TENEN ENVIRONMENTAL

121 West 27th Street, Suite 702
New York, NY 10001
(646) 606-2332

August 2, 2018

Deergrow Developments 1, LLC
3008 Avenue J
Brooklyn, NY 11210

Attn: Mr. Max Kozlowitz

Re: Due Diligence Environmental Site Investigation
13-16 to 13-30 Beach Channel Drive – Far Rockaway, NY
Tax Block 15528, Lots 6, 9, 12 and 112

Dear Max:

This letter report summarizes the findings of the Due Diligence Environmental Site Investigation (Phase II ESI) performed by Tenen Environmental, LLC (Tenen) at the above property (the Site) on July 23 and 24, 2018. The report includes a description of the sampling methodology and discusses the analytical results.

Background

The Site, located at 13-16 and 13-24 to 13-30 Beach Channel Drive, Far Rockaway, New York (Tax Block 15528, Lots 6, 9, 12, and 112) is an irregularly shaped parcel on the east side of Beach Channel Drive. The total Site area is approximately 28,000 square feet (SF). The Site has approximately 240 feet of frontage along Beach Channel Drive and approximately 50 feet of frontage along Dix Avenue. Other addresses associated with the Site include 13-36, 13-38 and 13-40 Beach Channel Drive and 21-19 Dix Avenue. The Site is located within the DFR Special Downtown Far Rockaway District and is zoned R5, a designation denoting a high-density district allowing a variety of housing, with a C1-2 overlay, allowing for uses to meet local retail needs. The Site is currently developed with one-story commercial buildings, occupied by a car wash, salon, barber, deli, and fast food restaurant, and a vacant three-story house previously used as a church. A location map of the Site is included as Figure 1.

Phase I Environmental Site Assessments (ESAs) for the Site were prepared by Environmental Business Consultants (EBC) for 13-16 Beach Channel Drive in November 2017, and by Tenen for 13-24 to 13-30 Beach Channel Drive in July 2018. The 2017 Phase I ESA performed by EBC did not identify any recognized environmental conditions (RECs) at the subject property (Lot 6) or adjoining properties. The 2018 Phase I ESA performed by Tenen identified the following RECs:

- Historic and current use of the Site (Lot 9) as an auto laundry (car wash) and historic use of the Site (Lot 12) for auto repair;
- Historic and current use of the north adjoining property as a filling station with underground gasoline storage and historic use of the property for auto repair.

Lot 9 (13-24 Beach Channel Drive) of the Site was listed on the EDR proprietary E-DESIGNATION database with E-designation E-232 for Air Quality – HVAC fuel limited to natural gas, Window Wall Attenuation and Alternate Ventilation, and Hazardous Materials Phase I and Phase II Testing Protocol.

The objectives of the Phase II ESI were to address the findings of the Phase I ESA and to determine if the historical uses of the Site or surrounding properties impacted the soil or groundwater at the Site.

Due Diligence Environmental Site Investigation

Site Geology and Hydrogeology. Fill material, containing sand, gravel, cobbles, brick, coal, and glass fragments, was encountered between one and three feet below grade (ft-bg) at the borings SB-1 and SB-2. The fill material was underlain by fine to coarse tan sand with some silt. Groundwater was encountered at approximately 17 ft-bg. The regional groundwater flow direction is to the northwest. Lithologic logs are presented in Attachment 1.

Sampling Methodology. The methodology used to collect the soil and groundwater samples is summarized below.

Soil. A total of four soil borings (SB-1 through SB-4) were installed on the Site. Boring SB-1 was collected in the outdoor yard behind the building on Lot 6; boring SB-2 was collected from the southwest portion of the parking lot on Lot 9; SB-3 was installed within the cellar of the building on Lot 12; SB-4 was installed within the building cellar on the northern portion of Lot 112. A track-mounted Geoprobe® direct-push unit was used to advance the exterior soil borings and to install the temporary wells; hand tools and a hand auger were used to advance the soil borings within the building footprints. Drilling was performed by Cascade Environmental of Lynbrook, New York.

All soil samples were collected using dedicated acetate liners. Soil screening using a PID indicated non-detect readings in all borings. No visual or olfactory observations were noted during borehole advancement. No grossly contaminated soil cuttings were encountered during this investigation. One soil sample was collected from each boring location within the fill material (SB-1 and SB-2 at 0-2 ft-bg) or at the groundwater interface (SB-3 and SB-4 at 5-7 ft-bg).

Groundwater. The four soil borings were converted into 1-inch diameter temporary wells (TMW-1 through TMW-4). Temporary groundwater well TW-4 on the northern portion of the Site is located in the presumably downgradient direction (TMW-1) and TW-1 on the southern portion of the Site is in the upgradient direction. One groundwater sample was collected from each of the four temporary wells using a peristaltic pump after water quality measurements stabilized; temporary well TW-3 went dry during purging and stabilization was discontinued to complete the process. The temporary wells were advanced to a depth of 20 to 25 feet (approximately 5 feet below the water table) at exterior locations (TW-1 and TW-2) and to a depth of approximately 7 feet below slab at interior locations within the cellar (TW-3 and TW-4) to collect the groundwater samples.

A summary of sample designations, media sampled, and locations is shown below. Of note, sample location SB-1/TW-1 is elevated approximately 4 feet above sample location SB-2/TW-2, which is at grade with Beach Channel Drive. The cellar slab within the building footprint is approximately 8 ft-bg. No duplicate samples were collected. Sampling locations are shown on Figure 2.

Boring Locations, Sample Designations and Media Sampled

Sample Location	Sample Name (Depth in ft-bg)	Sample Type	Description of Location
SB-1	SB-1 (0-2)	Soil	Southern portion of Lot 6 (Site)
	TMW-1	Groundwater	
SB-2	SB-2 (0-2)	Soil	Southeastern portion of Lot 9 (Site)
	TMW-2	Groundwater	
SB-3	SB-3 (5-7)	Soil	Southeastern portion of Lot 12 (Site)
	TMW-3	Groundwater	
SB-4	SB-4 (5-7)	Soil	Northern portion of Lot 112 (Site)
	TMW-4	Groundwater	

Analytical Results

The samples were preserved on ice and sent under chain-of-custody documentation to Alpha Analytical, Inc. (Alpha). Alpha is certified by the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) as LABIDs 11148 and 11627.

All soil and groundwater samples were analyzed for volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs). Soil samples were also analyzed for total metals. The results of the sample analysis are presented below. Summaries of detected compounds in soil and groundwater sample are included in Tables 1 through 5. Laboratory deliverables are included in Attachment 2.

Soil
The soil results were compared to the New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use SCOs as listed in 6 NYCRR Part 375-6.8(a) and Restricted-Residential Use (Restricted-Residential) SCOs as listed in 6 NYCRR Part 375-6.8(b).

No VOCs were detected in soil at concentrations above the Restricted-Residential Use SCOs or Unrestricted Use SCOs. The chlorinated solvent tetrachloroethene (PCE) was detected in SB-1 (0-2) and methylene chloride was detected in samples SB-3 (5-7) and SB-4 (5-7), below regulatory standards. Acetone, a common laboratory artifact, was also detected in several samples, below the corresponding Unrestricted Use SCO.

SVOCs, including several polyaromatic hydrocarbons (PAHs), consistent with the presence of historic fill material, were detected in samples SB-1 (0-2), SB-2 (0-2), and SB-3 (5-7). NO SVOCs were detected above the Restricted-Residential Use SCOs or Unrestricted Use SCOs.

No metals were detected above the Restricted-Residential Use SCOs. Lead [max: 166 mg/kg] and zinc [max: 376 mg/kg] were detected above the Unrestricted Use SCO of 63 mg/kg and 109 mg/kg, respectively, in SB-1 (0-2) and SB-2 (0-2). Mercury was detected in SB-1 (0-2) at a concentration of 0.669 mg/kg, above the Unrestricted Use SCO of 0.18 mg/kg.

Groundwater
Groundwater concentrations were compared to the NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Class GA Water Quality Standards and Guidance Values (Class GA Standards).

PCE was detected in the upgradient temporary well TW-1 at 16 ug/kg, above the Class GA Standard of 5 ug/kg; PCE was detected in TW-2 through TW-4 below the Class GA Standard. Acetone was detected at 70 ug/kg in TW-4, above the Class GA Standard of 50 ug/kg. No other VOCs were detected above regulatory standards.

Two SVOCs were detected above their corresponding Class GA Standards: the PAH benzo(a)anthracene was detected in TW-1 at 0.03 ug/kg, and phenol was detected in TW-4 at 9.8 ug/kg. No other SVOCs were detected above regulatory standards.

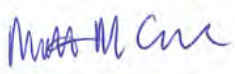
Findings and Conclusions

The results of the Phase II environmental site investigation indicate the following:

- VOC and SVOCs were not detected in soil at concentrations above the Restricted-Residential Use or Unrestricted Use SCOs.
- No metals were detected above the Restricted-Residential Use SCOs. Historic-fill related metals lead, mercury, and zinc were detected above the Unrestricted Use SCO, with the highest concentrations detected in soil boring SB-1.
- The chlorinated solvent PCE was detected above the Class GA Standard in the upgradient temporary well TW-1. PCE impact is likely associated with an upgradient surrounding property use.
- The SVOC compounds benzo(a)anthracene and phenol were detected above the Class GA Standards in TW-1 and TW-4, respectively.
- Petroleum-related impacts were not detected in soil or groundwater samples.

