June 13, 2018

Ms. Kerry Maloney
New York State Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, New York 12207

RE: First Quarter Performance Monitoring Report – March 2018
432 Rodney Street
Brooklyn, New York 11211
NYSDEC BCP Site No. C224216
Langan Project No.: 170357801

Dear Ms. Maloney:

In accordance with the Site Management Plan (SMP) dated December 14, 2017, Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) conducted quarterly groundwater sampling at 432 Rodney Street (the Site) located in the Borough of Brooklyn, New York. Refer to Figure 1 for the Site location. This groundwater sampling event was performed in March 2018 and represents the first quarterly sampling event for this year. This is the first quarterly sampling event since the installation and subsequent operation of a network of pressurized injection wells, and the receipt of a New York State Department of Environmental Conservation (NYSDEC) Certificate of Completion for the Site (issued December 29, 2017).

Project Background

The Site, identified as Block 2374, Lots 1, 27, 28, and 31 on the New York City Tax Map, is situated on an approximately 27,160-square-foot (±0.6235 acre) area bound by a vacant lot and residential and commercial buildings followed by Ainslie Street to the north, Keap Street to the east, Hope Street to the south, and Rodney Street to the west. The Site was most recently occupied by a packaged food storage and refrigeration facility, and has historically been used by various commercial, automotive, and light industrial companies since around 1887.

In 2016, operations ceased and the Site was remediated in accordance with the NYSDEC-approved Interim Remedial Measures Work Plan (IRMWP), dated March 22, 2016, NYSDEC-

approved IRMWP Addenda #1 and #2, dated January 9, 2017, and NYSDEC-approved Remedial Action Work Plan (RAWP), dated March 23, 2017, and approved October 31, 2017,. Under these plans, a Track 2 remedy was implemented on Lots 1 and 31, and Lots 27 and 28 follow a Track 4 remedy.

A two-phase groundwater treatment system was chosen as the remedy to treat groundwater impacted with petroleum-related volatile organic compounds (VOCs) and chlorinated volatile organic compounds (CVOCs). The treatment design included a preliminary in-situ chemical oxidation (ISCO) direct-injection of base-activated sodium persulfate, followed by the application of PlumeStop®, a liquid activated carbon substrate, through a sub-slab network of pressurized injection wells.

About 11,800 pounds of sodium hydroxide-activated sodium persulfate was direct-injected within saturated soil in the southeast corner of Lot 31 between February 21 and March 2, 2017 to treat petroleum-related VOC-impacted groundwater. Following the persulfate injection, about 56,400 pounds of PlumeStop® was applied through the well network on Lots 1 and 31 between November 8 and December 6, 2017, and about 15,600 pounds of PlumeStop® was direct-injected on Lots 27 and 28 between November 27 and December 6, 2017.

As part of the Site Management Plan (SMP) prepared by Langan and approved by the NYSDEC in December 2017, five performance monitoring wells (PMW01, PMW02, PMW03, PMW04 and PMW05) were installed on Lots 1 and 31 and two performance monitoring wells (PMW06 and PMW07) were installed on Lots 27 and 28 to monitor post-injection groundwater quality. The monitoring plan summarized in the SMP includes 1) baseline sampling, which was conducted in June 2017 (Lots 1 and 31) and November 2017 (Lots 27 and 28), after sodium hydroxide-activated sodium persulfate injections and prior to PlumeStop® injections; 2) and post-injection sampling, which is required to be conducted quarterly during the first year following the injections and semi-annually during each subsequent year as needed.

First Quarter Performance Monitoring Scope of Work

Well Purging and Sampling

Each of the seven performance monitoring wells were sampled during the first quarter 2018 event. Monitoring well sampling was conducted in accordance with the NYSDEC-approved SMP on March 20 and 23, 2018.

Each well was purged prior to sampling using the low-flow method developed by the United States Environmental Protection Agency (USEPA) ("Low-Flow [Minimal Drawdown] Ground-Water Sampling Procedures," EPA/540/S-95/504, April 1996) and accepted by the NYSDEC. Purging was performed using a peristaltic pump fitted with dedicated tubing at all wells. During purging, the turbidity, pH, temperature, conductivity, redox potential, and dissolved oxygen of

the groundwater were monitored using a Horiba U-22 Water Quality Meter with a flow-through cell. Purging was considered complete after three well volumes were purged and all parameter readings stabilized for three successive readings within a reasonable time frame. The purged water was containerized in a 55-gallon drum and temporarily stored in a secured area pending proper off-site disposal. The monitored parameters were recorded on the Well Purging and Sampling Logs provided in Attachment A.

After purging the well, a groundwater sample was collected directly from the pump discharge line using USEPA low-flow techniques at each well. For quality assurance and quality control, one field blank and a duplicate sample were collected. A trip blank was also included in each shipment for quality control. All samples were analyzed for Target Compound List (TCL) VOCs at Alpha Analytical of Westborough, Massachusetts, a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP)-accredited laboratory.

Data Validation

Upon receipt of final Analytical Services Protocol (ASP) Level B laboratory reports, copies of the reports were submitted to Langan's data validation department for review in accordance with the USEPA validation guidelines for organic and inorganic data review, and the data were found to be acceptable, with no issues. There were no data flagged as either estimated or unusable.

Data reduction, validation, and reporting procedures were completed in accordance with the Quality Assurance Project Plan (QAPP) provided in Appendix I of the SMP. Data Usability Reports (DUSRs) can be found in Attachment B of this document.

First Quarter Performance Monitoring Results

Analytical Results

The laboratory analytical results for this quarterly sampling event are summarized in Table 1 and on Figure 2. Laboratory analytical reports are provided as Attachment C. Groundwater sampling results were compared to NYSDEC Technical & Operations Guidance Series (TOGS) Ambient Water Quality Standards and Guidance Values (SGVs) for Class GA water.

Two VOCs, 2-butanone and acetone, were detected above the TOGS SGVs in monitoring well PMW07 located on Lot 27. Two CVOCs, cis-1,2-dichloroethene and tetrachloroethene (PCE), were detected above the TOGS SGVs in the four monitoring wells (PM01, PM02, PM03, and PM04) located within the building footprint on Lots 1 and 31.

Based on first quarter groundwater monitoring results, the extent of the petroleum-related VOC and CVOC-impacted groundwater has decreased relative to the baseline sampling following the implementation of the two-phase groundwater treatment program. Sampling results from the baseline to the first quarter indicate a decrease of the following CVOCs:

- 1,2-dichloroethane (100%),
- cis-1,2-Dichloroethene (between 65% and 99%),

- PCE[1] (between 44% and 100%)
- trichloroethene (TCE) (between 32% and 100%, and
- vinyl chloride (between 91% and 100%);

The following petroleum-related VOC concentrations decreased, relative to the baseline concentration:

- 1,2,4-trimethylbenzene (100%),
- Benzene (100%),
- Ethylbenzene (100%),
- Isopropylbenzene (100%),
- n-propylbenzene (100%),
- p/m-xylene (100%), and
- toluene (100%).

Table 2 compares the March 2018 first quarter analytical results to the baseline sampling results collected in June and November 2017.

Closure

In general, petroleum-related VOC and CVOC concentrations detected during the June 2017 baseline sampling event have decreased by one- to two-orders of magnitude in the first quarter sampling event. Post-remediation monitoring indicates that the two-phase groundwater remedy selected for this Site appears on track to meet the remedial objective of 90% contaminant mass reduction. We recommend continued monitoring of the sub-slab performance monitoring well network on a quarterly basis, as prescribed in the SMP.

Should you have any questions, please call the undersigned at 212-479-5413.

Sincerely,
Langan Engineering, Environmental, Surveying Landscape Architecture, and Geology, D.P.C.

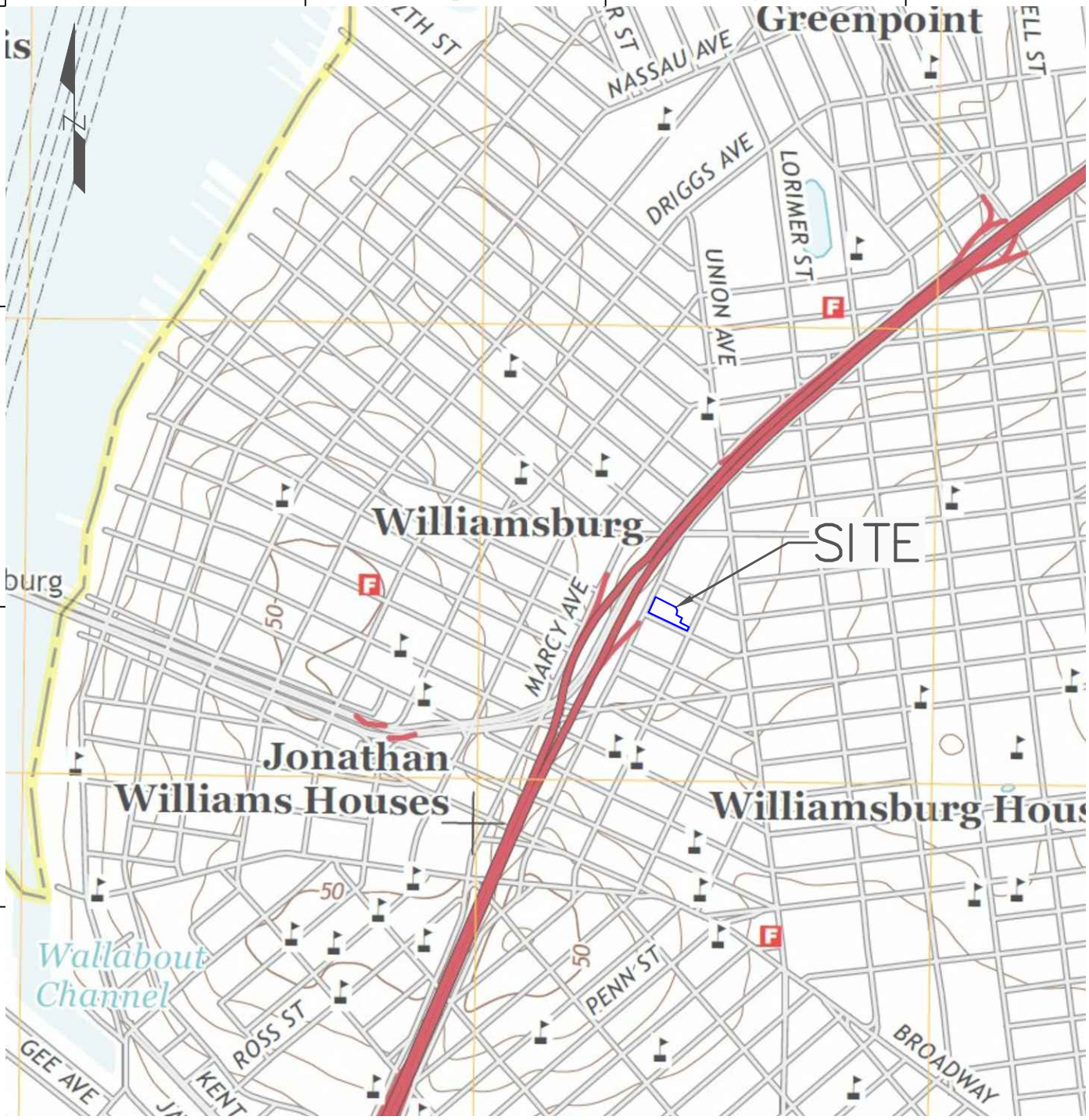
Michael D. Burke, PG, CHMM
Principal/Vice President

[1] The PCE concentration in groundwater in PMW02 remained relatively unchanged at 15 mg/L, compared to the baseline concentration of 10 mg/L.

