestown BPU semiannually. A City of Jamestown BPU representative was onsite on May 17, 2017, to collect samples from the system effluent discharged to the POTW. In accordance with the BPU Permit, a Semiannual Self-Monitoring Report was submitted to the City of Jamestown on July 19, 2017, providing the first half of 2017 sampling results (CH2M, 2017b). Tables 2 through 4 summarize the groundwater treatment system data. These tables present the system influent, individual carbon vessel effluent, and post-carbon (system discharge to POTW) concentrations. There were no discharge exceedances during this reporting period.

Conclusions

This report has been prepared to evaluate the effectiveness of the remedial measures present at the site on a semiannual basis, fulfilling the reporting requirements stipulated in the current PMP (URS, 2014). The conclusions are the following:

- The remedial systems for groundwater extraction and treatment have continued to operate through June 2017 with some intermittent shutdowns for maintenance/repairs.
- The institutional controls and engineering controls (IC/EC), including Deed Restrictions and Covenants and the groundwater extraction and treatment system, continue to be in force and operative at the site.
- Discharges from the groundwater treatment system were monitored as required and did not exceed the Jamestown BPU discharge permit limits.
- Performance and operations and monitoring (O&M) and inspections were conducted as required by the PMP (URS, 2014) and the O&M Plan (CH2M, 2017c), including quarterly groundwater elevation

[1] Acetone is extracted from the deep water-bearing zone; however, when present at high concentrations (over 1,000 micrograms per liter) in the influent, the GAC does not effectively remove this compound because of its higher molecular weight and solubility. Hence, remaining untreated acetone is discharged to the POTW.

measurements, routine treatment system inspections and flow readings of all recovery wells and the total wastewater treatment system flow, monthly influent/effluent sampling, maintenance of carbon vessels, inspections of monitoring and recovery wells, asphalt/concrete cover, and the SSDS system.

As recommended in the 2016 Periodic Review Report (CH2M, 2017d), approved by NYSDEC via letter dated May 1, 2017, given the low pumping rates and location hydraulically upgradient from RW-1S and RW-2S, pumping at RW-3S was shut down in August 8, 2017. Quarterly sitewide water level measurements will continue to include RW-3S, and semiannual extraction well sampling will include RW-3S (for the next year) to assess any change in flow hydraulics/capture and any changes in groundwater quality resulting from shutdown.

Please contact me at 617-626-7013 should you have any questions or comments regarding the Essex/Hope Jamestown Site.

Sincerely,

CH2M HILL Engineers, Inc.

Kyle Block
Project Manager

cc: Tim King (Essex/Hope)
Angela Martin (New York State Department of Health)
Jennifer Dougherty, Esq. (Division of Environmental Enforcement)
Carlo J. Montisano (Custom Production Manufacturing, Inc.)

Enclosures:
References
Table 1 – 2017 1st Quarter Semiannual Recovery Well Sampling – Detected Parameters
Table 2 – January-June 2017 System Monitoring – Detected Parameters in Pre-Carbon Samples
Table 3 – January-June 2017 System Monitoring – Detected Parameters in Primary Carbon Samples
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Figure 1 – Annual Groundwater Extraction by Recovery Well
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Figure 3 – Deep WBZ Potentiometric Surface Map – March 13th, 2017
Figure 4 – Shallow WBZ Potentiometric Surface Map – June 27th, 2017
Figure 5 – Deep WBZ Potentiometric Surface Map – June 27th, 2017
Figure 6 – Annual VOC Mass Removed by Well
Attachment 1 – Water Level Measurement Data
Attachment 2 – Laboratory Analytical Reports – January, February, March, April, May, and June 2017

References

CH2M HILL Engineers, Inc. (CH2M). 2017a. *159 Hopkins Avenue Mitigation System at the Essex/Hope Site, Jamestown, New York*. Technical Memorandum. June 16.

CH2M HILL Engineers, Inc. (CH2M). 2017b. *Letter to City of Jamestown Board of Public Utilities (BPU), re: Essex/Hope Jamestown Site, 125 Blackstone Ave, Jamestown, NY 14701, Semiannual Self-Monitoring Report for January through June 2017, City of Jamestown Board of Public Utilities (BPU) Permit No. 26*. July 19.

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CH2M HILL Engineers, Inc. (CH2M). 2017d. *2016 Annual Periodic Review Report, Essex/Hope Site, Jamestown, New York*. March.

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New York State Department of Environmental Conservation (NYSDEC). 2017. *Letter to Essex Specialty Products, re: Site Management (SM) Periodic Review Report (PRR) Response Letter, Essex/Hope Site, Jamestown, Chautauqua County, Site No.: 907015.* May 1.

URS Corporation (URS). 2014. *Performance Monitoring Plan for the Essex-Hope Site*. March.

Tables

Table 1. 2017 1st Quarter Semiannual Recovery Well Sampling – Detected Parameters

Semiannual Performance Monitoring Report: January through June 2017

Essex/Hope Site, Jamestown, New York

Volatile Organic Compounds – Method 8260A (µg/L)	Site GW RAOs	RW-1S	RW-2S	RW-2D	RW-3S	RW-6D
Acetone	--	ND	ND	ND	ND	**19,000**
Benzene	--	ND	ND	**9.5 J**	**4.8**	**68**
n-Butylbenzene	--	ND	ND	ND	**1.6 J**	ND
sec-Butylbenzene	--	ND	ND	ND	**1.1 J**	ND
tert-Butylbenzene	--	ND	ND	ND	**2.2 J**	ND
1,3,5-Trimethylbenzene	--	ND	ND	ND	**5.5**	ND
1,2,4-Trimethylbenzene	--	ND	ND	ND	**9.4**	ND
1,1-Dichloroethene	--	**2.5**	ND	**27**	ND	**71**
cis-1,2-Dichloroethene	--	**730**	**4.2**	**5,800 E**	ND	**20,000 E**
trans-1,2-Dichloroethene	5	**3.1 J**	ND	**33 J**	ND	ND
Ethylbenzene	5	ND	ND	ND	**4.5**	ND
Isopropylbenzene (Cumene)	--	ND	ND	ND	**6.0**	ND
n-Propylbenzene	--	ND	ND	ND	**14**	ND
Naphthalene	--	ND	ND	ND	**2.7**	ND
Trichloroethene	5	**350**	**5.4**	**2,000**	**0.92**	**12,000**
Vinyl Chloride	5	**31**	**0.77 J**	**1,300**	ND	**4,500**
Xylenes, Total	5	ND	ND	ND	**9.6 J**	ND

Notes:

Samples collected on February 2, 2017. Only detected parameters are shown.

Results are shown in micrograms per liter (µg/L).

Bold values indicate detections above the laboratory method detection limit (MDL).

E = Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

J = Estimated value. The target analyte concentration is below the quantitation limit (RL), but above the MDL.

ND = Not detected above the respective laboratory MDL.

Site GW RAOs = Site Groundwater Remedial Action Objectives

Table 2. January-June 2017 System Monitoring – Detected Parameters in Pre-Carbon Samples

Semiannual Performance Monitoring Report: January through June 2017

Essex/Hope Site, Jamestown, New York

Volatile Organic Compounds – Method 8260A (µg/L)	Sample Date					
	January 11	February 2	March 16	April 5	May 10	June 22
Acetone	**1,200**	**950**	**750**	**960**	**800**	**280**
Benzene	**7.2**	**7.0 J**	**8.4 J**	**8.6 J**	**7.7 J**	**6.6 J**
1,1-Dichloroethene	**9.5**	**8.9 J**	**16 J**	**12 J**	**13**	**11**
cis-1,2-Dichloroethene	**3,200 D**	**2,600**	**3,600**	**3,100**	**3,400**	**3,100**
trans-1,2-Dichloroethene	**14**	ND	ND	ND	**17 J**	**15 J**
1,4-Dioxane	ND	ND	**0.583**[a]	ND	ND	ND
Naphthalene	ND	ND	ND	**48 J**	ND	ND
Toluene	**0.59 J**	ND	ND	ND	ND	ND
Trichloroethene	**1,700 D**	**1,400**	**2,400**	**1,900**	**2,200**	**1,900**
Vinyl Chloride	**500**	**420**	**620**	**440**	**570**	**480**
Pre-Carbon Total VOCs	**6,631**	**5,386**	**7,394**	**6,469**	**7,008**	**5,793**

Notes:

Pre-carbon results represent system influent. Only detected parameters are shown.

Results are shown in micrograms per liter (µg/L).

Bold values indicate detections above the laboratory method detection limit (MDL).

a. 1,4-Dioxane was analyzed on March 16, 2017 via 8270D-SIM method as per NYSDEC request.

D = Concentration of analyte was quantified from diluted analysis.

E = Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

J = Estimated value. The target analyte concentration is below the quantitation limit (RL), but above the MDL.

ND = Not detected above the respective laboratory MDL.

NYSDEC = New York State Department of Environmental Protection

Site GW RAOs = Site Groundwater Remedial Action Objectives

VOC = volatile organic compound

Table 3. January-June 2017 System Monitoring – Detected Parameters in Primary Carbon Samples

Semiannual Performance Monitoring Report: January through June 2017

Essex/Hope Site, Jamestown, New York

Volatile Organic Compounds – Method 8260A (µg/L)	Sample Date					
	January 11	February 2	March 16	April 5	May 10	June 22
Acetone	**8.1 J**	ND	**45 J**	**71 J**	**2.2 J**	ND
1,1-Dichloroethene	ND	**0.42 J**	ND	**4.4 J**	ND	ND
cis-1,2-Dichloroethene	**23**	**130**	**990**	**1,500**	**3.2**	**44**
Naphthalene	ND	ND	ND	**14 J**	ND	ND
Trichloroethene	**0.60 J**	**5.9**	**96**	**120**	**0.36 J**	**0.67**
Vinyl Chloride	**12**	**290 E**	**570**	**570**	**600 E**	**1,100 D**
Primary Carbon Total VOCs	**44**	**426**	**1,701**	**2,279**	**606**	**1,145**

Notes:

Primary carbon detected parameters represent effluent from the primary carbon vessel in the two carbon vessel system. Only detected parameters are shown.

Results are shown in micrograms per liter (µg/L).

Bold values indicate detections above the laboratory method detection limit (MDL).

D = Concentration of analyte was quantified from diluted analysis.

E = Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

J = Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the MDL.

ND = Not detected above the respective laboratory MDL.

Site GW RAOs = Site Groundwater Remedial Action Objectives

VOC = volatile organic compound

Table 4. January-June 2017 System Monitoring – Detected Parameters in Post-Carbon (Effluent) Samples

Semiannual Performance Monitoring Report: January through June 2017

Essex/Hope Site, Jamestown, New York

Volatile Organic Compounds – Method 8260A (µg/L)	Sample Date					
	January 11	February 2	March 16	April 5	May 10	June 22
Acetone	ND	ND	ND	**1.5 J**	ND	ND
cis-1,2-Dichloroethene	**1.7**	**1.1 J**	**0.81 J**	**0.82 J**	ND	ND
Naphthalene	ND	ND	**0.7 J**	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	**0.22 J**	**0.29 J**
Vinyl Chloride	**15**	**4.4**	**23**	**83**	ND	**0.74 J**
Post-Carbon Total VOCs	**16.7**	**5.5**	**24.5**	**85.3**	**0.2**	**1.0**
Post-Carbon TTOs	**16.7**	**5.5**	**24.5**	**83.8**	**0.2**	**1.0**

Notes:

Post-carbon results represent system effluent from the secondary carbon vessel to the POTW. Only detected parameters are shown.

Bold values indicate detections above the laboratory method detection limit (MDL).

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

Results are shown in micrograms per liter (µg/L).

J = Estimated value. The target analyte concentration is below the quantitation limit (RL), but above the MDL.

ND = Not detected above the respective laboratory MDL.

POTW = publicly owned treatment works

Site GW RAOs = Site Groundwater Remedial Action Objectives

TTOs = total toxic organics

VOCs = volatile organic compounds

Figures

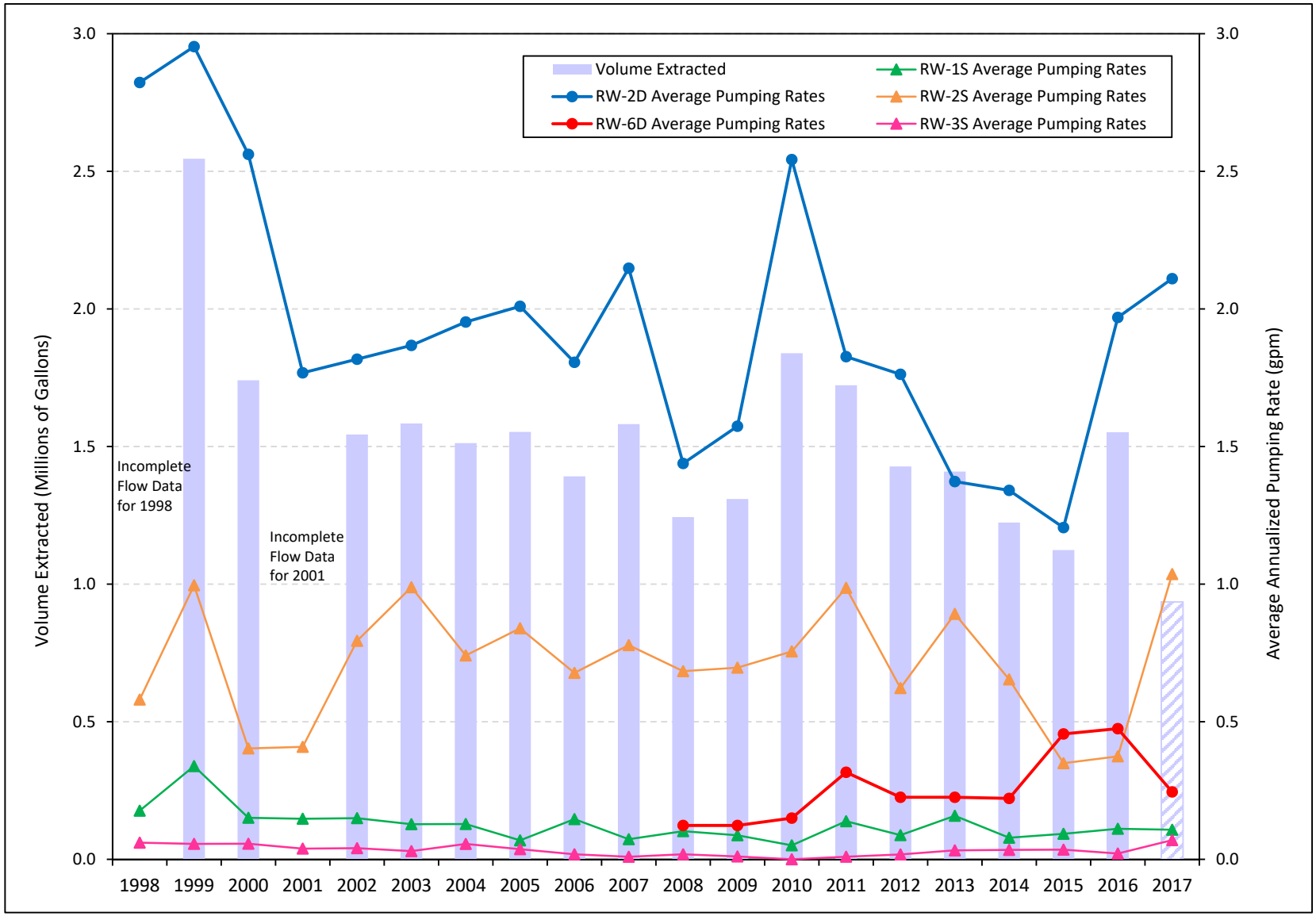

FIGURE 1

Annual Groundwater Extraction by Recovery Well

Semiannual Performance Monitoring Report: January through June 2017

Essex/Hope Site, Jamestown, New York

Notes:

1. Volume extracted in 2017 includes January through June data only.
2. Pumping rates for 2017 were averaged over 182-day reporting period.

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- Monitoring Well
- Piezometer
- Active Recovery Well
- Groundwater Elevation Contour (Dashed where inferred)
- Extent of Capture Zone
- Approximate Site Boundary

Note:
1. HW-8 water level appears to be anomalous, not included in contouring.
2. All elevations are in feet above mean sea level, NAVD88.
3. March 2017 pumping rates (gpm):
RW-1S: 0.12
RW-2S: 1.14
RW-3S: 0.04 (Offline from 3/23/2017 through 6/6/2017)
4. gpm = gallons per minute

N

BASE MAP SOURCE:
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

0 25 50 100
Scale in Feet

Essex Specialty Products, Inc	Essex/Hope Site, Jamestown, New York

FIGURE 2
Shallow WBZ Potentiometric Surface Map
March 13th, 2017
Semiannual Performance Monitoring Report
January through June 2017

CREATED BY: LA
REVIEWED BY: MV

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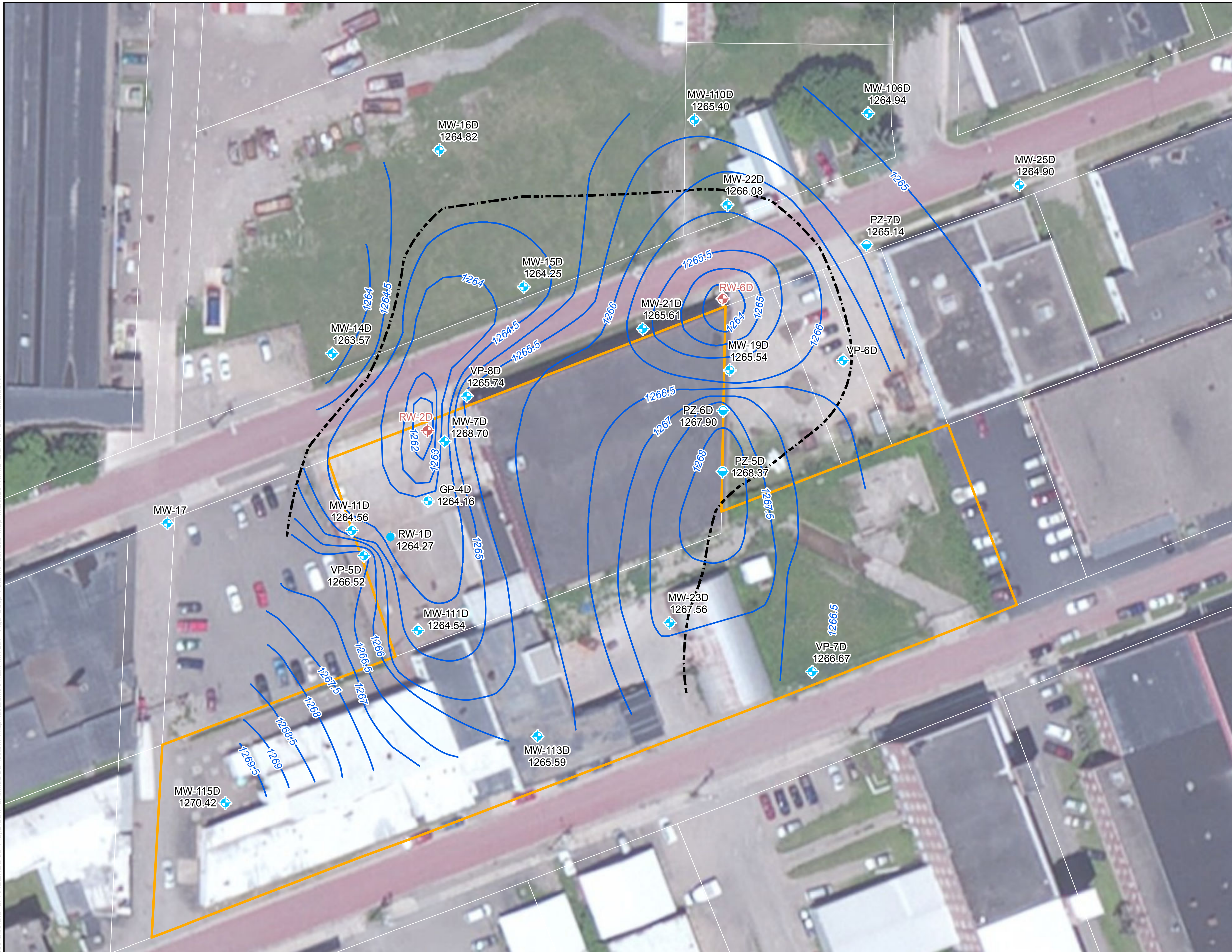

Monitoring Well

Piezometer

Active Recovery Well

Groundwater Elevation Contour (Dashed where inferred)

Extent of Capture Zone

Approximate Site Boundary

Note:
1. All elevations are in feet above mean sea level, NAVD88.
2. March 2017 pumping rates (gpm):
RW-2D: 2.88
RW-6D: 0.25
3. gpm = gallons per minute
4. MW-7D water level appears anomalous, not included in contouring

N

BASE MAP SOURCE:
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

0 25 50 100
Scale in Feet

Essex Specialty Products, Inc	Essex/Hope Site, Jamestown, New York

FIGURE 3
Deep WBZ Potentiometric Surface Map
March 13th, 2017
Semiannual Performance Monitoring Report
January through June 2017

CREATED BY: LA
REVIEWED BY: MV

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- Monitoring Well
- Piezometer
- Active Recovery Well
- Groundwater Elevation Contour (Dashed where inferred)
- Extent of Capture Zone
- Approximate Site Boundary

Note:
1. All elevations are in feet above mean sea level, NAVD88.
2. June 2017 pumping rates (gpm):
RW-1S: 0.06
RW-2S: 1.34
RW-3S: 0.37 (Offline from 3/23/2017 through 6/6/2017)
3. gpm = gallons per minute

N

BASE MAP SOURCE:
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

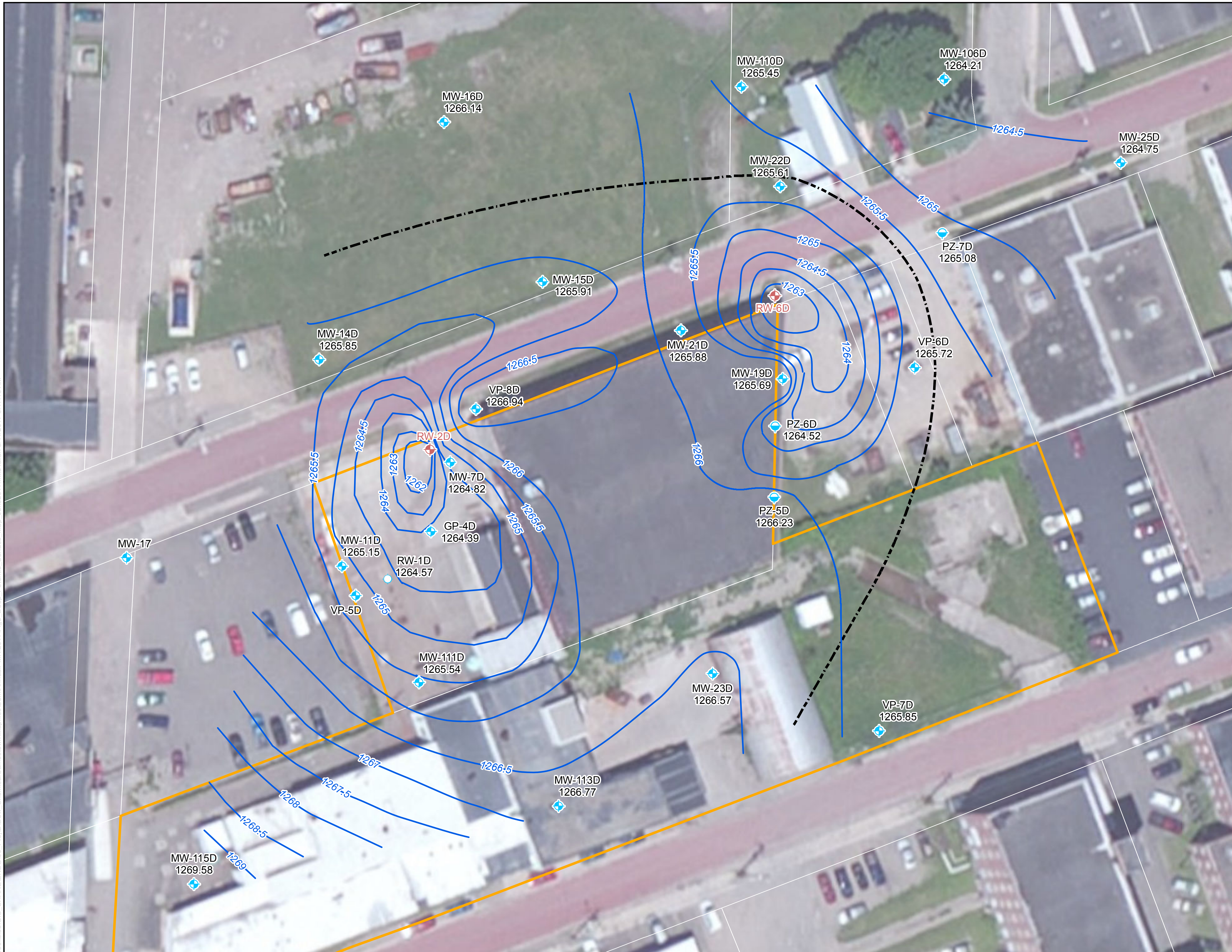
0 25 50 100
Scale in Feet

Essex Specialty Products, Inc	Essex/Hope Site, Jamestown, New York

FIGURE 4
Shallow WBZ Potentiometric Surface Map
June 27th, 2017
Semiannual Performance Monitoring Report
January through June 2017

CREATED BY: LA
REVIEWED BY: MV

ch2m



Recovery Well

Monitoring Well

Piezometer

Active Recovery Well

Groundwater Elevation Contour (Dashed where inferred)

Extent of Capture Zone

Approximate Site Boundary

Note:
1. All elevations are in feet above mean sea level, NAVD88.
2. June 2017 pumping rates (gpm):
RW-2D: 2.14
RW-6D: 0.51
3. gpm = gallons per minute

N

BASE MAP SOURCE:
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

0 25 50 100

Scale in Feet

Essex Specialty Products, Inc	Essex/Hope Site, Jamestown, New York

FIGURE 5
Deep WBZ Potentiometric Surface Map
June 27th, 2017
Semiannual Performance Monitoring Report
January through June 2017

CREATED BY: LA

REVIEWED BY: MV

ch2m

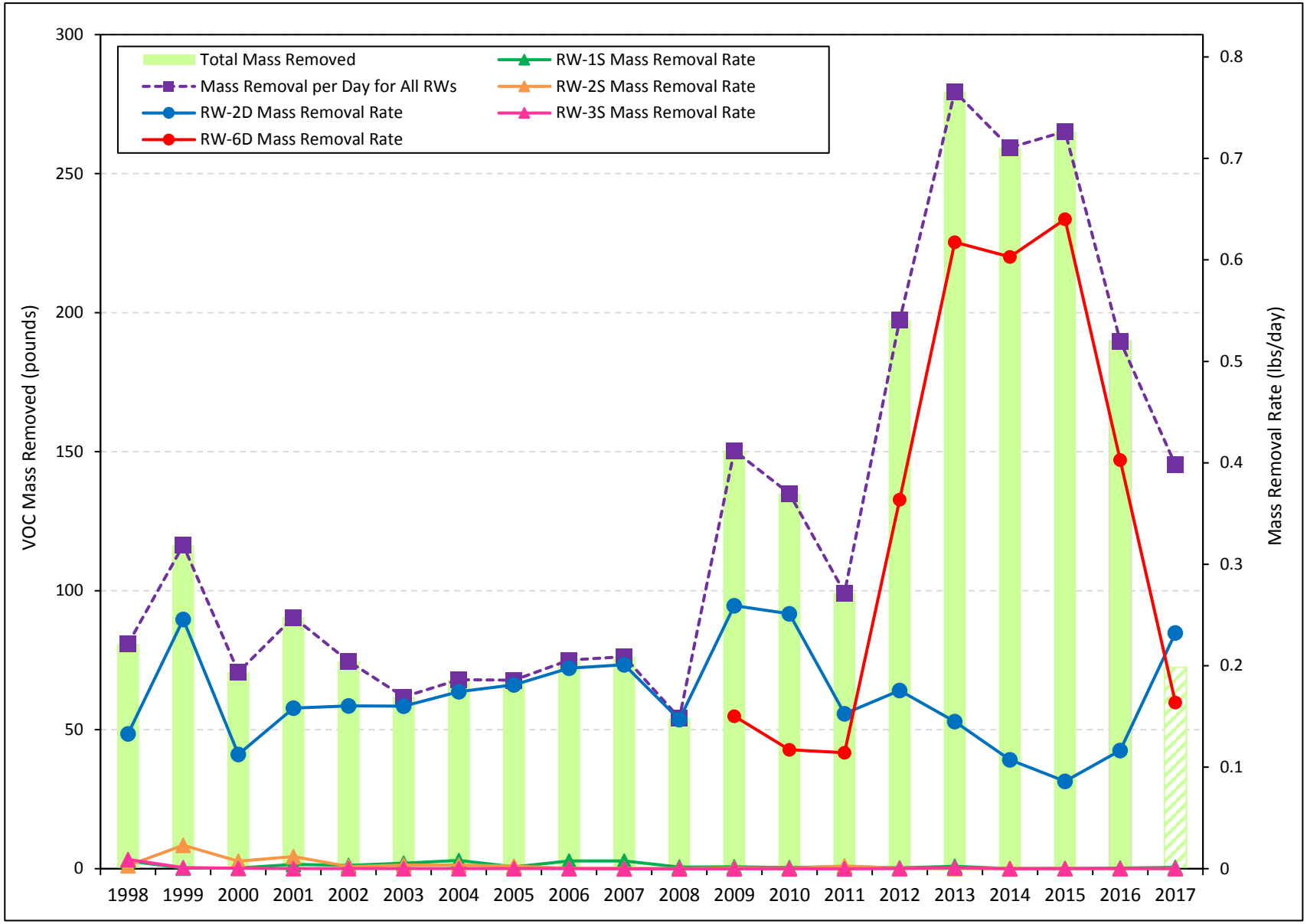


FIGURE 6

Annual VOC Mass Removed by Well

Semiannual Performance Monitoring Report: January through June 2017

Essex/Hope Site, Jamestown, New York

Notes:

1. Mass removal calculations include acetone, which is removed but not not treated.
2. VOC Mass Removed in 2017 includes January through June data only.