Please contact us if you need any additional information.

Sincerely,
Tenen Environmental, LLC



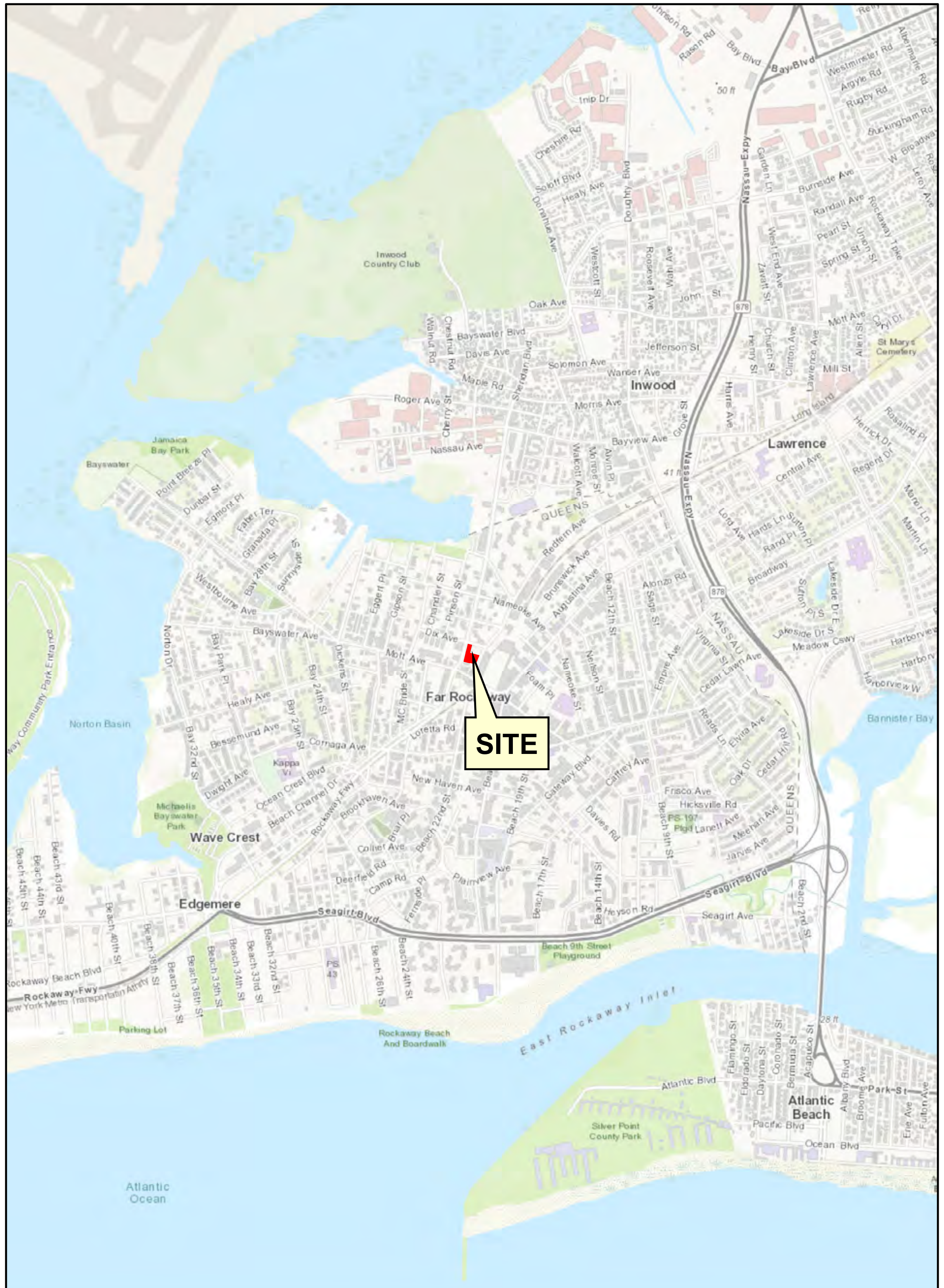
Matthew Carroll, P.E.
Principal / Environmental Engineer

Figure 1 Site Location
Figure 2 Soil and Groundwater Sample Locations

Tables 1 through 5 Analytical Results

Attachment 1	Lithologic Logs
Attachment 2	Laboratory Deliverables

Figures



Basemap Source: ESRI World Topo Map

Site Location

0 1,000 2,000 4,000 Feet

http://gis.nyc.gov/taxmap/map.htm

Department of Finance Digital Tax Map

0 100 200 400 Feet

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
NYC Department of City Planning, Information Technology Division

Department of City Planning MapPLUTO - 2018 v1

0 100 200 400 Feet

Site
13-16 to 13-30
Beach Channel Drive
Far Rockaway, New York
Block 15528, Lots 6, 9, 12 and 112

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Drawn By	Checked By	Date	Scale
LM	SB	July 2018	As Noted

Drawing Title: **Site Location Map**

Drawing No: **Figure 1**

Dix Avenue

Beach Channel Drive

Redfern Avenue

SB-4
TW-4

Lot 112

Lot 12

SB-3
TW-3

Block 15528

Lot 9

SB-2
TW-2

Lot 6

SB-1
TW-1

Site Boundary

Legend

- Soil Boring/Temporary Well Location
- Tax Lots
- Site Boundary

0 15 30 60 Feet

Site

13-16 to 13-30 Beach Channel Drive Far Rockaway, New York Block 15528, Lots 6, 9, 12 and 112

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LM	SB	July 2018	As Noted

Drawing Title: **Sample Location Map**

Drawing No: **Figure 2**

Tables

Table 1: Volatile Organic Compounds in Soil
13-16 to 13-30 Beach Channel Drive - Far Rockaway, NY