Enclosures:

Figure 1	Site Location Map
Figure 2	Groundwater Sampling Results Map – First Quarter March 2018
Table 1	Quarterly Groundwater Sampling Results – First Quarter 2018
Table 2	Historical Performance Monitoring Analytical Results
Attachment A	Well Purging and Sampling Logs
Attachment B	Data Usability Reports
Attachment C	Laboratory Analytical Reports

FIGURES



LEGEND:

SITE BOUNDARY

1000 0 250 500 1000

SCALE IN FEET

NOTES:

1. BASE MAP BASED ON USGS 7.5 MINUTE SERIES BROOKLYN QUADRANGLE MAP DATED 2013.

LANGAN

21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. S.A.
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project

432 RODNEY STREET

BLOCK No. 2374, LOT Nos. 1, 27, 28 & 31

BROOKLYN

KINGS NEW YORK

Drawing Title

SITE LOCATION MAP

Project No. 170357801	Figure No. 1
Date 4/20/2015	
Scale 1" = 1000'	
Drawn By KMS / Checked By MN	
Submission Date APRIL 2015	Sheet 1 of 2

Filename: \\langan.com\data\NYC\data8\170357801\Cadd Data - 170357801\2D-DesignFiles\Environmental\First Quarterly Monitoring Report - March 2018\Figure 1 - Site Location Map.dwg Date: 4/23/2018 Time: 13:20 User: ascher Style Table: Langan.stb Layout: ANSIA-BP

PMW02		
Sample ID	**PMW02_060817**	**PMW02_032318**
Sampling Date	**6/8/2017**	**3/23/2018**
VOCs (µg/L)		
cis-1,2-Dichloroethene	**56**	**23**
Tetrachloroethene	**10**	**15**
Trichloroethene	**7.2**	NE

PMW01		
Sample ID	**PMW01_060817**	**PMW01_032018**
Sampling Date	**6/8/2017**	**3/20/2018**
VOCs (µg/L)		
cis-1,2-Dichloroethene	**36**	**23**
Tetrachloroethene	**11**	NE
Trichloroethene	**9.6**	NE

LEGEND

- IW-4 — PERMANENT INJECTION WELL LOCATION
- DP-10 — DIRECT-PUSH INJECTION LOCATION
- PMW01 — PERFORMANCE MONITORING WELL LOCATION
- PIPING NETWORK (EACH LINE REPRESENTS ONE OR MORE LINEAR PIPE RUNS)

NOTES

1. BASEMAP IS REFERENCED FROM ARCHITECTURAL CELLAR PLAN BY AUFGANG ARCHITECTS, DATED JANUARY 16, 2017.
2. ALL WELL AND INJECTION LOCATIONS ARE APPROXIMATE.
3. GROUNDWATER SAMPLE ANALYTICAL RESULTS ARE COMPARED TO NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1 AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES (SGVs) FOR CLASS GA WATER.
4. ONLY COMPOUNDS EXCEEDING THEIR RESPECTIVE TOGS SGVS ARE SHOWN.
5. SAMPLES EXCEEDING THE TOGS SVGs ARE SHADED AND BOLDED.
6. µg/L = MICROGRAM PER LITER
7. VOCs = VOLATILE ORGANIC COMPOUNDS
8. ND = NOT DETECTED
9. NE = NO EXCEEDANCE OF TOGS SGVs

VOCs	NYSDEC TOGS SGVs
1,2,4,5-Tetramethylbenzene	5
1,2-Dichloroethane	0.6
2-Butanone	50
Acetone	50
Benzene	1
cis-1,2-Dichloroethene	5
Ethylbenzene	5
Isopropylbenzene	5
n-Propylbenzene	5
p/m-Xylene	5
Tetrachloroethene	5
Toluene	5
Trichloroethene	5
Vinyl chloride	2

PMW03		
Sample ID	**PMW03_060817**	**PMW03_032318**
Sampling Date	**6/8/2017**	**3/23/2018**
VOCs (µg/L)		
cis-1,2-Dichloroethene	**120**	**6.7**
Tetrachloroethene	**9.7**	ND
Trichloroethene	**9.1**	ND
Vinyl chloride	**3.6**	NE

PMW05		
Sample ID	**PMW05_060717**	**PMW05_032318**
Sampling Date	**6/7/2017**	**3/23/2018**
VOCs (µg/L)		
1,2,4-Trimethylbenzene	**5.1**	ND
1,2-Dichloroethane	**0.88**	ND
Benzene	**95**	ND
cis-1,2-Dichloroethene	**36**	ND
Ethylbenzene	**49**	ND
Isopropylbenzene	**6**	ND
n-Propylbenzene	**13**	ND
p/m-Xylene	**9.3**	ND
Tetrachloroethene	**62**	NE
Toluene	**8.3**	ND
Trichloroethene	**9.4**	ND
Vinyl chloride	**6.8**	ND

PMW04		
Sample ID	**PMW04_060817**	**PMW04_032318**
Sampling Date	**6/8/2017**	**3/23/2018**
VOCs (µg/L)		
cis-1,2-Dichloroethene	**52**	**39**
Tetrachloroethene	**14**	NE
Trichloroethene	**11**	NE
Vinyl chloride	**3**	NE

PMW06		
Sample ID	**PMW06_112717**	**PMW06_032018**
Sampling Date	**11/27/2017**	**3/20/2018**
VOCs (µg/L)		
2-Butanone	ND	**340**
Acetone	NE	**200**
cis-1,2-Dichloroethene	**11**	ND
Tetrachloroethene	**5.9**	ND

PMW07			
Sample ID	**PMW07_112717**	**PMW07_032018**	**DUP01_032018**
Sampling Date	**11/27/2017**	**3/20/2018**	**3/20/2018**
VOCs (µg/L)	NE	NE	NE

10 0 2 4 10
SCALE IN FEET

LANGAN
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. S.A.
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project: 432 RODNEY STREET
BLOCK No. 2374, LOT Nos. 1, 27, 28, & 31
BROOKLYN
KINGS NEW YORK

Figure Title: MARCH 2018 PERFORMANCE MONITORING RESULTS MAP

Project No. 170357801
Date 4/26/2018
Scale 1" = 10'
Drawn By ALS | Checked By BG
Submission Date

Figure No. 2
Sheet 2 of 2

LANGAN
SUBMISSION DATE: —
PROJECT NO. 170357801

Filename: \\langan.com\data\NYC\data8\170357801\Cadd Data - 170357801\2D-DesignFiles\Environmental\First Quarterly Monitoring Report - March 2018\Figure 2 - March 2018 Performance Monitoring Results Map.dwg Date: 4/27/2018 Time: 12:26 User: mperley Style Table: Langan.stb Layout: ANSID-BL (2)

TABLES

Table 1 - Quarterly Groundwater Sampling Results - First Quarter 2018
432 Rodney Street
Brooklyn, New York
Langan Project No. 170357801
BCP Site No. C224216

Sample ID Sampling Date Laboratory ID	NYSDEC TOGS SGVs	PMW01_032018 3/20/2018 L1809584-01		PMW02_032318 3/23/2018 L1810069-01		PMW03_032318 3/23/2018 L1810069-02		PMW04_032318 3/23/2018 L1810069-03		PMW05_032318 3/23/2018 L1810069-04		PMW06_032018 3/20/2018 L1809583-01		PMW07_032018 3/20/2018 L1809583-02		DUP01_032018 3/20/2018 L1809584-04	
VOCs (µg/L)																	
1,2-Dichloroethene	~	23		23		6.7		40	J	2.5	U	2.5	U	2.5	U	2.5	U
2-Butanone	50	5	U	5	U	2.3	J	31		8.7		**340**		5	U	5	U
Acetone	50	5	U	5	U	18		34		22		**200**		5	U	5	U
Benzene	1	0.5	U	0.5	U	0.5	U	0.37	J	0.5	U	0.5	U	0.5	U	0.5	U
Bromodichloromethane	50	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.2	J	0.19	J
Bromomethane	5	2.5	U	2.5	U	1.7	J	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloroform	7	2.5	U	2.5	U	1.3	J	2.5	U	2.5	U	2.5	U	3.4		3.4	
cis-1,2-Dichloroethene	5	**23**		**23**		**6.7**		**39**		2.5	U	2.5	U	2.5	U	2.5	U
Tetrachloroethene	5	3.3		**15**		0.5	U	2.5		0.48	J	0.5	U	0.5	U	0.5	U
trans-1,2-Dichloroethene	5	2.5	U	2.5	U	2.5	U	0.77	J	2.5	U	2.5	U	2.5	U	2.5	U
Trichloroethene	5	2		3.4		0.5	U	1.6		0.5	U	0.5	U	0.5	U	0.5	U
Vinyl chloride	2	1	U	0.13	J	0.77	J	0.89	J	1	U	0.25	J	1	U	1	U

NOTES:
1. Groundwater sample analytical results are compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (SGVs) for Class GA water.
2. Concentrations exceeding NYSDEC TOGS SGVs are shaded and bold.
3. DUP01_032018 is a duplicate sample of PMW07_032018
4. µg/L = Microgram per liter
5. VOCs = Volatile organic compounds
6. Only detected compounds are shown in the table.
7. ~ = Criterion does not exist.

QUALIFIERS:
J = Detected above the Method Detection Limit (MDL) but below the Reporting Limit (RL); therefore, the result is an estimated concentration.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.

Table 2 - Historical Performance Monitoring Analytical Results
432 Rodney Street
Brooklyn, New York
Langan Project No. 170357801
BCP Site No. C224216

Sampling Location	NYSDEC TOGS Class GA SGVs	PMW01			PMW02			PMW03			PMW04		
Sampling Event		Baseline (2016)	Post-Source Removal (2017)	Quarter 1 (2018)	Baseline (2016)	Post-Source Removal (2017)	Quarter 1 (2018)	Baseline (2016)	Post-Source Removal (2017)	Quarter 1 (2018)	Baseline (2016)	Post-Source Removal (2017)	Quarter 1 (2018)
Sample ID		MW09_061616	PMW01_060817	PMW01_032018	MW08S_061716	PMW02_060817	PMW02_032318	MW18_070516	PMW03_060817	PMW03_032318	MW10_061516	PMW04_060817	PMW04_032318
VOCs (µg/L)													
1,1-Dichloroethane	5	2.6	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U
1,1-Dichloroethene	5	0.5 U	0.2 J	0.5 U	0.5 U	0.33 J	0.5 U	*50* U	0.56	0.5 U	*50* U	0.24 J	0.5 U
1,2,4,5-Tetramethylbenzene	5	2 U	2 U	2 U	2 U	2 U	2 U	*200* U	2 U	2 U	*200* U	2 U	2 U
1,2,4-Trimethylbenzene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U
1,2-Dichlorobenzene	3	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U
1,2-Dichloroethane	0.6	**0.87**	0.5 U	0.5 U	0.5 U	0.14 J	0.5 U	*50* U	0.18 J	0.5 U	**20** J	0.13 J	0.5 U
1,2-Dichloroethene, Total	~	99	36	23	66	56	23	4100	120	6.7	6500	52	40 J
1,3,5-Trimethylbenzene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U
2-Butanone	50	5 U	4.7 J	5 U	5 U	27	5 U	*500* U	12	2.3 J	*500* U	5 U	31
Acetone	50	7.8	2.4 J	5 U	3 J	28	5 U	*500* U	22	18	**150** J	3.4 J	34
Benzene	1	0.37 J	0.21 J	0.5 U	0.6	0.22 J	0.5 U	**44** J	0.38 J	0.5 U	**260**	0.53	0.37 J
Bromodichloromethane	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U
Bromomethane	5	2.5 U	2.5 U	2.5 U	2.5 U	1.4 J	2.5 U	*250* U	2.5 U	1.7 J	*250* U	2.5 U	2.5 U
Chlorobenzene	5	2.5 U	1.1 J	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	1.4 J	2.5 U
Chloroform	7	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	1.3 J	*250* U	2.5 U	2.5 U
cis-1,2-Dichloroethene	5	**99**	**36**	**23**	**66**	**56**	**23**	**4100**	**120**	**6.7**	**6500**	**52**	**39**
Dichlorodifluoromethane	5	5 U	5 U	5 U	5 U	5 U	5 U	*500* U	5 U	5 U	*500* U	5 U	5 U
Ethylbenzene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U
Isopropylbenzene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U
Methyl tert butyl ether	10	0.71 J	1.1 J	2.5 U	1.9 J	4.5	2.5 U	*250* U	2.5 U	2.5 U	*250* U	7.8	2.5 U
Naphthalene	10	0.77 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	0.71 J	2.5 U	*250* U	2.5 U	2.5 U
n-Butylbenzene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U
n-Propylbenzene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U
o-Xylene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U
p/m-Xylene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U
p-Diethylbenzene	~	2 U	2 U	2 U	2 U	2 U	2 U	200 U	2 U	2 U	200 U	2 U	2 U
p-Ethyltoluene	~	2 U	2 U	2 U	2 U	2 U	2 U	200 U	2 U	2 U	200 U	2 U	2 U
sec-Butylbenzene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U
Tetrachloroethene	5	**48**	**11**	3.3	**27**	**10**	**15**	**500**	**9.7**	0.5 U	**1000**	**14**	2.5
Toluene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U
trans-1,2-Dichloroethene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	*250* U	2.5 U	2.5 U	*250* U	2.5 U	0.77 J
Trichloroethene	5	**13**	**9.6**	2	5	**7.2**	3.4	**130**	**9.1**	0.5 U	**210**	**11**	1.6
Vinyl chloride	2	0.5 J	0.46 J	1 U	1.5	0.8 J	0.13 J	**240**	**3.6**	0.77 J	**330**	**3**	0.89 J
Xylenes, Total	~	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	250 U	2.5 U	2.5 U	250 U	2.5 U	2.5 U

Notes:

1. Groundwater sample analytical results are compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (SGVs) for Class GA drinking water.
2. Results exceeding the NYSDEC TOGS standards and guidance values are shaded and bolded.
3. Results exceeding the NYSDEC TOGS standards and guidance values but are not detected at or above the level indicated are italicized.
4. µg/L = micrograms per liter.
5. Baseline analytical results are from sampling performed in June and July 2016.
6. Post-source removal analytical results are from sampling performed in June and November 2017.
7. Quarter 1 analytical results are from sampling performed in March 2018.
8. VOCs = Volatile organic compounds.