RW = Recovery Well

VOCs = volatile organic compounds

Attachment 1
Water Level Measurement Data

Attachment 1. 2017 Water Level Data

Semiannual Performance Monitoring Report: January through June 2017

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 13, 2017			June 27, 2017		
							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	8.88	12.7	1269.46	NA	NA	NA
GP-2D	769380.3448	977348.2696	1278.03	30.0	34.8	Deep	12.41	18.2	1265.62	NA	NA	NA
GP-2S	769379.1282	977344.6742	1277.97	2.6	12.6	Shallow	8.62	12.5	1269.35	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	13.32	40.9	1264.16	13.09	NA	1264.39
GP-4S	769402.7586	977283.8469	1277.43	10.8	15.8	Shallow	8.79	13.91	1268.64	8.51	NA	1268.92
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	NA	NA	NA	11.70	NA	1268.87
HW-3	769259.8546	977127.7364	1282.60	--	--	NA	NA	NA	NA	NA	NA	NA
HW-6	769321.824	977304.1001	1280.98	--	--	NA	11.51	19.25	1269.47	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	13.26	30.3	1263.92	6.59	NA	1270.59
HW-9	769334.6973	977479.3343	1280.35	6.0	16.0	Shallow	9.95	14.45	1270.40	9.97	NA	1270.38
HW-10	769233.13	977139.2685	1279.43	7.0	17.0	Shallow	8.65	16.78	1270.78	8.6	NA	1270.83
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	8.41	16.75	1268.87	8.05	NA	1269.23
MW-11	769378.0813	977235.7566	1277.13	5.0	15.0	Shallow	8.53	13.58	1268.60	8.17	NA	1268.96
MW-11D	769381.9882	977233.7196	1277.17	35.0	45.0	Deep	12.61	44.75	1264.56	12.02	NA	1265.15
MW-12	769328.1573	977258.4237	1277.51	4.0	14.0	Shallow	8.55	13.35	1268.96	8.00	NA	1269.51
MW-13	769254.1453	977431.3831	1277.65	8.0	18.0	Shallow	9.45	14.9	1268.20	9.16	NA	1268.49
MW-14D	769491.9314	977221.6501	1279.40	40.0	50.0	Deep	15.83	52.4	1263.57	13.55	NA	1265.85
MW-14S	769493.3395	977227.8574	1279.64	10.0	20.0	Shallow	13.11	23	1266.53	11.55	NA	1268.09
MW-15D	769533.3173	977340.5714	1278.90	34.0	44.0	Deep	14.65	44.95	1264.25	12.99	NA	1265.91
MW-15S	769538.8671	977337.6363	1279.00	10.0	20.0	Shallow	12.70	21.75	1266.30	12.01	NA	1266.99
MW-16D	769618.2417	977288.1514	1278.47	36.0	46.0	Deep	13.65	45.2	1264.82	12.33	NA	1266.14
MW-16S	769621.109	977287.0901	1278.74	7.0	17.0	Shallow	12.20	19.25	1266.54	11.95	NA	1266.79
MW-17	769386.4993	977119.1203	1278.01	--	--	Deep	NA	NA	NA	NA	NA	NA
MW-18	769558.1914	977549.586	1275.05	--	20.0	Shallow	9.30	15.16	1265.75	9.55	NA	1265.50
MW-19D	769481.5626	977468.4988	1275.64	34.0	44.0	Deep	10.10	43.66	1265.54	9.95	NA	1265.69
MW-19S	769486.6155	977468.8169	1275.95	9.0	19.0	Shallow	9.55	18.61	1266.40	9.85	NA	1266.10
MW-2	769235.7996	977145.802	1279.09	--	16.0	Shallow	NA	NA	NA	8.10	NA	1270.99

Attachment 1. 2017 Water Level Data

Semiannual Performance Monitoring Report: January through June 2017

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 13, 2017			June 27, 2017		
							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	8.51	11.7	1269.59	8.90	NA	1269.20
MW-21D	769507.3643	977414.361	1275.61	31.5	41.0	Deep	10.00	41.25	1265.61	9.73	NA	1265.88
MW-22D	769584.1112	977467.0392	1275.53	32.5	42.0	Deep	9.45	42.1	1266.08	9.92	NA	1265.61
MW-23D	769324.6944	977431.0933	1277.36	28.0	37.5	Deep	9.80	38.51	1267.56	10.79	NA	1266.57
MW-23S	769330.6539	977429.415	1277.30	5.0	14.5	Shallow	6.55	14.5	1270.75	6.64	NA	1270.66
MW-24S	769295.2558	977357.2665	1278.25	5.0	14.5	Shallow	NA	NA	NA	8.07	NA	1270.18
MW-25D	769596.5694	977648.4534	1274.50	31.0	41.0	Deep	9.60	39.25	1264.90	9.75	NA	1264.75
MW-25S	769599.3135	977655.0143	1274.30	7.0	17.0	Shallow	9.40	16.8	1264.90	9.80	NA	1264.50
MW-26S	769402.5984	977514.5926	1277.09	5.0	15.0	Shallow	8.42	14.3	1268.67	8.95	NA	1268.14
MW-27S	769420.4854	977594.2506	1276.46	10.0	20.0	Shallow	9.30	17.02	1267.16	8.83	NA	1267.63
MW-28S	769383.882	977607.3036	1276.87	7.0	17.0	Shallow	10.30	17.02	1266.57	9.36	NA	1267.51
MW-29S	769267.325	977370.5779	1278.35	4.0	14.0	Shallow	8.32	14.55	1270.03	8.90	NA	1269.45
MW-30S	769261.2158	977342.5646	1278.47	--	--	Shallow	8.82	15.95	1269.65	8.83	NA	1269.64
MW-31S	769248.0415	977369.7922	1278.29	--	--	Shallow	8.45	14.78	1269.84	8.32	NA	1269.97
MW-101S	769495.8475	977385.6759	1275.68	8	18	Shallow	9.35	17.57	1266.33	9.65	NA	1266.03
MW-102S	769527.4979	977462.326	1275.43	9	14	Shallow	9.25	13.38	1266.18	9.55	NA	1265.88
MW-103S	769581.6621	977463.0969	1275.32	8	18	Shallow	9.15	17.7	1266.17	9.45	NA	1265.87
MW-104S	769708.5764	977409.2259	1279.22	9	14	Shallow	12.31	16.36	1266.91	12.28	NA	1266.94
MW-105S	769762.8752	977561.1845	1278.79	8	18	Shallow	13.50	18.1	1265.29	14.03	NA	1264.76
MW-106S	769641.0458	977554.5197	1275.29	10	15	Shallow	9.70	14.7	1265.59	10.19	NA	1265.10
MW-106D	769644.3424	977553.224	1275.19	24	34	Deep	10.25	34	1264.94	10.98	NA	1264.21
MW-107S	769669.9391	977845.7849	1272.98	9	19	Shallow	9.20	18.8	1263.78	9.41	NA	1263.57
MW-108S	769725.6736	977754.0991	1274.30	7	17	Shallow	10.40	16.3	1263.90	10.63	NA	1263.67
MW-109S	769813.8606	977747.5072	1275.19	7	12	Shallow	11.50	11.55	1263.69	11.54	NA	1263.65
MW-110D	769637.0266	977446.4566	1275.75	28	38	Deep	10.35	38.3	1265.40	10.30	NA	1265.45
MW-111D	769320.091	977274.7704	1277.59	32	42	Deep	13.05	41.71	1264.54	12.05	NA	1265.54
MW-112S	769273.8366	977338.2933	1278.59	6	16	Shallow	8.81	15.31	1269.78	8.80	NA	1269.79
MW-113D	769254.2912	977349.0618	1278.47	29	39	Deep	12.88	38.5	1265.59	11.70	NA	1266.77
MW-114S	769203.8574	977244.4775	1279.15	8	13	Shallow	9.85	12.98	1269.30	9.71	NA	1269.44
MW-115D	769212.7919	977155.0166	1279.03	35	40	Deep	8.61	39.61	1270.42	9.45	NA	1269.58
MW-116S	769162.3866	977173.3185	1278.91	8	13	Shallow	9.50	13.25	1269.41	9.18	NA	1269.73
MW-117S	769220.9783	769220.9783	1278.14	6	16	Shallow	8.73	16	1269.41	8.41	NA	1269.73
MW-4	769170.132	977100.4237	1280.70	13.0	18.0	Shallow	NA	NA	NA	9.25	NA	1271.45
MW-6	769420.7881	977237.7868	1277.28	--	--	Shallow	8.29	17.6	1268.99	8.80	NA	1268.48
MW-7D	769437.2449	977291.4602	1277.12	35.0	45.0	Deep	8.42	19.51	1268.70	12.30	NA	1264.82
MW-7DD	769435.524	977293.5854	1277.09	90.0	100.0	Glacial Till	1.3	> 100'	1275.79	1.3	NA	1275.79

Attachment 1. 2017 Water Level Data

Semiannual Performance Monitoring Report: January through June 2017

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 13, 2017			June 27, 2017		
							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-7S	769440.6505	977291.0643	1277.04	10.0	20.0	Shallow	NA	NA	NA	8.75	NA	1268.29
MW-8	769407.6112	977252.3372	1277.30	39.6	49.6	Deep	13.26	NA	1264.04	12.96	NA	1264.34
PZ-11D	769432.9422	977590.2533	1276.14	21.3	41.3	Deep	9.75	15.8	1266.39	10.23	NA	1265.91
PZ-1D	769442.9506	977285.3708	1277.23	--	--	Deep	16.75	19.1	1260.48	NA	NA	NA
PZ-1S	769443.5701	977282.9687	1277.25	--	--	Shallow	8.6	10.7	1268.65	NA	NA	NA
PZ-2D	769442.5708	977286.8011	1277.14	--	--	Deep	20.12	21.26	1257.02	NA	NA	NA
PZ-3D	769416.9358	977325.1342	1278.35	20.0	40.0	Deep	12.3	18.2	1266.05	NA	NA	NA
PZ-4D	769419.6327	977320.1948	1278.24	--	--	Deep	20.1	22.6	1258.14	NA	NA	NA
PZ-5D	769418.7691	977464.0019	1275.88	21.5	41.5	Deep	7.51	40.39	1268.37	9.65	NA	1266.23
PZ-5S	769422.1501	977463.9155	1275.92	5.5	12.0	Shallow	7.42	11	1268.50	8.35	NA	1267.57
PZ-6D	769456.5907	977464.4016	1275.91	25.5	45.5	Deep	8.01	43.81	1267.90	11.39	NA	1264.52
PZ-6S	769459.2274	977464.5242	1276.09	8.5	13.5	Shallow	7.85	12.53	1268.24	9.30	NA	1266.79
PZ-7D	769559.4992	977553.3946	1275.19	22.0	42.0	Deep	10.05	33.6	1265.14	10.11	NA	1265.08
RW-1D	769375.0668	977258.1434	1275.87	32.0	57.0	Deep	11.60	55.2	1264.27	11.30	NA	1264.57
RW-1S	769386.1229	977269.3599	1275.36	10.5	16.0	Shallow	10.31	11.75	1265.05	6.40	11.50	1268.96
RW-2D	769444.1559	977280.6959	1275.92	27.0	42.0	Deep	25.40	39.10	1250.52	34.00	36.90	1241.92
RW-2S	769438.9816	977265.9357	1275.89	10.0	15.5	Shallow	9.20	12.35	1266.69	9.60	12.70	1266.29
RW-3S	769245.5478	977167.4284	1277.72	9.0	13.5	Shallow	7.75	10.50	1269.97	8.95	8.80	1268.77
RW-5S	769390.3003	977475.7102	1276.83	7.0	10.0	Shallow	7.39	10	1269.44	7.5	NA	1269.33
RW-6D	769525.8852	977464.2172	1274.95	--	--	Deep	14.25	26.6	1260.70	13.18	NA	1261.77
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	11.01	13.02	1266.52	NA	NA	NA
VP-6D	769487.6379	977538.8183	1276.11	29.5	39.5	Deep	NA	NA	NA	10.39	NA	1265.72
VP-6S	769483.3297	977539.5934	1276.08	18.3	24.0	Shallow	9.77	21.15	1266.31	10.10	NA	1265.98
VP-7D	769294.3214	977519.7338	1278.22	20.4	39.3	Deep	11.55	40.04	1266.67	12.37	NA	1265.85
VP-8D	769465.5145	977305.112	1276.69	20.0	39.0	Deep	10.95	39.7	1265.74	9.75	NA	1266.94

Notes:

CNL = could not locate

ft = feet

msl = mean sea level

NA = bot applicable, or unable to measure

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

TOC = top of casing

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

Attachment 2
Laboratory Analytical Reports – January, February, March, April, May, and June 2017

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: 460-126749-1
Client Project/Site: DOW Essex/Hope Jamestown, NY

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

Attn: Mr. Kyle Block

Authorized for release by:
1/24/2017 10:04:18 AM
Cynthia Romero, Project Management Assistant I
cynthia.romero@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: DOW Essex/Hope Jamestown, NY

TestAmerica Job ID: 460-126749-1

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: 460-126749-1

Laboratory: TestAmerica Edison

Narrative

CASE NARRATIVE

Client: CH2M Hill Constructors, Inc.

Project: DOW Essex/Hope Jamestown, NY

Report Number: 460-126749-1

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 1/12/2017 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0º 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 ORGANIC COMPOUNDS (GC-MS)

Samples Pre_carb_20170111 (460-126749-1), Primary_Eff_20170111 (460-126749-2), Post_carb_20170111 (460-126749-7) and Trip Blank (460-126749-8) were analyzed for Volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 01/14/2017 and 01/16/2017.

The continuing calibration verification (CCV) analyzed in batch 460-414962 was outside the method criteria for the following analyte(s): Carbon tetrachloride and Bromoform (biased low). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Refer to the QC report for details.

Samples Pre_carb_20170111 (460-126749-1)[2X] and Pre_carb_20170111 (460-126749-1)[25X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the volatiles analysis.

All other quality control parameters were within the acceptance limits.

Detection Summary

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

TestAmerica Job ID: 460-126749-1

Client Sample ID: Pre_carb_20170111 — Lab Sample ID: 460-126749-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	9.5		2.0	0.68	ug/L	2		8260C	Total/NA
1,2-Dichloroethene, trans-	14		2.0	0.36	ug/L	2		8260C	Total/NA
Acetone	1200		20	2.1	ug/L	2		8260C	Total/NA
Benzene	7.2		2.0	0.18	ug/L	2		8260C	Total/NA
Toluene	0.59	J	2.0	0.50	ug/L	2		8260C	Total/NA
Vinyl chloride	500		2.0	0.12	ug/L	2		8260C	Total/NA
1,2-Dichloroethene, cis- - DL	3200	D	25	6.5	ug/L	25		8260C	Total/NA
Trichloroethene - DL	1700	D	25	5.5	ug/L	25		8260C	Total/NA

Client Sample ID: Primary_Eff_20170111 — Lab Sample ID: 460-126749-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	23		1.0	0.26	ug/L	1		8260C	Total/NA
Acetone	8.1	J	10	1.1	ug/L	1		8260C	Total/NA
Trichloroethene	0.60	J	1.0	0.22	ug/L	1		8260C	Total/NA
Vinyl chloride	12		1.0	0.060	ug/L	1		8260C	Total/NA

Client Sample ID: Post_carb_20170111 — Lab Sample ID: 460-126749-7

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
Vinyl chloride	15		1.0	0.060	ug/L	1		8260C	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 460-126749-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, cis-	12		1.0	0.26	ug/L	1		8260C	Total/NA
Trichloroethene	7.2		1.0	0.22	ug/L	1		8260C	Total/NA
Vinyl chloride	1.8		1.0	0.060	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Pre_carb_20170111
Date Collected: 01/11/17 12:05
Date Received: 01/12/17 09:15

Lab Sample ID: 460-126749-1
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	0.56	U	2.0	0.56	ug/L			01/14/17 09:14	2
1,1,2,2-Tetrachloroethane	0.38	U	2.0	0.38	ug/L			01/14/17 09:14	2
1,1,2-Trichloroethane	0.16	U	2.0	0.16	ug/L			01/14/17 09:14	2
1,1-Dichloroethane	0.48	U	2.0	0.48	ug/L			01/14/17 09:14	2
1,1-Dichloroethene	**9.5**		2.0	0.68	ug/L			01/14/17 09:14	2
1,2-Dichlorobenzene	0.44	U	2.0	0.44	ug/L			01/14/17 09:14	2
1,2-Dichloroethane	0.50	U	2.0	0.50	ug/L			01/14/17 09:14	2
1,2-Dichloroethene, trans-	**14**		2.0	0.36	ug/L			01/14/17 09:14	2
1,2-Dichloropropane	0.36	U	2.0	0.36	ug/L			01/14/17 09:14	2
1,3-Dichlorobenzene	0.66	U	10	0.66	ug/L			01/14/17 09:14	2
1,3-Dichloropropene, cis-	0.32	U	2.0	0.32	ug/L			01/14/17 09:14	2
1,3-Dichloropropene, trans-	0.38	U	2.0	0.38	ug/L			01/14/17 09:14	2
1,4-Dichlorobenzene	0.66	U	2.0	0.66	ug/L			01/14/17 09:14	2
2-Butanone (MEK)	4.4	U	20	4.4	ug/L			01/14/17 09:14	2
2-Hexanone	1.4	U	20	1.4	ug/L			01/14/17 09:14	2
4-Methyl-2-pentanone (MIBK)	1.3	U	20	1.3	ug/L			01/14/17 09:14	2
Acetone	**1200**		20	2.1	ug/L			01/14/17 09:14	2
Benzene	**7.2**		2.0	0.18	ug/L			01/14/17 09:14	2
Bromochloromethane	0.60	U	2.0	0.60	ug/L			01/14/17 09:14	2
Bromodichloromethane	0.30	U	2.0	0.30	ug/L			01/14/17 09:14	2
Bromoform	0.36	U	2.0	0.36	ug/L			01/14/17 09:14	2
Bromomethane	0.36	U	2.0	0.36	ug/L			01/14/17 09:14	2
Carbon disulfide	0.44	U	2.0	0.44	ug/L			01/14/17 09:14	2
Carbon tetrachloride	0.66	U	2.0	0.66	ug/L			01/14/17 09:14	2
Chlorobenzene	0.48	U	2.0	0.48	ug/L			01/14/17 09:14	2
Chloroethane	0.74	U	2.0	0.74	ug/L			01/14/17 09:14	2
Chloroform	0.44	U	2.0	0.44	ug/L			01/14/17 09:14	2
Chloromethane	0.44	U	2.0	0.44	ug/L			01/14/17 09:14	2
Dibromochloromethane	0.44	U	2.0	0.44	ug/L			01/14/17 09:14	2
Ethylbenzene	0.60	U	2.0	0.60	ug/L			01/14/17 09:14	2
Isopropylbenzene	0.64	U	2.0	0.64	ug/L			01/14/17 09:14	2
Methylene Chloride	0.42	U	2.0	0.42	ug/L			01/14/17 09:14	2
m-Xylene & p-Xylene	0.56	U	20	0.56	ug/L			01/14/17 09:14	2
o-Xylene	0.64	U	2.0	0.64	ug/L			01/14/17 09:14	2
Styrene	0.34	U	2.0	0.34	ug/L			01/14/17 09:14	2
Tetrachloroethene	0.24	U	2.0	0.24	ug/L			01/14/17 09:14	2
Toluene	**0.59**	**J**	2.0	0.50	ug/L			01/14/17 09:14	2
Trichlorofluoromethane	0.30	U	2.0	0.30	ug/L			01/14/17 09:14	2
Vinyl chloride	**500**		2.0	0.12	ug/L			01/14/17 09:14	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*74 - 132*		*01/14/17 09:14*	*2*
4-Bromofluorobenzene	*90*		*77 - 124*		*01/14/17 09:14*	*2*
Dibromofluoromethane (Surr)	*110*		*72 - 131*		*01/14/17 09:14*	*2*
Toluene-d8 (Surr)	*100*		*80 - 120*		*01/14/17 09:14*	*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-	**3200**	**D**	25	6.5	ug/L			01/14/17 07:56	25
Trichloroethene	**1700**	**D**	25	5.5	ug/L			01/14/17 07:56	25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*102*	*D*	*74 - 132*		*01/14/17 07:56*	*25*
4-Bromofluorobenzene	*85*	*D*	*77 - 124*		*01/14/17 07:56*	*25*
Dibromofluoromethane (Surr)	*114*	*D*	*72 - 131*		*01/14/17 07:56*	*25*
Toluene-d8 (Surr)	*112*	*D*	*80 - 120*		*01/14/17 07:56*	*25*

Client Sample ID: Primary_Eff_20170111

Lab Sample ID: 460-126749-2

Date Collected: 01/11/17 12:10

Matrix: Water

Date Received: 01/12/17 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			01/16/17 13:58	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			01/16/17 13:58	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			01/16/17 13:58	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			01/16/17 13:58	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			01/16/17 13:58	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			01/16/17 13:58	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			01/16/17 13:58	1
1,2-Dichloroethene, cis-	**23**		1.0	0.26	ug/L			01/16/17 13:58	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			01/16/17 13:58	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/16/17 13:58	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			01/16/17 13:58	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			01/16/17 13:58	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			01/16/17 13:58	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			01/16/17 13:58	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			01/16/17 13:58	1
2-Hexanone	0.72	U	10	0.72	ug/L			01/16/17 13:58	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			01/16/17 13:58	1
Acetone	**8.1**	**J**	10	1.1	ug/L			01/16/17 13:58	1
Benzene	0.090	U	1.0	0.090	ug/L			01/16/17 13:58	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			01/16/17 13:58	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			01/16/17 13:58	1
Bromoform	0.18	U	1.0	0.18	ug/L			01/16/17 13:58	1
Bromomethane	0.18	U	1.0	0.18	ug/L			01/16/17 13:58	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			01/16/17 13:58	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			01/16/17 13:58	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			01/16/17 13:58	1
Chloroethane	0.37	U	1.0	0.37	ug/L			01/16/17 13:58	1
Chloroform	0.22	U	1.0	0.22	ug/L			01/16/17 13:58	1
Chloromethane	0.22	U	1.0	0.22	ug/L			01/16/17 13:58	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			01/16/17 13:58	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/16/17 13:58	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			01/16/17 13:58	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			01/16/17 13:58	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			01/16/17 13:58	1
o-Xylene	0.32	U	1.0	0.32	ug/L			01/16/17 13:58	1
Styrene	0.17	U	1.0	0.17	ug/L			01/16/17 13:58	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			01/16/17 13:58	1
Toluene	0.25	U	1.0	0.25	ug/L			01/16/17 13:58	1
Trichloroethene	**0.60**	**J**	1.0	0.22	ug/L			01/16/17 13:58	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			01/16/17 13:58	1
Vinyl chloride	**12**		1.0	0.060	ug/L			01/16/17 13:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*98*		*74 - 132*		*01/16/17 13:58*	*1*

Client Sample ID: Primary_Eff_20170111

Lab Sample ID: 460-126749-2
Date Collected: 01/11/17 12:10
Matrix: Water
Date Received: 01/12/17 09:15

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	*89*		*77 - 124*		*01/16/17 13:58*	*1*
Dibromofluoromethane (Surr)	*107*		*72 - 131*		*01/16/17 13:58*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*01/16/17 13:58*	*1*