SAMPLE ID:	NY-RESRR	NY-UNRES	SB-1 (0-2)		SB-2 (0-2)		SB-3 (5-7)		SB-4 (5-7)	
LAB ID:			L1828167-01		L1828167-02		L1828472-01		L1828472-02	
COLLECTION DATE:			7/23/2018		7/23/2018		7/24/2018		7/24/2018	
Volatile Organic Compounds Units: mg/kg			Conc	Q	Conc	Q	Conc	Q	Conc	Q
Methylene chloride	100	0.05	<0.0022	U	<0.0019	U	0.0026	J	0.0021	J
1,1-Dichloroethane	26	0.27	<0.00014	U	<0.00012	U	<0.00013	U	<0.00011	U
Chloroform	49	0.37	<0.00013	U	<0.00012	U	<0.00012	U	0.00014	J
Carbon tetrachloride	2.4	0.76	<0.00022	U	<0.00019	U	<0.0002	U	<0.00017	U
1,2-Dichloropropane	--	--	<0.00012	U	<0.0001	U	<0.00011	U	<0.00009	U
Dibromochloromethane	--	--	<0.00013	U	<0.00012	U	<0.00012	U	<0.0001	U
1,1,2-Trichloroethane	--	--	<0.00025	U	<0.00022	U	<0.00023	U	<0.0002	U
Tetrachloroethene	19	1.3	0.00058		<0.00016	U	<0.00017	U	<0.00014	U
Chlorobenzene	100	1.1	<0.00012	U	<0.00011	U	<0.00011	U	<0.00009	U
Trichlorofluoromethane	--	--	<0.00066	U	<0.00058	U	<0.00061	U	<0.00052	U
1,2-Dichloroethane	3.1	0.02	<0.00024	U	<0.00021	U	<0.00022	U	<0.00019	U
1,1,1-Trichloroethane	100	0.68	<0.00016	U	<0.00014	U	<0.00015	U	<0.00012	U
Bromodichloromethane	--	--	<0.0001	U	<0.00009	U	<0.0001	U	<0.00008	U
trans-1,3-Dichloropropene	--	--	<0.00026	U	<0.00023	U	<0.00024	U	<0.0002	U
cis-1,3-Dichloropropene	--	--	<0.00015	U	<0.00013	U	<0.00014	U	<0.00012	U
1,3-Dichloropropene, Total	--	--	<0.00015	U	<0.00013	U	<0.00014	U	<0.00012	U
1,1-Dichloropropene	--	--	<0.00015	U	<0.00013	U	<0.00014	U	<0.00012	U
Bromoform	--	--	<0.00023	U	<0.0002	U	<0.00022	U	<0.00018	U
1,1,2,2-Tetrachloroethane	--	--	<0.00016	U	<0.00014	U	<0.00014	U	<0.00012	U
Benzene	4.8	0.06	<0.00016	U	<0.00014	U	<0.00014	U	<0.00012	U
Toluene	100	0.7	<0.00052	U	<0.00045	U	<0.00047	U	<0.0004	U
Ethylbenzene	41	1	<0.00013	U	<0.00012	U	<0.00012	U	<0.0001	U
Chloromethane	--	--	<0.00089	U	<0.00078	U	<0.00082	U	<0.00069	U
Bromomethane	--	--	<0.00055	U	<0.00048	U	<0.00051	U	<0.00043	U
Vinyl chloride	0.9	0.02	<0.00032	U	<0.00028	U	<0.00029	U	<0.00025	U
Chloroethane	--	--	<0.00043	U	<0.00038	U	<0.0004	U	<0.00034	U
1,1-Dichloroethene	100	0.33	<0.00023	U	<0.0002	U	<0.00021	U	<0.00018	U
trans-1,2-Dichloroethene	100	0.19	<0.00013	U	<0.00011	U	<0.00012	U	<0.0001	U
Trichloroethene	21	0.47	<0.00013	U	<0.00011	U	<0.00012	U	<0.0001	U
1,2-Dichlorobenzene	100	1.1	<0.00014	U	<0.00012	U	<0.00012	U	<0.00011	U
1,3-Dichlorobenzene	49	2.4	<0.00014	U	<0.00012	U	<0.00013	U	<0.00011	U
1,4-Dichlorobenzene	13	1.8	<0.00016	U	<0.00014	U	<0.00015	U	<0.00013	U
Methyl tert butyl ether	100	0.93	<0.00019	U	<0.00017	U	<0.00018	U	<0.00015	U
p/m-Xylene	--	--	<0.00053	U	<0.00047	U	<0.00049	U	<0.00042	U
o-Xylene	--	--	<0.00028	U	<0.00024	U	<0.00025	U	<0.00022	U
Xylenes, Total	100	0.26	<0.00028	U	<0.00024	U	<0.00025	U	<0.00022	U
cis-1,2-Dichloroethene	100	0.25	<0.00017	U	<0.00015	U	<0.00015	U	<0.00013	U
1,2-Dichloroethene, Total	--	--	<0.00013	U	<0.00011	U	<0.00012	U	<0.0001	U
Dibromomethane	--	--	<0.00023	U	<0.0002	U	<0.00021	U	<0.00018	U
Styrene	--	--	<0.00019	U	<0.00016	U	<0.00017	U	<0.00014	U
Dichlorodifluoromethane	--	--	<0.00087	U	<0.00076	U	<0.0008	U	<0.00068	U
Acetone	100	0.05	<0.0046	U	0.0057	J	0.028		0.018	
Carbon disulfide	--	--	<0.0043	U	<0.0038	U	<0.004	U	<0.0034	U
2-Butanone	100	0.12	<0.0021	U	<0.0018	U	<0.0019	U	<0.0016	U
Vinyl acetate	--	--	<0.002	U	<0.0018	U	<0.0019	U	<0.0016	U
4-Methyl-2-pentanone	--	--	<0.0012	U	<0.0011	U	<0.0011	U	<0.00095	U
1,2,3-Trichloropropane	--	--	<0.00012	U	<0.00011	U	<0.00011	U	<0.00009	U
2-Hexanone	--	--	<0.0011	U	<0.00098	U	<0.001	U	<0.00087	U
Bromochloromethane	--	--	<0.0002	U	<0.00017	U	<0.00018	U	<0.00015	U
2,2-Dichloropropane	--	--	<0.00019	U	<0.00017	U	<0.00018	U	<0.00015	U
1,2-Dibromoethane	--	--	<0.00027	U	<0.00023	U	<0.00024	U	<0.00021	U
1,3-Dichloropropane	--	--	<0.00016	U	<0.00014	U	<0.00015	U	<0.00012	U
1,1,1,2-Tetrachloroethane	--	--	<0.00013	U	<0.00011	U	<0.00012	U	<0.0001	U
Bromobenzene	--	--	<0.00014	U	<0.00012	U	<0.00013	U	<0.00011	U
n-Butylbenzene	100	12	<0.00016	U	<0.00014	U	<0.00015	U	<0.00012	U
sec-Butylbenzene	100	11	<0.00014	U	<0.00012	U	<0.00013	U	<0.00011	U
tert-Butylbenzene	100	5.9	<0.00011	U	<0.0001	U	<0.0001	U	<0.00009	U
o-Chlorotoluene	--	--	<0.00018	U	<0.00016	U	<0.00017	U	<0.00014	U
p-Chlorotoluene	--	--	<0.0001	U	<0.00009	U	<0.00009	U	<0.00008	U
1,2-Dibromo-3-chloropropane	--	--	<0.00095	U	<0.00083	U	<0.00087	U	<0.00074	U
Hexachlorobutadiene	--	--	<0.00016	U	<0.00014	U	<0.00015	U	<0.00012	U
Isopropylbenzene	--	--	<0.0001	U	<0.00009	U	<0.0001	U	<0.00008	U
p-Isopropyltoluene	--	--	<0.0001	U	<0.00009	U	<0.0001	U	<0.00008	U
Naphthalene	100	12	<0.00062	U	<0.00054	U	<0.00057	U	<0.00048	U
Acrylonitrile	--	--	<0.0011	U	<0.00096	U	<0.001	U	<0.00085	U
n-Propylbenzene	100	3.9	<0.00016	U	<0.00014	U	<0.00015	U	<0.00013	U
1,2,3-Trichlorobenzene	--	--	<0.00031	U	<0.00027	U	<0.00028	U	<0.00024	U
1,2,4-Trichlorobenzene	--	--	<0.00026	U	<0.00023	U	<0.00024	U	<0.0002	U
1,3,5-Trimethylbenzene	52	8.4	<0.00018	U	<0.00016	U	<0.00017	U	<0.00014	U
1,2,4-Trimethylbenzene	52	3.6	<0.00032	U	<0.00028	U	<0.00029	U	<0.00025	U
1,4-Dioxane	13	0.1	<0.034	U	<0.029	U	<0.031	U	<0.026	U
p-Diethylbenzene	--	--	<0.00017	U	<0.00015	U	<0.00015	U	<0.00013	U
p-Ethyltoluene	--	--	<0.00037	U	<0.00032	U	<0.00034	U	<0.00028	U
1,2,4,5-Tetramethylbenzene	--	--	<0.00018	U	<0.00016	U	<0.00017	U	<0.00014	U
Ethyl ether	--	--	<0.00032	U	<0.00028	U	<0.0003	U	<0.00025	U
trans-1,4-Dichloro-2-butene	--	--	<0.0014	U	<0.0012	U	<0.0012	U	<0.001	U
Total VOCs			0.00058	-	0.0057	-	0.0306	-	0.02024	-

Notes:
NY-RESRR: Restricted-Residential Criteria, New York Restricted use current as of 5/2007
NY-UNRES: New York Unrestricted use Criteria current as of 5/2007
Cells highlighted in yellow indicate concentrations above the NY-UNRES
Cells highlighted in orange indicate concentrations above the NY-RESRR
DUP = designation for duplicate sample
MDL = Maximum Detection Limit
RL = Reporting limit
Qual = Laboratory Data Qualifier
For U qualified entries, the MDL is shown
U = not detected at or above the MDL
For J qualified entries, the estimated concentration is shown
J = estimated value, indicating the detected value is below the RL, but above the MDL
-- = No standard
Results and MDL values are in milligrams per killogram

Table 2: Semivolatile Organic Compounds in Soil
13-16 to 13-30 Beach Channel Drive - Far Rockaway, NY