Qualifiers:

J = Analyte detected at or above the MDL (Method Detection Limit) but below the RL (Reporting Limit) - data is estimated.

U = Analyte not detected at or above the level indicated.

Table 2 - Historical Performance Monitoring Analytical Results
432 Rodney Street
Brooklyn, New York
Langan Project No. 170357801
BCP Site No. C224216

Sampling Location	NYSDEC TOGS Class GA SGVs	PMW05			PMW06			PMW07		
Sampling Event		Baseline (2016)	Post-Source Removal (2017)	Quarter 1 (2018)	Baseline (2016)	Post-Source Removal (2017)	Quarter 1 (2018)	Baseline (2016)	Post-Source Removal (2017)	Quarter 1 (2018)
Sample ID		MW15S_061716	PMW05_060717	PMW05_032318	MW12_061716	PMW06_112717	PMW06_032018	MW13_061716	PMW07_112717	PMW07_032018
VOCs (µg/L)										
1,1-Dichloroethane	5	*100* U	1 J	2.5 U	*12* U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1-Dichloroethene	5	*20* U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.33 J	0.5 U	0.5 U
1,2,4,5-Tetramethylbenzene	5	**76** J	1.9 J	2 U	**13**	2 U	2 U	2 U	2 U	2 U
1,2,4-Trimethylbenzene	5	**2000**	**5.1**	2.5 U	**53**	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichlorobenzene	3	*100* U	0.78 J	2.5 U	*12* U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichloroethane	0.6	*20* U	**0.88**	0.5 U	*2.5* U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, Total	~	100 U	37 J	2.5 U	21	11	2.5 U	46	2.5 U	2.5 U
1,3,5-Trimethylbenzene	5	**580**	2.5 U	2.5 U	**17**	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-Butanone	50	*200* U	5 U	8.7	25 U	5 U	**340**	5 U	5 U	5 U
Acetone	50	**240**	42	22	25 U	5 U	**200**	4.5 J	5 U	5 U
Benzene	1	**260**	**95**	0.5 U	**41**	0.69	0.5 U	0.35 J	0.5 U	0.5 U
Bromodichloromethane	50	20 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J
Bromomethane	5	*100* U	2.5 U	2.5 U	*12* U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chlorobenzene	5	*100* U	2.5 U	2.5 U	*12* U	1 J	2.5 U	3.6	2.5 U	2.5 U
Chloroform	7	*100* U	2.5 U	2.5 U	*12* U	2.5 U	2.5 U	2.5 U	3.5	3.4
cis-1,2-Dichloroethene	5	*100* U	**36**	2.5 U	**21**	**11**	2.5 U	**46**	2.5 U	2.5 U
Dichlorodifluoromethane	5	*200* U	5 U	5 U	*25* U	5 U	5 U	**17**	5 U	5 U
Ethylbenzene	5	**1500**	**49**	2.5 U	**120**	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Isopropylbenzene	5	**110**	**6**	2.5 U	**20**	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methyl tert butyl ether	10	*100* U	1.4 J	2.5 U	*12* U	2.5 U	2.5 U	1.6 J	2.5 U	2.5 U
Naphthalene	10	**75** J	3.8	2.5 U	8.5 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
n-Butylbenzene	5	**44** J	2 J	2.5 U	**11** J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
n-Propylbenzene	5	**410**	**13**	2.5 U	**38**	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
o-Xylene	5	**2300**	2.3 J	2.5 U	**16**	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
p/m-Xylene	5	**5500**	**9.3**	2.5 U	**120**	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
p-Diethylbenzene	~	240	0.83 J	2 U	15	2 U	2 U	2 U	2 U	2 U
p-Ethyltoluene	~	1900	2	2 U	36	2 U	2 U	2 U	2 U	2 U
sec-Butylbenzene	5	*100* U	3	2.5 U	**9.1** J	0.74 J	2.5 U	1.2 J	2.5 U	2.5 U
Tetrachloroethene	5	*20* U	**62**	0.48 J	1.8 J	**5.9**	0.5 U	**67**	0.96	0.5 U
Toluene	5	**2300**	**8.3**	2.5 U	**8.1** J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
trans-1,2-Dichloroethene	5	*100* U	0.82 J	2.5 U	*12* U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Trichloroethene	5	*20* U	**9.4**	0.5 U	**13**	2.9	0.5 U	**8**	0.2 J	0.5 U
Vinyl chloride	2	*40* U	**6.8**	1 U	**15**	1.4	0.25 J	**12**	1 U	1 U
Xylenes, Total	~	7800	12 J	2.5 U	140	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U

Notes:

1. Groundwater sample analytical results are compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (SGVs) for Class GA drinking water.
2. Results exceeding the NYSDEC TOGS standards and guidance values are shaded and bolded.
3. Results exceeding the NYSDEC TOGS standards and guidance values but are not detected at or above the level indicated are italicized.
4. µg/L = micrograms per liter.
5. Baseline analytical results are from sampling performed in June and July 2016.
6. Post-source removal analytical results are from sampling performed in June and November 2017.
7. Quarter 1 analytical results are from sampling performed in March 2018.
8. VOCs = Volatile organic compounds.

Qualifiers:

J = Analyte detected at or above the MDL (Method Detection Limit) but below the RL (Reporting Limit) - data is estimated.

U = Analyte not detected at or above the level indicated.

ATTACHMENT A

WELL PURGING AND SAMPLING LOGS

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site:	123 Hope St	**Well#/Location:**	MW-1	**Job No.**	170357801
Date:	03/20/18	**Weather:**	Sunny, 50s	**Sampling Personnel:**	W.K.m

Well Information

Sample ID	PMW01-032018
Well Depth (ft.)	N/A
Screened Interval (ft.)	N/A
Casing Elevation (msl)	N/A
Casing Diameter (in)	2"
Depth to Water (ft.)	N/A
Water Elevation (msl)	N/A
Casing Volume (gal)	N/A
PID/FID Reading (ppm)	0.0

Purging Information

Purging Method	Low flow
Purging Rate (l/m; gpm)	—
Start Purge Time	1020
End Purge Time	1045
Volume Purged (gal)	4.50

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	1050
End Sampling Time	1055
Depth Before Sampling (ft.)	N/A
Number Bottles Collected	3 vials

	Parameters							
Sample Time	**pH**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Temp (°C)**	**ORP (mV)**	**Depth to Water (ft.)**	**Purged Volume (gallons)**
1025	7.20	0.893	6.5	1.18	7.27	121	—	1
1030	6.86	0.891	2.1	1.02	7.86	129	—	2
1035	6.76	0.891	1.7	0.93	8.05	130	—	2.75
1040	6.68	0.892	1.7	0.83	8.23	125	—	4.00
1045	6.70	0.892	1.7	0.82	8.25	123	—	4.50

Notes/Remarks

Stability

PH - ± 0.1 unit
Specific Conductance - ± 3%
Temperature - ± 3%
Dissolved Oxygen - ± 10% above 0.5 mg/L
Turbidity - ± 10% above 5 NTU
ORP/Eh - ± 10 millivolts
Maximum flow rate - < 0.5 L/min or 0.13 gpm
Maximum drawdown - < 0.33 feet

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 43 Kodiak	**Well#/Location:** MW2	**Job No.**	
Date: 3/23/18	**Weather:** 30s-40s, Clear	**Sampling Personnel:** K. Nagotko	

Well Information

Sample ID	MW2-032318
Well Depth (ft)	NA
Screened Interval (ft)	NA
Casing Elevation (msl)	NA
Casing Diameter (in)	2"
Depth to Water (ft)	NA
Water Elevation (msl)	NA
Casing Volume (gal)	
PID/FID Reading (ppm)	0.0

Purging Information

Purging Method	low flow - peri
Purging Rate (l/m; gpm)	
Start Purge Time	13:50
End Purge Time	14:50
Volume Purged (gal)	

Sampling Information

Sampling Method	low flow - peri
Start Sampling Time	1450
End Sampling Time	
Depth Before Sampling (ft)	
Number Bottles Collected	3 vials

	Parameters							
Sample Time	**Temp (°C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
1350	6.38	6.35	-27	0.0000	4.7	2.25		0.5
1355	6.58	6.21	-14	0.1070	3.1	1.95		1
1400	6.57	8.13	1	0.0776	2.0	1.85		1.25
1405	6.59	7.59	11	0.0683	0.8	1.8		1.75
1410	6.78	7.30	21	0.0650	0.4	1.72		2.125
1415	6.91	7.12	32	0.0681	0.1	1.65		2.325
1420	7.04	7.02	42	0.0688	0.0	1.65		2.75
1425	7.12	6.96	51	0.0696	0.0	1.64		3.0
1430	7.05	6.92	60	0.0690	0.0	1.70		3.625
1435	7.12	6.89	65	0.0686	0.0	1.7		4.25
1440	7.33	6.87	75	0.0694	0.0	1.78		4.625
1445	7.47	6.85	82	0.0703	0.0	1.72		5.00
1450	7.46	6.85	89	0.0697	0.0	1.73		5.325

Notes/Remarks

Stability

PH - ± 0.1 unit
Specific Conductance - ± 3%
Temperature - ± 3%
Dissolved Oxygen - ± 10% above 0.5 mg/L
Turbidity - ± 10% above 5 NTU
ORP/Eh - ± 10 millivolts
Maximum flow rate - < 0.5 L/m or 0.13 gpm
Maximum drawdown - < 0.33 feet

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

11x17

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site:	Well#/Location: MW3	Job No.
Date: 3/23/18	Weather: 30s-40s, Clear	Sampling Personnel: K. Nagotko

Well Information

Sample ID	
Well Depth (ft)	
Screened Interval (ft)	
Casing Elevation (msl)	
Casing Diameter (in)	
Depth to Water (ft)	
Water Elevation (msl)	
Casing Volume (gal)	
PID/FID Reading (ppm)	0.0

Purging Information

Purging Method	MW Low-Flow
Purging Rate (l/m; gpm)	
Start Purge Time	12:38
End Purge Time	13:38
Volume Purged (gal)	

Sampling Information

Sampling Method	MW Low-Flow
Start Sampling Time	13:38
End Sampling Time	
Depth Before Sampling (ft)	-
Number Bottles Collected	3 VOAs

	Parameters							
Sample Time	**Temp (°C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
1238	6.39	11.97	116	3.43	5.0	2.13		1.5
1243	6.39	12.38	20	4.04	4.3	1.78		1.75
1248	5.98	12.51	-20	4.07	3.0	2.74		2.00
1253	5.85	12.59	-39	4.21	2.6	5.33		2.5
1258	5.93	12.601	-47	4.24	2.7	5.14		2.75
1303	6.01	12.604	-50	4.26	2.7	4.61		3
1308	5.95	12.609	-58	4.35	3.4	4.13		3.5
1313	5.93	12.71	-67	4.40	2.5	3.54		3.75
1318	5.96	12.73	-73	4.35	2.7	3.31		4
1323	5.98	12.74	-75	4.40	2.3	3.22		4.25
1328	5.86	12.77	-80	4.25	2.8	3.39		4.375
1333	5.93	12.77	-82	4.36	2.4	2.19		4.75
1338	6.45	12.76	-85	4.44	0.4	2.07		5.125