Client Sample ID: Post_carb_20170111

Lab Sample ID: 460-126749-7
Date Collected: 01/11/17 12:15
Matrix: Water
Date Received: 01/12/17 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			01/14/17 07:30	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			01/14/17 07:30	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			01/14/17 07:30	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			01/14/17 07:30	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			01/14/17 07:30	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			01/14/17 07:30	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			01/14/17 07:30	1
1,2-Dichloroethene, cis-	**1.7**		1.0	0.26	ug/L			01/14/17 07:30	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			01/14/17 07:30	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/14/17 07:30	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			01/14/17 07:30	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			01/14/17 07:30	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			01/14/17 07:30	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			01/14/17 07:30	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			01/14/17 07:30	1
2-Hexanone	0.72	U	10	0.72	ug/L			01/14/17 07:30	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			01/14/17 07:30	1
Acetone	1.1	U	10	1.1	ug/L			01/14/17 07:30	1
Benzene	0.090	U	1.0	0.090	ug/L			01/14/17 07:30	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			01/14/17 07:30	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			01/14/17 07:30	1
Bromoform	0.18	U	1.0	0.18	ug/L			01/14/17 07:30	1
Bromomethane	0.18	U	1.0	0.18	ug/L			01/14/17 07:30	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			01/14/17 07:30	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			01/14/17 07:30	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			01/14/17 07:30	1
Chloroethane	0.37	U	1.0	0.37	ug/L			01/14/17 07:30	1
Chloroform	0.22	U	1.0	0.22	ug/L			01/14/17 07:30	1
Chloromethane	0.22	U	1.0	0.22	ug/L			01/14/17 07:30	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			01/14/17 07:30	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/14/17 07:30	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			01/14/17 07:30	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			01/14/17 07:30	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			01/14/17 07:30	1
o-Xylene	0.32	U	1.0	0.32	ug/L			01/14/17 07:30	1
Styrene	0.17	U	1.0	0.17	ug/L			01/14/17 07:30	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			01/14/17 07:30	1
Toluene	0.25	U	1.0	0.25	ug/L			01/14/17 07:30	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			01/14/17 07:30	1

Client Sample ID: Post_carb_20170111

Lab Sample ID: 460-126749-7
Matrix: Water
Date Collected: 01/11/17 12:15
Date Received: 01/12/17 09:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			01/14/17 07:30	1
Vinyl chloride	**15**		1.0	0.060	ug/L			01/14/17 07:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*74 - 132*		*01/14/17 07:30*	*1*
4-Bromofluorobenzene	*88*		*77 - 124*		*01/14/17 07:30*	*1*
Dibromofluoromethane (Surr)	*108*		*72 - 131*		*01/14/17 07:30*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*01/14/17 07:30*	*1*

Client Sample ID: Trip Blank

Lab Sample ID: 460-126749-8
Matrix: Water
Date Collected: 01/11/17 13:45
Date Received: 01/12/17 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			01/14/17 07:03	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			01/14/17 07:03	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			01/14/17 07:03	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			01/14/17 07:03	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			01/14/17 07:03	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			01/14/17 07:03	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			01/14/17 07:03	1
1,2-Dichloroethene, cis-	**12**		1.0	0.26	ug/L			01/14/17 07:03	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			01/14/17 07:03	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/14/17 07:03	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			01/14/17 07:03	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			01/14/17 07:03	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			01/14/17 07:03	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			01/14/17 07:03	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			01/14/17 07:03	1
2-Hexanone	0.72	U	10	0.72	ug/L			01/14/17 07:03	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			01/14/17 07:03	1
Acetone	1.1	U	10	1.1	ug/L			01/14/17 07:03	1
Benzene	0.090	U	1.0	0.090	ug/L			01/14/17 07:03	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			01/14/17 07:03	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			01/14/17 07:03	1
Bromoform	0.18	U	1.0	0.18	ug/L			01/14/17 07:03	1
Bromomethane	0.18	U	1.0	0.18	ug/L			01/14/17 07:03	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			01/14/17 07:03	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			01/14/17 07:03	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			01/14/17 07:03	1
Chloroethane	0.37	U	1.0	0.37	ug/L			01/14/17 07:03	1
Chloroform	0.22	U	1.0	0.22	ug/L			01/14/17 07:03	1
Chloromethane	0.22	U	1.0	0.22	ug/L			01/14/17 07:03	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			01/14/17 07:03	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/14/17 07:03	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			01/14/17 07:03	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			01/14/17 07:03	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			01/14/17 07:03	1
o-Xylene	0.32	U	1.0	0.32	ug/L			01/14/17 07:03	1

Client Sample ID: Trip Blank
Date Collected: 01/11/17 13:45
Date Received: 01/12/17 09:15

Lab Sample ID: 460-126749-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	0.17	U	1.0	0.17	ug/L			01/14/17 07:03	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			01/14/17 07:03	1
Toluene	0.25	U	1.0	0.25	ug/L			01/14/17 07:03	1
Trichloroethene	**7.2**		1.0	0.22	ug/L			01/14/17 07:03	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			01/14/17 07:03	1
Vinyl chloride	**1.8**		1.0	0.060	ug/L			01/14/17 07:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*74 - 132*		*01/14/17 07:03*	*1*
4-Bromofluorobenzene	*87*		*77 - 124*		*01/14/17 07:03*	*1*
Dibromofluoromethane (Surr)	*109*		*72 - 131*		*01/14/17 07:03*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*01/14/17 07:03*	*1*

Surrogate Summary

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

TestAmerica Job ID: 460-126749-1

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	(74-132)	(77-124)	(72-131)	(80-120)
460-126749-1 - DL	Pre_carb_20170111	102 D	85 D	114 D	112 D
460-126749-1	Pre_carb_20170111	101	90	110	100
460-126749-2	Primary_Eff_20170111	98	89	107	100
460-126749-7	Post_carb_20170111	97	88	108	100
460-126749-7 MS	Post_carb_20170111	99	92	108	97
460-126749-7 MSD	Post_carb_20170111	98	92	105	99
460-126749-8	Trip Blank	100	87	109	96
LCS 460-414711/3	Lab Control Sample	102	94	112	104
LCS 460-414962/4	Lab Control Sample	100	100	107	97
LCSD 460-414962/5	Lab Control Sample Dup	99	100	105	98
MB 460-414711/7	Method Blank	106	88	110	102
MB 460-414962/8	Method Blank	99	90	106	98

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 460-414711/7
Matrix: Water
Analysis Batch: 414711

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			01/14/17 00:30	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			01/14/17 00:30	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			01/14/17 00:30	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			01/14/17 00:30	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			01/14/17 00:30	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			01/14/17 00:30	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			01/14/17 00:30	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			01/14/17 00:30	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			01/14/17 00:30	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/14/17 00:30	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			01/14/17 00:30	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			01/14/17 00:30	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			01/14/17 00:30	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			01/14/17 00:30	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			01/14/17 00:30	1
2-Hexanone	0.72	U	10	0.72	ug/L			01/14/17 00:30	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			01/14/17 00:30	1
Acetone	1.1	U	10	1.1	ug/L			01/14/17 00:30	1
Benzene	0.090	U	1.0	0.090	ug/L			01/14/17 00:30	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			01/14/17 00:30	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			01/14/17 00:30	1
Bromoform	0.18	U	1.0	0.18	ug/L			01/14/17 00:30	1
Bromomethane	0.18	U	1.0	0.18	ug/L			01/14/17 00:30	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			01/14/17 00:30	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			01/14/17 00:30	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			01/14/17 00:30	1
Chloroethane	0.37	U	1.0	0.37	ug/L			01/14/17 00:30	1
Chloroform	0.22	U	1.0	0.22	ug/L			01/14/17 00:30	1
Chloromethane	0.22	U	1.0	0.22	ug/L			01/14/17 00:30	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			01/14/17 00:30	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/14/17 00:30	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			01/14/17 00:30	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			01/14/17 00:30	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			01/14/17 00:30	1
o-Xylene	0.32	U	1.0	0.32	ug/L			01/14/17 00:30	1
Styrene	0.17	U	1.0	0.17	ug/L			01/14/17 00:30	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			01/14/17 00:30	1
Toluene	0.25	U	1.0	0.25	ug/L			01/14/17 00:30	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			01/14/17 00:30	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			01/14/17 00:30	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			01/14/17 00:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*74 - 132*		*01/14/17 00:30*	*1*
4-Bromofluorobenzene	*88*		*77 - 124*		*01/14/17 00:30*	*1*
Dibromofluoromethane (Surr)	*110*		*72 - 131*		*01/14/17 00:30*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*01/14/17 00:30*	*1*

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

Lab Sample ID: LCS 460-414711/3
Matrix: Water
Analysis Batch: 414711

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	75 - 125
1,1,2,2-Tetrachloroethane	20.0	21.2		ug/L		106	74 - 120
1,1,2-Trichloroethane	20.0	20.9		ug/L		104	78 - 120
1,1-Dichloroethane	20.0	20.1		ug/L		100	77 - 123
1,1-Dichloroethene	20.0	18.5		ug/L		93	74 - 123
1,2-Dichlorobenzene	20.0	19.5		ug/L		97	80 - 120
1,2-Dichloroethane	20.0	19.9		ug/L		100	76 - 121
1,2-Dichloroethene, cis-	20.0	19.8		ug/L		99	80 - 120
1,2-Dichloroethene, trans-	20.0	19.4		ug/L		97	79 - 120
1,2-Dichloropropane	20.0	18.5		ug/L		92	77 - 123
1,3-Dichlorobenzene	20.0	19.7		ug/L		98	80 - 120
1,3-Dichloropropene, cis-	20.0	20.1		ug/L		101	77 - 120
1,3-Dichloropropene, trans-	20.0	19.8		ug/L		99	76 - 120
1,4-Dichlorobenzene	20.0	19.9		ug/L		99	80 - 120
2-Butanone (MEK)	100	99.0		ug/L		99	64 - 120
2-Hexanone	100	89.2		ug/L		89	71 - 125
4-Methyl-2-pentanone (MIBK)	100	95.6		ug/L		96	78 - 124
Acetone	100	90.0		ug/L		90	39 - 150
Benzene	20.0	23.3		ug/L		117	77 - 121
Bromochloromethane	20.0	21.5		ug/L		107	77 - 127
Bromodichloromethane	20.0	20.6		ug/L		103	76 - 120
Bromoform	20.0	17.3		ug/L		87	53 - 120
Bromomethane	20.0	20.0		ug/L		100	10 - 150
Carbon disulfide	20.0	20.2		ug/L		101	69 - 133
Carbon tetrachloride	20.0	21.0		ug/L		105	70 - 132
Chlorobenzene	20.0	19.6		ug/L		98	80 - 120
Chloroethane	20.0	19.9		ug/L		100	52 - 150
Chloroform	20.0	20.8		ug/L		104	80 - 120
Chloromethane	20.0	18.4		ug/L		92	56 - 131
Dibromochloromethane	20.0	19.4		ug/L		97	73 - 120
Ethylbenzene	20.0	19.1		ug/L		95	80 - 120
Isopropylbenzene	20.0	20.1		ug/L		101	80 - 123
Methylene Chloride	20.0	19.0		ug/L		95	77 - 123
m-Xylene & p-Xylene	20.0	18.0		ug/L		90	80 - 120
o-Xylene	20.0	20.9		ug/L		104	80 - 120
Styrene	20.0	19.6		ug/L		98	80 - 120
Tetrachloroethene	20.0	19.0		ug/L		95	78 - 122
Toluene	20.0	20.4		ug/L		102	80 - 120
Trichloroethene	20.0	18.8		ug/L		94	77 - 120
Trichlorofluoromethane	20.0	23.0		ug/L		115	71 - 143
Vinyl chloride	20.0	21.2		ug/L		106	62 - 138

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*74 - 132*
4-Bromofluorobenzene	*94*		*77 - 124*
Dibromofluoromethane (Surr)	*112*		*72 - 131*
Toluene-d8 (Surr)	*104*		*80 - 120*

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

Lab Sample ID: 460-126749-7 MS
Matrix: Water
Analysis Batch: 414711

Client Sample ID: Post_carb_20170111
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	19.8		ug/L		99	75 - 125
1,1,2,2-Tetrachloroethane	0.19	U	20.0	20.4		ug/L		102	74 - 120
1,1,2-Trichloroethane	0.080	U	20.0	19.8		ug/L		99	78 - 120
1,1-Dichloroethane	0.24	U	20.0	20.0		ug/L		100	77 - 123
1,1-Dichloroethene	0.34	U	20.0	18.3		ug/L		91	74 - 123
1,2-Dichlorobenzene	0.22	U	20.0	19.5		ug/L		98	80 - 120
1,2-Dichloroethane	0.25	U	20.0	19.5		ug/L		98	76 - 121
1,2-Dichloroethene, cis-	1.7		20.0	21.0		ug/L		96	80 - 120
1,2-Dichloroethene, trans-	0.18	U	20.0	19.1		ug/L		96	79 - 120
1,2-Dichloropropane	0.18	U	20.0	19.4		ug/L		97	77 - 123
1,3-Dichlorobenzene	0.33	U	20.0	18.6		ug/L		93	80 - 120
1,3-Dichloropropene, cis-	0.16	U	20.0	17.3		ug/L		86	77 - 120
1,3-Dichloropropene, trans-	0.19	U	20.0	16.9		ug/L		84	76 - 120
1,4-Dichlorobenzene	0.33	U	20.0	18.6		ug/L		93	80 - 120
2-Butanone (MEK)	2.2	U	100	101		ug/L		101	64 - 120
2-Hexanone	0.72	U	100	97.7		ug/L		98	71 - 125
4-Methyl-2-pentanone (MIBK)	0.63	U	100	100		ug/L		100	78 - 124
Acetone	1.1	U	100	89.4		ug/L		89	39 - 150
Benzene	0.090	U	20.0	19.5		ug/L		98	77 - 121
Bromochloromethane	0.30	U	20.0	20.3		ug/L		102	77 - 127
Bromodichloromethane	0.15	U	20.0	20.7		ug/L		104	76 - 120
Bromoform	0.18	U	20.0	15.7		ug/L		78	53 - 120
Bromomethane	0.18	U	20.0	18.1		ug/L		90	10 - 150
Carbon disulfide	0.22	U	20.0	19.5		ug/L		97	69 - 133
Carbon tetrachloride	0.33	U	20.0	20.6		ug/L		103	70 - 132
Chlorobenzene	0.24	U	20.0	19.8		ug/L		99	80 - 120
Chloroethane	0.37	U	20.0	19.3		ug/L		97	52 - 150
Chloroform	0.22	U	20.0	20.5		ug/L		102	80 - 120
Chloromethane	0.22	U	20.0	18.1		ug/L		91	56 - 131
Dibromochloromethane	0.22	U	20.0	18.4		ug/L		92	73 - 120
Ethylbenzene	0.30	U	20.0	19.1		ug/L		96	80 - 120
Isopropylbenzene	0.32	U	20.0	17.9		ug/L		89	80 - 123
Methylene Chloride	0.21	U	20.0	18.8		ug/L		94	77 - 123
m-Xylene & p-Xylene	0.28	U	20.0	18.2		ug/L		91	80 - 120
o-Xylene	0.32	U	20.0	19.7		ug/L		98	80 - 120
Styrene	0.17	U	20.0	18.5		ug/L		92	80 - 120
Tetrachloroethene	0.12	U	20.0	19.6		ug/L		98	78 - 122
Toluene	0.25	U	20.0	18.9		ug/L		94	80 - 120
Trichloroethene	0.22	U	20.0	19.4		ug/L		97	77 - 120
Trichlorofluoromethane	0.15	U	20.0	22.7		ug/L		113	71 - 143
Vinyl chloride	15		20.0	32.4		ug/L		85	62 - 138

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*74 - 132*
4-Bromofluorobenzene	*92*		*77 - 124*
Dibromofluoromethane (Surr)	*108*		*72 - 131*
Toluene-d8 (Surr)	*97*		*80 - 120*

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

Lab Sample ID: 460-126749-7 MSD
Matrix: Water
Analysis Batch: 414711

Client Sample ID: Post_carb_20170111
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	19.6		ug/L		98	75 - 125	1	30
1,1,2,2-Tetrachloroethane	0.19	U	20.0	20.7		ug/L		103	74 - 120	1	30
1,1,2-Trichloroethane	0.080	U	20.0	18.7		ug/L		93	78 - 120	6	30
1,1-Dichloroethane	0.24	U	20.0	20.1		ug/L		100	77 - 123	0	30
1,1-Dichloroethene	0.34	U	20.0	17.7		ug/L		88	74 - 123	3	30
1,2-Dichlorobenzene	0.22	U	20.0	20.0		ug/L		100	80 - 120	3	30
1,2-Dichloroethane	0.25	U	20.0	19.4		ug/L		97	76 - 121	0	30
1,2-Dichloroethene, cis-	1.7		20.0	20.7		ug/L		95	80 - 120	2	30
1,2-Dichloroethene, trans-	0.18	U	20.0	18.4		ug/L		92	79 - 120	4	30
1,2-Dichloropropane	0.18	U	20.0	19.5		ug/L		97	77 - 123	0	30
1,3-Dichlorobenzene	0.33	U	20.0	19.0		ug/L		95	80 - 120	2	30
1,3-Dichloropropene, cis-	0.16	U	20.0	17.7		ug/L		89	77 - 120	3	30
1,3-Dichloropropene, trans-	0.19	U	20.0	17.4		ug/L		87	76 - 120	3	30
1,4-Dichlorobenzene	0.33	U	20.0	19.5		ug/L		98	80 - 120	5	30
2-Butanone (MEK)	2.2	U	100	100		ug/L		100	64 - 120	1	30
2-Hexanone	0.72	U	100	98.4		ug/L		98	71 - 125	1	30
4-Methyl-2-pentanone (MIBK)	0.63	U	100	102		ug/L		102	78 - 124	2	30
Acetone	1.1	U	100	89.6		ug/L		90	39 - 150	0	30
Benzene	0.090	U	20.0	19.1		ug/L		95	77 - 121	2	30
Bromochloromethane	0.30	U	20.0	21.3		ug/L		106	77 - 127	5	30
Bromodichloromethane	0.15	U	20.0	20.9		ug/L		104	76 - 120	1	30
Bromoform	0.18	U	20.0	16.6		ug/L		83	53 - 120	6	30
Bromomethane	0.18	U	20.0	19.2		ug/L		96	10 - 150	6	30
Carbon disulfide	0.22	U	20.0	19.6		ug/L		98	69 - 133	1	30
Carbon tetrachloride	0.33	U	20.0	20.7		ug/L		104	70 - 132	0	30
Chlorobenzene	0.24	U	20.0	19.7		ug/L		98	80 - 120	0	30
Chloroethane	0.37	U	20.0	21.0		ug/L		105	52 - 150	8	30
Chloroform	0.22	U	20.0	20.8		ug/L		104	80 - 120	2	30
Chloromethane	0.22	U	20.0	16.9		ug/L		84	56 - 131	7	30
Dibromochloromethane	0.22	U	20.0	18.6		ug/L		93	73 - 120	1	30
Ethylbenzene	0.30	U	20.0	18.5		ug/L		92	80 - 120	4	30
Isopropylbenzene	0.32	U	20.0	18.5		ug/L		93	80 - 123	4	30
Methylene Chloride	0.21	U	20.0	18.9		ug/L		95	77 - 123	1	30
m-Xylene & p-Xylene	0.28	U	20.0	18.0		ug/L		90	80 - 120	1	30
o-Xylene	0.32	U	20.0	19.5		ug/L		98	80 - 120	1	30
Styrene	0.17	U	20.0	18.4		ug/L		92	80 - 120	0	30
Tetrachloroethene	0.12	U	20.0	18.8		ug/L		94	78 - 122	4	30
Toluene	0.25	U	20.0	19.4		ug/L		97	80 - 120	3	30
Trichloroethene	0.22	U	20.0	20.0		ug/L		100	77 - 120	3	30
Trichlorofluoromethane	0.15	U	20.0	22.6		ug/L		113	71 - 143	0	30
Vinyl chloride	15		20.0	31.9		ug/L		83	62 - 138	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*74 - 132*
4-Bromofluorobenzene	*92*		*77 - 124*
Dibromofluoromethane (Surr)	*105*		*72 - 131*
Toluene-d8 (Surr)	*99*		*80 - 120*

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

Lab Sample ID: MB 460-414962/8
Matrix: Water
Analysis Batch: 414962

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			01/16/17 13:32	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			01/16/17 13:32	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			01/16/17 13:32	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			01/16/17 13:32	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			01/16/17 13:32	1
1,2-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			01/16/17 13:32	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			01/16/17 13:32	1
1,2-Dichloroethene, cis-	0.26	U	1.0	0.26	ug/L			01/16/17 13:32	1
1,2-Dichloroethene, trans-	0.18	U	1.0	0.18	ug/L			01/16/17 13:32	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/16/17 13:32	1
1,3-Dichlorobenzene	0.33	U	5.0	0.33	ug/L			01/16/17 13:32	1
1,3-Dichloropropene, cis-	0.16	U	1.0	0.16	ug/L			01/16/17 13:32	1
1,3-Dichloropropene, trans-	0.19	U	1.0	0.19	ug/L			01/16/17 13:32	1
1,4-Dichlorobenzene	0.33	U	1.0	0.33	ug/L			01/16/17 13:32	1
2-Butanone (MEK)	2.2	U	10	2.2	ug/L			01/16/17 13:32	1
2-Hexanone	0.72	U	10	0.72	ug/L			01/16/17 13:32	1
4-Methyl-2-pentanone (MIBK)	0.63	U	10	0.63	ug/L			01/16/17 13:32	1
Acetone	1.1	U	10	1.1	ug/L			01/16/17 13:32	1
Benzene	0.090	U	1.0	0.090	ug/L			01/16/17 13:32	1
Bromochloromethane	0.30	U	1.0	0.30	ug/L			01/16/17 13:32	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			01/16/17 13:32	1
Bromoform	0.18	U	1.0	0.18	ug/L			01/16/17 13:32	1
Bromomethane	0.18	U	1.0	0.18	ug/L			01/16/17 13:32	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			01/16/17 13:32	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			01/16/17 13:32	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			01/16/17 13:32	1
Chloroethane	0.37	U	1.0	0.37	ug/L			01/16/17 13:32	1
Chloroform	0.22	U	1.0	0.22	ug/L			01/16/17 13:32	1
Chloromethane	0.22	U	1.0	0.22	ug/L			01/16/17 13:32	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			01/16/17 13:32	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/16/17 13:32	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			01/16/17 13:32	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			01/16/17 13:32	1
m-Xylene & p-Xylene	0.28	U	10	0.28	ug/L			01/16/17 13:32	1
o-Xylene	0.32	U	1.0	0.32	ug/L			01/16/17 13:32	1
Styrene	0.17	U	1.0	0.17	ug/L			01/16/17 13:32	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			01/16/17 13:32	1
Toluene	0.25	U	1.0	0.25	ug/L			01/16/17 13:32	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			01/16/17 13:32	1
Trichlorofluoromethane	0.15	U	1.0	0.15	ug/L			01/16/17 13:32	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			01/16/17 13:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*74 - 132*		*01/16/17 13:32*	*1*
4-Bromofluorobenzene	*90*		*77 - 124*		*01/16/17 13:32*	*1*
Dibromofluoromethane (Surr)	*106*		*72 - 131*		*01/16/17 13:32*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*01/16/17 13:32*	*1*

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

Lab Sample ID: LCS 460-414962/4
Matrix: Water
Analysis Batch: 414962

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	19.1		ug/L		95	75 - 125
1,1,2,2-Tetrachloroethane	20.0	18.4		ug/L		92	74 - 120
1,1,2-Trichloroethane	20.0	18.9		ug/L		95	78 - 120
1,1-Dichloroethane	20.0	20.6		ug/L		103	77 - 123
1,1-Dichloroethene	20.0	18.8		ug/L		94	74 - 123
1,2-Dichlorobenzene	20.0	19.6		ug/L		98	80 - 120
1,2-Dichloroethane	20.0	20.5		ug/L		102	76 - 121
1,2-Dichloroethene, cis-	20.0	20.7		ug/L		104	80 - 120
1,2-Dichloroethene, trans-	20.0	20.6		ug/L		103	79 - 120
1,2-Dichloropropane	20.0	20.8		ug/L		104	77 - 123
1,3-Dichlorobenzene	20.0	19.8		ug/L		99	80 - 120
1,3-Dichloropropene, cis-	20.0	18.3		ug/L		92	77 - 120
1,3-Dichloropropene, trans-	20.0	17.5		ug/L		88	76 - 120
1,4-Dichlorobenzene	20.0	19.5		ug/L		97	80 - 120
2-Butanone (MEK)	100	106		ug/L		106	64 - 120
2-Hexanone	100	94.8		ug/L		95	71 - 125
4-Methyl-2-pentanone (MIBK)	100	99.9		ug/L		100	78 - 124
Acetone	100	95.9		ug/L		96	39 - 150
Benzene	20.0	19.2		ug/L		96	77 - 121
Bromochloromethane	20.0	20.5		ug/L		103	77 - 127
Bromodichloromethane	20.0	19.0		ug/L		95	76 - 120
Bromoform	20.0	15.2		ug/L		76	53 - 120
Bromomethane	20.0	21.1		ug/L		106	10 - 150
Carbon disulfide	20.0	21.2		ug/L		106	69 - 133
Carbon tetrachloride	20.0	17.8		ug/L		89	70 - 132
Chlorobenzene	20.0	19.6		ug/L		98	80 - 120
Chloroethane	20.0	19.9		ug/L		100	52 - 150
Chloroform	20.0	21.6		ug/L		108	80 - 120
Chloromethane	20.0	17.8		ug/L		89	56 - 131
Dibromochloromethane	20.0	16.8		ug/L		84	73 - 120
Ethylbenzene	20.0	18.8		ug/L		94	80 - 120
Isopropylbenzene	20.0	18.2		ug/L		91	80 - 123
Methylene Chloride	20.0	20.2		ug/L		101	77 - 123
m-Xylene & p-Xylene	20.0	18.9		ug/L		94	80 - 120
o-Xylene	20.0	18.4		ug/L		92	80 - 120
Styrene	20.0	19.0		ug/L		95	80 - 120
Tetrachloroethene	20.0	21.1		ug/L		105	78 - 122
Toluene	20.0	19.0		ug/L		95	80 - 120
Trichloroethene	20.0	19.5		ug/L		98	77 - 120
Trichlorofluoromethane	20.0	21.3		ug/L		107	71 - 143
Vinyl chloride	20.0	19.7		ug/L		99	62 - 138

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*74 - 132*
4-Bromofluorobenzene	*100*		*77 - 124*
Dibromofluoromethane (Surr)	*107*		*72 - 131*
Toluene-d8 (Surr)	*97*		*80 - 120*