SAMPLE ID:	NY-RESRR	NY-UNRES	SB-1 (0-2)		SB-2 (0-2)		SB-3 (5-7)		SB-4 (5-7)	
LAB ID:			L1828167-01		L1828167-02		L1828472-01		L1828472-02	
COLLECTION DATE:			7/23/2018		7/23/2018		7/24/2018		7/24/2018	
Semivolatile Organic Compounds			Conc	Q	Conc	Q	Conc	Q	Conc	Q
Acenaphthene	100	20	<0.019	U	<0.017	U	<0.019	U	<0.018	U
1,2,4-Trichlorobenzene	--	--	<0.02	U	<0.019	U	<0.021	U	<0.02	U
Hexachlorobenzene	1.2	0.33	<0.02	U	<0.019	U	<0.02	U	<0.02	U
Bis(2-chloroethyl)ether	--	--	<0.024	U	<0.023	U	<0.024	U	<0.024	U
2-Chloronaphthalene	--	--	<0.018	U	<0.017	U	<0.018	U	<0.018	U
1,2-Dichlorobenzene	100	1.1	<0.032	U	<0.03	U	<0.032	U	<0.032	U
1,3-Dichlorobenzene	49	2.4	<0.031	U	<0.029	U	<0.031	U	<0.03	U
1,4-Dichlorobenzene	13	1.8	<0.031	U	<0.029	U	<0.032	U	<0.031	U
3,3'-Dichlorobenzidine	--	--	<0.048	U	<0.045	U	<0.048	U	<0.047	U
2,4-Dinitrotoluene	--	--	<0.036	U	<0.034	U	<0.036	U	<0.035	U
2,6-Dinitrotoluene	--	--	<0.031	U	<0.029	U	<0.031	U	<0.03	U
Fluoranthene	100	100	0.034	J	0.14		<0.021	U	<0.02	U
4-Chlorophenyl phenyl ether	--	--	<0.019	U	<0.018	U	<0.019	U	<0.019	U
4-Bromophenyl phenyl ether	--	--	<0.027	U	<0.026	U	<0.028	U	<0.027	U
Bis(2-chloroisopropyl)ether	--	--	<0.031	U	<0.029	U	<0.031	U	<0.03	U
Bis(2-chloroethoxy)methane	--	--	<0.018	U	<0.017	U	<0.018	U	<0.018	U
Hexachlorobutadiene	--	--	<0.026	U	<0.024	U	<0.026	U	<0.026	U
Hexachlorocyclopentadiene	--	--	<0.16	U	<0.15	U	<0.16	U	<0.16	U
Hexachloroethane	--	--	<0.029	U	<0.027	U	<0.029	U	<0.029	U
Isophorone	--	--	<0.023	U	<0.022	U	<0.023	U	<0.023	U
Naphthalene	100	12	<0.022	U	0.02	J	<0.022	U	<0.022	U
Nitrobenzene	--	--	<0.027	U	<0.025	U	<0.027	U	<0.026	U
NDPA/DPA	--	--	<0.02	U	<0.019	U	<0.02	U	<0.02	U
n-Nitrosodi-n-propylamine	--	--	<0.028	U	<0.026	U	<0.028	U	<0.027	U
Bis(2-ethylhexyl)phthalate	--	--	<0.062	U	<0.058	U	0.12	J	<0.061	U
Butyl benzyl phthalate	--	--	<0.045	U	<0.042	U	<0.045	U	<0.045	U
Di-n-butylphthalate	--	--	<0.034	U	<0.032	U	<0.034	U	<0.034	U
Di-n-octylphthalate	--	--	<0.061	U	<0.057	U	<0.061	U	<0.06	U
Diethyl phthalate	--	--	<0.017	U	<0.016	U	<0.017	U	<0.016	U
Dimethyl phthalate	--	--	<0.038	U	<0.035	U	<0.038	U	<0.037	U
Benzo(a)anthracene	1	1	0.022	J	0.11		<0.02	U	<0.02	U
Benzo(a)pyrene	1	1	<0.044	U	0.088	J	<0.044	U	<0.043	U
Benzo(b)fluoranthene	1	1	0.031	J	0.11		<0.03	U	<0.03	U
Benzo(k)fluoranthene	3.9	0.8	<0.029	U	0.039	J	<0.029	U	<0.028	U
Chrysene	3.9	1	0.023	J	0.1		<0.019	U	<0.018	U
Acenaphthylene	100	100	<0.028	U	<0.026	U	<0.028	U	<0.027	U
Anthracene	100	100	<0.035	U	<0.033	U	<0.035	U	<0.034	U
Benzo(ghi)perylene	100	100	<0.021	U	0.056	J	<0.021	U	<0.021	U
Fluorene	100	30	<0.018	U	<0.016	U	<0.018	U	<0.017	U
Phenanthrene	100	100	0.03	J	0.078	J	<0.022	U	<0.022	U
Dibenzo(a,h)anthracene	0.33	0.33	<0.021	U	<0.019	U	<0.021	U	<0.02	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	<0.025	U	0.055	J	<0.025	U	<0.025	U
Pyrene	100	100	0.036	J	0.18		<0.018	U	<0.018	U
Biphenyl	--	--	<0.042	U	<0.039	U	<0.042	U	<0.041	U
4-Chloroaniline	--	--	<0.033	U	<0.03	U	<0.033	U	<0.032	U
2-Nitroaniline	--	--	<0.035	U	<0.032	U	<0.035	U	<0.034	U
3-Nitroaniline	--	--	<0.034	U	<0.032	U	<0.034	U	<0.033	U
4-Nitroaniline	--	--	<0.074	U	<0.07	U	<0.075	U	<0.073	U
Dibenzofuran	59	7	<0.017	U	<0.016	U	<0.017	U	<0.017	U
2-Methylnaphthalene	--	--	<0.022	U	<0.02	U	<0.022	U	<0.021	U
1,2,4,5-Tetrachlorobenzene	--	--	<0.019	U	<0.018	U	<0.019	U	<0.018	U
Acetophenone	--	--	<0.022	U	<0.021	U	<0.022	U	<0.022	U
2,4,6-Trichlorophenol	--	--	<0.034	U	<0.032	U	<0.034	U	<0.034	U
p-Chloro-m-cresol	--	--	<0.027	U	<0.025	U	<0.027	U	<0.026	U
2-Chlorophenol	--	--	<0.021	U	<0.02	U	<0.021	U	<0.021	U
2,4-Dichlorophenol	--	--	<0.029	U	<0.027	U	<0.029	U	<0.028	U
2,4-Dimethylphenol	--	--	<0.059	U	<0.055	U	<0.06	U	<0.058	U
2-Nitrophenol	--	--	<0.068	U	<0.063	U	<0.068	U	<0.067	U
4-Nitrophenol	--	--	<0.073	U	<0.068	U	<0.074	U	<0.072	U
2,4-Dinitrophenol	--	--	<0.084	U	<0.078	U	<0.084	U	<0.083	U
4,6-Dinitro-o-cresol	--	--	<0.086	U	<0.08	U	<0.087	U	<0.085	U
Pentachlorophenol	6.7	0.8	<0.04	U	<0.037	U	<0.04	U	<0.039	U
Phenol	100	0.33	<0.027	U	<0.025	U	<0.027	U	<0.027	U
2-Methylphenol	100	0.33	<0.028	U	<0.026	U	<0.028	U	<0.027	U
3-Methylphenol/4-Methylphenol	100	0.33	<0.028	U	<0.026	U	<0.028	U	<0.028	U
2,4,5-Trichlorophenol	--	--	<0.034	U	<0.032	U	<0.034	U	<0.034	U
Benzoic Acid	--	--	<0.18	U	<0.17	U	<0.18	U	<0.18	U
Benzyl Alcohol	--	--	<0.055	U	<0.051	U	<0.055	U	<0.054	U
Carbazole	--	--	<0.018	U	<0.016	U	<0.018	U	<0.017	U
Total SVOCs			0.176	-	0.976	-	0.12	-	-	-

Notes:
NY-RESRR: Restricted-Residential Criteria, New York Restricted use current as of 5/2007
NY-UNRES: New York Unrestricted use Criteria current as of 5/2007
Cells highlighted in yellow indicate concentrations above the NY-UNRES
Cells highlighted in orange indicate concentrations above the NY-RESRR
DUP = designation for duplicate sample
MDL = Maximum Detection Limit
RL = Reporting limit
Qual = Laboratory Data Qualifier
For U qualified entries, the MDL is shown
U = not detected at or above the MDL
For J qualified entries, the estimated concentration is shown
J = estimated value, indicating the detected value is below the RL, but above the MDL
-- = No standard
Results and MDL values are in milligrams per killogram

Table 3: Metals in Soil
13-16 to 13-30 Beach Channel Drive - Far Rockaway, NY

SAMPLE ID:	NY-RESRR	NY-UNRES	SB-1 (0-2)		SB-2 (0-2)		SB-3 (5-7)		SB-4 (5-7)	
LAB ID:			L1828167-01		L1828167-02		L1828472-01		L1828472-02	
COLLECTION DATE:			7/23/2018		7/23/2018		7/24/2018		7/24/2018	
Total Metals Units: mg/kg			Conc	Q	Conc	Q	Conc	Q	Conc	Q
Aluminum, Total	--	--	4560		1230		543		414	
Antimony, Total	--	--	<0.317	U	5.63		<0.323	U	<0.311	U
Arsenic, Total	16	13	5.08		2.01		1.55		2.01	
Barium, Total	400	350	173		18		2.37		2.13	
Beryllium, Total	72	7.2	0.117	J	0.282	J	0.043	J	0.041	J
Cadmium, Total	4.3	2.5	0.417	J	0.274	J	<0.083	U	<0.08	U
Calcium, Total	--	--	1360		1970		218		945	
Chromium, Total	--	--	7.58		3.38		4.46		5.18	
Cobalt, Total	--	--	1.68		2.6		0.349	J	0.475	J
Copper, Total	270	50	19.7		32.2		0.868		1.2	
Iron, Total	--	--	6870		3590		2080		2820	
Lead, Total	400	63	166		74.7		0.97	J	0.803	J
Magnesium, Total	--	--	367		371		60.5		47.1	
Manganese, Total	2000	1600	57		28.4		8.89		16.7	
Mercury, Total	0.81	0.18	0.669		0.155		<0.015	U	<0.014	U
Nickel, Total	310	30	4.96		6.39		1.45	J	1.86	J
Potassium, Total	--	--	182	J	94.8	J	62.6	J	47.2	J
Selenium, Total	180	3.9	0.433	J	<0.202	U	<0.219	U	0.319	J
Silver, Total	180	2	<0.236	U	<0.222	U	<0.241	U	<0.232	U
Sodium, Total	--	--	67.9	J	45.8	J	9.85	J	9.48	J
Thallium, Total	--	--	<0.262	U	<0.247	U	<0.268	U	<0.258	U
Vanadium, Total	--	--	12.4		5.28		2.67		3.53	
Zinc, Total	10000	109	376		205		4.04	J	3.83	J

Notes:
NY-RESRR: Restricted-Residential Criteria, New York Restricted use current as of 5/2007
NY-UNRES: New York Unrestricted use Criteria current as of 5/2007
Cells highlighted in yellow indicate concentrations above the NY-UNRES
Cells highlighted in orange indicate concentrations above the NY-RESRR
DUP = designation for duplicate sample
MDL = Maximum Detection Limit
RL = Reporting limit
Qual = Laboratory Data Qualifier
For U qualified entries, the MDL is shown
U = not detected at or above the MDL
For J qualified entries, the estimated concentration is shown
J = estimated value, indicating the detected value is below the RL, but above the MDL
-- = No standard
Results and MDL values are in milligrams per killogram

Table 4: Volatile Organic Compounds in Groundwater
13-16 to 13-30 Beach Channel Drive - Far Rockaway, NY