Notes/Remarks

Stability

PH - ± 0.1 unit
Specific Conductance - ± 3%
Temperature - ± 3%
Dissolved Oxygen - ± 10% above 0.5 mg/L
Turbidity - ± 10% above 5 NTU
ORP/Eh - ± 10 millivolts
Maximum flow rate - < 0.5 L/m or 0.13 gpm
Maximum drawdown - < 0.33 feet

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site:	Well#/Location: MW4	Job No.
Date: 3/23/2018	Weather: 30s-40s, Clear	Sampling Personnel: K. Nagotko

Well Information

Sample ID	MW4_032318
Well Depth (ft)	
Screened Interval (ft)	
Casing Elevation (msl)	
Casing Diameter (in)	
Depth to Water (ft)	
Water Elevation (msl)	
Casing Volume (gal)	
PID/FID Reading (ppm)	1.0

Purging Information

Purging Method	
Purging Rate (l/m; gpm)	
Start Purge Time	11:20
End Purge Time	12:20
Volume Purged (gal)	

Sampling Information

Sampling Method	
Start Sampling Time	12:20
End Sampling Time	
Depth Before Sampling (ft)	
Number Bottles Collected	

	Parameters							
Sample Time	Temp (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Depth to Water (ft)	Purged Volume (gallons)
1120	7.05	11.85	50	0.937	27.6	10.69		0.5
1125	6.41	12.01	22	0.701	11.7	10.22		1.125
1130	6.45	11.57	21	0.584	31.9	8.91		2.50
1135	6.54	9.98	51	0.596	41.1	8.04		2.75
1140	6.72	8.44	82	0.687	19.9	7.37		3.50
1145	6.63	7.76	100	0.716	15.3	6.94		4.00
1150	6.39	7.46	112	0.721	12.6	6.57		4.25
1155	6.2	7.27	122	0.730	9.8	6.11		4.625
1200	6.01	7.18	127	0.733	8.1	5.810		5.0
1205	5.99	7.09	132	0.744	6.8	5.59		5.25
1210	5.97	7.01	135	0.754	5.7	5.33		5.5
1215	5.910	6.95	136	0.766	5.1	5.01		5.75
1220	5.91	6.91	136	0.764	4.2	4.85		6.00

Notes/Remarks

Stablility

PH - ± 0.1 unit

Specific Conductance - ± 3%

Temperature - ± 3%

Dissolved Oxygen - ±10% above 0.5 mg/L

Turbidity - ± 10% above 5 NTU

ORP/Eh - ±10 millivolts

Maximum flow rate - <0.5 L/m or 0.13 gpm

Maximum drawdown - <0.33 feet

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site:	Well#/Location: MW5	Job No.
Date: 5/23/15	Weather: 30s-40s, Clear	Sampling Personnel: K. Nagotko

Well Information

Sample ID	MW5-032318
Well Depth (ft)	
Screened Interval (ft)	
Casing Elevation (msl)	
Casing Diameter (in)	
Depth to Water (ft)	
Water Elevation (msl)	
Casing Volume (gal)	
PID/FID Reading (ppm)	0.1

Purging Information

Purging Method	
Purging Rate (l/m; gpm)	
Start Purge Time	1500
End Purge Time	1540
Volume Purged (gal)	

Sampling Information

Sampling Method	
Start Sampling Time	1540
End Sampling Time	
Depth Before Sampling (ft)	
Number Bottles Collected	3

	Parameters							
Sample Time	Temp (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Depth to Water (ft)	Purged Volume (gallons)
1500	7.22	7.16	113	0.705	1.9	2.40		0.75
1505	6.15	7.16	102	0.469	139	5.38		1
1510	5.88	7.82	96	0.344	139	8.23		1.5
1515	5.80	8.57	95	0.327	120	8.59		1.625
1520	5.92	8.77	98	0.327	112	8.31		1.875
1525	5.85	8.84	101	0.325	128	8.18		2.25
1530	5.97	8.85	103	0.324	118	7.84		2.50
~~1535~~ 1535	6.14	8.90	107	0.321	117	7.67		2.875
~~1540~~ 1540	6.11	8.91	104	0.319	114	7.45		3.25
~~1545~~ ~~1545~~								
~~1550~~ 1550								

Notes/Remarks

Stability

- PH - ± 0.1 unit
- Specific Conductance - ± 3%
- Temperature - ± 3%
- Dissolved Oxygen - ± 10% above 0.5 mg/L
- Turbidity - ± 10% above 5 NTU
- ORP/Eh - ± 10 millivolts
- Maximum flow rate - < 0.5 L/m or 0.13 gpm
- Maximum drawdown - < 0.33 feet

light brown initial discharge.

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 441 Keap St	Well#/Location: MW06	Job No. 170 357 802
Date: 03/20/18	Weather: Indoors	Sampling Personnel: W. Kim

Well Information

Sample ID	PMW06-032018
Well Depth (ft.)	15
Screened Interval (ft.)	5-15
Casing Elevation (msl)	N/A
Casing Diameter (in)	2"
Depth to Water (ft.)	10.39
Water Elevation (msl)	N/A
Casing Volume (gal)	N/A
PID/FID Reading (ppm)	0.0

Purging Information

Purging Method	Low Flow
Purging Rate (l/m; gpm)	N/A
Start Purge Time	1320
End Purge Time	1405
Volume Purged (gal)	3

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	1410
End Sampling Time	1415
Depth Before Sampling (ft.)	N/A
Number Bottles Collected	3 vials

	Parameters							
Sample Time	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	ORP (mV)	Depth to Water (ft.)	Purged Volume (gallons)
1325	5.50	4.173	281	2.88	14.03	-46	—	0.5
1330	5.59	4.26	276	3.15	13.96	-57	—	0.75
1335	5.77	3.55	230	3.72	13.96	-72	—	1.00
1340	5.82	3.33	209	3.87	13.60	-76	—	1.25
1345	6.04	2.51	138	3.15	13.49	-92	—	1.50
1350	6.06	2.46	142	3.03	14.84	-94	—	1.75
1355	6.12	2.38	121	2.81	14.12	-99	—	2.0
1400	6.23	2.38	135	2.91	14.10	-95	—	2.5
1405	6.21	2.38	128	2.91	14.18	-95	—	3.0

Notes/Remarks

PMW06_032018 (1410)

Stability

- PH-± 0.1 unit
- Specific Conductance-± 3%
- Temperature-± 3%
- Dissolved Oxygen-± 10%above 0.5 mg/L
- Turbidity-± 10%above 5 NTU
- ORP/Eh-± 10 millivdts
- Maximumflow rate-< 0.5 L/mor 0.13 gpm
- Maximumdrawdown-< 0.33 feet

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site:	441 Keap St	Well#/Location:	MW07	Job No.	170357802
Date:	03/20/18	Weather:	Indoors	Sampling Personnel:	W. Kim

Well Information

Sample ID	PMW07_032018
Well Depth (ft.)	15
Screened Interval (ft.)	5 - 15
Casing Elevation (msl)	N/A
Casing Diameter (in)	2"
Depth to Water (ft.)	10.45
Water Elevation (msl)	N/A
Casing Volume (gal)	—
PID/FID Reading (ppm)	0.0

Purging Information

Purging Method	Low flow
Purging Rate (l/m; gpm)	—
Start Purge Time	1210
End Purge Time	1300
Volume Purged (gal)	3.75

Sampling Information

Sampling Method	Low flow
Start Sampling Time	1305
End Sampling Time	1310
Depth Before Sampling (ft.)	N/A
Number Bottles Collected	3 vials

	Parameters							
Sample Time	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	ORP (mV)	Depth to Water (ft.)	Purged Volume (gallons)
1215	6.67	0.888	177	2.58	11.56	148	—	0.25
1220	6.53	0.857	99.9	1.87	13.01	145	—	0.50
1225	6.51	0.852	71.0	1.60	13.27	143	—	0.75
1230	6.49	0.852	54.2	1.41	13.45	142	—	0.80
1235	6.48	0.850	41.2	1.27	13.56	142	—	1.00
1240	6.47	0.846	17.9	1.06	13.74	141	—	1.25
1245	6.45	0.845	8.5	0.84	14.04	140	—	1.50
1250	6.45	0.843	5.4	0.76	14.09	140	—	2.25
1255	6.44	0.838	4.2	0.76	14.04	140	—	3.00
1300	6.44	0.839	4.1	0.77	14.09	140	—	3.75

Notes/Remarks

Stability

PH - ± 0.1 unit
Specific Conductance - ± 3%
Temperature - ± 3%
Dissolved Oxygen - ± 10% above 0.5 mg/L
Turbidity - ± 10% above 5 NTU
ORP/Eh - ± 10 millivolts
Maximum flow rate - < 0.5 L/min or 0.13 gpm
Maximum drawdown - < 0.33 feet

PMW07 - 032018 (1300)
DUP01 - 032018 collected

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

ATTACHMENT B

DATA USABILITY REPORTS

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Anna Schmiedicke, Langan Senior Staff Engineer

From: Emily Strake, Langan Senior Project Chemist/Risk Assessor

Date: April 18, 2018

Re: Data Usability Summary Report
For 432 Rodney Street
Brooklyn, New York
Groundwater Samples Collected March 2018
Langan Project No.: 170357801

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of groundwater samples collected March 20, 2018 by Langan Engineering and Environmental Services ("Langan") at 432 Rodney Street located in Brooklyn, New York. The samples were analyzed by Alpha Analytical Laboratories, Inc. located in Westborough, Massachusetts (NYSDOH ELAP registration # 11148) for volatile organic compounds (VOCs) using the analytical methods specified below.

- VOCs by SW-846 Method 8260C

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

TABLE 1: SAMPLE SUMMARY

SDG	*Lab Sample ID*	*Client Sample ID*	*Sample Date*	*Analytical Parameters*
L1809583	L1809583-01	PMW06_032018	3/20/2018	VOCs
L1809583	L1809583-02	PMW07_032018	3/20/2018	VOCs
L1809583	L1809583-03	DUP01_032018	3/20/2018	VOCs
L1809584	L1809584-01	PMW01_032018	3/20/2018	VOCs
L1809584	L1809584-02	TB01_032018	3/20/2018	VOCs
L1809584	L1809584-03	FB01_032018	3/20/2018	VOCs
L1810069	L1810069-01	PMW02_032318	3/23/2018	VOCs
L1810069	L1810069-02	PMW03_032318	3/23/2018	VOCs
L1810069	L1810069-03	PMW04_032318	3/23/2018	VOCs
L1810069	L1810069-04	PMW05_032318	3/23/2018	VOCs
L1810069	L1810069-05	TB02_032318	3/23/2018	VOCs

VALIDATION OVERVIEW

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-33A, "Low/Medium Volatile Data Validation" (September 2016, Revision 1), USEPA Region II SOP #HW-34A, "Trace Volatile Data Validation" (September 2016, Revision 1), the USEPA Contract Laboratory Program "National Functional Guidelines for Organic Superfund Methods Data Review" (USEPA-540-R-2017-002, January 2017) and the specifics of the methods employed.