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

Lab Sample ID: LCSD 460-414962/5
Matrix: Water
Analysis Batch: 414962

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	19.8		ug/L		99	75 - 125	4	30
1,1,2,2-Tetrachloroethane			20.0	19.8		ug/L		99	74 - 120	7	30
1,1,2-Trichloroethane			20.0	18.7		ug/L		93	78 - 120	1	30
1,1-Dichloroethane			20.0	20.4		ug/L		102	77 - 123	1	30
1,1-Dichloroethene			20.0	19.1		ug/L		95	74 - 123	1	30
1,2-Dichlorobenzene			20.0	19.3		ug/L		97	80 - 120	2	30
1,2-Dichloroethane			20.0	19.8		ug/L		99	76 - 121	3	30
1,2-Dichloroethene, cis-			20.0	20.4		ug/L		102	80 - 120	2	30
1,2-Dichloroethene, trans-			20.0	20.1		ug/L		101	79 - 120	2	30
1,2-Dichloropropane			20.0	21.7		ug/L		108	77 - 123	4	30
1,3-Dichlorobenzene			20.0	20.0		ug/L		100	80 - 120	1	30
1,3-Dichloropropene, cis-			20.0	19.7		ug/L		98	77 - 120	7	30
1,3-Dichloropropene, trans-			20.0	17.8		ug/L		89	76 - 120	2	30
1,4-Dichlorobenzene			20.0	19.9		ug/L		99	80 - 120	2	30
2-Butanone (MEK)			100	107		ug/L		107	64 - 120	1	30
2-Hexanone			100	101		ug/L		101	71 - 125	6	30
4-Methyl-2-pentanone (MIBK)			100	101		ug/L		101	78 - 124	1	30
Acetone			100	92.0		ug/L		92	39 - 150	4	30
Benzene			20.0	19.5		ug/L		98	77 - 121	2	30
Bromochloromethane			20.0	21.9		ug/L		109	77 - 127	6	30
Bromodichloromethane			20.0	19.5		ug/L		97	76 - 120	2	30
Bromoform			20.0	16.0		ug/L		80	53 - 120	5	30
Bromomethane			20.0	20.1		ug/L		101	10 - 150	5	30
Carbon disulfide			20.0	21.6		ug/L		108	69 - 133	2	30
Carbon tetrachloride			20.0	18.8		ug/L		94	70 - 132	6	30
Chlorobenzene			20.0	20.4		ug/L		102	80 - 120	4	30
Chloroethane			20.0	18.1		ug/L		90	52 - 150	10	30
Chloroform			20.0	20.9		ug/L		104	80 - 120	3	30
Chloromethane			20.0	17.1		ug/L		86	56 - 131	4	30
Dibromochloromethane			20.0	17.3		ug/L		86	73 - 120	3	30
Ethylbenzene			20.0	19.3		ug/L		96	80 - 120	2	30
Isopropylbenzene			20.0	19.1		ug/L		96	80 - 123	5	30
Methylene Chloride			20.0	19.9		ug/L		100	77 - 123	1	30
m-Xylene & p-Xylene			20.0	19.2		ug/L		96	80 - 120	2	30
o-Xylene			20.0	19.2		ug/L		96	80 - 120	4	30
Styrene			20.0	19.5		ug/L		98	80 - 120	3	30
Tetrachloroethene			20.0	21.4		ug/L		107	78 - 122	1	30
Toluene			20.0	19.4		ug/L		97	80 - 120	2	30
Trichloroethene			20.0	20.1		ug/L		101	77 - 120	3	30
Trichlorofluoromethane			20.0	21.5		ug/L		107	71 - 143	1	30
Vinyl chloride			20.0	19.7		ug/L		99	62 - 138	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*74 - 132*
4-Bromofluorobenzene	*100*		*77 - 124*
Dibromofluoromethane (Surr)	*105*		*72 - 131*
Toluene-d8 (Surr)	*98*		*80 - 120*

QC Association Summary

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

TestAmerica Job ID: 460-126749-1

GC/MS VOA

Analysis Batch: 414711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-126749-1 - DL	Pre_carb_20170111	Total/NA	Water	8260C	
460-126749-1	Pre_carb_20170111	Total/NA	Water	8260C	
460-126749-7	Post_carb_20170111	Total/NA	Water	8260C	
460-126749-8	Trip Blank	Total/NA	Water	8260C	
MB 460-414711/7	Method Blank	Total/NA	Water	8260C	
LCS 460-414711/3	Lab Control Sample	Total/NA	Water	8260C	
460-126749-7 MS	Post_carb_20170111	Total/NA	Water	8260C	
460-126749-7 MSD	Post_carb_20170111	Total/NA	Water	8260C	

Analysis Batch: 414962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-126749-2	Primary_Eff_20170111	Total/NA	Water	8260C	
MB 460-414962/8	Method Blank	Total/NA	Water	8260C	
LCS 460-414962/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 460-414962/5	Lab Control Sample Dup	Total/NA	Water	8260C	

Lab Chronicle

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

TestAmerica Job ID: 460-126749-1

Client Sample ID: Pre_carb_20170111
Lab Sample ID: 460-126749-1
Date Collected: 01/11/17 12:05
Matrix: Water
Date Received: 01/12/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	25	414711	01/14/17 07:56	EMM	TAL EDI
Total/NA	Analysis	8260C		2	414711	01/14/17 09:14	EMM	TAL EDI

Client Sample ID: Primary_Eff_20170111
Lab Sample ID: 460-126749-2
Date Collected: 01/11/17 12:10
Matrix: Water
Date Received: 01/12/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	414962	01/16/17 13:58	EMM	TAL EDI

Client Sample ID: Post_carb_20170111
Lab Sample ID: 460-126749-7
Date Collected: 01/11/17 12:15
Matrix: Water
Date Received: 01/12/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	414711	01/14/17 07:30	EMM	TAL EDI

Client Sample ID: Trip Blank
Lab Sample ID: 460-126749-8
Date Collected: 01/11/17 13:45
Matrix: Water
Date Received: 01/12/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	414711	01/14/17 07:03	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: DOW Essex/Hope Jamestown, NY

TestAmerica Job ID: 460-126749-1

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: DOW Essex/Hope Jamestown, NY

TestAmerica Job ID: 460-126749-1

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: DOW Essex/Hope Jamestown, NY

TestAmerica Job ID: 460-126749-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-126749-1	Pre_carb_20170111	Water	01/11/17 12:05	01/12/17 09:15
460-126749-2	Primary_Eff_20170111	Water	01/11/17 12:10	01/12/17 09:15
460-126749-7	Post_carb_20170111	Water	01/11/17 12:15	01/12/17 09:15
460-126749-8	Trip Blank	Water	01/11/17 13:45	01/12/17 09:15

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

1/24/2017

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page 1 of 1

Name (for report and invoice) Kyle Block	Samplers Name (Printed) Travis Pendry	Site/Project Identification Essex / Hope Jamestown
Company CH2M	P. O. #	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program: DKQP: ☐
Address 18 Tremont St. Suite 300	Analysis Turnaround Time: Standard ☒	
City Boston, MA State 02108	Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone Fax		

Sample Identification	Date	Time	Matrix	No. of Cont.	VOCs 8260	Sample Numbers
Pre-carb-20170111	1/11/17	1205	GW	3	X	-1
Primary-Eff-20170111		1210			X	-2
Post-carb-20170111-1		1215			X	-3
Post-carb-20170111-2		1245			X	-4
Post-carb-20170111-3		1315			X	-5
Post-carb-20170111-4		1345			X	-6, -7
Trip Blank	—	—	—	2	X	-8

LAB USE ONLY
Project No:
Job No: 126749

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 and report as Post-carb-20170111

Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
Travis Pendry	CH2M	1/11/17 1505	1)	TA 915
Relinquished by 2)	Company	Date / Time	Received by 2)	Company 1/12/17 FedEx
Relinqui 3)		Date / Time	Received by 3)	Company
Relinqui 4)		Date / Time	Received by 4)	Company

460-126749 Chain of Custody

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

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

cs#950049 4℃ 2.0°C

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 126749

Number of Coolers: 1 IR Gun #: 8

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	2.0 °C	2.0 °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: KA Date: 1/12/17

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc.

Job Number: 460-126749-1

Login Number: 126749
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	950049
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#8
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.

ANALYTICAL REPORT

Lab Number:	L1703663
Client:	CH2MHILL 18 Tremont Street Suite 700 Boston, MA 02108
ATTN:	Kyle Block
Phone:	(617) 523-2260
Project Name:	ESSEX HOPE JAMESTOWN
Project Number:	683896.06.JM.CS
Report Date:	02/09/17

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1703663
Report Date: 02/09/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1703663-01	PRE-CARB_20170202	WATER	JAMESTOWN, NY	02/02/17 14:30	02/03/17
L1703663-02	PRIMARY-EFF_20170202	WATER	JAMESTOWN, NY	02/02/17 14:35	02/03/17
L1703663-03	POST-CARB_20170202	WATER	JAMESTOWN, NY	02/02/17 16:10	02/03/17
L1703663-04	TRIP BLANK	WATER	JAMESTOWN, NY	02/02/17 00:00	02/03/17
L1703663-05	RW-1S_20170202	WATER	JAMESTOWN, NY	02/02/17 14:50	02/03/17
L1703663-06	RW-2S_20170202	WATER	JAMESTOWN, NY	02/02/17 15:20	02/03/17
L1703663-07	RW-2D_20170202	WATER	JAMESTOWN, NY	02/02/17 15:50	02/03/17
L1703663-08	RW-3S_20170202	WATER	JAMESTOWN, NY	02/02/17 16:20	02/03/17
L1703663-09	RW-6D_20170202	WATER	JAMESTOWN, NY	02/02/17 16:40	02/03/17
L1703663-10	COMP POST-CARB_20170202- GRABS 1-4	WATER	JAMESTOWN, NY	02/02/17 16:10	02/03/17

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1703663
Project Number:	683896.06.JM.CS	**Report Date:**	02/09/17

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1703663
Project Number:	683896.06.JM.CS	**Report Date:**	02/09/17

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L1703663-01, -05, -07, and -09: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1703663-02, -07, and -09: The sample was re-analyzed on dilution in order to quantify the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

L1703663-04: The Trip Blank has results for vinyl chloride, trichloroethene, and cis-1,2-dichloroethene present above the reporting limits. Re-analysis confirmed the original results. The results of the both analyses are reported.

The initial calibration, associated with L1703663-01 through -09, did not meet the method required minimum response factor for the calibration standards for 4-methyl-2-pentanone and 1,4-dioxane.

The continuing calibration, associated with L1703663-01 through -09, did not meet the method required minimum response factor for 4-methyl-2-pentanone and 1,4-dioxane.

WG976616-2: The continuing calibration verification standard has the percent deviation for 1,4-dioxane (29%D) above the 20% CCV criteria, but within overall method allowances.

WG976616-7: The continuing calibration verification standard has the percent deviation for 1,4-dioxane (29%D) above the 20% CCV criteria, but within overall method allowances.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Kelly Stenstrom

Title: Technical Director/Representative Date: 02/09/17

ORGANICS

VOLATILES

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-01 D
Client ID: PRE-CARB_20170202
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/09/17 01:45
Analyst: MM

Date Collected: 02/02/17 14:30
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	50	14.	20
1,1-Dichloroethane	ND		ug/l	50	14.	20
Chloroform	ND		ug/l	50	14.	20
Carbon tetrachloride	ND		ug/l	10	2.7	20
1,2-Dichloropropane	ND		ug/l	20	2.7	20
Dibromochloromethane	ND		ug/l	10	3.0	20
1,1,2-Trichloroethane	ND		ug/l	30	10.	20
Tetrachloroethene	ND		ug/l	10	3.6	20
Chlorobenzene	ND		ug/l	50	14.	20
Trichlorofluoromethane	ND		ug/l	50	14.	20
1,2-Dichloroethane	ND		ug/l	10	2.6	20
1,1,1-Trichloroethane	ND		ug/l	50	14.	20
Bromodichloromethane	ND		ug/l	10	3.8	20
trans-1,3-Dichloropropene	ND		ug/l	10	3.3	20
cis-1,3-Dichloropropene	ND		ug/l	10	2.9	20
1,3-Dichloropropene, Total	ND		ug/l	10	2.9	20
1,1-Dichloropropene	ND		ug/l	50	14.	20
Bromoform	ND		ug/l	40	13.	20
1,1,2,2-Tetrachloroethane	ND		ug/l	10	3.3	20
Benzene	7.0	J	ug/l	10	3.2	20
Toluene	ND		ug/l	50	14.	20
Ethylbenzene	ND		ug/l	50	14.	20
Chloromethane	ND		ug/l	50	14.	20
Bromomethane	ND		ug/l	50	14.	20
Vinyl chloride	420		ug/l	20	1.4	20
Chloroethane	ND		ug/l	50	14.	20
1,1-Dichloroethene	8.9	J	ug/l	10	3.4	20
trans-1,2-Dichloroethene	ND		ug/l	50	14.	20
Trichloroethene	1400		ug/l	10	3.5	20
1,2-Dichlorobenzene	ND		ug/l	50	14.	20

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-01 D Date Collected: 02/02/17 14:30

Client ID: PRE-CARB_20170202 Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	50	14.	20
1,4-Dichlorobenzene	ND		ug/l	50	14.	20
Methyl tert butyl ether	ND		ug/l	50	14.	20
p/m-Xylene	ND		ug/l	50	14.	20
o-Xylene	ND		ug/l	50	14.	20
Xylenes, Total	ND		ug/l	50	14.	20
cis-1,2-Dichloroethene	2600		ug/l	50	14.	20
1,2-Dichloroethene, Total	2600		ug/l	50	14.	20
Dibromomethane	ND		ug/l	100	20.	20
1,2,3-Trichloropropane	ND		ug/l	50	14.	20
Styrene	ND		ug/l	50	14.	20
Dichlorodifluoromethane	ND		ug/l	100	20.	20
Acetone	950		ug/l	100	29.	20
Carbon disulfide	ND		ug/l	100	20.	20
2-Butanone	ND		ug/l	100	39.	20
Vinyl acetate	ND		ug/l	100	20.	20
4-Methyl-2-pentanone	ND		ug/l	100	20.	20
2-Hexanone	ND		ug/l	100	20.	20
Bromochloromethane	ND		ug/l	50	14.	20
2,2-Dichloropropane	ND		ug/l	50	14.	20
1,2-Dibromoethane	ND		ug/l	40	13.	20
1,3-Dichloropropane	ND		ug/l	50	14.	20
1,1,1,2-Tetrachloroethane	ND		ug/l	50	14.	20
Bromobenzene	ND		ug/l	50	14.	20
n-Butylbenzene	ND		ug/l	50	14.	20
sec-Butylbenzene	ND		ug/l	50	14.	20
tert-Butylbenzene	ND		ug/l	50	14.	20
o-Chlorotoluene	ND		ug/l	50	14.	20
p-Chlorotoluene	ND		ug/l	50	14.	20
1,2-Dibromo-3-chloropropane	ND		ug/l	50	14.	20
Hexachlorobutadiene	ND		ug/l	50	14.	20
Isopropylbenzene	ND		ug/l	50	14.	20
p-Isopropyltoluene	ND		ug/l	50	14.	20
Naphthalene	ND		ug/l	50	14.	20
n-Propylbenzene	ND		ug/l	50	14.	20
1,2,3-Trichlorobenzene	ND		ug/l	50	14.	20
1,2,4-Trichlorobenzene	ND		ug/l	50	14.	20
1,3,5-Trimethylbenzene	ND		ug/l	50	14.	20
1,2,4-Trimethylbenzene	ND		ug/l	50	14.	20

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-01 D
Client ID: PRE-CARB_20170202
Sample Location: JAMESTOWN, NY

Date Collected: 02/02/17 14:30
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	5000	1200	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	99		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-02
Client ID: PRIMARY-EFF_20170202
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/08/17 23:40
Analyst: MM

Date Collected: 02/02/17 14:35
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	290	E	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	0.42	J	ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	5.9		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-02 Date Collected: 02/02/17 14:35

Client ID: PRIMARY-EFF_20170202 Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	130		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	130		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-02 Date Collected: 02/02/17 14:35

Client ID: PRIMARY-EFF_20170202 Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	100		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-02 D
Client ID: PRIMARY-EFF_20170202
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/09/17 10:37
Analyst: MM

Date Collected: 02/02/17 14:35
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Vinyl chloride	270		ug/l	10	0.71	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	98		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-03
Client ID: POST-CARB_20170202
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/09/17 00:12
Analyst: MM

Date Collected: 02/02/17 16:10
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	4.4		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-03 Date Collected: 02/02/17 16:10

Client ID: POST-CARB_20170202 Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	1.1	J	ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	1.1	J	ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-03 Date Collected: 02/02/17 16:10

Client ID: POST-CARB_20170202 Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	102		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-04
Client ID: TRIP BLANK
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/08/17 23:09
Analyst: MM

Date Collected: 02/02/17 00:00
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	1.5		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	7.0		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-04 Date Collected: 02/02/17 00:00

Client ID: TRIP BLANK Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	8.0		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	8.0		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	1.8	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-04 Date Collected: 02/02/17 00:00

Client ID: TRIP BLANK Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	98		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-04 R
Client ID: TRIP BLANK
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/09/17 16:54
Analyst: MM

Date Collected: 02/02/17 00:00
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	1.3		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	5.7		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-04 R Date Collected: 02/02/17 00:00

Client ID: TRIP BLANK Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	5.4		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	5.4		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	1.9	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-04 R
Client ID: TRIP BLANK
Sample Location: JAMESTOWN, NY

Date Collected: 02/02/17 00:00
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	98		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-05 D
Client ID: RW-1S_20170202
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/09/17 02:17
Analyst: MM

Date Collected: 02/02/17 14:50
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	10	2.8	4
1,1-Dichloroethane	ND		ug/l	10	2.8	4
Chloroform	ND		ug/l	10	2.8	4
Carbon tetrachloride	ND		ug/l	2.0	0.54	4
1,2-Dichloropropane	ND		ug/l	4.0	0.55	4
Dibromochloromethane	ND		ug/l	2.0	0.60	4
1,1,2-Trichloroethane	ND		ug/l	6.0	2.0	4
Tetrachloroethene	ND		ug/l	2.0	0.72	4
Chlorobenzene	ND		ug/l	10	2.8	4
Trichlorofluoromethane	ND		ug/l	10	2.8	4
1,2-Dichloroethane	ND		ug/l	2.0	0.53	4
1,1,1-Trichloroethane	ND		ug/l	10	2.8	4
Bromodichloromethane	ND		ug/l	2.0	0.77	4
trans-1,3-Dichloropropene	ND		ug/l	2.0	0.66	4
cis-1,3-Dichloropropene	ND		ug/l	2.0	0.58	4
1,3-Dichloropropene, Total	ND		ug/l	2.0	0.58	4
1,1-Dichloropropene	ND		ug/l	10	2.8	4
Bromoform	ND		ug/l	8.0	2.6	4
1,1,2,2-Tetrachloroethane	ND		ug/l	2.0	0.67	4
Benzene	ND		ug/l	2.0	0.64	4
Toluene	ND		ug/l	10	2.8	4
Ethylbenzene	ND		ug/l	10	2.8	4
Chloromethane	ND		ug/l	10	2.8	4
Bromomethane	ND		ug/l	10	2.8	4
Vinyl chloride	31		ug/l	4.0	0.28	4
Chloroethane	ND		ug/l	10	2.8	4
1,1-Dichloroethene	2.5		ug/l	2.0	0.68	4
trans-1,2-Dichloroethene	3.1	J	ug/l	10	2.8	4
Trichloroethene	350		ug/l	2.0	0.70	4
1,2-Dichlorobenzene	ND		ug/l	10	2.8	4

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-05 D Date Collected: 02/02/17 14:50

Client ID: RW-1S_20170202 Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	10	2.8	4
1,4-Dichlorobenzene	ND		ug/l	10	2.8	4
Methyl tert butyl ether	ND		ug/l	10	2.8	4
p/m-Xylene	ND		ug/l	10	2.8	4
o-Xylene	ND		ug/l	10	2.8	4
Xylenes, Total	ND		ug/l	10	2.8	4
cis-1,2-Dichloroethene	730		ug/l	10	2.8	4
1,2-Dichloroethene, Total	730	J	ug/l	10	2.8	4
Dibromomethane	ND		ug/l	20	4.0	4
1,2,3-Trichloropropane	ND		ug/l	10	2.8	4
Styrene	ND		ug/l	10	2.8	4
Dichlorodifluoromethane	ND		ug/l	20	4.0	4
Acetone	ND		ug/l	20	5.8	4
Carbon disulfide	ND		ug/l	20	4.0	4
2-Butanone	ND		ug/l	20	7.8	4
Vinyl acetate	ND		ug/l	20	4.0	4
4-Methyl-2-pentanone	ND		ug/l	20	4.0	4
2-Hexanone	ND		ug/l	20	4.0	4
Bromochloromethane	ND		ug/l	10	2.8	4
2,2-Dichloropropane	ND		ug/l	10	2.8	4
1,2-Dibromoethane	ND		ug/l	8.0	2.6	4
1,3-Dichloropropane	ND		ug/l	10	2.8	4
1,1,1,2-Tetrachloroethane	ND		ug/l	10	2.8	4
Bromobenzene	ND		ug/l	10	2.8	4
n-Butylbenzene	ND		ug/l	10	2.8	4
sec-Butylbenzene	ND		ug/l	10	2.8	4
tert-Butylbenzene	ND		ug/l	10	2.8	4
o-Chlorotoluene	ND		ug/l	10	2.8	4
p-Chlorotoluene	ND		ug/l	10	2.8	4
1,2-Dibromo-3-chloropropane	ND		ug/l	10	2.8	4
Hexachlorobutadiene	ND		ug/l	10	2.8	4
Isopropylbenzene	ND		ug/l	10	2.8	4
p-Isopropyltoluene	ND		ug/l	10	2.8	4
Naphthalene	ND		ug/l	10	2.8	4
n-Propylbenzene	ND		ug/l	10	2.8	4
1,2,3-Trichlorobenzene	ND		ug/l	10	2.8	4
1,2,4-Trichlorobenzene	ND		ug/l	10	2.8	4
1,3,5-Trimethylbenzene	ND		ug/l	10	2.8	4
1,2,4-Trimethylbenzene	ND		ug/l	10	2.8	4

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-05 D
Client ID: RW-1S_20170202
Sample Location: JAMESTOWN, NY

Date Collected: 02/02/17 14:50
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	1000	240	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	101		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-06
Client ID: RW-2S_20170202
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/09/17 00:43
Analyst: MM

Date Collected: 02/02/17 15:20
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	0.77	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	5.4		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-06 Date Collected: 02/02/17 15:20

Client ID: RW-2S_20170202 Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	4.2		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	4.2		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-06 Date Collected: 02/02/17 15:20

Client ID: RW-2S_20170202 Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	102		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-07 D2
Client ID: RW-2D_20170202
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/09/17 12:42
Analyst: MAB

Date Collected: 02/02/17 15:50
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	3100		ug/l	250	70.	100
1,2-Dichloroethene, Total	3100	J	ug/l	62	18.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	97		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-07 D
Client ID: RW-2D_20170202
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/09/17 02:48
Analyst: MM

Date Collected: 02/02/17 15:50
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	62	18.	25
1,1-Dichloroethane	ND		ug/l	62	18.	25
Chloroform	ND		ug/l	62	18.	25
Carbon tetrachloride	ND		ug/l	12	3.4	25
1,2-Dichloropropane	ND		ug/l	25	3.4	25
Dibromochloromethane	ND		ug/l	12	3.7	25
1,1,2-Trichloroethane	ND		ug/l	38	12.	25
Tetrachloroethene	ND		ug/l	12	4.5	25
Chlorobenzene	ND		ug/l	62	18.	25
Trichlorofluoromethane	ND		ug/l	62	18.	25
1,2-Dichloroethane	ND		ug/l	12	3.3	25
1,1,1-Trichloroethane	ND		ug/l	62	18.	25
Bromodichloromethane	ND		ug/l	12	4.8	25
trans-1,3-Dichloropropene	ND		ug/l	12	4.1	25
cis-1,3-Dichloropropene	ND		ug/l	12	3.6	25
1,3-Dichloropropene, Total	ND		ug/l	12	3.6	25
1,1-Dichloropropene	ND		ug/l	62	18.	25
Bromoform	ND		ug/l	50	16.	25
1,1,2,2-Tetrachloroethane	ND		ug/l	12	4.2	25
Benzene	9.5	J	ug/l	12	4.0	25
Toluene	ND		ug/l	62	18.	25
Ethylbenzene	ND		ug/l	62	18.	25
Chloromethane	ND		ug/l	62	18.	25
Bromomethane	ND		ug/l	62	18.	25
Vinyl chloride	1300		ug/l	25	1.8	25
Chloroethane	ND		ug/l	62	18.	25
1,1-Dichloroethene	27		ug/l	12	4.2	25
trans-1,2-Dichloroethene	33	J	ug/l	62	18.	25
Trichloroethene	2000		ug/l	12	4.4	25
1,2-Dichlorobenzene	ND		ug/l	62	18.	25

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-07 D Date Collected: 02/02/17 15:50

Client ID: RW-2D_20170202 Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	62	18.	25
1,4-Dichlorobenzene	ND		ug/l	62	18.	25
Methyl tert butyl ether	ND		ug/l	62	18.	25
p/m-Xylene	ND		ug/l	62	18.	25
o-Xylene	ND		ug/l	62	18.	25
Xylenes, Total	ND		ug/l	62	18.	25
cis-1,2-Dichloroethene	5800	E	ug/l	62	18.	25
Dibromomethane	ND		ug/l	120	25.	25
1,2,3-Trichloropropane	ND		ug/l	62	18.	25
Styrene	ND		ug/l	62	18.	25
Dichlorodifluoromethane	ND		ug/l	120	25.	25
Acetone	ND		ug/l	120	36.	25
Carbon disulfide	ND		ug/l	120	25.	25
2-Butanone	ND		ug/l	120	48.	25
Vinyl acetate	ND		ug/l	120	25.	25
4-Methyl-2-pentanone	ND		ug/l	120	25.	25
2-Hexanone	ND		ug/l	120	25.	25
Bromochloromethane	ND		ug/l	62	18.	25
2,2-Dichloropropane	ND		ug/l	62	18.	25
1,2-Dibromoethane	ND		ug/l	50	16.	25
1,3-Dichloropropane	ND		ug/l	62	18.	25
1,1,1,2-Tetrachloroethane	ND		ug/l	62	18.	25
Bromobenzene	ND		ug/l	62	18.	25
n-Butylbenzene	ND		ug/l	62	18.	25
sec-Butylbenzene	ND		ug/l	62	18.	25
tert-Butylbenzene	ND		ug/l	62	18.	25
o-Chlorotoluene	ND		ug/l	62	18.	25
p-Chlorotoluene	ND		ug/l	62	18.	25
1,2-Dibromo-3-chloropropane	ND		ug/l	62	18.	25
Hexachlorobutadiene	ND		ug/l	62	18.	25
Isopropylbenzene	ND		ug/l	62	18.	25
p-Isopropyltoluene	ND		ug/l	62	18.	25
Naphthalene	ND		ug/l	62	18.	25
n-Propylbenzene	ND		ug/l	62	18.	25
1,2,3-Trichlorobenzene	ND		ug/l	62	18.	25
1,2,4-Trichlorobenzene	ND		ug/l	62	18.	25
1,3,5-Trimethylbenzene	ND		ug/l	62	18.	25
1,2,4-Trimethylbenzene	ND		ug/l	62	18.	25
1,4-Dioxane	ND		ug/l	6200	1500	25

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-07 D
Client ID: RW-2D_20170202
Sample Location: JAMESTOWN, NY

Date Collected: 02/02/17 15:50
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	100		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-08
Client ID: RW-3S_20170202
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/09/17 01:14
Analyst: MM

Date Collected: 02/02/17 16:20
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	4.8		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	4.5		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.92		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-08 Date Collected: 02/02/17 16:20