SAMPLE ID:	NY-AWQS	TW-1		TW-2		TW-3		TW-4	
LAB ID:		L1828167-03		L1828167-04		L1828472-03		L1828472-04	
COLLECTION DATE:		7/23/2018		7/23/2018		7/24/2018		7/24/2018	
Volatile Organic Compounds Units: ug/l		Conc	Q	Conc	Q	Conc	Q	Conc	Q
Methylene chloride	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,1-Dichloroethane	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Chloroform	7	<0.7	U	<0.7	U	<0.7	U	2.3	J
Carbon tetrachloride	5	<0.13	U	<0.13	U	<0.13	U	<0.13	U
1,2-Dichloropropane	1	<0.14	U	<0.14	U	<0.14	U	<0.14	U
Dibromochloromethane	50	<0.15	U	<0.15	U	<0.15	U	<0.15	U
1,1,2-Trichloroethane	1	<0.5	U	<0.5	U	<0.5	U	<0.5	U
Tetrachloroethene	5	16		0.86		0.36	J	0.24	J
Chlorobenzene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Trichlorofluoromethane	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,2-Dichloroethane	0.6	<0.13	U	<0.13	U	<0.13	U	<0.13	U
1,1,1-Trichloroethane	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Bromodichloromethane	50	<0.19	U	<0.19	U	<0.19	U	<0.19	U
trans-1,3-Dichloropropene	0.4	<0.16	U	<0.16	U	<0.16	U	<0.16	U
cis-1,3-Dichloropropene	0.4	<0.14	U	<0.14	U	<0.14	U	<0.14	U
1,3-Dichloropropene, Total		<0.14	U	<0.14	U	<0.14	U	<0.14	U
1,1-Dichloropropene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Bromoform	50	<0.65	U	<0.65	U	<0.65	U	<0.65	U
1,1,2,2-Tetrachloroethane	5	<0.17	U	<0.17	U	<0.17	U	<0.17	U
Benzene	1	<0.16	U	<0.16	U	<0.16	U	<0.16	U
Toluene	5	<0.7	U	<0.7	U	<0.7	U	0.82	J
Ethylbenzene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Chloromethane		<0.7	U	<0.7	U	<0.7	U	<0.7	U
Bromomethane	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Vinyl chloride	2	<0.07	U	<0.07	U	<0.07	U	<0.07	U
Chloroethane	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,1-Dichloroethene	5	<0.17	U	<0.17	U	<0.17	U	<0.17	U
trans-1,2-Dichloroethene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Trichloroethene	5	0.23	J	<0.18	U	<0.18	U	<0.18	U
1,2-Dichlorobenzene	3	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,3-Dichlorobenzene	3	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,4-Dichlorobenzene	3	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Methyl tert butyl ether	10	<0.7	U	<0.7	U	<0.7	U	<0.7	U
p/m-Xylene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
o-Xylene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Xylenes, Total		<0.7	U	<0.7	U	<0.7	U	<0.7	U
cis-1,2-Dichloroethene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,2-Dichloroethene, Total		<0.7	U	<0.7	U	<0.7	U	<0.7	U
Dibromomethane	5	<1	U	<1	U	<1	U	<1	U
1,2,3-Trichloropropane	0.04	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Acrylonitrile	5	<1.5	U	<1.5	U	<1.5	U	<1.5	U
Styrene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Dichlorodifluoromethane	5	<1	U	<1	U	<1	U	<1	U
Acetone	50	2.9	J	1.7	J	20		70	
Carbon disulfide	60	<1	U	<1	U	<1	U	<1	U
2-Butanone	50	<1.9	U	<1.9	U	<1.9	U	3	J
Vinyl acetate		<1	U	<1	U	<1	U	<1	U
4-Methyl-2-pentanone		<1	U	<1	U	<1	U	<1	U
2-Hexanone	50	<1	U	<1	U	<1	U	<1	U
Bromochloromethane	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
2,2-Dichloropropane	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,2-Dibromoethane	0.0006	<0.65	U	<0.65	U	<0.65	U	<0.65	U
1,3-Dichloropropane	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,1,1,2-Tetrachloroethane	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Bromobenzene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
n-Butylbenzene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
sec-Butylbenzene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
tert-Butylbenzene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
o-Chlorotoluene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
p-Chlorotoluene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,2-Dibromo-3-chloropropane	0.04	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Hexachlorobutadiene	0.5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Isopropylbenzene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
p-Isopropyltoluene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Naphthalene	10	<0.7	U	<0.7	U	<0.7	U	<0.7	U
n-Propylbenzene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,2,3-Trichlorobenzene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,2,4-Trichlorobenzene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,3,5-Trimethylbenzene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,2,4-Trimethylbenzene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,4-Dioxane		<61	U	<61	U	<61	U	<61	U
p-Diethylbenzene		<0.7	U	<0.7	U	<0.7	U	<0.7	U
p-Ethyltoluene		<0.7	U	<0.7	U	<0.7	U	<0.7	U
1,2,4,5-Tetramethylbenzene	5	<0.54	U	<0.54	U	<0.54	U	<0.54	U
Ethyl ether		<0.7	U	<0.7	U	<0.7	U	<0.7	U
trans-1,4-Dichloro-2-butene	5	<0.7	U	<0.7	U	<0.7	U	<0.7	U
Total VOCs		19.13	-	2.56	-	20.36	-	76.36	-

Notes:
NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Cells highlighted in yellow indicate concentrations above the NY-AWQS
Cells shaded in grey indicate MDL values above the NY-AWQS
MDL = Maximum Detection Limit
Qual = Laboratory Data Qualifier
For U qualified entries, the MDL is shown
U = not detected at or above the MDL
For J qualified entries, the estimated concentration is shown
J = estimated value, indicating the detected value is below the RL, but above the MDL
-- = No standard
Results and MDL values are in micrograms per liter (µg/L)

Table 5: Semivolatile Organic Compounds in Groundwater
13-16 to 13-30 Beach Channel Drive - Far Rockaway, NY