Validation includes evaluation of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, trip blanks, field blanks, field duplicates, target compound identification and quantification, chromatograms, and overall system performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J –** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ –** The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U –** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items subject to review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

TABLE 2: VALIDATOR-APPLIED QUALIFICATION

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
PMW06_032018	SW8260C	1,4-Dioxane (P-Dioxane)	123-91-1	UJ
PMW06_032018	SW8260C	Bromomethane	74-83-9	UJ
PMW06_032018	SW8260C	Chloroethane	75-00-3	UJ
PMW06_032018	SW8260C	Chloromethane	74-87-3	UJ
PMW06_032018	SW8260C	Dichlorodifluoromethane	75-71-8	UJ
PMW06_032018	SW8260C	Hexachlorobutadiene	87-68-3	UJ
PMW06_032018	SW8260C	Vinyl Chloride	75-01-4	J
PMW07_032018	SW8260C	1,4-Dioxane (P-Dioxane)	123-91-1	UJ
PMW07_032018	SW8260C	Bromomethane	74-83-9	UJ
PMW07_032018	SW8260C	Chloroethane	75-00-3	UJ
PMW07_032018	SW8260C	Chloromethane	74-87-3	UJ
PMW07_032018	SW8260C	Dichlorodifluoromethane	75-71-8	UJ
PMW07_032018	SW8260C	Hexachlorobutadiene	87-68-3	UJ
PMW07_032018	SW8260C	Vinyl Chloride	75-01-4	UJ
DUP01_032018	SW8260C	1,4-Dioxane (P-Dioxane)	123-91-1	UJ
DUP01_032018	SW8260C	Bromomethane	74-83-9	UJ
DUP01_032018	SW8260C	Chloroethane	75-00-3	UJ
DUP01_032018	SW8260C	Chloromethane	74-87-3	UJ
DUP01_032018	SW8260C	Dichlorodifluoromethane	75-71-8	UJ
DUP01_032018	SW8260C	Hexachlorobutadiene	87-68-3	UJ
DUP01_032018	SW8260C	Vinyl Chloride	75-01-4	UJ
PMW01_032018	SW8260C	1,4-Dioxane (P-Dioxane)	123-91-1	UJ
PMW01_032018	SW8260C	Bromomethane	74-83-9	UJ
PMW01_032018	SW8260C	Chloroethane	75-00-3	UJ
PMW01_032018	SW8260C	Chloromethane	74-87-3	UJ
PMW01_032018	SW8260C	Dichlorodifluoromethane	75-71-8	UJ
PMW01_032018	SW8260C	Hexachlorobutadiene	87-68-3	UJ
PMW01_032018	SW8260C	Vinyl Chloride	75-01-4	UJ
TB01_032018	SW8260C	1,4-Dioxane (P-Dioxane)	123-91-1	UJ
TB01_032018	SW8260C	Bromomethane	74-83-9	UJ
TB01_032018	SW8260C	Chloroethane	75-00-3	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
TB01_032018	SW8260C	Chloromethane	74-87-3	UJ
TB01_032018	SW8260C	Dichlorodifluoromethane	75-71-8	UJ
TB01_032018	SW8260C	Hexachlorobutadiene	87-68-3	UJ
TB01_032018	SW8260C	Vinyl Chloride	75-01-4	UJ
FB01_032018	SW8260C	1,4-Dioxane (P-Dioxane)	123-91-1	UJ
FB01_032018	SW8260C	Bromomethane	74-83-9	UJ
FB01_032018	SW8260C	Chloroethane	75-00-3	UJ
FB01_032018	SW8260C	Chloromethane	74-87-3	UJ
FB01_032018	SW8260C	Dichlorodifluoromethane	75-71-8	UJ
FB01_032018	SW8260C	Hexachlorobutadiene	87-68-3	UJ
FB01_032018	SW8260C	Vinyl Chloride	75-01-4	UJ
PMW02_032318	SW8260C	1,4-Dioxane (P-Dioxane)	123-91-1	UJ
PMW02_032318	SW8260C	Bromochloromethane	74-97-5	UJ
PMW02_032318	SW8260C	Bromomethane	74-83-9	UJ
PMW02_032318	SW8260C	Chloroform	67-66-3	UJ
PMW02_032318	SW8260C	Dichlorodifluoromethane	75-71-8	UJ
PMW02_032318	SW8260C	Trichloroethylene (TCE)	79-01-6	J
PMW02_032318	SW8260C	Trans-1,3-Dichloropropene	10061-02-6	UJ
PMW03_032318	SW8260C	1,4-Dioxane (P-Dioxane)	123-91-1	UJ
PMW03_032318	SW8260C	Bromochloromethane	74-97-5	UJ
PMW03_032318	SW8260C	Bromomethane	74-83-9	J
PMW03_032318	SW8260C	Chloroform	67-66-3	J
PMW03_032318	SW8260C	Dichlorodifluoromethane	75-71-8	UJ
PMW03_032318	SW8260C	Trichloroethylene (TCE)	79-01-6	UJ
PMW03_032318	SW8260C	Trans-1,3-Dichloropropene	10061-02-6	UJ
PMW04_032318	SW8260C	1,4-Dioxane (P-Dioxane)	123-91-1	UJ
PMW04_032318	SW8260C	Bromochloromethane	74-97-5	UJ
PMW04_032318	SW8260C	Bromomethane	74-83-9	UJ
PMW04_032318	SW8260C	Chloroform	67-66-3	UJ
PMW04_032318	SW8260C	Dichlorodifluoromethane	75-71-8	UJ
PMW04_032318	SW8260C	Trichloroethylene (TCE)	79-01-6	J
PMW04_032318	SW8260C	Trans-1,3-Dichloropropene	10061-02-6	UJ

Project Sample ID	*Analysis*	*Analyte*	*CAS No.*	*Validator Qualifier*
PMW05_032318	SW8260C	1,4-Dioxane (P-Dioxane)	123-91-1	UJ
PMW05_032318	SW8260C	Bromochloromethane	74-97-5	UJ
PMW05_032318	SW8260C	Bromomethane	74-83-9	UJ
PMW05_032318	SW8260C	Chloroform	67-66-3	UJ
PMW05_032318	SW8260C	Dichlorodifluoromethane	75-71-8	UJ
PMW05_032318	SW8260C	Trichloroethylene (TCE)	79-01-6	UJ
PMW05_032318	SW8260C	Trans-1,3-Dichloropropene	10061-02-6	UJ
TB02_032318	SW8260C	1,4-Dioxane (P-Dioxane)	123-91-1	UJ
TB02_032318	SW8260C	Bromochloromethane	74-97-5	UJ
TB02_032318	SW8260C	Bromomethane	74-83-9	UJ
TB02_032318	SW8260C	Chloroform	67-66-3	UJ
TB02_032318	SW8260C	Dichlorodifluoromethane	75-71-8	UJ
TB02_032318	SW8260C	Trichloroethylene (TCE)	79-01-6	UJ
TB02_032318	SW8260C	Trans-1,3-Dichloropropene	10061-02-6	UJ

MAJOR DEFICIENCIES:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

MINOR DEFICIENCIES:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by USEPA Method 8260C:

The initial calibration (ICAL) analyzed for instrument VOA101 exhibited a low average response factor (RF) for 1,4-dioxane (0.001). The associated results in samples DUP01_032018, PMW06_032018, PMW07_032018, TB01_032018, FB01_032018 and PMW01_032018 are qualified as "UJ".

The initial calibration verification (ICV) analyzed on 3/16/2018 at 1:14 a.m. exhibited percent differences (%Ds) greater than the control limit for dichlorodifluoromethane (69.2%), chloromethane (49.3%), vinyl chloride (44.9%), bromomethane (39.8%), chloroethane (31.3%)

and 1,4-dioxane (22.7%). The associated results in samples DUP01_032018, PMW06_032018, PMW07_032018, TB01_032018, FB01_032018 and PMW01_032018 are qualified as "J" or "UJ" based on potential indeterminate bias.

The continuing calibration verification (CCV) analyzed on 3/25/2018 at 9:36 exhibited %Ds greater than the control limit for 1,4-dioxane (39.4%) and hexachlorobutadiene (22.4%). The associated results in samples DUP01_032018, PMW06_032018, PMW07_032018, TB01_032018, FB01_032018 and PMW01_032018 are qualified as "UJ" based on potential indeterminate bias.

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) for batch WG1101340 exhibited a relative percent difference (RPD) greater than the control limit for 1,4-dioxane (24%); the associated results in samples PMW02_032318, PMW03_032318. PMW04_03218, PMW05_032318 and TB02_032318 are qualified as "UJ" based on potential indeterminate bias.

The ICAL analyzed for instrument GONZO exhibited a low average RF for 1,4-dioxane (0.001); the associated results in samples PMW02_032318, PMW03_032318. PMW04_03218, PMW05_032318 and TB02_032318 are qualified as "UJ".

The ICV analyzed on 2/15/2018 at 5:16 exhibited %Ds greater than the control limit for dichlorodifluoromethane (45.1%), bromochloromethane (-20.2%), chloroform (-20.5%), trichloroethene (-21.9%) and trans-1,3-dichloropropene (-20.9%); the associated results in samples PMW02_032318, PMW03_032318. PMW04_03218, PMW05_032318 and TB02_032318 are qualified as "UJ" based on potential indeterminate bias.

The CCV analyzed on 3/28/2018 at 8:34 exhibited %Ds greater than the control limit for bromomethane (-49.1%) and bromochloromethane (-22.8%); the associated results in samples PMW02_032318, PMW03_032318. PMW04_03218, PMW05_032318 and TB02_032318 are qualified as "J" or "UJ" based on potential indeterminate bias.

OTHER DEFICIENCIES:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by USEPA Method 8260C:

The CCV analyzed on 3/26/2018 at 8:36 exhibited %Ds greater than the control limit for chloromethane (-36.3%), 1,1-dichloroethene (-21.6%), and 1,4-dioxane (37.9%). The associated results were reported from the initial analysis of the sample; no qualification is necessary.

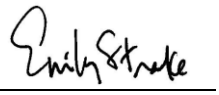
COMMENTS:

One field duplicate and parent sample pair (PMW07_032018 & DUP01_032018) was collected and analyzed for all parameters. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 30%. All parameters met the precision criteria.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All laboratory data packages met ASP Category B requirements and all sample holding times were met.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:



Emily Strake, CEP
Senior Project Chemist/Risk Assessor

ATTACHMENT C

LABORATORY ANALYTICAL REPORTS

ANALYTICAL REPORT

Lab Number:	L1809583
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Brian Gochenaur
Phone:	(212) 479-5590
Project Name:	441 KEAP STREET
Project Number:	170357802
Report Date:	03/28/18

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: 441 KEAP STREET
Project Number: 170357802

Lab Number: L1809583
Report Date: 03/28/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1809583-01	PMW06_032018	WATER	BROOKLYN, NEW YORK	03/20/18 14:10	03/20/18
L1809583-02	PMW07_032018	WATER	BROOKLYN, NEW YORK	03/20/18 13:00	03/20/18
L1809583-03	DUP01_032018	WATER	BROOKLYN, NEW YORK	03/20/18 00:00	03/20/18

Project Name: 441 KEAP STREET
Project Number: 170357802
Lab Number: L1809583
Report Date: 03/28/18

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:	441 KEAP STREET	**Lab Number:**	L1809583
Project Number:	170357802	**Report Date:**	03/28/18

Case Narrative (continued)

Report Revision

March 28, 2018: This report includes the results of the sample "DUP01_032018".