Client ID: RW-3S_20170202 Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	8.6		ug/l	2.5	0.70	1
o-Xylene	0.97	J	ug/l	2.5	0.70	1
Xylenes, Total	9.6	J	ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	1.6	J	ug/l	2.5	0.70	1
sec-Butylbenzene	1.1	J	ug/l	2.5	0.70	1
tert-Butylbenzene	2.2	J	ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	6.0		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	2.7		ug/l	2.5	0.70	1
n-Propylbenzene	14		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	5.5		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	9.4		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-08 Date Collected: 02/02/17 16:20

Client ID: RW-3S_20170202 Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	99		70-130

Project Name: ESSEX HOPE JAMESTOWN
Lab Number: L1703663
Project Number: 683896.06.JM.CS
Report Date: 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-09 D2
Client ID: RW-6D_20170202
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/09/17 13:13
Analyst: MM

Date Collected: 02/02/17 16:40
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	20000		ug/l	500	140	200
1,2-Dichloroethene, Total	20000		ug/l	250	70.	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	98		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-09 D
Client ID: RW-6D_20170202
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 02/09/17 03:20
Analyst: MM

Date Collected: 02/02/17 16:40
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	250	70.	100
1,1-Dichloroethane	ND		ug/l	250	70.	100
Chloroform	ND		ug/l	250	70.	100
Carbon tetrachloride	ND		ug/l	50	13.	100
1,2-Dichloropropane	ND		ug/l	100	14.	100
Dibromochloromethane	ND		ug/l	50	15.	100
1,1,2-Trichloroethane	ND		ug/l	150	50.	100
Tetrachloroethene	ND		ug/l	50	18.	100
Chlorobenzene	ND		ug/l	250	70.	100
Trichlorofluoromethane	ND		ug/l	250	70.	100
1,2-Dichloroethane	ND		ug/l	50	13.	100
1,1,1-Trichloroethane	ND		ug/l	250	70.	100
Bromodichloromethane	ND		ug/l	50	19.	100
trans-1,3-Dichloropropene	ND		ug/l	50	16.	100
cis-1,3-Dichloropropene	ND		ug/l	50	14.	100
1,3-Dichloropropene, Total	ND		ug/l	50	14.	100
1,1-Dichloropropene	ND		ug/l	250	70.	100
Bromoform	ND		ug/l	200	65.	100
1,1,2,2-Tetrachloroethane	ND		ug/l	50	17.	100
Benzene	68		ug/l	50	16.	100
Toluene	ND		ug/l	250	70.	100
Ethylbenzene	ND		ug/l	250	70.	100
Chloromethane	ND		ug/l	250	70.	100
Bromomethane	ND		ug/l	250	70.	100
Vinyl chloride	4500		ug/l	100	7.1	100
Chloroethane	ND		ug/l	250	70.	100
1,1-Dichloroethene	71		ug/l	50	17.	100
trans-1,2-Dichloroethene	ND		ug/l	250	70.	100
Trichloroethene	12000		ug/l	50	18.	100
1,2-Dichlorobenzene	ND		ug/l	250	70.	100

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-09 D Date Collected: 02/02/17 16:40

Client ID: RW-6D_20170202 Date Received: 02/03/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	250	70.	100
1,4-Dichlorobenzene	ND		ug/l	250	70.	100
Methyl tert butyl ether	ND		ug/l	250	70.	100
p/m-Xylene	ND		ug/l	250	70.	100
o-Xylene	ND		ug/l	250	70.	100
Xylenes, Total	ND		ug/l	250	70.	100
cis-1,2-Dichloroethene	20000	E	ug/l	250	70.	100
Dibromomethane	ND		ug/l	500	100	100
1,2,3-Trichloropropane	ND		ug/l	250	70.	100
Styrene	ND		ug/l	250	70.	100
Dichlorodifluoromethane	ND		ug/l	500	100	100
Acetone	19000		ug/l	500	150	100
Carbon disulfide	ND		ug/l	500	100	100
2-Butanone	ND		ug/l	500	190	100
Vinyl acetate	ND		ug/l	500	100	100
4-Methyl-2-pentanone	ND		ug/l	500	100	100
2-Hexanone	ND		ug/l	500	100	100
Bromochloromethane	ND		ug/l	250	70.	100
2,2-Dichloropropane	ND		ug/l	250	70.	100
1,2-Dibromoethane	ND		ug/l	200	65.	100
1,3-Dichloropropane	ND		ug/l	250	70.	100
1,1,1,2-Tetrachloroethane	ND		ug/l	250	70.	100
Bromobenzene	ND		ug/l	250	70.	100
n-Butylbenzene	ND		ug/l	250	70.	100
sec-Butylbenzene	ND		ug/l	250	70.	100
tert-Butylbenzene	ND		ug/l	250	70.	100
o-Chlorotoluene	ND		ug/l	250	70.	100
p-Chlorotoluene	ND		ug/l	250	70.	100
1,2-Dibromo-3-chloropropane	ND		ug/l	250	70.	100
Hexachlorobutadiene	ND		ug/l	250	70.	100
Isopropylbenzene	ND		ug/l	250	70.	100
p-Isopropyltoluene	ND		ug/l	250	70.	100
Naphthalene	ND		ug/l	250	70.	100
n-Propylbenzene	ND		ug/l	250	70.	100
1,2,3-Trichlorobenzene	ND		ug/l	250	70.	100
1,2,4-Trichlorobenzene	ND		ug/l	250	70.	100
1,3,5-Trimethylbenzene	ND		ug/l	250	70.	100
1,2,4-Trimethylbenzene	ND		ug/l	250	70.	100
1,4-Dioxane	ND		ug/l	25000	6100	100

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

SAMPLE RESULTS

Lab ID: L1703663-09 D
Client ID: RW-6D_20170202
Sample Location: JAMESTOWN, NY

Date Collected: 02/02/17 16:40
Date Received: 02/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	101		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 02/09/17 09:34
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02,04,07,09 Batch: WG976616-10					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 02/09/17 09:34
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02,04,07,09 Batch: WG976616-10					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 02/09/17 09:34
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02,04,07,09 Batch: WG976616-10					
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	98		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 02/08/17 22:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-09 Batch: WG976616-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 02/08/17 22:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-09 Batch: WG976616-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1703663

Project Number: 683896.06.JM.CS **Report Date:** 02/09/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 02/08/17 22:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-09 Batch: WG976616-5					
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	97		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1703663
Report Date: 02/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09 Batch: WG976616-3 WG976616-4								
Methylene chloride	98		100		70-130	2		20
1,1-Dichloroethane	93		96		70-130	3		20
Chloroform	95		97		70-130	2		20
Carbon tetrachloride	86		90		63-132	5		20
1,2-Dichloropropane	94		97		70-130	3		20
Dibromochloromethane	95		93		63-130	2		20
1,1,2-Trichloroethane	94		96		70-130	2		20
Tetrachloroethene	97		98		70-130	1		20
Chlorobenzene	95		96		75-130	1		20
Trichlorofluoromethane	93		97		62-150	4		20
1,2-Dichloroethane	93		94		70-130	1		20
1,1,1-Trichloroethane	95		98		67-130	3		20
Bromodichloromethane	94		95		67-130	1		20
trans-1,3-Dichloropropene	86		87		70-130	1		20
cis-1,3-Dichloropropene	85		87		70-130	2		20
1,1-Dichloropropene	93		96		70-130	3		20
Bromoform	80		81		54-136	1		20
1,1,2,2-Tetrachloroethane	94		92		67-130	2		20
Benzene	95		97		70-130	2		20
Toluene	95		97		70-130	2		20
Ethylbenzene	92		94		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.CS

Lab Number: L1703663

Report Date: 02/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09 Batch: WG976616-3 WG976616-4								
Chloromethane	86		90		64-130	5		20
Bromomethane	69		69		39-139	0		20
Vinyl chloride	98		98		55-140	0		20
Chloroethane	97		99		55-138	2		20
1,1-Dichloroethene	95		98		61-145	3		20
trans-1,2-Dichloroethene	94		97		70-130	3		20
Trichloroethene	93		96		70-130	3		20
1,2-Dichlorobenzene	98		98		70-130	0		20
1,3-Dichlorobenzene	95		94		70-130	1		20
1,4-Dichlorobenzene	96		96		70-130	0		20
Methyl tert butyl ether	97		98		63-130	1		20
p/m-Xylene	90		95		70-130	5		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	94		96		70-130	2		20
Dibromomethane	98		100		70-130	2		20
1,2,3-Trichloropropane	92		89		64-130	3		20
Styrene	95		95		70-130	0		20
Dichlorodifluoromethane	86		89		36-147	3		20
Acetone	98		100		58-148	2		20
Carbon disulfide	90		93		51-130	3		20
2-Butanone	97		100		63-138	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1703663
Report Date: 02/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09 Batch: WG976616-3 WG976616-4								
Vinyl acetate	88		91		70-130	3		20
4-Methyl-2-pentanone	91		92		59-130	1		20
2-Hexanone	93		94		57-130	1		20
Bromochloromethane	98		100		70-130	2		20
2,2-Dichloropropane	86		87		63-133	1		20
1,2-Dibromoethane	98		97		70-130	1		20
1,3-Dichloropropane	93		95		70-130	2		20
1,1,1,2-Tetrachloroethane	93		96		64-130	3		20
Bromobenzene	92		93		70-130	1		20
n-Butylbenzene	110		100		53-136	10		20
sec-Butylbenzene	98		97		70-130	1		20
tert-Butylbenzene	95		95		70-130	0		20
o-Chlorotoluene	91		90		70-130	1		20
p-Chlorotoluene	90		91		70-130	1		20
1,2-Dibromo-3-chloropropane	96		99		41-144	3		20
Hexachlorobutadiene	100		100		63-130	0		20
Isopropylbenzene	90		92		70-130	2		20
p-Isopropyltoluene	100		99		70-130	1		20
Naphthalene	110		100		70-130	10		20
n-Propylbenzene	93		93		69-130	0		20
1,2,3-Trichlorobenzene	110		100		70-130	10		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.CS

Lab Number: L1703663

Report Date: 02/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09 Batch: WG976616-3 WG976616-4								
1,2,4-Trichlorobenzene	110		100		70-130	10		20
1,3,5-Trimethylbenzene	94		90		64-130	4		20
1,2,4-Trimethylbenzene	98		93		70-130	5		20
1,4-Dioxane	104		100		56-162	4		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		97		70-130
Toluene-d8	99		100		70-130
4-Bromofluorobenzene	96		97		70-130
Dibromofluoromethane	98		100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.CS

Lab Number: L1703663

Report Date: 02/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,04,07,09 Batch: WG976616-8 WG976616-9								
Methylene chloride	95		96		70-130	1		20
1,1-Dichloroethane	94		96		70-130	2		20
Chloroform	94		98		70-130	4		20
Carbon tetrachloride	89		90		63-132	1		20
1,2-Dichloropropane	94		98		70-130	4		20
Dibromochloromethane	92		96		63-130	4		20
1,1,2-Trichloroethane	94		96		70-130	2		20
Tetrachloroethene	97		99		70-130	2		20
Chlorobenzene	94		96		75-130	2		20
Trichlorofluoromethane	95		96		62-150	1		20
1,2-Dichloroethane	94		97		70-130	3		20
1,1,1-Trichloroethane	97		98		67-130	1		20
Bromodichloromethane	94		96		67-130	2		20
trans-1,3-Dichloropropene	86		88		70-130	2		20
cis-1,3-Dichloropropene	86		89		70-130	3		20
1,1-Dichloropropene	96		97		70-130	1		20
Bromoform	79		83		54-136	5		20
1,1,2,2-Tetrachloroethane	92		94		67-130	2		20
Benzene	95		98		70-130	3		20
Toluene	96		97		70-130	1		20
Ethylbenzene	92		93		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1703663
Report Date: 02/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,04,07,09 Batch: WG976616-8 WG976616-9								
Chloromethane	87		90		64-130	3		20
Bromomethane	68		70		39-139	3		20
Vinyl chloride	97		99		55-140	2		20
Chloroethane	97		99		55-138	2		20
1,1-Dichloroethene	96		98		61-145	2		20
trans-1,2-Dichloroethene	94		98		70-130	4		20
Trichloroethene	94		98		70-130	4		20
1,2-Dichlorobenzene	95		98		70-130	3		20
1,3-Dichlorobenzene	93		95		70-130	2		20
1,4-Dichlorobenzene	94		97		70-130	3		20
Methyl tert butyl ether	96		100		63-130	4		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	90		95		70-130	5		20
cis-1,2-Dichloroethene	96		99		70-130	3		20
Dibromomethane	97		100		70-130	3		20
1,2,3-Trichloropropane	90		92		64-130	2		20
Styrene	95		95		70-130	0		20
Dichlorodifluoromethane	82		84		36-147	2		20
Acetone	94		96		58-148	2		20
Carbon disulfide	90		92		51-130	2		20
2-Butanone	88		93		63-138	6		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1703663
Report Date: 02/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,04,07,09 Batch: WG976616-8 WG976616-9								
Vinyl acetate	88		92		70-130	4		20
4-Methyl-2-pentanone	90		94		59-130	4		20
2-Hexanone	88		92		57-130	4		20
Bromochloromethane	95		100		70-130	5		20
2,2-Dichloropropane	90		90		63-133	0		20
1,2-Dibromoethane	96		99		70-130	3		20
1,3-Dichloropropane	92		95		70-130	3		20
1,1,1,2-Tetrachloroethane	92		96		64-130	4		20
Bromobenzene	91		92		70-130	1		20
n-Butylbenzene	100		110		53-136	10		20
sec-Butylbenzene	94		98		70-130	4		20
tert-Butylbenzene	92		96		70-130	4		20
o-Chlorotoluene	90		92		70-130	2		20
p-Chlorotoluene	88		91		70-130	3		20
1,2-Dibromo-3-chloropropane	97		98		41-144	1		20
Hexachlorobutadiene	93		96		63-130	3		20
Isopropylbenzene	90		91		70-130	1		20
p-Isopropyltoluene	98		100		70-130	2		20
Naphthalene	110		120		70-130	9		20
n-Propylbenzene	91		93		69-130	2		20
1,2,3-Trichlorobenzene	110		120		70-130	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.CS

Lab Number: L1703663

Report Date: 02/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,04,07,09 Batch: WG976616-8 WG976616-9								
1,2,4-Trichlorobenzene	100		120		70-130	18		20
1,3,5-Trimethylbenzene	92		97		64-130	5		20
1,2,4-Trimethylbenzene	96		100		70-130	4		20
1,4-Dioxane	86		88		56-162	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		96		70-130
Toluene-d8	100		99		70-130
4-Bromofluorobenzene	96		97		70-130
Dibromofluoromethane	99		99		70-130

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1703663
Report Date: 02/09/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1703663-01A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-01B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-01C	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-02A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-02B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-02C	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-03X	Vial HCl preserved split	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-03Y	Vial HCl preserved split	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-03Z	Vial HCl preserved split	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-04A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-04B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-05A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-05B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-05C	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-06A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-06B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-06C	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-07A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-07B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-07C	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-08A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-08B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-08C	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-09A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-09B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-09C	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1703663-10A	Vial HCl preserved	A	N/A	3.0	Y	Absent	COMP-VOA(0)
L1703663-10A1	Vial HCl preserved	A	N/A	3.0	Y	Absent	COMP-VOA(0)
L1703663-10A2	Vial HCl preserved	A	N/A	3.0	Y	Absent	COMP-VOA(0)

*Values in parentheses indicate holding time in days

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1703663
Report Date: 02/09/17

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1703663-10B	Vial HCl preserved	A	N/A	3.0	Y	Absent	COMP-VOA(0)
L1703663-10B1	Vial HCl preserved	A	N/A	3.0	Y	Absent	COMP-VOA(0)
L1703663-10B2	Vial HCl preserved	A	N/A	3.0	Y	Absent	COMP-VOA(0)
L1703663-10C	Vial HCl preserved	A	N/A	3.0	Y	Absent	COMP-VOA(0)
L1703663-10C1	Vial HCl preserved	A	N/A	3.0	Y	Absent	COMP-VOA(0)
L1703663-10C2	Vial HCl preserved	A	N/A	3.0	Y	Absent	COMP-VOA(0)
L1703663-10D	Vial HCl preserved	A	N/A	3.0	Y	Absent	COMP-VOA(0)
L1703663-10D1	Vial HCl preserved	A	N/A	3.0	Y	Absent	COMP-VOA(0)
L1703663-10D2	Vial HCl preserved	A	N/A	3.0	Y	Absent	COMP-VOA(0)

*Values in parentheses indicate holding time in days

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1703663
Project Number:	683896.06.JM.CS	**Report Date:**	02/09/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: DU Report with 'J' Qualifiers

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1703663
Project Number:	683896.06.JM.CS	**Report Date:**	02/09/17

Data Qualifiers

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1703663
Project Number:	683896.06.JM.CS	**Report Date:**	02/09/17

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 2

Date Rec'd in Lab: 2/4/17

ALPHA Job #: L1703663

Client Information

Client: CH2M HILL
Address: 18 Tremont St Suite 300 Boston MA 02108
Phone: (617) 626-7013
Fax: (810) 229-5031
Email:

Project Information

Project Name: Essex Hope Jamestown
Project Location: Jamestown NY
Project # 683896.06.JM.LS
(Use Project name as Project #) ☐
Project Manager: Kyle Block.
ALPHAQuote #:

Turn-Around Time

Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information

☒ Same as Client Info
PO #

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Composite all 4 Post-CARB Samples and Report as Post-CARB_20170202

Please specify Metals or TAL.

ANALYSIS

VOC 8260

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC 8260	Sample Specific Comments	Total Bottle
03663-01	Pre-Carb-20170202	02/02/17	1430	GW	JG	X		3
-02	Primary-Eff-20170202		1435			X		3
-10/03	Post-CARB-20170202-1		1440			X		3
	Post-CARB-20170202-2		1510			X		3
	Post-CARB-20170202-3		1540			X		3
↓	Post-CARB-20170202-4		1610			X		3
-04	TRIP BLANK	↓	—	↓	↓	X		2

Container Type: √
Preservative: B

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
	2/3/17 0930		
	2/3/17 1245		2/4/17 0090

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 2 of 2

Date Rec'd in Lab: 2/4/17

ALPHA Job #: L1703663

Project Information

Project Name: Essex Hope Jamestown
Project Location: Jamestown NY
Project #: 683896.06.JM.LS
(Use Project name as Project #) ☐
Project Manager: Kyle Block.
ALPHAQuote #:

Turn-Around Time

Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Client Information

Client: CH2M HILL
Address: 18 Tremont ST Suite 300 Boston MA 02108
Phone: (617) 626-7013
Fax: (810) 229-5031
Email:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☒ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: VOC 8260								Sample Specific Comments	Total Bottles
03663-05	RW-1S-20170202	02/02/16	1450	GW	J.L	X									3
-06	RW-2S-20170202	↓	1520	↓	↓	X									3
-07	RW-2D-20170202	↓	1550	↓	↓	X									3
-08	RW-3S-20170202	↓	1620	↓	↓	X									3
-09	RW-6D-20170202.	↓	1640	↓	↓	X									3

Container Type	V								
Preservative	B								

Preservative Code	Container Code
A = None	P = Plastic
B = HCl	A = Amber Glass
C = HNO_3	V = Vial
D = H_2SO_4	G = Glass
E = NaOH	B = Bacteria Cup
F = MeOH	C = Cube
G = $NaHSO_4$	O = Other
H = $Na_2S_2O_3$	E = Encore
K/E = Zn Ac/NaOH	D = BOD Bottle
O = Other	

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	2/3/17 0930	J. Horner AAL	2/3/17 1015
J. Horner AAL	3/3/17 1245	[signature]	2/4/17 00:10

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1708072
Client:	CH2MHILL 18 Tremont Street Suite 700 Boston, MA 02108
ATTN:	Kyle Block
Phone:	(617) 523-2260
Project Name:	ESSEX HOPE JAMESTOWN
Project Number:	683896.06.JM.CS
Report Date:	03/23/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1708072
Report Date: 03/23/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1708072-01	PRE-CARB_20170316	WATER	JAMESTOWN, NY	03/16/17 08:30	03/16/17
L1708072-02	PRIMARY-EFF_20170316	WATER	JAMESTOWN, NY	03/16/17 08:35	03/16/17
L1708072-03	COMP-POST-CARB_20170316-GRAB-1	WATER	JAMESTOWN, NY	03/16/17 08:40	03/16/17
L1708072-04	COMP-POST-CARB_20170316-GRAB-2	WATER	JAMESTOWN, NY	03/16/17 09:10	03/16/17
L1708072-05	COMP-POST-CARB_20170316-GRAB-3	WATER	JAMESTOWN, NY	03/16/17 09:40	03/16/17
L1708072-06	COMP-POST-CARB_20170316-GRAB-4	WATER	JAMESTOWN, NY	03/16/17 10:10	03/16/17
L1708072-07	POST-CARB_20170316	WATER	JAMESTOWN, NY	03/16/17 10:10	03/16/17

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1708072
Project Number:	683896.06.JM.CS	**Report Date:**	03/23/17

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1708072
Project Number:	683896.06.JM.CS	**Report Date:**	03/23/17

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L1708072-03 through -06 were composited and analyzed per client request.

Volatile Organics

L1708072-01 and -02: The samples have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

The WG986686-3 LCS recovery, associated with L1708072-01 and -02, is above the individual acceptance criteria for 1,2,3-trichlorobenzene (140%), but within the overall method allowances. The results of the associated samples are reported.

The WG987278-3 LCS recovery, associated with L1708072-07, is above the individual acceptance criteria for 1,2,3-trichlorobenzene (140%), but within the overall method allowances. The results of the associated samples are reported.

The WG987278-3/-4 LCS/LCSD RPDs, associated with L1708072-07, are above the acceptance criteria for 1,1-dichloroethane (22%), carbon tetrachloride (22%), 1,1,1-trichloroethane (25%), cis-1,3-dichloropropene (22%), 1,1-dichloropropene (22%), chloromethane (21%), chloroethane (21%), trans-1,2-dichloroethene (23%), dichlorodifluoromethane (21%), carbon disulfide (23%), 2,2-dichloropropane (22%), 1,2-dibromoethane (21%), n-butylbenzene (22%), 1,2-dibromo-3-chloropropane (21%), naphthalene (24%), 1,2,3-trichlorobenzene (24%), 1,2,4-trichlorobenzene (21%), 1,3,5-trimethylbenzene (21%) and 1,4-dioxane (28%).

The initial calibration, associated with L1708072-01 and -02, did not meet the method required minimum response factor for the calibration standards for bromomethane, chloroethane, acetone, bromochloromethane, 2-butanone, trichloroethene, dibromomethane, bromodichloromethane, 1,4-dioxane, cis-1,3-dichloropropene, 1,1,2-trichloroethane, o-xylene, 1,1,2,2-tetrachloroethane, trans-1,4-dichloro-2-butene, and 1,2,4-trichlorobenzene.

The initial calibration, associated with L1708072-07, did not meet the method required minimum response

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1708072
Project Number:	683896.06.JM.CS	**Report Date:**	03/23/17

Case Narrative (continued)

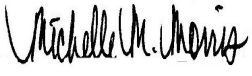
factor for the calibration standards for bromomethane, chloroethane, acetone, bromochloromethane, 2-butanone, trichloroethene, dibromomethane, bromodichloromethane, 1,4-dioxane, cis-1,3-dichloropropene, 1,1,2-trichloroethane, o-xylene, 1,1,2,2-tetrachloroethane, trans-1,4-dichloro-2-butene, and 1,2,4-trichlorobenzene.

The continuing calibration, associated with L1708072-01 and -02, did not meet the method required minimum response factor for bromomethane, chloroethane, acetone, bromochloromethane, 2-butanone, trichloroethene, dibromomethane, 1,4-dioxane, 1,1,2-trichloroethane, and 1,1,2,2,-tetrachloroethane.

The continuing calibration, associated with L1708072-07, did not meet the method required minimum response factor for dichlorodifluoromethane, bromomethane, chloroethane, acetone, bromochloromethane, 2-butanone, trichloroethene, dibromomethane, 1,4-dioxane, 1,1,2-trichloroethane, and 1,1,2,2,-tetrachloroethane.