SAMPLE ID:	NY-AWQS	TW-1		TW-2		TW-3		TW-4	
LAB ID:		L1828167-03		L1828167-04		L1828472-03		L1828472-04	
COLLECTION DATE:		7/23/2018		7/23/2018		7/24/2018		7/24/2018	
Semivolatile Organic Compounds Units: ug/l		**Conc**	**Q**	**Conc**	**Q**	**Conc**	**Q**	**Conc**	**Q**
1,2,4-Trichlorobenzene	5	<0.5	U	<0.5	U	<0.5	U	<0.5	U
Bis(2-chloroethyl)ether	1	<0.5	U	<0.5	U	<0.5	U	<0.5	U
1,2-Dichlorobenzene	3	<0.45	U	<0.45	U	<0.45	U	<0.45	U
1,3-Dichlorobenzene	3	<0.4	U	<0.4	U	<0.4	U	<0.4	U
1,4-Dichlorobenzene	3	<0.43	U	<0.43	U	<0.43	U	<0.43	U
3,3'-Dichlorobenzidine	5	<1.6	U	<1.6	U	<1.6	U	<1.6	U
2,4-Dinitrotoluene	5	<1.2	U	<1.2	U	<1.2	U	<1.2	U
2,6-Dinitrotoluene	5	<0.93	U	<0.93	U	<0.93	U	<0.93	U
4-Chlorophenyl phenyl ether		<0.49	U	<0.49	U	<0.49	U	<0.49	U
4-Bromophenyl phenyl ether		<0.38	U	<0.38	U	<0.38	U	<0.38	U
Bis(2-chloroisopropyl)ether	5	<0.53	U	<0.53	U	<0.53	U	<0.53	U
Bis(2-chloroethoxy)methane	5	<0.5	U	<0.5	U	<0.5	U	<0.5	U
Hexachlorocyclopentadiene	5	<0.69	U	<0.69	U	<0.69	U	<0.69	U
Isophorone	50	<1.2	U	<1.2	U	<1.2	U	<1.2	U
Nitrobenzene	0.4	<0.77	U	<0.77	U	<0.77	U	<0.77	U
NDPA/DPA	50	<0.42	U	<0.42	U	<0.42	U	<0.42	U
n-Nitrosodi-n-propylamine		<0.64	U	<0.64	U	<0.64	U	<0.64	U
Bis(2-ethylhexyl)phthalate	5	<1.5	U	<1.5	U	<1.5	U	<1.5	U
Butyl benzyl phthalate	50	<1.2	U	<1.2	U	<1.2	U	<1.2	U
Di-n-butylphthalate	50	<0.39	U	<0.39	U	0.44	J	<0.39	U
Di-n-octylphthalate	50	<1.3	U	<1.3	U	<1.3	U	<1.3	U
Diethyl phthalate	50	<0.38	U	<0.38	U	<0.38	U	1.4	J
Dimethyl phthalate	50	<1.8	U	<1.8	U	<1.8	U	<1.8	U
Biphenyl		<0.46	U	<0.46	U	<0.46	U	<0.46	U
4-Chloroaniline	5	<1.1	U	<1.1	U	<1.1	U	<1.1	U
2-Nitroaniline	5	<0.5	U	<0.5	U	<0.5	U	<0.5	U
3-Nitroaniline	5	<0.81	U	<0.81	U	<0.81	U	<0.81	U
4-Nitroaniline	5	<0.8	U	<0.8	U	<0.8	U	<0.8	U
Dibenzofuran		<0.5	U	<0.5	U	<0.5	U	<0.5	U
1,2,4,5-Tetrachlorobenzene	5	<0.44	U	<0.44	U	<0.44	U	<0.44	U
Acetophenone		<0.53	U	<0.53	U	<0.53	U	<0.53	U
2,4,6-Trichlorophenol		<0.61	U	<0.61	U	<0.61	U	<0.61	U
p-Chloro-m-cresol		<0.35	U	<0.35	U	<0.35	U	<0.35	U
2-Chlorophenol		<0.48	U	<0.48	U	<0.48	U	<0.48	U
2,4-Dichlorophenol	1	<0.41	U	<0.41	U	<0.41	U	<0.41	U
2,4-Dimethylphenol	50	<1.8	U	<1.8	U	<1.8	U	<1.8	U
2-Nitrophenol		<0.85	U	<0.85	U	<0.85	U	<0.85	U
4-Nitrophenol		<0.67	U	<0.67	U	<0.67	U	<0.67	U
2,4-Dinitrophenol	10	<6.6	U	<6.6	U	<6.6	U	<6.6	U
4,6-Dinitro-o-cresol		<1.8	U	<1.8	U	<1.8	U	<1.8	U
Phenol	1	<0.57	U	<0.57	U	<0.57	U	9.8	
2-Methylphenol		<0.49	U	<0.49	U	<0.49	U	<0.49	U
3-Methylphenol/4-Methylphenol		<0.48	U	<0.48	U	<0.48	U	84	
2,4,5-Trichlorophenol		<0.77	U	<0.77	U	<0.77	U	<0.77	U
Benzoic Acid		<2.6	U	<2.6	U	<2.6	U	24	J
Benzyl Alcohol		<0.59	U	<0.59	U	<0.59	U	<0.59	U
Carbazole		<0.49	U	<0.49	U	<0.49	U	<0.49	U
Total SVOCs		-	-	-	-	0.44	-	119.2	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM									
Acenaphthene	20	<0.01	U	<0.01	U	<0.01	U	<0.01	U
2-Chloronaphthalene	10	<0.02	U	<0.02	U	<0.02	U	<0.02	U
Fluoranthene	50	<0.02	U	<0.02	U	<0.02	U	<0.02	U
Hexachlorobutadiene	0.5	<0.05	U	<0.05	U	<0.05	U	<0.05	U
Naphthalene	10	<0.05	U	<0.05	U	<0.05	U	<0.05	U
Benzo(a)anthracene	0.002	0.03	J	<0.02	U	<0.02	U	<0.02	U
Benzo(a)pyrene	0	<0.02	U	<0.02	U	<0.02	U	<0.02	U
Benzo(b)fluoranthene	0.002	<0.01	U	<0.01	U	<0.01	U	<0.01	U
Benzo(k)fluoranthene	0.002	<0.01	U	<0.01	U	<0.01	U	<0.01	U
Chrysene	0.002	<0.01	U	<0.01	U	<0.01	U	<0.01	U
Acenaphthylene		<0.01	U	<0.01	U	<0.01	U	<0.01	U
Anthracene	50	<0.01	U	<0.01	U	<0.01	U	<0.01	U
Benzo(ghi)perylene		<0.01	U	<0.01	U	<0.01	U	<0.01	U
Fluorene	50	<0.01	U	<0.01	U	<0.01	U	<0.01	U
Phenanthrene	50	<0.02	U	<0.02	U	<0.02	U	<0.02	U
Dibenzo(a,h)anthracene		<0.01	U	<0.01	U	<0.01	U	<0.01	U
Indeno(1,2,3-cd)pyrene	0.002	<0.01	U	<0.01	U	<0.01	U	<0.01	U
Pyrene	50	<0.02	U	<0.02	U	<0.02	U	<0.02	U
2-Methylnaphthalene		<0.02	U	<0.02	U	<0.02	U	<0.02	U
Pentachlorophenol	1	<0.01	U	<0.01	U	<0.01	U	<0.01	U
Hexachlorobenzene	0.04	<0.01	U	<0.01	U	<0.01	U	<0.01	U
Hexachloroethane	5	<0.06	U	<0.06	U	<0.06	U	<0.06	U
Total SVOCs		0.03	-	-	-	-	-	-	-

Notes:
NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Cells highlighted in yellow indicate concentrations above the NY-AWQS
Cells shaded in grey indicate MDL values above the NY-AWQS
MDL = Maximum Detection Limit
Qual = Laboratory Data Qualifier
For U qualified entries, the MDL is shown
U = not detected at or above the MDL
For J qualified entries, the estimated concentration is shown
J = estimated value, indicating the detected value is below the RL, but above the MDL
-- = No standard
Results and MDL values are in micrograms per liter (µg/L)

Attachment 1
Lithologic Logs

7/23/18 13-16 through 13-30 Beach Channel Dr

0745 Tenen (S. Babyatsky) on site
Cascade on site (Lucas Reiss)
weather: 76°F, overcast, light rain
purpose: soil & gw sampling on
Lot 6 (13-16 BCD) & Lot 9 (13-24 BCD)
Remote Geoprobe 6620DT

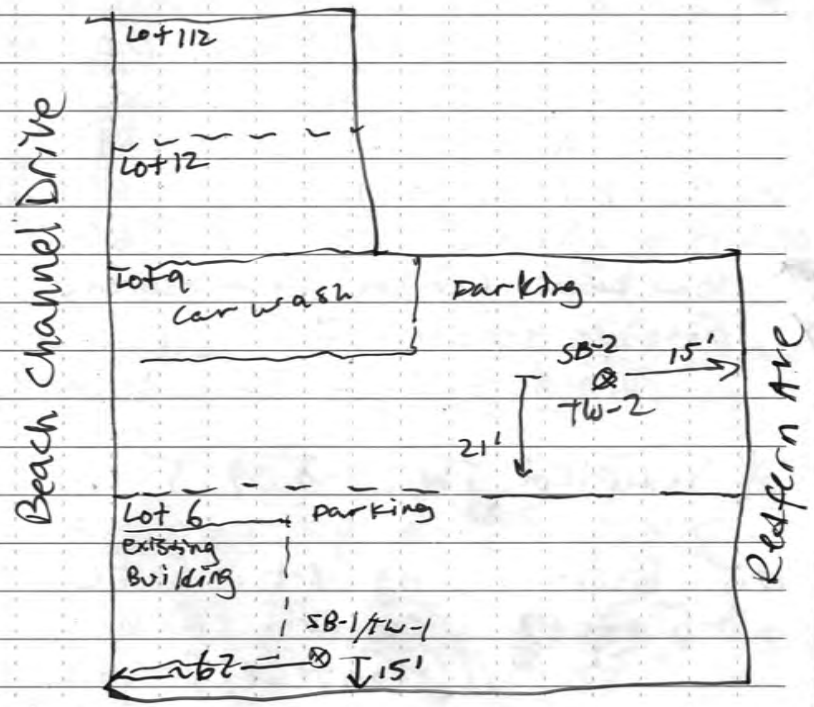
0835 Begin drilling SB-2 in Lot 9
0-5 ~80% recovery PID 0.0ppm
0-1 Fill (Asphalt, gravel, glass frags, gravel, cobbles, med to fine sand-dark brown)
1-5 Tan fine to med sand w/ fine gravel

5-10 Fine to coarse tan sand, pebbles
~90% recovery PID Ø

10-15 100% recovery PID
Fine to coarse tan sand, pebbles
saturated at lower 6"

15-20 ~80% recovery PID Ø
Tan med to coarse sand, saturated
Some gravel

Scale: 1 square = _____



N

Not to scale

0900 Temporary well installed @ SB-2 (ID TW-2) 1" diam
DTW 16.62'
Depth to bottom 20.14'

* Sampled SB2 (0-2) @ 0915

Scale: 1 square = _____

Rite in the Rain

0925 Begin purging @ TW-2
DTW 16.62' Headspace 0.0ppm

Time	Temp	pH	ORP	ms/cm	NTU	Do
0930	21.29	6.70	-2	2.90	72.1	4.84
0940	20.02	6.44	31	2.91	19.8	2.68
0950	19.70	6.44	40	2.93	7.2	2.60

Total Dissolved solids not measured; possible sensor issue.
Purged ~ 4 gallons

* Sampled TW-2 @ 0955

1015 Begin drilling SB-1 in Lot 6
0-5 ~70% recovery PID Ø
0-3 Fill (Ash, coal frag, red brick, black silty sand
3-5 Fine to med sand, tan

5-10 Fine sand w/ silt, tan
~ 75% recovery PID Ø

10-15 Med to coarse tan sand
~80% recovery PID Ø

15-20 ~80% recovery PID Ø

Scale: 1 square =_____

15-20 cont'd.
Med to coarse tan sand
Saturated @ ~ 18'

20-25 med to coarse tan sand, saturated
~ 80% recovery PID Ø

1040 Temp well (1" diam) installed in SB-1 boring (well ID TW-1)
DTW 18.85'

* Sampled SB-1 (0-2) @ 1045

Lot 6 is at grade w/ Redfern Ave
Lot 9 is at grade w/ BCD
Lot 6 boring location is @ ~ 4' higher elevation than Lot 9 boring location.

1050 Begin purging TW-1
DTW 18.85' Headspace Ø

Readings recorded on next page.