Report Submission

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

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: Cristin Walker

Title: Technical Director/Representative Date: 03/28/18

ORGANICS

VOLATILES

Project Name: 441 KEAP STREET
Project Number: 170357802
Lab Number: L1809583
Report Date: 03/28/18

SAMPLE RESULTS

Lab ID: L1809583-01
Client ID: PMW06_032018
Sample Location: BROOKLYN, NEW YORK

Date Collected: 03/20/18 14:10
Date Received: 03/20/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/25/18 16:08
Analyst: AD

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	0.25	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

Project Name: 441 KEAP STREET **Lab Number:** L1809583

Project Number: 170357802 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809583-01 Date Collected: 03/20/18 14:10

Client ID: PMW06_032018 Date Received: 03/20/18

Sample Location: BROOKLYN, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
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
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	200		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	330	E	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

Project Name: 441 KEAP STREET **Lab Number:** L1809583

Project Number: 170357802 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809583-01 Date Collected: 03/20/18 14:10

Client ID: PMW06_032018 Date Received: 03/20/18

Sample Location: BROOKLYN, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	98		70-130

Project Name: 441 KEAP STREET
Project Number: 170357802
Lab Number: L1809583
Report Date: 03/28/18

SAMPLE RESULTS

Lab ID: L1809583-01 D
Client ID: PMW06_032018
Sample Location: BROOKLYN, NEW YORK

Date Collected: 03/20/18 14:10
Date Received: 03/20/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/26/18 10:56
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
2-Butanone	340		ug/l	25	9.7	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	98		70-130

Project Name: 441 KEAP STREET
Project Number: 170357802
Lab Number: L1809583
Report Date: 03/28/18

SAMPLE RESULTS

Lab ID: L1809583-02
Client ID: PMW07_032018
Sample Location: BROOKLYN, NEW YORK

Date Collected: 03/20/18 13:00
Date Received: 03/20/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/25/18 16:37
Analyst: AD

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	3.4		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	0.20	J	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

Project Name: 441 KEAP STREET **Lab Number:** L1809583

Project Number: 170357802 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809583-02 Date Collected: 03/20/18 13:00

Client ID: PMW07_032018 Date Received: 03/20/18

Sample Location: BROOKLYN, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
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
Acrylonitrile	ND		ug/l	5.0	1.5	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

Project Name: 441 KEAP STREET **Lab Number:** L1809583

Project Number: 170357802 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809583-02 Date Collected: 03/20/18 13:00

Client ID: PMW07_032018 Date Received: 03/20/18

Sample Location: BROOKLYN, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	97		70-130

Project Name: 441 KEAP STREET **Lab Number:** L1809583

Project Number: 170357802 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809583-03
Client ID: DUP01_032018
Sample Location: BROOKLYN, NEW YORK

Date Collected: 03/20/18 00:00
Date Received: 03/20/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/25/18 15:40
Analyst: AD

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	3.4		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	0.19	J	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

Project Name: 441 KEAP STREET **Lab Number:** L1809583

Project Number: 170357802 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809583-03 Date Collected: 03/20/18 00:00

Client ID: DUP01_032018 Date Received: 03/20/18

Sample Location: BROOKLYN, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
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
Acrylonitrile	ND		ug/l	5.0	1.5	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

Project Name: 441 KEAP STREET **Lab Number:** L1809583

Project Number: 170357802 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809583-03 Date Collected: 03/20/18 00:00

Client ID: DUP01_032018 Date Received: 03/20/18

Sample Location: BROOKLYN, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	97		70-130

Project Name: 441 KEAP STREET
Project Number: 170357802
Lab Number: L1809583
Report Date: 03/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/26/18 10:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1100368-12					
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: 441 KEAP STREET
Project Number: 170357802
Lab Number: L1809583
Report Date: 03/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/26/18 10:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1100368-12					
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
Acrylonitrile	ND		ug/l	5.0	1.5
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

Project Name: 441 KEAP STREET
Project Number: 170357802
Lab Number: L1809583
Report Date: 03/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/26/18 10:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1100368-12					
o-Chlorotoluene	ND		ug/l	2.5	0.70
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.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	97		70-130

Project Name: 441 KEAP STREET
Project Number: 170357802
Lab Number: L1809583
Report Date: 03/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/25/18 11:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1100368-5					
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: 441 KEAP STREET
Project Number: 170357802
Lab Number: L1809583
Report Date: 03/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/25/18 11:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1100368-5					
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
Acrylonitrile	ND		ug/l	5.0	1.5
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

Project Name: 441 KEAP STREET
Project Number: 170357802
Lab Number: L1809583
Report Date: 03/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/25/18 11:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1100368-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
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.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	98		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 441 KEAP STREET

Project Number: 170357802

Lab Number: L1809583

Report Date: 03/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1100368-10 WG1100368-11								
Methylene chloride	83		88		70-130	6		20
1,1-Dichloroethane	87		93		70-130	7		20
Chloroform	89		94		70-130	5		20
Carbon tetrachloride	85		91		63-132	7		20
1,2-Dichloropropane	91		97		70-130	6		20
Dibromochloromethane	96		100		63-130	4		20
1,1,2-Trichloroethane	97		100		70-130	3		20
Tetrachloroethene	95		99		70-130	4		20
Chlorobenzene	97		100		75-130	3		20
Trichlorofluoromethane	78		86		62-150	10		20
1,2-Dichloroethane	89		96		70-130	8		20
1,1,1-Trichloroethane	86		94		67-130	9		20
Bromodichloromethane	92		99		67-130	7		20
trans-1,3-Dichloropropene	98		100		70-130	2		20
cis-1,3-Dichloropropene	92		98		70-130	6		20
1,1-Dichloropropene	88		94		70-130	7		20
Bromoform	88		96		54-136	9		20
1,1,2,2-Tetrachloroethane	98		110		67-130	12		20
Benzene	87		92		70-130	6		20
Toluene	95		100		70-130	5		20
Ethylbenzene	97		100		70-130	3		20
Chloromethane	64		68		64-130	6		20
Bromomethane	86		88		39-139	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 441 KEAP STREET

Project Number: 170357802

Lab Number: L1809583

Report Date: 03/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1100368-10 WG1100368-11								
Vinyl chloride	76		84		55-140	10		20
Chloroethane	86		92		55-138	7		20
1,1-Dichloroethene	78		85		61-145	9		20
trans-1,2-Dichloroethene	83		89		70-130	7		20
Trichloroethene	87		92		70-130	6		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	85		94		63-130	10		20
p/m-Xylene	95		100		70-130	5		20
o-Xylene	95		100		70-130	5		20
cis-1,2-Dichloroethene	86		92		70-130	7		20
Dibromomethane	90		99		70-130	10		20
1,2,3-Trichloropropane	100		110		64-130	10		20
Acrylonitrile	86		95		70-130	10		20
Styrene	95		100		70-130	5		20
Dichlorodifluoromethane	70		79		36-147	12		20
Acetone	90		94		58-148	4		20
Carbon disulfide	77		81		51-130	5		20
2-Butanone	80		90		63-138	12		20
Vinyl acetate	82		89		70-130	8		20
4-Methyl-2-pentanone	93		100		59-130	7		20
2-Hexanone	97		110		57-130	13		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 441 KEAP STREET
Project Number: 170357802

Lab Number: L1809583
Report Date: 03/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1100368-10 WG1100368-11								
Bromochloromethane	88		94		70-130	7		20
2,2-Dichloropropane	89		94		63-133	5		20
1,2-Dibromoethane	97		110		70-130	13		20
1,3-Dichloropropane	97		100		70-130	3		20
1,1,1,2-Tetrachloroethane	96		100		64-130	4		20
Bromobenzene	99		100		70-130	1		20
n-Butylbenzene	110		110		53-136	0		20
sec-Butylbenzene	110		100		70-130	10		20
tert-Butylbenzene	110		100		70-130	10		20
o-Chlorotoluene	98		99		70-130	1		20
p-Chlorotoluene	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	93		100		41-144	7		20
Hexachlorobutadiene	120		120		63-130	0		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	110		100		70-130	10		20
Naphthalene	99		110		70-130	11		20
n-Propylbenzene	100		100		69-130	0		20
1,2,3-Trichlorobenzene	100		110		70-130	10		20
1,2,4-Trichlorobenzene	100		110		70-130	10		20
1,3,5-Trimethylbenzene	100		100		64-130	0		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
1,4-Dioxane	136		144		56-162	6		20
p-Diethylbenzene	110		110		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 441 KEAP STREET

Project Number: 170357802

Lab Number: L1809583

Report Date: 03/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1100368-10 WG1100368-11								
p-Ethyltoluene	100		100		70-130	0		20
1,2,4,5-Tetramethylbenzene	100		100		70-130	0		20
Ethyl ether	82		90		59-134	9		20
trans-1,4-Dichloro-2-butene	94		100		70-130	6		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	103		104		70-130
Toluene-d8	104		103		70-130
4-Bromofluorobenzene	102		102		70-130
Dibromofluoromethane	99		99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 441 KEAP STREET
Project Number: 170357802

Lab Number: L1809583
Report Date: 03/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1100368-3 WG1100368-4								
Methylene chloride	89		86		70-130	3		20
1,1-Dichloroethane	93		89		70-130	4		20
Chloroform	95		91		70-130	4		20
Carbon tetrachloride	86		84		63-132	2		20
1,2-Dichloropropane	97		94		70-130	3		20
Dibromochloromethane	100		99		63-130	1		20
1,1,2-Trichloroethane	100		98		70-130	2		20
Tetrachloroethene	97		94		70-130	3		20
Chlorobenzene	100		98		75-130	2		20
Trichlorofluoromethane	77		76		62-150	1		20
1,2-Dichloroethane	93		91		70-130	2		20
1,1,1-Trichloroethane	90		87		67-130	3		20
Bromodichloromethane	96		92		67-130	4		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	98		94		70-130	4		20
1,1-Dichloropropene	89		87		70-130	2		20
Bromoform	95		90		54-136	5		20
1,1,2,2-Tetrachloroethane	100		100		67-130	0		20
Benzene	93		89		70-130	4		20
Toluene	100		97		70-130	3		20
Ethylbenzene	100		97		70-130	3		20
Chloromethane	71		69		64-130	3		20
Bromomethane	88		90		39-139	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 441 KEAP STREET
Project Number: 170357802

Lab Number: L1809583
Report Date: 03/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1100368-3 WG1100368-4								
Vinyl chloride	79		78		55-140	1		20
Chloroethane	90		88		55-138	2		20
1,1-Dichloroethene	80		78		61-145	3		20
trans-1,2-Dichloroethene	88		84		70-130	5		20
Trichloroethene	92		88		70-130	4		20
1,2-Dichlorobenzene	100		100		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	90		88		63-130	2		20
p/m-Xylene	100		95		70-130	5		20
o-Xylene	100		95		70-130	5		20
cis-1,2-Dichloroethene	93		89		70-130	4		20
Dibromomethane	94		92		70-130	2		20
1,2,3-Trichloropropane	100		100		64-130	0		20
Acrylonitrile	91		83		70-130	9		20
Styrene	100		95		70-130	5		20
Dichlorodifluoromethane	69		70		36-147	1		20
Acetone	100		85		58-148	16		20
Carbon disulfide	82		76		51-130	8		20
2-Butanone	88		76		63-138	15		20
Vinyl acetate	86		83		70-130	4		20
4-Methyl-2-pentanone	96		91		59-130	5		20
2-Hexanone	100		97		57-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 441 KEAP STREET
Project Number: 170357802

Lab Number: L1809583
Report Date: 03/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1100368-3 WG1100368-4								
Bromochloromethane	92		89		70-130	3		20
2,2-Dichloropropane	94		90		63-133	4		20
1,2-Dibromoethane	100		99		70-130	1		20
1,3-Dichloropropane	100		99		70-130	1		20
1,1,1,2-Tetrachloroethane	100		99		64-130	1		20
Bromobenzene	100		100		70-130	0		20
n-Butylbenzene	120		100		53-136	18		20
sec-Butylbenzene	110		100		70-130	10		20
tert-Butylbenzene	110		100		70-130	10		20
o-Chlorotoluene	110		98		70-130	12		20
p-Chlorotoluene	110		100		70-130	10		20
1,2-Dibromo-3-chloropropane	99		95		41-144	4		20
Hexachlorobutadiene	120		120		63-130	0		20
Isopropylbenzene	110		100		70-130	10		20
p-Isopropyltoluene	110		100		70-130	10		20
Naphthalene	100		99		70-130	1		20
n-Propylbenzene	110		100		69-130	10		20
1,2,3-Trichlorobenzene	100		100		70-130	0		20
1,2,4-Trichlorobenzene	110		100		70-130	10		20
1,3,5-Trimethylbenzene	110		99		64-130	11		20
1,2,4-Trimethylbenzene	110		100		70-130	10		20
1,4-Dioxane	138		144		56-162	4		20
p-Diethylbenzene	120		100		70-130	18		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 441 KEAP STREET

Project Number: 170357802

Lab Number: L1809583

Report Date: 03/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1100368-3 WG1100368-4								
p-Ethyltoluene	110		100		70-130	10		20
1,2,4,5-Tetramethylbenzene	110		100		70-130	10		20
Ethyl ether	87		83		59-134	5		20
trans-1,4-Dichloro-2-butene	100		92		70-130	8		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		101		70-130
Toluene-d8	104		105		70-130
4-Bromofluorobenzene	101		101		70-130
Dibromofluoromethane	99		99		70-130

Project Name: 441 KEAP STREET
Project Number: 170357802

Lab Number: L1809583
Report Date: 03/28/18

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(*)
L1809583-01A	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809583-01B	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809583-01C	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809583-02A	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809583-02B	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809583-02C	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809583-03A	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809583-03B	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809583-03C	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	441 KEAP STREET	**Lab Number:**	L1809583
Project Number:	170357802	**Report Date:**	03/28/18