The continuing calibration verification standard WG987278-2 has the percent deviation for dichlorodifluoromethane (43%D) and chloromethane (29%D) above the 20% CCV criteria, but within overall method allowances.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Michelle M. Morris

Title: Technical Director/Representative Date: 03/23/17

ORGANICS

VOLATILES

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

SAMPLE RESULTS

Lab ID: L1708072-01 D
Client ID: PRE-CARB_20170316
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/18/17 00:07
Analyst: NL

Date Collected: 03/16/17 08:30
Date Received: 03/16/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	120	35.	50
1,1-Dichloroethane	ND		ug/l	120	35.	50
Chloroform	ND		ug/l	120	35.	50
Carbon tetrachloride	ND		ug/l	25	6.7	50
1,2-Dichloropropane	ND		ug/l	50	6.8	50
Dibromochloromethane	ND		ug/l	25	7.4	50
1,1,2-Trichloroethane	ND		ug/l	75	25.	50
Tetrachloroethene	ND		ug/l	25	9.0	50
Chlorobenzene	ND		ug/l	120	35.	50
Trichlorofluoromethane	ND		ug/l	120	35.	50
1,2-Dichloroethane	ND		ug/l	25	6.6	50
1,1,1-Trichloroethane	ND		ug/l	120	35.	50
Bromodichloromethane	ND		ug/l	25	9.6	50
trans-1,3-Dichloropropene	ND		ug/l	25	8.2	50
cis-1,3-Dichloropropene	ND		ug/l	25	7.2	50
1,3-Dichloropropene, Total	ND		ug/l	25	7.2	50
1,1-Dichloropropene	ND		ug/l	120	35.	50
Bromoform	ND		ug/l	100	32.	50
1,1,2,2-Tetrachloroethane	ND		ug/l	25	8.4	50
Benzene	8.4	J	ug/l	25	8.0	50
Toluene	ND		ug/l	120	35.	50
Ethylbenzene	ND		ug/l	120	35.	50
Chloromethane	ND		ug/l	120	35.	50
Bromomethane	ND		ug/l	120	35.	50
Vinyl chloride	620		ug/l	50	3.6	50
Chloroethane	ND		ug/l	120	35.	50
1,1-Dichloroethene	16	J	ug/l	25	8.4	50
trans-1,2-Dichloroethene	ND		ug/l	120	35.	50
Trichloroethene	2400		ug/l	25	8.8	50
1,2-Dichlorobenzene	ND		ug/l	120	35.	50

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

SAMPLE RESULTS

Lab ID: L1708072-01 D Date Collected: 03/16/17 08:30

Client ID: PRE-CARB_20170316 Date Received: 03/16/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	120	35.	50
1,4-Dichlorobenzene	ND		ug/l	120	35.	50
Methyl tert butyl ether	ND		ug/l	120	35.	50
p/m-Xylene	ND		ug/l	120	35.	50
o-Xylene	ND		ug/l	120	35.	50
Xylenes, Total	ND		ug/l	120	35.	50
cis-1,2-Dichloroethene	3600		ug/l	120	35.	50
1,2-Dichloroethene, Total	3600		ug/l	120	35.	50
Dibromomethane	ND		ug/l	250	50.	50
1,2,3-Trichloropropane	ND		ug/l	120	35.	50
Styrene	ND		ug/l	120	35.	50
Dichlorodifluoromethane	ND		ug/l	250	50.	50
Acetone	750		ug/l	250	73.	50
Carbon disulfide	ND		ug/l	250	50.	50
2-Butanone	ND		ug/l	250	97.	50
Vinyl acetate	ND		ug/l	250	50.	50
4-Methyl-2-pentanone	ND		ug/l	250	50.	50
2-Hexanone	ND		ug/l	250	50.	50
Bromochloromethane	ND		ug/l	120	35.	50
2,2-Dichloropropane	ND		ug/l	120	35.	50
1,2-Dibromoethane	ND		ug/l	100	32.	50
1,3-Dichloropropane	ND		ug/l	120	35.	50
1,1,1,2-Tetrachloroethane	ND		ug/l	120	35.	50
Bromobenzene	ND		ug/l	120	35.	50
n-Butylbenzene	ND		ug/l	120	35.	50
sec-Butylbenzene	ND		ug/l	120	35.	50
tert-Butylbenzene	ND		ug/l	120	35.	50
o-Chlorotoluene	ND		ug/l	120	35.	50
p-Chlorotoluene	ND		ug/l	120	35.	50
1,2-Dibromo-3-chloropropane	ND		ug/l	120	35.	50
Hexachlorobutadiene	ND		ug/l	120	35.	50
Isopropylbenzene	ND		ug/l	120	35.	50
p-Isopropyltoluene	ND		ug/l	120	35.	50
Naphthalene	ND		ug/l	120	35.	50
n-Propylbenzene	ND		ug/l	120	35.	50
1,2,3-Trichlorobenzene	ND		ug/l	120	35.	50
1,2,4-Trichlorobenzene	ND		ug/l	120	35.	50
1,3,5-Trimethylbenzene	ND		ug/l	120	35.	50
1,2,4-Trimethylbenzene	ND		ug/l	120	35.	50

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

SAMPLE RESULTS

Lab ID: L1708072-01 D Date Collected: 03/16/17 08:30

Client ID: PRE-CARB_20170316 Date Received: 03/16/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	12000	3000	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	102		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

SAMPLE RESULTS

Lab ID: L1708072-02 D
Client ID: PRIMARY-EFF_20170316
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/18/17 00:30
Analyst: NL

Date Collected: 03/16/17 08:35
Date Received: 03/16/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	50	14.	20
1,1-Dichloroethane	ND		ug/l	50	14.	20
Chloroform	ND		ug/l	50	14.	20
Carbon tetrachloride	ND		ug/l	10	2.7	20
1,2-Dichloropropane	ND		ug/l	20	2.7	20
Dibromochloromethane	ND		ug/l	10	3.0	20
1,1,2-Trichloroethane	ND		ug/l	30	10.	20
Tetrachloroethene	ND		ug/l	10	3.6	20
Chlorobenzene	ND		ug/l	50	14.	20
Trichlorofluoromethane	ND		ug/l	50	14.	20
1,2-Dichloroethane	ND		ug/l	10	2.6	20
1,1,1-Trichloroethane	ND		ug/l	50	14.	20
Bromodichloromethane	ND		ug/l	10	3.8	20
trans-1,3-Dichloropropene	ND		ug/l	10	3.3	20
cis-1,3-Dichloropropene	ND		ug/l	10	2.9	20
1,3-Dichloropropene, Total	ND		ug/l	10	2.9	20
1,1-Dichloropropene	ND		ug/l	50	14.	20
Bromoform	ND		ug/l	40	13.	20
1,1,2,2-Tetrachloroethane	ND		ug/l	10	3.3	20
Benzene	ND		ug/l	10	3.2	20
Toluene	ND		ug/l	50	14.	20
Ethylbenzene	ND		ug/l	50	14.	20
Chloromethane	ND		ug/l	50	14.	20
Bromomethane	ND		ug/l	50	14.	20
Vinyl chloride	570		ug/l	20	1.4	20
Chloroethane	ND		ug/l	50	14.	20
1,1-Dichloroethene	ND		ug/l	10	3.4	20
trans-1,2-Dichloroethene	ND		ug/l	50	14.	20
Trichloroethene	96		ug/l	10	3.5	20
1,2-Dichlorobenzene	ND		ug/l	50	14.	20

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

SAMPLE RESULTS

Lab ID: L1708072-02 D Date Collected: 03/16/17 08:35

Client ID: PRIMARY-EFF_20170316 Date Received: 03/16/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	50	14.	20
1,4-Dichlorobenzene	ND		ug/l	50	14.	20
Methyl tert butyl ether	ND		ug/l	50	14.	20
p/m-Xylene	ND		ug/l	50	14.	20
o-Xylene	ND		ug/l	50	14.	20
Xylenes, Total	ND		ug/l	50	14.	20
cis-1,2-Dichloroethene	990		ug/l	50	14.	20
1,2-Dichloroethene, Total	990		ug/l	50	14.	20
Dibromomethane	ND		ug/l	100	20.	20
1,2,3-Trichloropropane	ND		ug/l	50	14.	20
Styrene	ND		ug/l	50	14.	20
Dichlorodifluoromethane	ND		ug/l	100	20.	20
Acetone	45	J	ug/l	100	29.	20
Carbon disulfide	ND		ug/l	100	20.	20
2-Butanone	ND		ug/l	100	39.	20
Vinyl acetate	ND		ug/l	100	20.	20
4-Methyl-2-pentanone	ND		ug/l	100	20.	20
2-Hexanone	ND		ug/l	100	20.	20
Bromochloromethane	ND		ug/l	50	14.	20
2,2-Dichloropropane	ND		ug/l	50	14.	20
1,2-Dibromoethane	ND		ug/l	40	13.	20
1,3-Dichloropropane	ND		ug/l	50	14.	20
1,1,1,2-Tetrachloroethane	ND		ug/l	50	14.	20
Bromobenzene	ND		ug/l	50	14.	20
n-Butylbenzene	ND		ug/l	50	14.	20
sec-Butylbenzene	ND		ug/l	50	14.	20
tert-Butylbenzene	ND		ug/l	50	14.	20
o-Chlorotoluene	ND		ug/l	50	14.	20
p-Chlorotoluene	ND		ug/l	50	14.	20
1,2-Dibromo-3-chloropropane	ND		ug/l	50	14.	20
Hexachlorobutadiene	ND		ug/l	50	14.	20
Isopropylbenzene	ND		ug/l	50	14.	20
p-Isopropyltoluene	ND		ug/l	50	14.	20
Naphthalene	ND		ug/l	50	14.	20
n-Propylbenzene	ND		ug/l	50	14.	20
1,2,3-Trichlorobenzene	ND		ug/l	50	14.	20
1,2,4-Trichlorobenzene	ND		ug/l	50	14.	20
1,3,5-Trimethylbenzene	ND		ug/l	50	14.	20
1,2,4-Trimethylbenzene	ND		ug/l	50	14.	20

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

SAMPLE RESULTS

Lab ID: L1708072-02 D Date Collected: 03/16/17 08:35

Client ID: PRIMARY-EFF_20170316 Date Received: 03/16/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	5000	1200	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	103		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

SAMPLE RESULTS

Lab ID: L1708072-07
Client ID: POST-CARB_20170316
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/22/17 11:44
Analyst: PD

Date Collected: 03/16/17 10:10
Date Received: 03/16/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	23		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

SAMPLE RESULTS

Lab ID: L1708072-07 Date Collected: 03/16/17 10:10

Client ID: POST-CARB_20170316 Date Received: 03/16/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	0.81	J	ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	0.81	J	ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	0.70	J	ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

SAMPLE RESULTS

Lab ID: L1708072-07 Date Collected: 03/16/17 10:10

Client ID: POST-CARB_20170316 Date Received: 03/16/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	101		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/17/17 21:04
Analyst: NL

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG986686-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/17/17 21:04
Analyst: NL

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG986686-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/17/17 21:04
Analyst: NL

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG986686-5					
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	0.74	J	ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	97		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/22/17 11:21
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 07 Batch: WG987278-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/22/17 11:21
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 07 Batch: WG987278-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1708072

Project Number: 683896.06.JM.CS **Report Date:** 03/23/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/22/17 11:21
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 07 Batch: WG987278-5					
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	0.75	J	ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1708072
Report Date: 03/23/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG986686-3 WG986686-4								
Methylene chloride	98		96		70-130	2		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	100		98		70-130	2		20
Carbon tetrachloride	100		100		63-132	0		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	97		94		63-130	3		20
1,1,2-Trichloroethane	100		98		70-130	2		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		97		75-130	3		20
Trichlorofluoromethane	100		97		62-150	3		20
1,2-Dichloroethane	97		95		70-130	2		20
1,1,1-Trichloroethane	100		98		67-130	2		20
Bromodichloromethane	97		95		67-130	2		20
trans-1,3-Dichloropropene	100		98		70-130	2		20
cis-1,3-Dichloropropene	110		100		70-130	10		20
1,1-Dichloropropene	110		100		70-130	10		20
Bromoform	96		93		54-136	3		20
1,1,2,2-Tetrachloroethane	100		98		67-130	2		20
Benzene	110		100		70-130	10		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.CS

Lab Number: L1708072

Report Date: 03/23/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG986686-3 WG986686-4								
Chloromethane	100		100		64-130	0		20
Bromomethane	97		96		39-139	1		20
Vinyl chloride	110		100		55-140	10		20
Chloroethane	100		100		55-138	0		20
1,1-Dichloroethene	110		100		61-145	10		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	100		97		70-130	3		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	100		98		70-130	2		20
Methyl tert butyl ether	110		100		63-130	10		20
p/m-Xylene	110		105		70-130	5		20
o-Xylene	110		105		70-130	5		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	100		96		70-130	4		20
1,2,3-Trichloropropane	100		99		64-130	1		20
Styrene	110		105		70-130	5		20
Dichlorodifluoromethane	98		94		36-147	4		20
Acetone	97		92		58-148	5		20
Carbon disulfide	110		100		51-130	10		20
2-Butanone	100		99		63-138	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1708072
Report Date: 03/23/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG986686-3 WG986686-4								
Vinyl acetate	98		93		70-130	5		20
4-Methyl-2-pentanone	90		84		59-130	7		20
2-Hexanone	81		77		57-130	5		20
Bromochloromethane	100		100		70-130	0		20
2,2-Dichloropropane	100		100		63-133	0		20
1,2-Dibromoethane	100		99		70-130	1		20
1,3-Dichloropropane	100		100		70-130	0		20
1,1,1,2-Tetrachloroethane	98		96		64-130	2		20
Bromobenzene	100		100		70-130	0		20
n-Butylbenzene	110		110		53-136	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	110		110		70-130	0		20
o-Chlorotoluene	110		110		70-130	0		20
p-Chlorotoluene	110		100		70-130	10		20
1,2-Dibromo-3-chloropropane	92		88		41-144	4		20
Hexachlorobutadiene	120		100		63-130	18		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	110		93		70-130	17		20
n-Propylbenzene	110		110		69-130	0		20
1,2,3-Trichlorobenzene	**140**	Q	120		70-130	15		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1708072
Report Date: 03/23/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG986686-3 WG986686-4								
1,2,4-Trichlorobenzene	120		110		70-130	9		20
1,3,5-Trimethylbenzene	110		100		64-130	10		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
1,4-Dioxane	122		116		56-162	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		97		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	103		102		70-130
Dibromofluoromethane	98		97		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1708072
Report Date: 03/23/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 07 Batch: WG987278-3 WG987278-4								
Methylene chloride	100		88		70-130	13		20
1,1-Dichloroethane	120		96		70-130	**22**	Q	20
Chloroform	110		94		70-130	16		20
Carbon tetrachloride	120		96		63-132	**22**	Q	20
1,2-Dichloropropane	110		94		70-130	16		20
Dibromochloromethane	100		87		63-130	14		20
1,1,2-Trichloroethane	100		88		70-130	13		20
Tetrachloroethene	110		95		70-130	15		20
Chlorobenzene	110		92		75-130	18		20
Trichlorofluoromethane	110		92		62-150	18		20
1,2-Dichloroethane	110		92		70-130	18		20
1,1,1-Trichloroethane	120		93		67-130	**25**	Q	20
Bromodichloromethane	110		91		67-130	19		20
trans-1,3-Dichloropropene	100		88		70-130	13		20
cis-1,3-Dichloropropene	120		96		70-130	**22**	Q	20
1,1-Dichloropropene	120		96		70-130	**22**	Q	20
Bromoform	98		84		54-136	15		20
1,1,2,2-Tetrachloroethane	100		85		67-130	16		20
Benzene	120		100		70-130	18		20
Toluene	110		94		70-130	16		20
Ethylbenzene	110		94		70-130	16		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1708072
Report Date: 03/23/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 07 Batch: WG987278-3 WG987278-4								
Chloromethane	88		71		64-130	**21**	Q	20
Bromomethane	100		88		39-139	13		20
Vinyl chloride	100		82		55-140	20		20
Chloroethane	120		97		55-138	**21**	Q	20
1,1-Dichloroethene	110		97		61-145	13		20
trans-1,2-Dichloroethene	120		95		70-130	**23**	Q	20
Trichloroethene	110		94		70-130	16		20
1,2-Dichlorobenzene	110		93		70-130	17		20
1,3-Dichlorobenzene	110		95		70-130	15		20
1,4-Dichlorobenzene	110		92		70-130	18		20
Methyl tert butyl ether	110		93		63-130	17		20
p/m-Xylene	120		100		70-130	18		20
o-Xylene	120		100		70-130	18		20
cis-1,2-Dichloroethene	120		100		70-130	18		20
Dibromomethane	110		91		70-130	19		20
1,2,3-Trichloropropane	100		88		64-130	13		20
Styrene	115		100		70-130	14		20
Dichlorodifluoromethane	59		48		36-147	**21**	Q	20
Acetone	99		81		58-148	20		20
Carbon disulfide	110		87		51-130	**23**	Q	20
2-Butanone	100		84		63-138	17		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1708072
Report Date: 03/23/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 07 Batch: WG987278-3 WG987278-4								
Vinyl acetate	100		85		70-130	16		20
4-Methyl-2-pentanone	86		71		59-130	19		20
2-Hexanone	78		65		57-130	18		20
Bromochloromethane	110		95		70-130	15		20
2,2-Dichloropropane	120		96		63-133	**22**	Q	20
1,2-Dibromoethane	110		89		70-130	**21**	Q	20
1,3-Dichloropropane	100		89		70-130	12		20
1,1,1,2-Tetrachloroethane	110		90		64-130	20		20
Bromobenzene	110		93		70-130	17		20
n-Butylbenzene	120		96		53-136	**22**	Q	20
sec-Butylbenzene	120		98		70-130	20		20
tert-Butylbenzene	120		98		70-130	20		20
o-Chlorotoluene	120		100		70-130	18		20
p-Chlorotoluene	110		96		70-130	14		20
1,2-Dibromo-3-chloropropane	91		74		41-144	**21**	Q	20
Hexachlorobutadiene	120		99		63-130	19		20
Isopropylbenzene	120		100		70-130	18		20
p-Isopropyltoluene	110		94		70-130	16		20
Naphthalene	99		78		70-130	**24**	Q	20
n-Propylbenzene	120		98		69-130	20		20
1,2,3-Trichlorobenzene	**140**	Q	110		70-130	**24**	Q	20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.CS

Lab Number: L1708072

Report Date: 03/23/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 07 Batch: WG987278-3 WG987278-4								
1,2,4-Trichlorobenzene	120		97		70-130	**21**	Q	20
1,3,5-Trimethylbenzene	120		97		64-130	**21**	Q	20
1,2,4-Trimethylbenzene	120		99		70-130	19		20
1,4-Dioxane	140		106		56-162	**28**	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		98		70-130
Toluene-d8	99		99		70-130
4-Bromofluorobenzene	99		100		70-130
Dibromofluoromethane	100		98		70-130

SEMIVOLATILES

Project Name: ESSEX HOPE JAMESTOWN
Lab Number: L1708072
Project Number: 683896.06.JM.CS
Report Date: 03/23/17

SAMPLE RESULTS

Lab ID:	L1708072-01	Date Collected:	03/16/17 08:30
Client ID:	PRE-CARB_20170316	Date Received:	03/16/17
Sample Location:	JAMESTOWN, NY	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM	Extraction Date:	03/17/17 14:00
Analytical Date:	03/22/17 11:21		
Analyst:	WR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	583.		ng/l	142	70.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	21		15-110

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS
Lab Number: L1708072
Report Date: 03/23/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 03/21/17 18:38
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 03/17/17 14:00

Parameter	Result	Qualifier	Units	RL	MDL
1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01 Batch: WG986218-1					
1,4-Dioxane	ND		ng/l	150	75.0

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	25		15-110

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.CS

Lab Number: L1708072

Report Date: 03/23/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01 Batch: WG986218-2 WG986218-3								
1,4-Dioxane	132		132		40-140	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	26		28		15-110

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1708072
Report Date: 03/23/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
C	Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1708072-01A	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	NYTCL-8260(14)
L1708072-01B	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	NYTCL-8260(14)
L1708072-01C	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	NYTCL-8260(14)
L1708072-01D	Amber 500ml unpreserved	C	7	3.0	Y	Present/Intact	A2-1,4-DIOXANE-SIM(7)
L1708072-01E	Amber 500ml unpreserved	C	7	3.0	Y	Present/Intact	A2-1,4-DIOXANE-SIM(7)
L1708072-02A	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	NYTCL-8260(14)
L1708072-02B	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	NYTCL-8260(14)
L1708072-02C	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	NYTCL-8260(14)
L1708072-03A	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	COMP-VOA(0)
L1708072-03B	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	COMP-VOA(0)
L1708072-03C	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	COMP-VOA(0)
L1708072-04A	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	HOLD-8260(14)
L1708072-04B	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	HOLD-8260(14)
L1708072-04C	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	HOLD-8260(14)
L1708072-05A	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	HOLD-8260(14)
L1708072-05B	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	HOLD-8260(14)
L1708072-05C	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	HOLD-8260(14)
L1708072-06A	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	HOLD-8260(14)
L1708072-06B	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	HOLD-8260(14)
L1708072-06C	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	HOLD-8260(14)
L1708072-07X	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	NYTCL-8260(14)
L1708072-07Y	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	NYTCL-8260(14)
L1708072-07Z	Vial HCl preserved	C	N/A	3.0	Y	Present/Intact	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1708072
Project Number:	683896.06.JM.CS	**Report Date:**	03/23/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: DU Report with 'J' Qualifiers

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1708072
Project Number:	683896.06.JM.CS	**Report Date:**	03/23/17

Data Qualifiers

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1708072
Project Number:	683896.06.JM.CS	**Report Date:**	03/23/17

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 3/17/17

ALPHA Job #: L1708072

Project Information
Project Name: Essex/Hope JAMESTOWN
Project Location: Jamestown NY
Project # 683896.06.JM.LS
(Use Project name as Project #) ☐
Project Manager: Kyle Block
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Client Information
Client: CH2M HILL
Address: 18 Tremont St. Suite 500 Boston, MA
Phone:
Fax:
Email:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☐ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC 8260	1,4-dioxane 8270SIM only	Sample Specific Comments	Total Bottles
08072-01	Pre-Carb_20170316	03/16/17	0830	GW	JRG	X	X		5
-02	Primary-Eff_20170316	↓	0835	↓	↓	X			3
-03	Post-Carb_20170316-1	↓	0840	↓	↓	X			3
-04	Post-Carb-20170316-2	↓	0910	↓	↓	X			3
-05	Post-Carb-20170316-3	↓	0940	↓	↓	X			3
-06	Post-Carb-20170316-4	↓	1010	↓	↓	X			3
	~~TRIP BLANK~~								

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

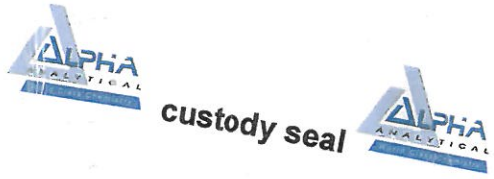
Westboro: Certification No: MA935
Mansfield: Certification No: MA015

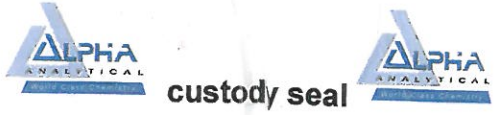
Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
~~[signature]~~	3/16/17 @ 1530	[signature] AAL	3/16/17 1545
[signature] AAL	3/16/17 1735	[signature]	3/17/17 0055

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)


custody seal


custody seal

ANALYTICAL REPORT

Lab Number:	L1710487
Client:	CH2MHILL 18 Tremont Street Suite 700 Boston, MA 02108
ATTN:	Kyle Block
Phone:	(617) 523-2260
Project Name:	ESSEX/HOPE JAMESTOWN
Project Number:	683896.06.JM.CS
Report Date:	04/12/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: ESSEX/HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1710487
Report Date: 04/12/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1710487-01	PRE-CARB_20170405	WATER	JAMESTOWN, NY	04/05/17 07:00	04/05/17
L1710487-02	PRIMARY-EFF_20170405	WATER	JAMESTOWN, NY	04/05/17 07:10	04/05/17
L1710487-03	POST-CARB_20170405	WATER	JAMESTOWN, NY	04/05/17 08:50	04/05/17
L1710487-04	TRIP BLANK	WATER	JAMESTOWN, NY	04/05/17 00:00	04/05/17
L1710487-05	COMPOSITE POST-CARB_20170405-GRABS 1-4	WATER	JAMESTOWN, NY	04/05/17 08:50	04/05/17

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487
Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	ESSEX/HOPE JAMESTOWN	**Lab Number:**	L1710487
Project Number:	683896.06.JM.CS	**Report Date:**	04/12/17

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L1710487-01 and -02: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1710487-04: The Trip Blank has results for trichloroethene, cis-1,2-dichloroethene and Total 1,2-Dichloroethene present above the reporting limits. The sample vial was verified as being labeled correctly by the laboratory and the previous analysis showed there was no potential for carry over.

The WG993548-3 LCS recoveries, associated with L1710487-01 through -04, are above the individual acceptance criteria for carbon disulfide (150%) and 1,2,3-trichlorobenzene (140%), but within the overall method allowances. The results of the associated samples are reported. In addition, the LCS/LCSD RPD is above the acceptance criteria for carbon disulfide (31%).

The initial calibration, associated with L1710487-01 through -04, did not meet the method required minimum response factor for the calibration standards for bromomethane, chloroethane, acetone, bromochloromethane, 2-butanone, trichloroethene, dibromomethane, bromodichloromethane, 1,4-dioxane, cis-1,3-dichloropropene, 1,1,2-trichloroethane, o-xylene, 1,1,2,2-tetrachloroethane and 1,2,4-trichlorobenzene.

The continuing calibration, associated with L1710487-01 through -04, did not meet the method required minimum response factor for bromomethane, chloroethane, acetone, bromochloromethane, 2-butanone, dibromomethane, 1,4-dioxane, 1,1,2-trichloroethane and 1,1,2,2,-tetrachloroethane.

The continuing calibration verification standard WG993548-2 has the percent deviation for naphthalene (26%D) above the 20% CCV criteria, but within overall method allowances.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 04/12/17

ORGANICS

VOLATILES

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

SAMPLE RESULTS

Lab ID: L1710487-01 D
Client ID: PRE-CARB_20170405
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 04/12/17 11:45
Analyst: PD

Date Collected: 04/05/17 07:00
Date Received: 04/05/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	120	35.	50
1,1-Dichloroethane	ND		ug/l	120	35.	50
Chloroform	ND		ug/l	120	35.	50
Carbon tetrachloride	ND		ug/l	25	6.7	50
1,2-Dichloropropane	ND		ug/l	50	6.8	50
Dibromochloromethane	ND		ug/l	25	7.4	50
1,1,2-Trichloroethane	ND		ug/l	75	25.	50
Tetrachloroethene	ND		ug/l	25	9.0	50
Chlorobenzene	ND		ug/l	120	35.	50
Trichlorofluoromethane	ND		ug/l	120	35.	50
1,2-Dichloroethane	ND		ug/l	25	6.6	50
1,1,1-Trichloroethane	ND		ug/l	120	35.	50
Bromodichloromethane	ND		ug/l	25	9.6	50
trans-1,3-Dichloropropene	ND		ug/l	25	8.2	50
cis-1,3-Dichloropropene	ND		ug/l	25	7.2	50
1,3-Dichloropropene, Total	ND		ug/l	25	7.2	50
1,1-Dichloropropene	ND		ug/l	120	35.	50
Bromoform	ND		ug/l	100	32.	50
1,1,2,2-Tetrachloroethane	ND		ug/l	25	8.4	50
Benzene	8.6	J	ug/l	25	8.0	50
Toluene	ND		ug/l	120	35.	50
Ethylbenzene	ND		ug/l	120	35.	50
Chloromethane	ND		ug/l	120	35.	50
Bromomethane	ND		ug/l	120	35.	50
Vinyl chloride	440		ug/l	50	3.6	50
Chloroethane	ND		ug/l	120	35.	50
1,1-Dichloroethene	12	J	ug/l	25	8.4	50
trans-1,2-Dichloroethene	ND		ug/l	120	35.	50
Trichloroethene	1900		ug/l	25	8.8	50
1,2-Dichlorobenzene	ND		ug/l	120	35.	50

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

SAMPLE RESULTS

Lab ID: L1710487-01 D Date Collected: 04/05/17 07:00

Client ID: PRE-CARB_20170405 Date Received: 04/05/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	120	35.	50
1,4-Dichlorobenzene	ND		ug/l	120	35.	50
Methyl tert butyl ether	ND		ug/l	120	35.	50
p/m-Xylene	ND		ug/l	120	35.	50
o-Xylene	ND		ug/l	120	35.	50
Xylenes, Total	ND		ug/l	120	35.	50
cis-1,2-Dichloroethene	3100		ug/l	120	35.	50
1,2-Dichloroethene, Total	3100		ug/l	120	35.	50
Dibromomethane	ND		ug/l	250	50.	50
1,2,3-Trichloropropane	ND		ug/l	120	35.	50
Styrene	ND		ug/l	120	35.	50
Dichlorodifluoromethane	ND		ug/l	250	50.	50
Acetone	960		ug/l	250	73.	50
Carbon disulfide	ND		ug/l	250	50.	50
2-Butanone	ND		ug/l	250	97.	50
Vinyl acetate	ND		ug/l	250	50.	50
4-Methyl-2-pentanone	ND		ug/l	250	50.	50
2-Hexanone	ND		ug/l	250	50.	50
Bromochloromethane	ND		ug/l	120	35.	50
2,2-Dichloropropane	ND		ug/l	120	35.	50
1,2-Dibromoethane	ND		ug/l	100	32.	50
1,3-Dichloropropane	ND		ug/l	120	35.	50
1,1,1,2-Tetrachloroethane	ND		ug/l	120	35.	50
Bromobenzene	ND		ug/l	120	35.	50
n-Butylbenzene	ND		ug/l	120	35.	50
sec-Butylbenzene	ND		ug/l	120	35.	50
tert-Butylbenzene	ND		ug/l	120	35.	50
o-Chlorotoluene	ND		ug/l	120	35.	50
p-Chlorotoluene	ND		ug/l	120	35.	50
1,2-Dibromo-3-chloropropane	ND		ug/l	120	35.	50
Hexachlorobutadiene	ND		ug/l	120	35.	50
Isopropylbenzene	ND		ug/l	120	35.	50
p-Isopropyltoluene	ND		ug/l	120	35.	50
Naphthalene	48	J	ug/l	120	35.	50
n-Propylbenzene	ND		ug/l	120	35.	50
1,2,3-Trichlorobenzene	ND		ug/l	120	35.	50
1,2,4-Trichlorobenzene	ND		ug/l	120	35.	50
1,3,5-Trimethylbenzene	ND		ug/l	120	35.	50
1,2,4-Trimethylbenzene	ND		ug/l	120	35.	50