Scale: 1 square =_____

Rite in the Rain

7/23/18 BCD

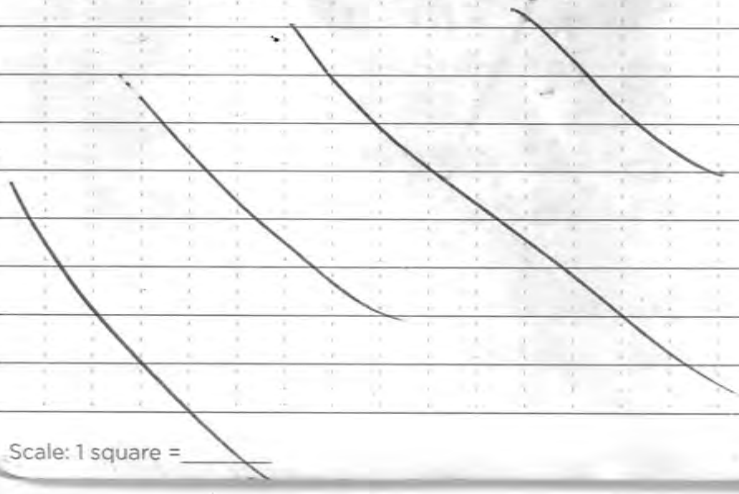
Time	Temp	pH	ORP	mS/cm	NTU	DO
1055	22.0°	6.51 →	43	0.252	436	5.65
1105	21.16	6.69	72	0.267	178	9.03
1115	18.11	6.48	70	0.269	107	8.26
1125	18.05	6.36	98	0.286	25	6.88
1135	17.89	6.36	~~29~~ 106 ↑	0.284	16.8	6.54

purged ~5 gallons

* Sampled TW-1 @ 1140

1150 Alpha on site for sample pickup

1215 Tenen / Cascade off site



Scale: 1 square = _____

1000 Tenen (S. Babyatsky, A. Kuhn) on site
Cascade (Lucas & Evan) on site
Weather 83°F, Partly cloudy
purpose collect soil & gw samples on Lot 12 (13-26 BCD) & Lot 112 (13-30 BCD) in the cellar level (~8ft bgs)

1045 Begin breaking concrete w/ hand tools in Cellar of Lot 112

1115 Hand auger SB-4 (Lot 112)
0-2 Med to coarse tan sand w/ Pebbles, gravel PID ø
2-4 SAA, more gravel PID ø
4-6 SAA PID ø

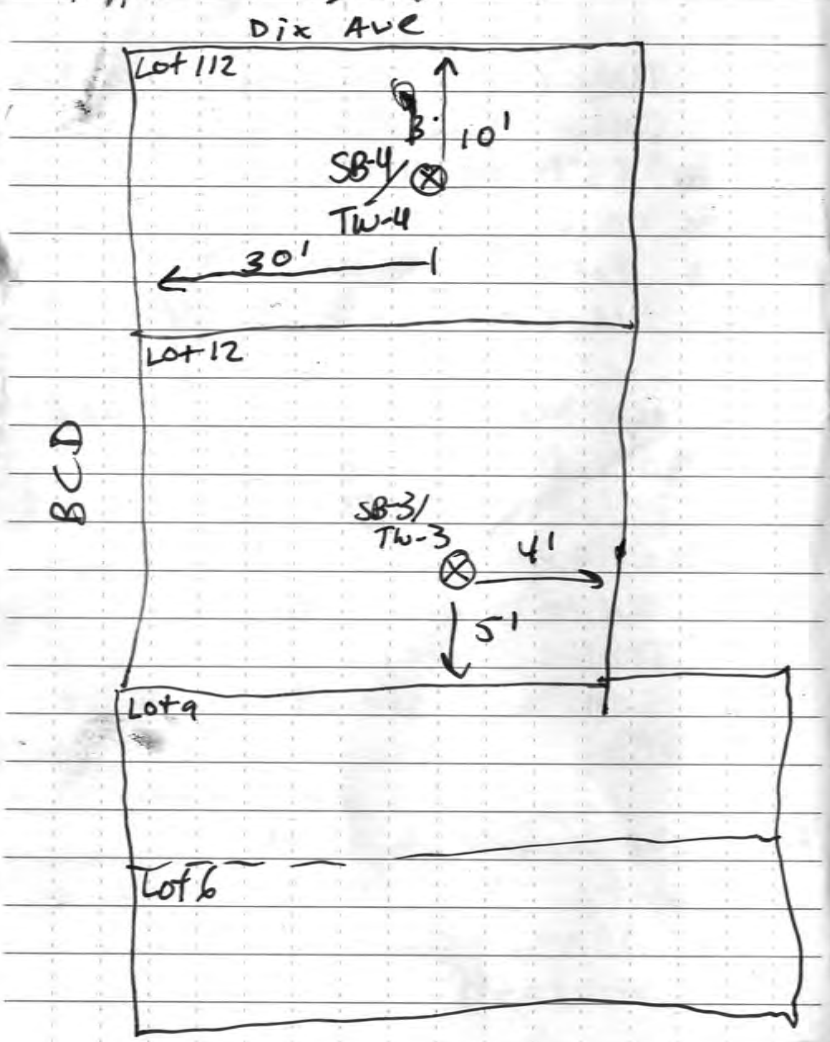
1140 Slap hammer for depth > 6'
SB-4 cont'd.
6-7 SAA w/ some fine sand saturated PID ø

* Sampled SB-4 (5-7) @ 1215

1215 Installed temp well TW-4 @ ~7'

Scale: 1 square = _____

Rite in the Rain



Scale: 1 square = _____

1218 TW-4 DTW 5.41' (below slab)
well pvc extends ~3.9' above
slab. DTB 6.25' (below slab)
Headspace Ø ppm

Time	Temp	pH	ORP	mS/cm	NTU	DO
1240	22.86	6.55	21	0.576	280	0.0
1250	21.52	6.44	23	0.369	263	0.0
1300	21.06	6.41	13	0.368	19.8	0.0
1310	21.39	6.45	1	0.374	240	0.0
1320	20.70	6.42	1	0.370	20.0	0.0
1330	20.67	6.42	1	0.370	24.4	0.0

1335 collect sample
Purged ~2½ gallons

~~TW-3~~ SB

1240 Begin breaking concrete w/ handtools in cellar of Lot 12

1255 Hand auger SB-3
0-2 Fine to med tan sand, pebbles, gravel
2-4 SAA
4-6 SAA
6-7 SAA saturated. Slaphammer used
PID Ø ppm all intervals

* Sampled SB-3 (5-7) @ 1340

Scale: 1 square = _____

Rite in the Rain

7/24/18

1340 Installed temp well TW-3

TW-3

DTW 5.97 Headspace 0ppm

DTB 6.53

Time Temp pH ORP ~~SC~~ Cond NTU DO

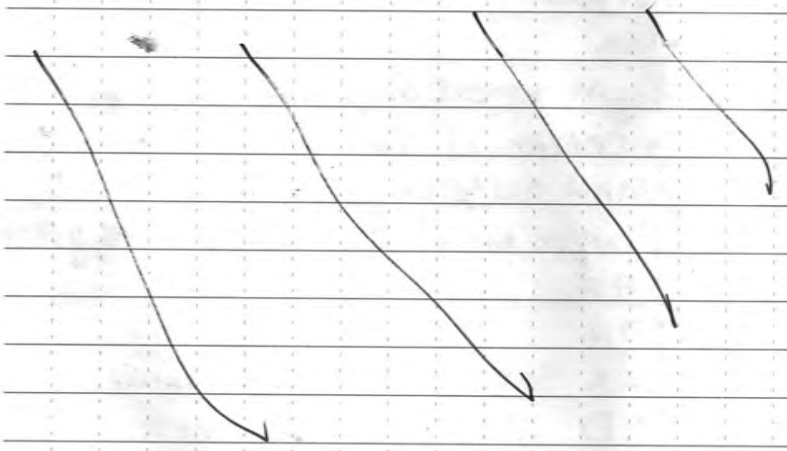
well continued running dry.

Collected grab sample

*Sampled TW-3 @ 1515

1615 Alpha on site for pickup of samples

1630 Tenen off site



Scale: 1 square = _____

Scale: 1 square = _____

Attachment 2
Laboratory Deliverables

ANALYTICAL REPORT

Lab Number:	L1828167
Client:	Tenen Environmental, LLC 121 West 27th Street Suite 702 New York City, NY 10001
ATTN:	Mohamed Ahmed
Phone:	(646) 606-2332
Project Name:	13-16 TO 13-30 BCD
Project Number:	13-16 TO 13-30 BCD
Report Date:	07/30/18

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1828167-01	SB-1 (0-2)	SOIL	13-16 TO 13-30 BEACH CHANNEL DRIVE	07/23/18 10:45	07/23/18
L1828167-02	SB-2 (0-2)	SOIL	13-16 TO 13-30 BEACH CHANNEL DRIVE	07/23/18 09:15	07/23/18
L1828167-03	TW-1	WATER	13-16 TO 13-30 BEACH CHANNEL DRIVE	07/23/18 11:40	07/23/18
L1828167-04	TW-2	WATER	13-16 TO 13-30 BEACH CHANNEL DRIVE	07/23/18 09:55	07/23/18
L1828167-05	TRIP BLANK	WATER	13-16 TO 13-30 BEACH CHANNEL DRIVE	07/23/18 00:00	07/23/18

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

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:	13-16 TO 13-30 BCD	**Lab Number:**	L1828167
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/30/18

Case Narrative (continued)

Report Submission

July 30, 2018: This final report includes the results of all requested analyses.

July 26, 2018: This is a preliminary report.

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

Volatile Organics

Any reported concentrations that are below 200 ug/kg may be biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Semivolatile Organics

The WG1138758-2/-3 LCS/LCSD recoveries, associated with L1828167-03 and -04, are below the acceptance criteria for benzoic acid (0%/0%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

Total Metals

L1828167-01 and -02: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by matrix interferences encountered during analysis.