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:	441 KEAP STREET	**Lab Number:**	L1809583
Project Number:	170357802	**Report Date:**	03/28/18

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:	441 KEAP STREET	**Lab Number:**	L1809583
Project Number:	170357802	**Report Date:**	03/28/18

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: SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
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: Chloride, 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, SM4500CI-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: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, 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, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Be, Cd, Cr, Cu, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

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: 3/21/18

ALPHA Job #: L1809583

Client Information

Client: Langan Engineering
Address: 360 West 31st St
New York, NY 10001
Phone: 212-479-5400
Fax: aschmiedicke@langan.com
Email: bgschemeur@langan.com

Project Information

Project Name: 441 Keap Street
Project Location: Brooklyn, New York
Project #: 170357802
(Use Project name as Project #) ☐
Project Manager: Brian Gochenour
ALPHAQuote #:

Turn-Around Time

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

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:

ANALYSIS

TCL VOCs

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

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL VOCs	Total Bottle
09553-01	PMW06_032018	3/20/18	1410	GW	WK	X	
02	PMW07_032018	↓	1300	↓	↓	X	
~~03~~	~~TB01_032018~~	↓	1111	↓	↓	~~X~~	
-03	DUP01_032018	3/20/18	- -			X	

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
	3/20/18 1707	Rameik Jackson/ALL	3/20 1707
	3/20 2209		
	3/21 0:20	Jason Memphis	3/21/18 0:20

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 1 of 1

Date Rec'd in Lab: 3/21/18

ALPHA Job #: L1809583

Client Information

Client: Langan Engineering
Address: 360 West 31st St
New York, NY 10001
Phone: 212-479-5400
Fax: aschmiedicke@langan.com
Email: bgiscbenner@langan.com

Project Information

Project Name: 441 Keap Street
Project Location: Brooklyn, New York
Project #: 170357802
(Use Project name as Project #) ☐
Project Manager: Brian Gochenour
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:

Please specify Metals or TAL.

ANALYSIS

TCL VOCs

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	TCL VOCs	Sample Specific Comments	Total Bottle
09553-01	PMW06_032018	3/20/18	1410	GW	WK	X		
02	PMW07_032018	↓	1300	↓	↓	X		
~~03~~	~~TB01_032018~~	↓	1111	↓	↓	X		

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
	3/20/18 1707	Rameik Jackson/MAL	3/20 1707
	3/20 2209		
	3/21 0:20	Jason Memphis	3/21/18 0:20

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:	L1809584
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Brian Gochenaur
Phone:	(212) 479-5590
Project Name:	123 HOPE STREET
Project Number:	170357801
Report Date:	03/28/18

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: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1809584
Report Date: 03/28/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1809584-01	PMW01_032018	WATER	BROOKLYN, NEW YORK	03/20/18 10:50	03/20/18
L1809584-02	TB01_032018	WATER	BROOKLYN, NEW YORK	03/20/18 11:11	03/20/18
L1809584-03	FB01_032018	WATER	BROOKLYN, NEW YORK	03/20/18 11:11	03/20/18

Project Name: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1809584
Report Date: 03/28/18

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: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1809584
Report Date: 03/28/18

Case Narrative (continued)

Report Revision

March 28, 2018: At the client's request, the results of the sample "DUP01_032018" was removed from this report and have been issued under separate cover.

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

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: Amita Naik

Title: Technical Director/Representative Date: 03/28/18

ORGANICS

VOLATILES

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1809584
Report Date: 03/28/18

SAMPLE RESULTS

Lab ID: L1809584-01
Client ID: PMW01_032018
Sample Location: BROOKLYN, NEW YORK

Date Collected: 03/20/18 10:50
Date Received: 03/20/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/25/18 15:12
Analyst: AD

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	3.3		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

Project Name: 123 HOPE STREET **Lab Number:** L1809584

Project Number: 170357801 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809584-01 Date Collected: 03/20/18 10:50

Client ID: PMW01_032018 Date Received: 03/20/18

Sample Location: BROOKLYN, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	2.0		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
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	23		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	23		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
Acrylonitrile	ND		ug/l	5.0	1.5	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

Project Name: 123 HOPE STREET **Lab Number:** L1809584

Project Number: 170357801 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809584-01 Date Collected: 03/20/18 10:50

Client ID: PMW01_032018 Date Received: 03/20/18

Sample Location: BROOKLYN, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	97		70-130

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1809584
Report Date: 03/28/18

SAMPLE RESULTS

Lab ID: L1809584-02
Client ID: TB01_032018
Sample Location: BROOKLYN, NEW YORK

Date Collected: 03/20/18 11:11
Date Received: 03/20/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/25/18 14:17
Analyst: AD

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

Project Name: 123 HOPE STREET **Lab Number:** L1809584

Project Number: 170357801 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809584-02 Date Collected: 03/20/18 11:11

Client ID: TB01_032018 Date Received: 03/20/18

Sample Location: BROOKLYN, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
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
Acrylonitrile	ND		ug/l	5.0	1.5	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

Project Name: 123 HOPE STREET **Lab Number:** L1809584

Project Number: 170357801 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809584-02 Date Collected: 03/20/18 11:11

Client ID: TB01_032018 Date Received: 03/20/18

Sample Location: BROOKLYN, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	97		70-130

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1809584
Report Date: 03/28/18

SAMPLE RESULTS

Lab ID: L1809584-03
Client ID: FB01_032018
Sample Location: BROOKLYN, NEW YORK
Date Collected: 03/20/18 11:11
Date Received: 03/20/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/25/18 14:45
Analyst: AD

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

Project Name: 123 HOPE STREET **Lab Number:** L1809584

Project Number: 170357801 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809584-03 Date Collected: 03/20/18 11:11

Client ID: FB01_032018 Date Received: 03/20/18

Sample Location: BROOKLYN, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
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
Acrylonitrile	ND		ug/l	5.0	1.5	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

Project Name: 123 HOPE STREET **Lab Number:** L1809584

Project Number: 170357801 **Report Date:** 03/28/18

SAMPLE RESULTS

Lab ID: L1809584-03 Date Collected: 03/20/18 11:11

Client ID: FB01_032018 Date Received: 03/20/18

Sample Location: BROOKLYN, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	96		70-130

Project Name: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1809584
Report Date: 03/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/25/18 11:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1100368-5					
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: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1809584
Report Date: 03/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/25/18 11:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1100368-5					
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
Acrylonitrile	ND		ug/l	5.0	1.5
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

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1809584
Report Date: 03/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/25/18 11:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1100368-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
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.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	98		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 123 HOPE STREET

Project Number: 170357801

Lab Number: L1809584

Report Date: 03/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1100368-3 WG1100368-4								
Methylene chloride	89		86		70-130	3		20
1,1-Dichloroethane	93		89		70-130	4		20
Chloroform	95		91		70-130	4		20
Carbon tetrachloride	86		84		63-132	2		20
1,2-Dichloropropane	97		94		70-130	3		20
Dibromochloromethane	100		99		63-130	1		20
1,1,2-Trichloroethane	100		98		70-130	2		20
Tetrachloroethene	97		94		70-130	3		20
Chlorobenzene	100		98		75-130	2		20
Trichlorofluoromethane	77		76		62-150	1		20
1,2-Dichloroethane	93		91		70-130	2		20
1,1,1-Trichloroethane	90		87		67-130	3		20
Bromodichloromethane	96		92		67-130	4		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	98		94		70-130	4		20
1,1-Dichloropropene	89		87		70-130	2		20
Bromoform	95		90		54-136	5		20
1,1,2,2-Tetrachloroethane	100		100		67-130	0		20
Benzene	93		89		70-130	4		20
Toluene	100		97		70-130	3		20
Ethylbenzene	100		97		70-130	3		20
Chloromethane	71		69		64-130	3		20
Bromomethane	88		90		39-139	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 123 HOPE STREET

Project Number: 170357801

Lab Number: L1809584

Report Date: 03/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1100368-3 WG1100368-4								
Vinyl chloride	79		78		55-140	1		20
Chloroethane	90		88		55-138	2		20
1,1-Dichloroethene	80		78		61-145	3		20
trans-1,2-Dichloroethene	88		84		70-130	5		20
Trichloroethene	92		88		70-130	4		20
1,2-Dichlorobenzene	100		100		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	90		88		63-130	2		20
p/m-Xylene	100		95		70-130	5		20
o-Xylene	100		95		70-130	5		20
cis-1,2-Dichloroethene	93		89		70-130	4		20
Dibromomethane	94		92		70-130	2		20
1,2,3-Trichloropropane	100		100		64-130	0		20
Acrylonitrile	91		83		70-130	9		20
Styrene	100		95		70-130	5		20
Dichlorodifluoromethane	69		70		36-147	1		20
Acetone	100		85		58-148	16		20
Carbon disulfide	82		76		51-130	8		20
2-Butanone	88		76		63-138	15		20
Vinyl acetate	86		83		70-130	4		20
4-Methyl-2-pentanone	96		91		59-130	5		20
2-Hexanone	100		97		57-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 123 HOPE STREET

Project Number: 170357801

Lab Number: L1809584

Report Date: 03/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1100368-3 WG1100368-4								
Bromochloromethane	92		89		70-130	3		20
2,2-Dichloropropane	94		90		63-133	4		20
1,2-Dibromoethane	100		99		70-130	1		20
1,3-Dichloropropane	100		99		70-130	1		20
1,1,1,2-Tetrachloroethane	100		99		64-130	1		20
Bromobenzene	100		100		70-130	0		20
n-Butylbenzene	120		100		53-136	18		20
sec-Butylbenzene	110		100		70-130	10		20
tert-Butylbenzene	110		100		70-130	10		20
o-Chlorotoluene	110		98		70-130	12		20
p-Chlorotoluene	110		100		70-130	10		20
1,2-Dibromo-3-chloropropane	99		95		41-144	4		20
Hexachlorobutadiene	120		120		63-130	0		20
Isopropylbenzene	110		100		70-130	10		20
p-Isopropyltoluene	110		100		70-130	10		20
Naphthalene	100		99		70-130	1		20
n-Propylbenzene	110		100		69-130	10		20
1,2,3-Trichlorobenzene	100		100		70-130	0		20
1,2,4-Trichlorobenzene	110		100		70-130	10		20
1,3,5-Trimethylbenzene	110		99		64-130	11		20
1,2,4-Trimethylbenzene	110		100		70-130	10		20
1,4-Dioxane	138		144		56-162	4		20
p-Diethylbenzene	120		100		70-130	18		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1809584
Report Date: 03/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1100368-3 WG1100368-4								
p-Ethyltoluene	110		100		70-130	10		20
1,2,4,5-Tetramethylbenzene	110		100		70-130	10		20
Ethyl ether	87		83		59-134	5		20
trans-1,4-Dichloro-2-butene	100		92		70-130	8		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		101		70-130
Toluene-d8	104		105		70-130
4-Bromofluorobenzene	101		101		70-130
Dibromofluoromethane	99		99		70-130

Project Name: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1809584
Report Date: 03/28/18

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(*)
L1809584-01A	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809584-01B	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809584-01C	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809584-02A	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809584-02B	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809584-02C	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809584-02D	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809584-03A	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809584-03B	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809584-03C	Vial HCl preserved	A	NA		5.8	Y	Absent		NYTCL-8260(14)
L1809584-04A	Vial HCl preserved	A	NA		5.8	Y	Absent		-
L1809584-04B	Vial HCl preserved	A	NA		5.8	Y	Absent		-
L1809584-04C	Vial HCl preserved	A	NA		5.8	Y	Absent		-

*Values in parentheses indicate holding time in days

Project Name:	123 HOPE STREET	**Lab Number:**	L1809584
Project Number:	170357801	**Report Date:**	03/28/18

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:	123 HOPE STREET	**Lab Number:**	L1809584
Project Number:	170357801	**Report Date:**	03/28/18

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:	123 HOPE STREET	**Lab Number:**	L1809584
Project Number:	170357801	**Report Date:**	03/28/18

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: SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
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: Chloride, 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, SM4500CI-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: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, 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, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Be, Cd, Cr, Cu, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

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: 3/21/18

ALPHA Job #: L1809584

Client Information

Client: Langan Engineering
Address: 360 West 31st St
New York, NY 10001
Phone: 212-479-5400
Fax: gschmidt-ke@langan.com
Email: bgechengaur@langan.com

Project Information

Project Name: 123 Hope Street
Project Location: Brooklyn, New York
Project #: 170357801
(Use Project name as Project #)
Project Manager: Brian Gechengaur
ALPHAQuote #:

Turn-Around Time

Standard [X] Due Date:
Rush (only if pre approved) [ ] # of Days:

Deliverables

[ ] ASP-A [X] 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

[X] 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.