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

SAMPLE RESULTS

Lab ID: L1710487-01 D
Client ID: PRE-CARB_20170405
Sample Location: JAMESTOWN, NY

Date Collected: 04/05/17 07:00
Date Received: 04/05/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	12000	3000	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	104		70-130

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

SAMPLE RESULTS

Lab ID: L1710487-02 D
Client ID: PRIMARY-EFF_20170405
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 04/12/17 12:08
Analyst: PD

Date Collected: 04/05/17 07:10
Date Received: 04/05/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	50	14.	20
1,1-Dichloroethane	ND		ug/l	50	14.	20
Chloroform	ND		ug/l	50	14.	20
Carbon tetrachloride	ND		ug/l	10	2.7	20
1,2-Dichloropropane	ND		ug/l	20	2.7	20
Dibromochloromethane	ND		ug/l	10	3.0	20
1,1,2-Trichloroethane	ND		ug/l	30	10.	20
Tetrachloroethene	ND		ug/l	10	3.6	20
Chlorobenzene	ND		ug/l	50	14.	20
Trichlorofluoromethane	ND		ug/l	50	14.	20
1,2-Dichloroethane	ND		ug/l	10	2.6	20
1,1,1-Trichloroethane	ND		ug/l	50	14.	20
Bromodichloromethane	ND		ug/l	10	3.8	20
trans-1,3-Dichloropropene	ND		ug/l	10	3.3	20
cis-1,3-Dichloropropene	ND		ug/l	10	2.9	20
1,3-Dichloropropene, Total	ND		ug/l	10	2.9	20
1,1-Dichloropropene	ND		ug/l	50	14.	20
Bromoform	ND		ug/l	40	13.	20
1,1,2,2-Tetrachloroethane	ND		ug/l	10	3.3	20
Benzene	ND		ug/l	10	3.2	20
Toluene	ND		ug/l	50	14.	20
Ethylbenzene	ND		ug/l	50	14.	20
Chloromethane	ND		ug/l	50	14.	20
Bromomethane	ND		ug/l	50	14.	20
Vinyl chloride	570		ug/l	20	1.4	20
Chloroethane	ND		ug/l	50	14.	20
1,1-Dichloroethene	4.4	J	ug/l	10	3.4	20
trans-1,2-Dichloroethene	ND		ug/l	50	14.	20
Trichloroethene	120		ug/l	10	3.5	20
1,2-Dichlorobenzene	ND		ug/l	50	14.	20

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

SAMPLE RESULTS

Lab ID: L1710487-02 D Date Collected: 04/05/17 07:10

Client ID: PRIMARY-EFF_20170405 Date Received: 04/05/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	50	14.	20
1,4-Dichlorobenzene	ND		ug/l	50	14.	20
Methyl tert butyl ether	ND		ug/l	50	14.	20
p/m-Xylene	ND		ug/l	50	14.	20
o-Xylene	ND		ug/l	50	14.	20
Xylenes, Total	ND		ug/l	50	14.	20
cis-1,2-Dichloroethene	1500		ug/l	50	14.	20
1,2-Dichloroethene, Total	1500		ug/l	50	14.	20
Dibromomethane	ND		ug/l	100	20.	20
1,2,3-Trichloropropane	ND		ug/l	50	14.	20
Styrene	ND		ug/l	50	14.	20
Dichlorodifluoromethane	ND		ug/l	100	20.	20
Acetone	71	J	ug/l	100	29.	20
Carbon disulfide	ND		ug/l	100	20.	20
2-Butanone	ND		ug/l	100	39.	20
Vinyl acetate	ND		ug/l	100	20.	20
4-Methyl-2-pentanone	ND		ug/l	100	20.	20
2-Hexanone	ND		ug/l	100	20.	20
Bromochloromethane	ND		ug/l	50	14.	20
2,2-Dichloropropane	ND		ug/l	50	14.	20
1,2-Dibromoethane	ND		ug/l	40	13.	20
1,3-Dichloropropane	ND		ug/l	50	14.	20
1,1,1,2-Tetrachloroethane	ND		ug/l	50	14.	20
Bromobenzene	ND		ug/l	50	14.	20
n-Butylbenzene	ND		ug/l	50	14.	20
sec-Butylbenzene	ND		ug/l	50	14.	20
tert-Butylbenzene	ND		ug/l	50	14.	20
o-Chlorotoluene	ND		ug/l	50	14.	20
p-Chlorotoluene	ND		ug/l	50	14.	20
1,2-Dibromo-3-chloropropane	ND		ug/l	50	14.	20
Hexachlorobutadiene	ND		ug/l	50	14.	20
Isopropylbenzene	ND		ug/l	50	14.	20
p-Isopropyltoluene	ND		ug/l	50	14.	20
Naphthalene	14	J	ug/l	50	14.	20
n-Propylbenzene	ND		ug/l	50	14.	20
1,2,3-Trichlorobenzene	ND		ug/l	50	14.	20
1,2,4-Trichlorobenzene	ND		ug/l	50	14.	20
1,3,5-Trimethylbenzene	ND		ug/l	50	14.	20
1,2,4-Trimethylbenzene	ND		ug/l	50	14.	20

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

SAMPLE RESULTS

Lab ID: L1710487-02 D Date Collected: 04/05/17 07:10

Client ID: PRIMARY-EFF_20170405 Date Received: 04/05/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	5000	1200	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	105		70-130

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

SAMPLE RESULTS

Lab ID: L1710487-03
Client ID: POST-CARB_20170405
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 04/12/17 12:31
Analyst: PD

Date Collected: 04/05/17 08:50
Date Received: 04/05/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	83		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

SAMPLE RESULTS

Lab ID: L1710487-03 Date Collected: 04/05/17 08:50

Client ID: POST-CARB_20170405 Date Received: 04/05/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	0.82	J	ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	0.82	J	ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	1.5	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

SAMPLE RESULTS

Lab ID: L1710487-03 Date Collected: 04/05/17 08:50

Client ID: POST-CARB_20170405 Date Received: 04/05/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	106		70-130

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

SAMPLE RESULTS

Lab ID: L1710487-04
Client ID: TRIP BLANK
Sample Location: JAMESTOWN, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 04/12/17 12:54
Analyst: PD

Date Collected: 04/05/17 00:00
Date Received: 04/05/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	0.85	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	3.9		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

SAMPLE RESULTS

Lab ID: L1710487-04 Date Collected: 04/05/17 00:00

Client ID: TRIP BLANK Date Received: 04/05/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	3.6		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	3.6		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	4.0	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

SAMPLE RESULTS

Lab ID: L1710487-04 Date Collected: 04/05/17 00:00

Client ID: TRIP BLANK Date Received: 04/05/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	107		70-130

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/12/17 09:27
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG993548-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/12/17 09:27
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG993548-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70

Project Name: ESSEX/HOPE JAMESTOWN **Lab Number:** L1710487

Project Number: 683896.06.JM.CS **Report Date:** 04/12/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/12/17 09:27
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG993548-5					
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	0.90	J	ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	99		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX/HOPE JAMESTOWN

Project Number: 683896.06.JM.CS

Lab Number: L1710487

Report Date: 04/12/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG993548-3 WG993548-4								
Methylene chloride	98		94		70-130	4		20
1,1-Dichloroethane	110		100		70-130	10		20
Chloroform	110		100		70-130	10		20
Carbon tetrachloride	110		98		63-132	12		20
1,2-Dichloropropane	110		100		70-130	10		20
Dibromochloromethane	99		96		63-130	3		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	100		95		70-130	5		20
Chlorobenzene	100		98		75-130	2		20
Trichlorofluoromethane	90		83		62-150	8		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	100		97		67-130	3		20
Bromodichloromethane	100		100		67-130	0		20
trans-1,3-Dichloropropene	100		98		70-130	2		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	110		98		70-130	12		20
Bromoform	94		92		54-136	2		20
1,1,2,2-Tetrachloroethane	100		98		67-130	2		20
Benzene	120		110		70-130	9		20
Toluene	110		100		70-130	10		20
Ethylbenzene	110		100		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX/HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1710487
Report Date: 04/12/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG993548-3 WG993548-4								
Chloromethane	87		84		64-130	4		20
Bromomethane	88		81		39-139	8		20
Vinyl chloride	87		82		55-140	6		20
Chloroethane	97		91		55-138	6		20
1,1-Dichloroethene	100		94		61-145	6		20
trans-1,2-Dichloroethene	110		99		70-130	11		20
Trichloroethene	100		97		70-130	3		20
1,2-Dichlorobenzene	100		99		70-130	1		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	100		98		70-130	2		20
Methyl tert butyl ether	100		100		63-130	0		20
p/m-Xylene	110		105		70-130	5		20
o-Xylene	115		105		70-130	9		20
cis-1,2-Dichloroethene	110		100		70-130	10		20
Dibromomethane	100		98		70-130	2		20
1,2,3-Trichloropropane	94		89		64-130	5		20
Styrene	115		110		70-130	4		20
Dichlorodifluoromethane	78		76		36-147	3		20
Acetone	96		91		58-148	5		20
Carbon disulfide	**150**	Q	110		51-130	**31**	Q	20
2-Butanone	100		100		63-138	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX/HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1710487
Report Date: 04/12/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG993548-3 WG993548-4								
Vinyl acetate	100		100		70-130	0		20
4-Methyl-2-pentanone	86		84		59-130	2		20
2-Hexanone	78		76		57-130	3		20
Bromochloromethane	100		100		70-130	0		20
2,2-Dichloropropane	110		100		63-133	10		20
1,2-Dibromoethane	100		98		70-130	2		20
1,3-Dichloropropane	100		100		70-130	0		20
1,1,1,2-Tetrachloroethane	100		96		64-130	4		20
Bromobenzene	100		98		70-130	2		20
n-Butylbenzene	120		110		53-136	9		20
sec-Butylbenzene	110		100		70-130	10		20
tert-Butylbenzene	110		100		70-130	10		20
o-Chlorotoluene	120		110		70-130	9		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	82		80		41-144	2		20
Hexachlorobutadiene	120		110		63-130	9		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	110		100		70-130	10		20
Naphthalene	96		83		70-130	15		20
n-Propylbenzene	110		110		69-130	0		20
1,2,3-Trichlorobenzene	**140**	Q	120		70-130	15		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX/HOPE JAMESTOWN

Project Number: 683896.06.JM.CS

Lab Number: L1710487

Report Date: 04/12/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG993548-3 WG993548-4								
1,2,4-Trichlorobenzene	110		100		70-130	10		20
1,3,5-Trimethylbenzene	110		100		64-130	10		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
1,4-Dioxane	98		92		56-162	6		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		99		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	103		103		70-130
Dibromofluoromethane	99		99		70-130

Project Name: ESSEX/HOPE JAMESTOWN
Project Number: 683896.06.JM.CS

Lab Number: L1710487
Report Date: 04/12/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1710487-01A	Vial HCl preserved	A	N/A	5.5	Y	Absent	NYTCL-8260(14)
L1710487-01B	Vial HCl preserved	A	N/A	5.5	Y	Absent	NYTCL-8260(14)
L1710487-01C	Vial HCl preserved	A	N/A	5.5	Y	Absent	NYTCL-8260(14)
L1710487-02A	Vial HCl preserved	A	N/A	5.5	Y	Absent	NYTCL-8260(14)
L1710487-02B	Vial HCl preserved	A	N/A	5.5	Y	Absent	NYTCL-8260(14)
L1710487-02C	Vial HCl preserved	A	N/A	5.5	Y	Absent	NYTCL-8260(14)
L1710487-03A	Vial HCl preserved split	A	N/A	5.5	Y	Absent	NYTCL-8260(14)
L1710487-03B	Vial HCl preserved split	A	N/A	5.5	Y	Absent	NYTCL-8260(14)
L1710487-03C	Vial HCl preserved split	A	N/A	5.5	Y	Absent	NYTCL-8260(14)
L1710487-04A	Vial HCl preserved	A	N/A	5.5	Y	Absent	NYTCL-8260(14)
L1710487-04B	Vial HCl preserved	A	N/A	5.5	Y	Absent	NYTCL-8260(14)
L1710487-05A	Vial HCl preserved	A	N/A	5.5	Y	Absent	COMP-VOA(0)
L1710487-05A1	Vial HCl preserved	A	N/A	5.5	Y	Absent	COMP-VOA(0)
L1710487-05A2	Vial HCl preserved	A	N/A	5.5	Y	Absent	COMP-VOA(0)
L1710487-05B	Vial HCl preserved	A	N/A	5.5	Y	Absent	COMP-VOA(0)
L1710487-05B1	Vial HCl preserved	A	N/A	5.5	Y	Absent	COMP-VOA(0)
L1710487-05B2	Vial HCl preserved	A	N/A	5.5	Y	Absent	COMP-VOA(0)
L1710487-05C	Vial HCl preserved	A	N/A	5.5	Y	Absent	COMP-VOA(0)
L1710487-05C1	Vial HCl preserved	A	N/A	5.5	Y	Absent	COMP-VOA(0)
L1710487-05C2	Vial HCl preserved	A	N/A	5.5	Y	Absent	COMP-VOA(0)
L1710487-05D	Vial HCl preserved	A	N/A	5.5	Y	Absent	COMP-VOA(0)
L1710487-05D1	Vial HCl preserved	A	N/A	5.5	Y	Absent	COMP-VOA(0)
L1710487-05D2	Vial HCl preserved	A	N/A	5.5	Y	Absent	COMP-VOA(0)

*Values in parentheses indicate holding time in days

Project Name:	ESSEX/HOPE JAMESTOWN	**Lab Number:**	L1710487
Project Number:	683896.06.JM.CS	**Report Date:**	04/12/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: DU Report with 'J' Qualifiers

Project Name:	ESSEX/HOPE JAMESTOWN	**Lab Number:**	L1710487
Project Number:	683896.06.JM.CS	**Report Date:**	04/12/17

Data Qualifiers

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	ESSEX/HOPE JAMESTOWN	**Lab Number:**	L1710487
Project Number:	683896.06.JM.CS	**Report Date:**	04/12/17

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:04121718:31

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 4/6/17

ALPHA Job #: L1710487

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

CH2M HILL

Project Information
Project Name: Essex/Hope Jamestown
Project Location: Jamestown NY
Project #: 683896.06.JM.CS
(Use Project name as Project #) ☐
Project Manager: Kyle Block.
ALPHAQuote #:

Client Information
Client: Kyle Block
Address: 18 Tremont St. Suite 300 Boston MA
Phone: 617-523-2260
Fax:
Email: Kyle.Block@CH2M.Com

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☒ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☒

Other project specific requirements/comments:
Composite all 4 Post-Carb samples in lab and report as Post-Carb_20170405

Please specify Metals or TAL.

ANALYSIS: VOCs 8260

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs 8260	Sample Specific Comments	Total Bottles
10487-01	Pre-Carb_20170405	04/05/17	0700	GW	JRG	X		3
-02	Primary-Eff_20170405	↓	0710	↓	↓	X		3
-03,05	Post-Carb_20170405-1	↓	0720	↓	↓	X		3
-03,05	Post-Carb_20170405-2	↓	0750	↓	↓	X		3
-03,05	Post-Carb_20170405-3	↓	0820	↓	↓	X		3
-03,05	Post-Carb_20170405-4	↓	0850	↓	↓	X		3
-04	Trip Blank		—			X		2

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type: V
Preservative: B

Relinquished By:	Date/Time	Received By:	Date/Time
J. Gow...	4/5/17 @ 10:20	J. Doom... AAL	4/5/17 10:20
J. Doom... AAL	4/5/17 12:20	[signature]	4/6/17 00:30

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1715092
Client:	CH2MHILL 18 Tremont Street Suite 700 Boston, MA 02108
ATTN:	Kyle Block
Phone:	(617) 523-2260
Project Name:	ESSEX HOPE JAMESTOWN
Project Number:	683896.06.JM.LS
Report Date:	05/18/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.LS

Lab Number: L1715092
Report Date: 05/18/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1715092-01	PRE-CARB-_20170510	WATER	JAMESTOWN, NY	05/10/17 06:15	05/10/17
L1715092-02	PRIMARY -EFF-_20170510	WATER	JAMESTOWN, NY	05/10/17 06:20	05/10/17
L1715092-03	POST-CARB-_20170510	WATER	JAMESTOWN, NY	05/10/17 08:00	05/10/17
L1715092-04	TRIP BLANK	WATER	JAMESTOWN, NY	05/10/17 00:00	05/10/17
L1715092-05	COMPOSITE POST-CARB-20170510-GRAB 1-4	WATER	JAMESTOWN, NY	05/10/17 08:00	05/10/17

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092
Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1715092
Project Number:	683896.06.JM.LS	**Report Date:**	05/18/17

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L1715092-01: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1715092-02: The sample was re-analyzed on dilution in order to quantify the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

L1715092-04: The Trip Blank has a result for trichloroethene present above the reporting limit. Re-analysis confirmed the original results. The results of both analyses are reported.

The WG1004427-2 continuing calibration verification standard has the percent deviation for carbon tetrachloride (22%), vinyl acetate (41%), 2-hexanone (25%), isopropylbenzene (21%), n-propylbenzene (24%), 1,4-dichlorobutane (24%), n-butylbenzene (27%), sec-butylbenzene (24%), and p-isopropyltoluene (23%) above the 20% CCV criteria, but within overall method allowances.

The WG1004427-3 LCS recoveries, associated with L1715092-01 through -04, are above the individual acceptance criteria for hexachlorobutadiene (150%), naphthalene (170%), 1,2,3-trichlorobenzene (180%), and 1,2,4-trichlorobenzene (140%), but within the overall method allowances. The results of the associated samples are reported. In addition, the LCS/LCSD RPDs are above the acceptance criteria for hexachlorobutadiene (31%), naphthalene (43%), 1,2,3-trichlorobenzene (40%) and 1,2,4-trichlorobenzene (24%).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Kelly Stenstrom

Title: Technical Director/Representative Date: 05/18/17

ORGANICS

VOLATILES

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-01 D
Client ID: PRE-CARB-_20170510
Sample Location: JAMESTOWN, NY

Date Collected: 05/10/17 06:15
Date Received: 05/10/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/17/17 15:09
Analyst: NL

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	50	14.	20
1,1-Dichloroethane	ND		ug/l	50	14.	20
Chloroform	ND		ug/l	50	14.	20
Carbon tetrachloride	ND		ug/l	10	2.7	20
1,2-Dichloropropane	ND		ug/l	20	2.7	20
Dibromochloromethane	ND		ug/l	10	3.0	20
1,1,2-Trichloroethane	ND		ug/l	30	10.	20
Tetrachloroethene	ND		ug/l	10	3.6	20
Chlorobenzene	ND		ug/l	50	14.	20
Trichlorofluoromethane	ND		ug/l	50	14.	20
1,2-Dichloroethane	ND		ug/l	10	2.6	20
1,1,1-Trichloroethane	ND		ug/l	50	14.	20
Bromodichloromethane	ND		ug/l	10	3.8	20
trans-1,3-Dichloropropene	ND		ug/l	10	3.3	20
cis-1,3-Dichloropropene	ND		ug/l	10	2.9	20
1,3-Dichloropropene, Total	ND		ug/l	10	2.9	20
1,1-Dichloropropene	ND		ug/l	50	14.	20
Bromoform	ND		ug/l	40	13.	20
1,1,2,2-Tetrachloroethane	ND		ug/l	10	3.3	20
Benzene	7.7	J	ug/l	10	3.2	20
Toluene	ND		ug/l	50	14.	20
Ethylbenzene	ND		ug/l	50	14.	20
Chloromethane	ND		ug/l	50	14.	20
Bromomethane	ND		ug/l	50	14.	20
Vinyl chloride	570		ug/l	20	1.4	20
Chloroethane	ND		ug/l	50	14.	20
1,1-Dichloroethene	13		ug/l	10	3.4	20
trans-1,2-Dichloroethene	17	J	ug/l	50	14.	20
Trichloroethene	2200		ug/l	10	3.5	20
1,2-Dichlorobenzene	ND		ug/l	50	14.	20

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-01 D
Client ID: PRE-CARB-_20170510
Sample Location: JAMESTOWN, NY

Date Collected: 05/10/17 06:15
Date Received: 05/10/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	50	14.	20
1,4-Dichlorobenzene	ND		ug/l	50	14.	20
Methyl tert butyl ether	ND		ug/l	50	14.	20
p/m-Xylene	ND		ug/l	50	14.	20
o-Xylene	ND		ug/l	50	14.	20
Xylenes, Total	ND		ug/l	50	14.	20
cis-1,2-Dichloroethene	3400		ug/l	50	14.	20
1,2-Dichloroethene, Total	3400	J	ug/l	50	14.	20
Dibromomethane	ND		ug/l	100	20.	20
1,2,3-Trichloropropane	ND		ug/l	50	14.	20
Styrene	ND		ug/l	50	14.	20
Dichlorodifluoromethane	ND		ug/l	100	20.	20
Acetone	800		ug/l	100	29.	20
Carbon disulfide	ND		ug/l	100	20.	20
2-Butanone	ND		ug/l	100	39.	20
Vinyl acetate	ND		ug/l	100	20.	20
4-Methyl-2-pentanone	ND		ug/l	100	20.	20
2-Hexanone	ND		ug/l	100	20.	20
Bromochloromethane	ND		ug/l	50	14.	20
2,2-Dichloropropane	ND		ug/l	50	14.	20
1,2-Dibromoethane	ND		ug/l	40	13.	20
1,3-Dichloropropane	ND		ug/l	50	14.	20
1,1,1,2-Tetrachloroethane	ND		ug/l	50	14.	20
Bromobenzene	ND		ug/l	50	14.	20
n-Butylbenzene	ND		ug/l	50	14.	20
sec-Butylbenzene	ND		ug/l	50	14.	20
tert-Butylbenzene	ND		ug/l	50	14.	20
o-Chlorotoluene	ND		ug/l	50	14.	20
p-Chlorotoluene	ND		ug/l	50	14.	20
1,2-Dibromo-3-chloropropane	ND		ug/l	50	14.	20
Hexachlorobutadiene	ND		ug/l	50	14.	20
Isopropylbenzene	ND		ug/l	50	14.	20
p-Isopropyltoluene	ND		ug/l	50	14.	20
Naphthalene	ND		ug/l	50	14.	20
n-Propylbenzene	ND		ug/l	50	14.	20
1,2,3-Trichlorobenzene	ND		ug/l	50	14.	20
1,2,4-Trichlorobenzene	ND		ug/l	50	14.	20
1,3,5-Trimethylbenzene	ND		ug/l	50	14.	20
1,2,4-Trimethylbenzene	ND		ug/l	50	14.	20

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-01 D
Client ID: PRE-CARB-_20170510
Sample Location: JAMESTOWN, NY

Date Collected: 05/10/17 06:15
Date Received: 05/10/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	5000	1200	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	101		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-02
Client ID: PRIMARY -EFF-_20170510
Sample Location: JAMESTOWN, NY

Date Collected: 05/10/17 06:20
Date Received: 05/10/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/17/17 14:44
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	600	E	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.36	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-02 Date Collected: 05/10/17 06:20

Client ID: PRIMARY -EFF-_20170510 Date Received: 05/10/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	3.2		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	3.2		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	2.2	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-02 Date Collected: 05/10/17 06:20

Client ID: PRIMARY -EFF-_20170510 Date Received: 05/10/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	100		70-130

Project Name: ESSEX HOPE JAMESTOWN
Lab Number: L1715092
Project Number: 683896.06.JM.LS
Report Date: 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-02 D
Client ID: PRIMARY -EFF-_20170510
Sample Location: JAMESTOWN, NY

Date Collected: 05/10/17 06:20
Date Received: 05/10/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/17/17 16:42
Analyst: NL

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Vinyl chloride	540		ug/l	10	0.71	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	100		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-03
Client ID: POST-CARB-_20170510
Sample Location: JAMESTOWN, NY

Date Collected: 05/10/17 08:00
Date Received: 05/10/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/17/17 14:18
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.22	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-03 Date Collected: 05/10/17 08:00

Client ID: POST-CARB-_20170510 Date Received: 05/10/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-03 Date Collected: 05/10/17 08:00

Client ID: POST-CARB-_20170510 Date Received: 05/10/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	99		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-04
Client ID: TRIP BLANK
Sample Location: JAMESTOWN, NY

Date Collected: 05/10/17 00:00
Date Received: 05/10/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/17/17 13:53
Analyst: NL

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	0.29	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.85		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-04 Date Collected: 05/10/17 00:00

Client ID: TRIP BLANK Date Received: 05/10/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN
Lab Number: L1715092
Project Number: 683896.06.JM.LS
Report Date: 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-04
Client ID: TRIP BLANK
Sample Location: JAMESTOWN, NY
Date Collected: 05/10/17 00:00
Date Received: 05/10/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	99		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-04 R
Client ID: TRIP BLANK
Sample Location: JAMESTOWN, NY

Date Collected: 05/10/17 00:00
Date Received: 05/10/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/17/17 18:23
Analyst: NL

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	0.30	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.91		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-04 R Date Collected: 05/10/17 00:00

Client ID: TRIP BLANK Date Received: 05/10/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	1.7	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

SAMPLE RESULTS

Lab ID: L1715092-04 R
Client ID: TRIP BLANK
Sample Location: JAMESTOWN, NY

Date Collected: 05/10/17 00:00
Date Received: 05/10/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	101		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1715092

Project Number: 683896.06.JM.LS **Report Date:** 05/18/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/17/17 13:28
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1004427-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.LS
Lab Number: L1715092
Report Date: 05/18/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/17/17 13:28
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1004427-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.LS
Lab Number: L1715092
Report Date: 05/18/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/17/17 13:28
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1004427-5					
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.LS

Lab Number: L1715092
Report Date: 05/18/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1004427-3 WG1004427-4								
Methylene chloride	100		99		70-130	1		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	100		100		63-132	0		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	89		89		63-130	0		20
1,1,2-Trichloroethane	110		100		70-130	10		20
Tetrachloroethene	100		98		70-130	2		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	100		100		62-150	0		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Bromodichloromethane	98		100		67-130	2		20
trans-1,3-Dichloropropene	93		92		70-130	1		20
cis-1,3-Dichloropropene	89		90		70-130	1		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	86		86		54-136	0		20
1,1,2,2-Tetrachloroethane	110		110		67-130	0		20
Benzene	100		100		70-130	0		20
Toluene	110		100		70-130	10		20
Ethylbenzene	110		100		70-130	10		20
Chloromethane	120		110		64-130	9		20
Bromomethane	97		94		39-139	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.LS