ANALYSIS

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	TCL VOCs	Total Bottle	Sample Specific Comments
09584-01	PMW01_032018	3/20/18	1650	GW	WK	X		
02	TBC1_032018	↓	1111	↓	↓	X		
03	FBC1_032018	↓	1111	↓	↓	X		

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
	3/20/18 17:10	Romelle Jackson AAL	3/20 1707
KJ	3/20 2205		3/20 2205
J 3/21	0700		3/21/18 07:00

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:	L1810069
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Brian Gochenaur
Phone:	(212) 479-5590
Project Name:	123 HOPE STREET
Project Number:	170357801
Report Date:	03/29/18

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: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1810069
Report Date: 03/29/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1810069-01	PMW02_032318	WATER	BROOKLYN, NY	03/23/18 14:50	03/23/18
L1810069-02	PMW03_032318	WATER	BROOKLYN, NY	03/23/18 13:38	03/23/18
L1810069-03	PMW04_032318	WATER	BROOKLYN, NY	03/23/18 12:20	03/23/18
L1810069-04	PMW05_032318	WATER	BROOKLYN, NY	03/23/18 15:40	03/23/18
L1810069-05	TB02_032318	WATER	BROOKLYN, NY	03/23/18 00:00	03/23/18

Project Name: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1810069
Report Date: 03/29/18

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:	123 HOPE STREET	**Lab Number:**	L1810069
Project Number:	170357801	**Report Date:**	03/29/18

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.

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: 03/29/18

ORGANICS

VOLATILES

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-01
Client ID: PMW02_032318
Sample Location: BROOKLYN, NY

Date Collected: 03/23/18 14:50
Date Received: 03/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/28/18 12:21
Analyst: NLK

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	15		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	0.13	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

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-01
Client ID: PMW02_032318
Sample Location: BROOKLYN, NY
Date Collected: 03/23/18 14:50
Date Received: 03/23/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	3.4		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
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	23		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	23		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
Acrylonitrile	ND		ug/l	5.0	1.5	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

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-01
Client ID: PMW02_032318
Sample Location: BROOKLYN, NY
Date Collected: 03/23/18 14:50
Date Received: 03/23/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	93		70-130

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-02
Client ID: PMW03_032318
Sample Location: BROOKLYN, NY

Date Collected: 03/23/18 13:38
Date Received: 03/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/28/18 12:46
Analyst: NLK

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	1.3	J	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	1.7	J	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

Project Name: 123 HOPE STREET **Lab Number:** L1810069

Project Number: 170357801 **Report Date:** 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-02 Date Collected: 03/23/18 13:38

Client ID: PMW03_032318 Date Received: 03/23/18

Sample Location: BROOKLYN, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
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	6.7		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	6.7		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
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	18		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	2.3	J	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

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-02
Client ID: PMW03_032318
Sample Location: BROOKLYN, NY
Date Collected: 03/23/18 13:38
Date Received: 03/23/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	91		70-130

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-03
Client ID: PMW04_032318
Sample Location: BROOKLYN, NY

Date Collected: 03/23/18 12:20
Date Received: 03/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/28/18 13:12
Analyst: NLK

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	2.5		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	0.37	J	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	0.89	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	0.77	J	ug/l	2.5	0.70	1

Project Name: 123 HOPE STREET **Lab Number:** L1810069

Project Number: 170357801 **Report Date:** 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-03 Date Collected: 03/23/18 12:20

Client ID: PMW04_032318 Date Received: 03/23/18

Sample Location: BROOKLYN, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	1.6		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
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	39		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	40	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
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	34		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	31		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

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-03
Client ID: PMW04_032318
Sample Location: BROOKLYN, NY
Date Collected: 03/23/18 12:20
Date Received: 03/23/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	96		70-130

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-04
Client ID: PMW05_032318
Sample Location: BROOKLYN, NY

Date Collected: 03/23/18 15:40
Date Received: 03/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/28/18 13:37
Analyst: NLK

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	0.48	J	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

Project Name: 123 HOPE STREET **Lab Number:** L1810069

Project Number: 170357801 **Report Date:** 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-04 Date Collected: 03/23/18 15:40

Client ID: PMW05_032318 Date Received: 03/23/18

Sample Location: BROOKLYN, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
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
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	22		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	8.7		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

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-04
Client ID: PMW05_032318
Sample Location: BROOKLYN, NY
Date Collected: 03/23/18 15:40
Date Received: 03/23/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	92		70-130

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-05
Client ID: TB02_032318
Sample Location: BROOKLYN, NY

Date Collected: 03/23/18 00:00
Date Received: 03/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/28/18 14:02
Analyst: NLK

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

Project Name: 123 HOPE STREET **Lab Number:** L1810069

Project Number: 170357801 **Report Date:** 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-05 Date Collected: 03/23/18 00:00

Client ID: TB02_032318 Date Received: 03/23/18

Sample Location: BROOKLYN, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
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
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	2.6	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

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

SAMPLE RESULTS

Lab ID: L1810069-05
Client ID: TB02_032318
Sample Location: BROOKLYN, NY
Date Collected: 03/23/18 00:00
Date Received: 03/23/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	92		70-130

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/28/18 09:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1101340-5					
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: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1810069
Report Date: 03/29/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/28/18 09:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1101340-5					
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
Acrylonitrile	ND		ug/l	5.0	1.5
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

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/28/18 09:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1101340-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
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.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l

Project Name: 123 HOPE STREET
Project Number: 170357801
Lab Number: L1810069
Report Date: 03/29/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/28/18 09:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1101340-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	89		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1810069
Report Date: 03/29/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1101340-3 WG1101340-4								
Methylene chloride	81		82		70-130	1		20
1,1-Dichloroethane	89		90		70-130	1		20
Chloroform	84		84		70-130	0		20
Carbon tetrachloride	99		99		63-132	0		20
1,2-Dichloropropane	85		84		70-130	1		20
Dibromochloromethane	82		82		63-130	0		20
1,1,2-Trichloroethane	84		84		70-130	0		20
Tetrachloroethene	90		88		70-130	2		20
Chlorobenzene	87		85		75-130	2		20
Trichlorofluoromethane	100		100		62-150	0		20
1,2-Dichloroethane	82		82		70-130	0		20
1,1,1-Trichloroethane	96		94		67-130	2		20
Bromodichloromethane	81		83		67-130	2		20
trans-1,3-Dichloropropene	94		93		70-130	1		20
cis-1,3-Dichloropropene	84		85		70-130	1		20
1,1-Dichloropropene	97		96		70-130	1		20
Bromoform	79		79		54-136	0		20
1,1,2,2-Tetrachloroethane	86		90		67-130	5		20
Benzene	87		87		70-130	0		20
Toluene	90		90		70-130	0		20
Ethylbenzene	95		94		70-130	1		20
Chloromethane	94		94		64-130	0		20
Bromomethane	51		51		39-139	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 123 HOPE STREET

Project Number: 170357801

Lab Number: L1810069

Report Date: 03/29/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1101340-3 WG1101340-4								
Vinyl chloride	98		97		55-140	1		20
Chloroethane	100		100		55-138	0		20
1,1-Dichloroethene	91		93		61-145	2		20
trans-1,2-Dichloroethene	89		88		70-130	1		20
Trichloroethene	83		84		70-130	1		20
1,2-Dichlorobenzene	83		82		70-130	1		20
1,3-Dichlorobenzene	87		87		70-130	0		20
1,4-Dichlorobenzene	85		86		70-130	1		20
Methyl tert butyl ether	85		87		63-130	2		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	90		90		70-130	0		20
cis-1,2-Dichloroethene	83		82		70-130	1		20
Dibromomethane	76		79		70-130	4		20
1,2,3-Trichloropropane	84		92		64-130	9		20
Acrylonitrile	82		82		70-130	0		20
Styrene	85		85		70-130	0		20
Dichlorodifluoromethane	130		120		36-147	8		20
Acetone	100		110		58-148	10		20
Carbon disulfide	92		92		51-130	0		20
2-Butanone	91		86		63-138	6		20
Vinyl acetate	83		83		70-130	0		20
4-Methyl-2-pentanone	83		84		59-130	1		20
2-Hexanone	92		92		57-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 123 HOPE STREET

Project Number: 170357801

Lab Number: L1810069

Report Date: 03/29/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1101340-3 WG1101340-4								
Bromochloromethane	77		73		70-130	5		20
2,2-Dichloropropane	100		100		63-133	0		20
1,2-Dibromoethane	83		83		70-130	0		20
1,3-Dichloropropane	85		86		70-130	1		20
1,1,1,2-Tetrachloroethane	89		87		64-130	2		20
Bromobenzene	83		84		70-130	1		20
n-Butylbenzene	120		120		53-136	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	88		89		70-130	1		20
o-Chlorotoluene	93		94		70-130	1		20
p-Chlorotoluene	95		96		70-130	1		20
1,2-Dibromo-3-chloropropane	77		81		41-144	5		20
Hexachlorobutadiene	120		110		63-130	9		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	110		110		70-130	0		20
Naphthalene	90		90		70-130	0		20
n-Propylbenzene	100		100		69-130	0		20
1,2,3-Trichlorobenzene	80		81		70-130	1		20
1,2,4-Trichlorobenzene	83		83		70-130	0		20
1,3,5-Trimethylbenzene	98		98		64-130	0		20
1,2,4-Trimethylbenzene	100		99		70-130	1		20
1,4-Dioxane	110		140		56-162	**24**	Q	20
p-Diethylbenzene	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1810069
Report Date: 03/29/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1101340-3 WG1101340-4								
p-Ethyltoluene	100		100		70-130	0		20
1,2,4,5-Tetramethylbenzene	96		96		70-130	0		20
Ethyl ether	82		86		59-134	5		20
trans-1,4-Dichloro-2-butene	90		90		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98		98		70-130
Toluene-d8	106		106		70-130
4-Bromofluorobenzene	110		111		70-130
Dibromofluoromethane	91		91		70-130

Project Name: 123 HOPE STREET
Project Number: 170357801

Lab Number: L1810069
Report Date: 03/29/18

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(*)
L1810069-01A	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-01B	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-01C	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-02A	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-02B	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-02C	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-03A	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-03B	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-03C	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-04A	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-04B	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-04C	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-05A	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L1810069-05B	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	123 HOPE STREET	**Lab Number:**	L1810069
Project Number:	170357801	**Report Date:**	03/29/18

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:	123 HOPE STREET	**Lab Number:**	L1810069
Project Number:	170357801	**Report Date:**	03/29/18

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:	123 HOPE STREET	**Lab Number:**	L1810069
Project Number:	170357801	**Report Date:**	03/29/18

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: SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
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: Chloride, 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, SM4500CI-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: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, 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, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Be, Cd, Cr, Cu, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

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: 3/24/18

ALPHA Job #: L1810069

Client Information
Client: LANGAN
Address: 360 W 31st Street, New York, NY 10001
Phone: 212-479-5400
Fax: -
Email: BECHENAUER@LANGAN.COM

Project Information
Project Name: 123 HOPE STREET
Project Location: BROOKLYN, NY
Project #: 170357801
(Use Project name as Project #): ☐
Project Manager: Brian Bechenauer
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:
cc on email: ASCHMIEDICKE@LANGAN.COM

Please specify Metals or TAL.

ANALYSIS
TCL VOCs

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

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL VOCs	Sample Specific Comments
10069-01	PMW02_032318	3/23/18	1450	GW	KN	X	
02	PMW03_032318	"	1338	"	"	X	
03	PMW04_032318	"	1220	"	"	X	
04	PMW05_032318	"	1540	"	"	X	
05	TB02_032318	"	-	DI WATER	"	X	

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
[illegible]	3/23/18	[illegible]	3/23/18 16:40
[illegible]	3/23/18 2130	[illegible]	3/24/18 0250
[illegible] 3/24			

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)