Lab Number: L1715092
Report Date: 05/18/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1004427-3 WG1004427-4								
Vinyl chloride	110		120		55-140	9		20
Chloroethane	120		110		55-138	9		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	99		97		70-130	2		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	110		100		70-130	10		20
1,4-Dichlorobenzene	110		100		70-130	10		20
Methyl tert butyl ether	110		110		63-130	0		20
p/m-Xylene	110		105		70-130	5		20
o-Xylene	105		105		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	98		100		70-130	2		20
1,2,3-Trichloropropane	100		100		64-130	0		20
Styrene	110		105		70-130	5		20
Dichlorodifluoromethane	130		130		36-147	0		20
Acetone	110		94		58-148	16		20
Carbon disulfide	94		90		51-130	4		20
2-Butanone	97		89		63-138	9		20
Vinyl acetate	120		120		70-130	0		20
4-Methyl-2-pentanone	89		86		59-130	3		20
2-Hexanone	100		96		57-130	4		20
Bromochloromethane	98		97		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.LS

Lab Number: L1715092

Report Date: 05/18/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1004427-3 WG1004427-4								
2,2-Dichloropropane	99		96		63-133	3		20
1,2-Dibromoethane	100		100		70-130	0		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		64-130	0		20
Bromobenzene	100		100		70-130	0		20
n-Butylbenzene	130		120		53-136	8		20
sec-Butylbenzene	120		110		70-130	9		20
tert-Butylbenzene	110		110		70-130	0		20
o-Chlorotoluene	110		110		70-130	0		20
p-Chlorotoluene	120		110		70-130	9		20
1,2-Dibromo-3-chloropropane	99		86		41-144	14		20
Hexachlorobutadiene	**150**	Q	110		63-130	**31**	Q	20
Isopropylbenzene	120		110		70-130	9		20
p-Isopropyltoluene	120		110		70-130	9		20
Naphthalene	**170**	Q	110		70-130	**43**	Q	20
n-Propylbenzene	120		110		69-130	9		20
1,2,3-Trichlorobenzene	**180**	Q	120		70-130	**40**	Q	20
1,2,4-Trichlorobenzene	**140**	Q	110		70-130	**24**	Q	20
1,3,5-Trimethylbenzene	110		110		64-130	0		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
1,4-Dioxane	122		108		56-162	12		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.LS

Lab Number: L1715092

Report Date: 05/18/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1004427-3 WG1004427-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	109		109		70-130
Toluene-d8	106		105		70-130
4-Bromofluorobenzene	111		110		70-130
Dibromofluoromethane	100		100		70-130

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.LS

Lab Number: L1715092
Report Date: 05/18/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1715092-01A	Vial HCl preserved	A	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1715092-01B	Vial HCl preserved	A	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1715092-01C	Vial HCl preserved	A	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1715092-02A	Vial HCl preserved	A	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1715092-02B	Vial HCl preserved	A	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1715092-02C	Vial HCl preserved	A	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1715092-03A	Vial HCl preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1715092-03B	Vial HCl preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1715092-03C	Vial HCl preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1715092-04A	Vial HCl preserved	A	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1715092-04B	Vial HCl preserved	A	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1715092-05A	Vial HCl preserved	A	N/A	4.5	Y	Absent	COMP-VOA(0)
L1715092-05B	Vial HCl preserved	A	N/A	4.5	Y	Absent	COMP-VOA(0)
L1715092-05C	Vial HCl preserved	A	N/A	4.5	Y	Absent	COMP-VOA(0)
L1715092-05D	Vial HCl preserved	A	N/A	4.5	Y	Absent	COMP-VOA(0)
L1715092-05E	Vial HCl preserved	A	N/A	4.5	Y	Absent	COMP-VOA(0)
L1715092-05F	Vial HCl preserved	A	N/A	4.5	Y	Absent	COMP-VOA(0)
L1715092-05G	Vial HCl preserved	A	N/A	4.5	Y	Absent	COMP-VOA(0)
L1715092-05H	Vial HCl preserved	A	N/A	4.5	Y	Absent	COMP-VOA(0)
L1715092-05I	Vial HCl preserved	A	N/A	4.5	Y	Absent	COMP-VOA(0)
L1715092-05J	Vial HCl preserved	A	N/A	4.5	Y	Absent	COMP-VOA(0)
L1715092-05K	Vial HCl preserved	A	N/A	4.5	Y	Absent	COMP-VOA(0)
L1715092-05L	Vial HCl preserved	A	N/A	4.5	Y	Absent	COMP-VOA(0)

*Values in parentheses indicate holding time in days

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1715092
Project Number:	683896.06.JM.LS	**Report Date:**	05/18/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: DU Report with 'J' Qualifiers

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1715092
Project Number:	683896.06.JM.LS	**Report Date:**	05/18/17

Data Qualifiers

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1715092
Project Number:	683896.06.JM.LS	**Report Date:**	05/18/17

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

CHZM HILL

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 5/11/17

ALPHA Job #: L1715093

Client Information

Client: Kyle Block
Address: 18 Tremont St. Suite 300 Boston MA
Phone: 617-523-2260
Fax:
Email: kyle.block@chzm.com

Project Information

Project Name: Esset Hope Jamestown
Project Location: Jamestown NY
Project #: 683896.06.JM.LS
(Use Project name as Project #)
Project Manager: Kyle Block
ALPHAQuote #:

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☐ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Composite All 4 Post CMAB samples in Lab and Report as Post-CMAB-20170509

Please specify Metals or TAL.

10

ANALYSIS: VOCs 8260

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs 8260	Sample Specific Comments	Total Bottle
15093-01	Pre-CMAB-20170509	05/09/17	0615	GW	JRA	✓		3
02	Primary-Eff-20170509		0620			✓		3
03	Post-CMAB-20170509-1		0630			✓		3
03	Post-CMAB-20170509-2		0700			✓		3
03	Post-CMAB-20170509-3		0730			✓		3
03	Post-CMAB-20170509-4		0800			✓		3
04	TRIP BLANK	—				✓		2

NOTE: All Dated references should be 5/10/17 NOT 05/09/17

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	V												
Preservative	B												

Relinquished By:	Date/Time	Received By:	Date/Time
JMAC AAC	5/09/2017 0910	JMAC AAC	5/09/17 09:10
			5/10/17 0827

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

CHZM HILL

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 5/11/17

ALPHA Job #: L1715093

Client Information

Client: Kyle Block
Address: 18 Tremont St. Suite 300 Boston MA
Phone: 617-523-2260
Fax:
Email: kyle.block@chzm.com

Project Information

Project Name: Esset Hope Jamestown
Project Location: Jamestown NY
Project #: 683896.06.JM.LS
(Use Project name as Project #)
Project Manager: Kyle Block
ALPHAQuote #:

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☐ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Composite All 4 Post Carb samples in Lab and Report as Post-Carb-20170509

Please specify Metals or TAL.

ANALYSIS

VOCs 8260

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs 8260	Sample Specific Comments	Total Bottle
15093 -01	Pre-Carb-20170509	05/09/17	0615	GW	JRG	✓		3
02	Primary-Eff-20170509		0620			✓		3
03	Post-Carb-20170509-1		0630			✓		3
03	Post-Carb-20170509-2		0700			✓		3
03	Post-Carb-20170509-3		0730			✓		3
03	Post-Carb-20170509-4	↓	0800	↓	↓	✓		3
04	Trip Blank	—				✓		2

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type: V
Preservative: B

Relinquished By:	Date/Time	Received By:	Date/Time
JMH AAC 5/09/17 0910	05/09/2017	JMH AAC	5/09/17 09:10
			5/10/17 0827

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1721368
Client:	CH2MHILL 18 Tremont Street Suite 700 Boston, MA 02108
ATTN:	Kyle Block
Phone:	(617) 523-2260
Project Name:	ESSEX HOPE JAMESTOWN
Project Number:	683896.06.JM.LS
Report Date:	06/28/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.LS

Lab Number: L1721368
Report Date: 06/28/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1721368-01	PRE-CARB_20170622	WATER	JAMESTOWN, NY	06/22/17 07:15	06/22/17
L1721368-02	PRIMARY-EFF_20170622	WATER	JAMESTOWN, NY	06/22/17 07:20	06/22/17
L1721368-03	POST-CARB_20170622	WATER	JAMESTOWN, NY	06/22/17 07:25	06/22/17
L1721368-04	TRIP BLANK	WATER	JAMESTOWN, NY	06/22/17 00:00	06/22/17
L1721368-05	COMPOSITE POST-CARB_20170622-GRAB 1-4	WATER	JAMESTOWN, NY	06/22/17 07:25	06/22/17

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1721368
Project Number:	683896.06.JM.LS	**Report Date:**	06/28/17

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1721368
Project Number:	683896.06.JM.LS	**Report Date:**	06/28/17

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L1721368-01: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1721368-02: The sample was re-analyzed on dilution in order to quantify the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

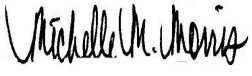
The WG1017774-3/-4 LCS/LCSD recoveries, associated with L1721368-01 through -04, are above the individual acceptance criteria for naphthalene (LCS at 140%) and 1,2,3-trichlorobenzene (170%/140%), but within the overall method allowances. The results of the associated samples are reported.

The initial calibration, associated with L1721368-01 through -04, did not meet the method required minimum response factor for the calibration standards for bromomethane, chloroethane, bromochloromethane, 2-butanone, trichloroethene, dibromomethane, bromodichloromethane, 1,4-dioxane, tetrachloroethene and 1,2,3-trichlorobenzene.

The continuing calibration, associated with L1721368-01 through -04, did not meet the method required minimum response factor for bromomethane, bromochloromethane, 2-butanone, dibromomethane and 1,4-dioxane.

The continuing calibration verification standard WG1017774-2 has the percent deviation for dichlorodifluoromethane (21%), chloromethane (32%) and 1,4-dioxane (22%) above the 20% CCV criteria, but within overall method allowances.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Michelle M. Morris

Title: Technical Director/Representative Date: 06/28/17

ORGANICS

VOLATILES

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-01 D
Client ID: PRE-CARB_20170622
Sample Location: JAMESTOWN, NY

Date Collected: 06/22/17 07:15
Date Received: 06/22/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/27/17 22:39
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	50	14.	20
1,1-Dichloroethane	ND		ug/l	50	14.	20
Chloroform	ND		ug/l	50	14.	20
Carbon tetrachloride	ND		ug/l	10	2.7	20
1,2-Dichloropropane	ND		ug/l	20	2.7	20
Dibromochloromethane	ND		ug/l	10	3.0	20
1,1,2-Trichloroethane	ND		ug/l	30	10.	20
Tetrachloroethene	ND		ug/l	10	3.6	20
Chlorobenzene	ND		ug/l	50	14.	20
Trichlorofluoromethane	ND		ug/l	50	14.	20
1,2-Dichloroethane	ND		ug/l	10	2.6	20
1,1,1-Trichloroethane	ND		ug/l	50	14.	20
Bromodichloromethane	ND		ug/l	10	3.8	20
trans-1,3-Dichloropropene	ND		ug/l	10	3.3	20
cis-1,3-Dichloropropene	ND		ug/l	10	2.9	20
1,3-Dichloropropene, Total	ND		ug/l	10	2.9	20
1,1-Dichloropropene	ND		ug/l	50	14.	20
Bromoform	ND		ug/l	40	13.	20
1,1,2,2-Tetrachloroethane	ND		ug/l	10	3.3	20
Benzene	6.6	J	ug/l	10	3.2	20
Toluene	ND		ug/l	50	14.	20
Ethylbenzene	ND		ug/l	50	14.	20
Chloromethane	ND		ug/l	50	14.	20
Bromomethane	ND		ug/l	50	14.	20
Vinyl chloride	480		ug/l	20	1.4	20
Chloroethane	ND		ug/l	50	14.	20
1,1-Dichloroethene	11		ug/l	10	3.4	20
trans-1,2-Dichloroethene	15	J	ug/l	50	14.	20
Trichloroethene	1900		ug/l	10	3.5	20
1,2-Dichlorobenzene	ND		ug/l	50	14.	20

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-01 D Date Collected: 06/22/17 07:15

Client ID: PRE-CARB_20170622 Date Received: 06/22/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	50	14.	20
1,4-Dichlorobenzene	ND		ug/l	50	14.	20
Methyl tert butyl ether	ND		ug/l	50	14.	20
p/m-Xylene	ND		ug/l	50	14.	20
o-Xylene	ND		ug/l	50	14.	20
Xylenes, Total	ND		ug/l	50	14.	20
cis-1,2-Dichloroethene	3100		ug/l	50	14.	20
1,2-Dichloroethene, Total	3100	J	ug/l	50	14.	20
Dibromomethane	ND		ug/l	100	20.	20
1,2,3-Trichloropropane	ND		ug/l	50	14.	20
Styrene	ND		ug/l	50	14.	20
Dichlorodifluoromethane	ND		ug/l	100	20.	20
Acetone	280		ug/l	100	29.	20
Carbon disulfide	ND		ug/l	100	20.	20
2-Butanone	ND		ug/l	100	39.	20
Vinyl acetate	ND		ug/l	100	20.	20
4-Methyl-2-pentanone	ND		ug/l	100	20.	20
2-Hexanone	ND		ug/l	100	20.	20
Bromochloromethane	ND		ug/l	50	14.	20
2,2-Dichloropropane	ND		ug/l	50	14.	20
1,2-Dibromoethane	ND		ug/l	40	13.	20
1,3-Dichloropropane	ND		ug/l	50	14.	20
1,1,1,2-Tetrachloroethane	ND		ug/l	50	14.	20
Bromobenzene	ND		ug/l	50	14.	20
n-Butylbenzene	ND		ug/l	50	14.	20
sec-Butylbenzene	ND		ug/l	50	14.	20
tert-Butylbenzene	ND		ug/l	50	14.	20
o-Chlorotoluene	ND		ug/l	50	14.	20
p-Chlorotoluene	ND		ug/l	50	14.	20
1,2-Dibromo-3-chloropropane	ND		ug/l	50	14.	20
Hexachlorobutadiene	ND		ug/l	50	14.	20
Isopropylbenzene	ND		ug/l	50	14.	20
p-Isopropyltoluene	ND		ug/l	50	14.	20
Naphthalene	ND		ug/l	50	14.	20
n-Propylbenzene	ND		ug/l	50	14.	20
1,2,3-Trichlorobenzene	ND		ug/l	50	14.	20
1,2,4-Trichlorobenzene	ND		ug/l	50	14.	20
1,3,5-Trimethylbenzene	ND		ug/l	50	14.	20
1,2,4-Trimethylbenzene	ND		ug/l	50	14.	20

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-01 D
Client ID: PRE-CARB_20170622
Sample Location: JAMESTOWN, NY

Date Collected: 06/22/17 07:15
Date Received: 06/22/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	5000	1200	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	102		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-02
Client ID: PRIMARY-EFF_20170622
Sample Location: JAMESTOWN, NY

Date Collected: 06/22/17 07:20
Date Received: 06/22/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/27/17 21:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	960	E	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.67		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-02 Date Collected: 06/22/17 07:20

Client ID: PRIMARY-EFF_20170622 Date Received: 06/22/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	44		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	44		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-02 Date Collected: 06/22/17 07:20

Client ID: PRIMARY-EFF_20170622 Date Received: 06/22/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	101		70-130

Project Name: ESSEX HOPE JAMESTOWN
Lab Number: L1721368
Project Number: 683896.06.JM.LS
Report Date: 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-02 D
Client ID: PRIMARY-EFF_20170622
Sample Location: JAMESTOWN, NY

Date Collected: 06/22/17 07:20
Date Received: 06/22/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/28/17 11:14
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Vinyl chloride	1100		ug/l	20	1.4	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	104		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-03
Client ID: POST-CARB_20170622
Sample Location: JAMESTOWN, NY

Date Collected: 06/22/17 07:25
Date Received: 06/22/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/27/17 22:14
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	0.74	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.29	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-03 Date Collected: 06/22/17 07:25

Client ID: POST-CARB_20170622 Date Received: 06/22/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-03 Date Collected: 06/22/17 07:25

Client ID: POST-CARB_20170622 Date Received: 06/22/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	101		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-04
Client ID: TRIP BLANK
Sample Location: JAMESTOWN, NY

Date Collected: 06/22/17 00:00
Date Received: 06/22/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/27/17 21:24
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-04 Date Collected: 06/22/17 00:00

Client ID: TRIP BLANK Date Received: 06/22/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

SAMPLE RESULTS

Lab ID: L1721368-04 Date Collected: 06/22/17 00:00

Client ID: TRIP BLANK Date Received: 06/22/17

Sample Location: JAMESTOWN, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	98		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/28/17 10:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1017774-10					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/28/17 10:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1017774-10					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/28/17 10:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1017774-10					
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	0.87	J	ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	0.94	J	ug/l	2.5	0.70
1,2,4-Trichlorobenzene	0.71	J	ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	102		70-130

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/27/17 20:59
Analyst: NL

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1017774-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/27/17 20:59
Analyst: NL

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1017774-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70

Project Name: ESSEX HOPE JAMESTOWN **Lab Number:** L1721368

Project Number: 683896.06.JM.LS **Report Date:** 06/28/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/27/17 20:59
Analyst: NL

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1017774-5					
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	0.76	J	ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.LS

Lab Number: L1721368
Report Date: 06/28/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1017774-3 WG1017774-4								
Methylene chloride	110		100		70-130	10		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	100		98		63-132	2		20
1,2-Dichloropropane	110		100		70-130	10		20
Dibromochloromethane	110		110		63-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	100		95		70-130	5		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	92		88		62-150	4		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	100		97		67-130	3		20
Bromodichloromethane	110		100		67-130	10		20
trans-1,3-Dichloropropene	96		96		70-130	0		20
cis-1,3-Dichloropropene	98		97		70-130	1		20
1,1-Dichloropropene	100		99		70-130	1		20
Bromoform	93		92		54-136	1		20
1,1,2,2-Tetrachloroethane	110		110		67-130	0		20
Benzene	110		110		70-130	0		20
Toluene	100		99		70-130	1		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	80		73		64-130	9		20
Bromomethane	83		80		39-139	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.LS

Lab Number: L1721368
Report Date: 06/28/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1017774-3 WG1017774-4								
Vinyl chloride	92		87		55-140	6		20
Chloroethane	100		99		55-138	1		20
1,1-Dichloroethene	99		94		61-145	5		20
trans-1,2-Dichloroethene	100		99		70-130	1		20
Trichloroethene	100		98		70-130	2		20
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	110		100		70-130	10		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	120		120		63-130	0		20
p/m-Xylene	110		105		70-130	5		20
o-Xylene	105		100		70-130	5		20
cis-1,2-Dichloroethene	110		100		70-130	10		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	110		110		64-130	0		20
Styrene	105		105		70-130	0		20
Dichlorodifluoromethane	80		75		36-147	6		20
Acetone	100		100		58-148	0		20
Carbon disulfide	92		86		51-130	7		20
2-Butanone	100		100		63-138	0		20
Vinyl acetate	110		110		70-130	0		20
4-Methyl-2-pentanone	87		88		59-130	1		20
2-Hexanone	83		82		57-130	1		20
Bromochloromethane	110		110		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.LS

Lab Number: L1721368

Report Date: 06/28/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1017774-3 WG1017774-4								
2,2-Dichloropropane	110		100		63-133	10		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		64-130	0		20
Bromobenzene	110		100		70-130	10		20
n-Butylbenzene	110		100		53-136	10		20
sec-Butylbenzene	110		99		70-130	11		20
tert-Butylbenzene	100		94		70-130	6		20
o-Chlorotoluene	100		110		70-130	10		20
p-Chlorotoluene	110		100		70-130	10		20
1,2-Dibromo-3-chloropropane	100		100		41-144	0		20
Hexachlorobutadiene	120		100		63-130	18		20
Isopropylbenzene	110		100		70-130	10		20
p-Isopropyltoluene	100		94		70-130	6		20
Naphthalene	**140**	Q	120		70-130	15		20
n-Propylbenzene	100		99		69-130	1		20
1,2,3-Trichlorobenzene	**170**	Q	**140**	Q	70-130	19		20
1,2,4-Trichlorobenzene	110		100		70-130	10		20
1,3,5-Trimethylbenzene	110		100		64-130	10		20
1,2,4-Trimethylbenzene	100		98		70-130	2		20
1,4-Dioxane	134		122		56-162	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.LS

Lab Number: L1721368

Report Date: 06/28/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1017774-3 WG1017774-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		104		70-130
Toluene-d8	98		98		70-130
4-Bromofluorobenzene	101		101		70-130
Dibromofluoromethane	100		100		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.LS

Lab Number: L1721368
Report Date: 06/28/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1017774-8 WG1017774-9								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	110		110		63-132	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	100		110		63-130	10		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	110		110		70-130	0		20
Chlorobenzene	110		110		75-130	0		20
Trichlorofluoromethane	100		100		62-150	0		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	110		110		67-130	0		20
Bromodichloromethane	110		110		67-130	0		20
trans-1,3-Dichloropropene	93		96		70-130	3		20
cis-1,3-Dichloropropene	96		98		70-130	2		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	86		88		54-136	2		20
1,1,2,2-Tetrachloroethane	100		110		67-130	10		20
Benzene	110		110		70-130	0		20
Toluene	110		110		70-130	0		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	88		86		64-130	2		20
Bromomethane	100		96		39-139	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.LS

Lab Number: L1721368

Report Date: 06/28/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1017774-8 WG1017774-9								
Vinyl chloride	94		94		55-140	0		20
Chloroethane	110		110		55-138	0		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	110		100		70-130	10		20
Trichloroethene	110		110		70-130	0		20
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	110		110		63-130	0		20
p/m-Xylene	115		115		70-130	0		20
o-Xylene	110		105		70-130	5		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	100		110		64-130	10		20
Styrene	110		110		70-130	0		20
Dichlorodifluoromethane	78		76		36-147	3		20
Acetone	100		100		58-148	0		20
Carbon disulfide	95		94		51-130	1		20
2-Butanone	95		100		63-138	5		20
Vinyl acetate	100		110		70-130	10		20
4-Methyl-2-pentanone	78		81		59-130	4		20
2-Hexanone	73		79		57-130	8		20
Bromochloromethane	110		110		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.LS

Lab Number: L1721368

Report Date: 06/28/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1017774-8 WG1017774-9								
2,2-Dichloropropane	120		110		63-133	9		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	110		110		64-130	0		20
Bromobenzene	110		100		70-130	10		20
n-Butylbenzene	120		120		53-136	0		20
sec-Butylbenzene	120		110		70-130	9		20
tert-Butylbenzene	110		100		70-130	10		20
o-Chlorotoluene	110		110		70-130	0		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	93		96		41-144	3		20
Hexachlorobutadiene	130		120		63-130	8		20
Isopropylbenzene	120		110		70-130	9		20
p-Isopropyltoluene	110		100		70-130	10		20
Naphthalene	130		110		70-130	17		20
n-Propylbenzene	110		110		69-130	0		20
1,2,3-Trichlorobenzene	**160**	Q	**140**	Q	70-130	13		20
1,2,4-Trichlorobenzene	110		100		70-130	10		20
1,3,5-Trimethylbenzene	120		110		64-130	9		20
1,2,4-Trimethylbenzene	110		100		70-130	10		20
1,4-Dioxane	94		104		56-162	10		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ESSEX HOPE JAMESTOWN

Project Number: 683896.06.JM.LS

Lab Number: L1721368

Report Date: 06/28/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1017774-8 WG1017774-9								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	105		108		70-130
Toluene-d8	100		99		70-130
4-Bromofluorobenzene	101		100		70-130
Dibromofluoromethane	100		101		70-130

Project Name: ESSEX HOPE JAMESTOWN
Project Number: 683896.06.JM.LS

Lab Number: L1721368
Report Date: 06/28/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1721368-01A	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1721368-01B	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1721368-01C	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1721368-02A	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1721368-02B	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1721368-02C	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1721368-03A	Vial HCl preserved split	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1721368-03B	Vial HCl preserved split	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1721368-03C	Vial HCl preserved split	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1721368-04A	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1721368-05A	Vial HCl preserved	A	NA		4.2	Y	Absent		COMP-VOA(0)
L1721368-05B	Vial HCl preserved	A	NA		4.2	Y	Absent		COMP-VOA(0)
L1721368-05C	Vial HCl preserved	A	NA		4.2	Y	Absent		COMP-VOA(0)
L1721368-05D	Vial HCl preserved	A	NA		4.2	Y	Absent		COMP-VOA(0)
L1721368-05E	Vial HCl preserved	A	NA		4.2	Y	Absent		COMP-VOA(0)
L1721368-05F	Vial HCl preserved	A	NA		4.2	Y	Absent		COMP-VOA(0)
L1721368-05G	Vial HCl preserved	A	NA		4.2	Y	Absent		COMP-VOA(0)
L1721368-05H	Vial HCl preserved	A	NA		4.2	Y	Absent		COMP-VOA(0)
L1721368-05I	Vial HCl preserved	A	NA		4.2	Y	Absent		COMP-VOA(0)
L1721368-05J	Vial HCl preserved	A	NA		4.2	Y	Absent		COMP-VOA(0)
L1721368-05K	Vial HCl preserved	A	NA		4.2	Y	Absent		COMP-VOA(0)
L1721368-05L	Vial HCl preserved	A	NA		4.2	Y	Absent		COMP-VOA(0)

*Values in parentheses indicate holding time in days

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1721368
Project Number:	683896.06.JM.LS	**Report Date:**	06/28/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related

Report Format: DU Report with 'J' Qualifiers

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1721368
Project Number:	683896.06.JM.LS	**Report Date:**	06/28/17

Data Qualifiers

projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	ESSEX HOPE JAMESTOWN	**Lab Number:**	L1721368
Project Number:	683896.06.JM.LS	**Report Date:**	06/28/17

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193
Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page: 1 of 1

Date Rec'd in Lab: 6/23/17

ALPHA Job #: L1721368

CHZM HILL

Client Information
Client: Kyle Block
Address: 18 Tremont St. Suite 300 Boston MA
Phone: 617.523-3260
Fax:
Email: KyleBlock.

Project Information
Project Name: Essex Mine Jamestown
Project Location: Jamestown NY
Project #: 683896.06.Jam.LS
(Use Project name as Project #): ☐
Project Manager: Kyle Block
ALPHAQuote #:

Turn-Around Time
Standard: ☒ Due Date:
Rush (only if pre approved): ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☒ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☒

Other project specific requirements/comments:
Composite All 4 Post-Carb Samples in Lab and Report as Post-Carb-20170622

Please specify Metals or TAL.

ANALYSIS
VOCs 8260

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs 8260	Sample Specific Comments	Total Bottle
21368-01	Pre-Carb_20170622	06/22/17	0715	GW	JAG	X		3
-02	Primary-FFF_20170622		0720			X		3
-03	POST-CARB-20170622-1		0725			X		3
			~~0730~~			X		3
-03	POST-CARB-20170622-2		0800			X		3
-03	POST-CARB-20170622-3		0830			X		3
-03	POST-CARB-20170622-4		0900			X		3
-04	TRIP BLANK		—			X		2

Container Type: V
Preservative: B

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
	6/22/17 1015	J. Adam AAL	6/23/17 10:15
J. Adam AAL	6/22/17 1350		6/23/17 0720

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)