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: Lisa Westerlind

Title: Technical Director/Representative Date: 07/30/18

ORGANICS

VOLATILES

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-01
Client ID: SB-1 (0-2)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE

Date Collected: 07/23/18 10:45
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 07/24/18 11:50
Analyst: MV
Percent Solids: 91%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	4.8	2.2	1
1,1-Dichloroethane	ND		ug/kg	0.95	0.14	1
Chloroform	ND		ug/kg	1.4	0.13	1
Carbon tetrachloride	ND		ug/kg	0.95	0.22	1
1,2-Dichloropropane	ND		ug/kg	0.95	0.12	1
Dibromochloromethane	ND		ug/kg	0.95	0.13	1
1,1,2-Trichloroethane	ND		ug/kg	0.95	0.25	1
Tetrachloroethene	0.58		ug/kg	0.48	0.19	1
Chlorobenzene	ND		ug/kg	0.48	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.8	0.66	1
1,2-Dichloroethane	ND		ug/kg	0.95	0.24	1
1,1,1-Trichloroethane	ND		ug/kg	0.48	0.16	1
Bromodichloromethane	ND		ug/kg	0.48	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.95	0.26	1
cis-1,3-Dichloropropene	ND		ug/kg	0.48	0.15	1
1,3-Dichloropropene, Total	ND		ug/kg	0.48	0.15	1
1,1-Dichloropropene	ND		ug/kg	0.48	0.15	1
Bromoform	ND		ug/kg	3.8	0.23	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.48	0.16	1
Benzene	ND		ug/kg	0.48	0.16	1
Toluene	ND		ug/kg	0.95	0.52	1
Ethylbenzene	ND		ug/kg	0.95	0.13	1
Chloromethane	ND		ug/kg	3.8	0.89	1
Bromomethane	ND		ug/kg	1.9	0.55	1
Vinyl chloride	ND		ug/kg	0.95	0.32	1
Chloroethane	ND		ug/kg	1.9	0.43	1
1,1-Dichloroethene	ND		ug/kg	0.95	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.13	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-01 Date Collected: 07/23/18 10:45

Client ID: SB-1 (0-2) Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/kg	0.48	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	1.9	0.14	1
1,3-Dichlorobenzene	ND		ug/kg	1.9	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	1.9	0.16	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.19	1
p/m-Xylene	ND		ug/kg	1.9	0.53	1
o-Xylene	ND		ug/kg	0.95	0.28	1
Xylenes, Total	ND		ug/kg	0.95	0.28	1
cis-1,2-Dichloroethene	ND		ug/kg	0.95	0.17	1
1,2-Dichloroethene, Total	ND		ug/kg	0.95	0.13	1
Dibromomethane	ND		ug/kg	1.9	0.23	1
Styrene	ND		ug/kg	0.95	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.5	0.87	1
Acetone	ND		ug/kg	9.5	4.6	1
Carbon disulfide	ND		ug/kg	9.5	4.3	1
2-Butanone	ND		ug/kg	9.5	2.1	1
Vinyl acetate	ND		ug/kg	9.5	2.0	1
4-Methyl-2-pentanone	ND		ug/kg	9.5	1.2	1
1,2,3-Trichloropropane	ND		ug/kg	1.9	0.12	1
2-Hexanone	ND		ug/kg	9.5	1.1	1
Bromochloromethane	ND		ug/kg	1.9	0.20	1
2,2-Dichloropropane	ND		ug/kg	1.9	0.19	1
1,2-Dibromoethane	ND		ug/kg	0.95	0.27	1
1,3-Dichloropropane	ND		ug/kg	1.9	0.16	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.48	0.13	1
Bromobenzene	ND		ug/kg	1.9	0.14	1
n-Butylbenzene	ND		ug/kg	0.95	0.16	1
sec-Butylbenzene	ND		ug/kg	0.95	0.14	1
tert-Butylbenzene	ND		ug/kg	1.9	0.11	1
o-Chlorotoluene	ND		ug/kg	1.9	0.18	1
p-Chlorotoluene	ND		ug/kg	1.9	0.10	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.9	0.95	1
Hexachlorobutadiene	ND		ug/kg	3.8	0.16	1
Isopropylbenzene	ND		ug/kg	0.95	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.95	0.10	1
Naphthalene	ND		ug/kg	3.8	0.62	1
Acrylonitrile	ND		ug/kg	3.8	1.1	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-01 Date Collected: 07/23/18 10:45

Client ID: SB-1 (0-2) Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE 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/kg	0.95	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.9	0.31	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.9	0.26	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.9	0.18	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.9	0.32	1
1,4-Dioxane	ND		ug/kg	95	34.	1
p-Diethylbenzene	ND		ug/kg	1.9	0.17	1
p-Ethyltoluene	ND		ug/kg	1.9	0.37	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	1.9	0.18	1
Ethyl ether	ND		ug/kg	1.9	0.32	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.8	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	85		70-130
Dibromofluoromethane	109		70-130

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-02
Client ID: SB-2 (0-2)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE

Date Collected: 07/23/18 09:15
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 07/24/18 11:24
Analyst: MV
Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	4.2	1.9	1
1,1-Dichloroethane	ND		ug/kg	0.84	0.12	1
Chloroform	ND		ug/kg	1.2	0.12	1
Carbon tetrachloride	ND		ug/kg	0.84	0.19	1
1,2-Dichloropropane	ND		ug/kg	0.84	0.10	1
Dibromochloromethane	ND		ug/kg	0.84	0.12	1
1,1,2-Trichloroethane	ND		ug/kg	0.84	0.22	1
Tetrachloroethene	ND		ug/kg	0.42	0.16	1
Chlorobenzene	ND		ug/kg	0.42	0.11	1
Trichlorofluoromethane	ND		ug/kg	3.3	0.58	1
1,2-Dichloroethane	ND		ug/kg	0.84	0.21	1
1,1,1-Trichloroethane	ND		ug/kg	0.42	0.14	1
Bromodichloromethane	ND		ug/kg	0.42	0.09	1
trans-1,3-Dichloropropene	ND		ug/kg	0.84	0.23	1
cis-1,3-Dichloropropene	ND		ug/kg	0.42	0.13	1
1,3-Dichloropropene, Total	ND		ug/kg	0.42	0.13	1
1,1-Dichloropropene	ND		ug/kg	0.42	0.13	1
Bromoform	ND		ug/kg	3.3	0.20	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.42	0.14	1
Benzene	ND		ug/kg	0.42	0.14	1
Toluene	ND		ug/kg	0.84	0.45	1
Ethylbenzene	ND		ug/kg	0.84	0.12	1
Chloromethane	ND		ug/kg	3.3	0.78	1
Bromomethane	ND		ug/kg	1.7	0.48	1
Vinyl chloride	ND		ug/kg	0.84	0.28	1
Chloroethane	ND		ug/kg	1.7	0.38	1
1,1-Dichloroethene	ND		ug/kg	0.84	0.20	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	0.11	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-02 Date Collected: 07/23/18 09:15

Client ID: SB-2 (0-2) Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/kg	0.42	0.11	1
1,2-Dichlorobenzene	ND		ug/kg	1.7	0.12	1
1,3-Dichlorobenzene	ND		ug/kg	1.7	0.12	1
1,4-Dichlorobenzene	ND		ug/kg	1.7	0.14	1
Methyl tert butyl ether	ND		ug/kg	1.7	0.17	1
p/m-Xylene	ND		ug/kg	1.7	0.47	1
o-Xylene	ND		ug/kg	0.84	0.24	1
Xylenes, Total	ND		ug/kg	0.84	0.24	1
cis-1,2-Dichloroethene	ND		ug/kg	0.84	0.15	1
1,2-Dichloroethene, Total	ND		ug/kg	0.84	0.11	1
Dibromomethane	ND		ug/kg	1.7	0.20	1
Styrene	ND		ug/kg	0.84	0.16	1
Dichlorodifluoromethane	ND		ug/kg	8.4	0.76	1
Acetone	5.7	J	ug/kg	8.4	4.0	1
Carbon disulfide	ND		ug/kg	8.4	3.8	1
2-Butanone	ND		ug/kg	8.4	1.8	1
Vinyl acetate	ND		ug/kg	8.4	1.8	1
4-Methyl-2-pentanone	ND		ug/kg	8.4	1.1	1
1,2,3-Trichloropropane	ND		ug/kg	1.7	0.11	1
2-Hexanone	ND		ug/kg	8.4	0.98	1
Bromochloromethane	ND		ug/kg	1.7	0.17	1
2,2-Dichloropropane	ND		ug/kg	1.7	0.17	1
1,2-Dibromoethane	ND		ug/kg	0.84	0.23	1
1,3-Dichloropropane	ND		ug/kg	1.7	0.14	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.42	0.11	1
Bromobenzene	ND		ug/kg	1.7	0.12	1
n-Butylbenzene	ND		ug/kg	0.84	0.14	1
sec-Butylbenzene	ND		ug/kg	0.84	0.12	1
tert-Butylbenzene	ND		ug/kg	1.7	0.10	1
o-Chlorotoluene	ND		ug/kg	1.7	0.16	1
p-Chlorotoluene	ND		ug/kg	1.7	0.09	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.5	0.83	1
Hexachlorobutadiene	ND		ug/kg	3.3	0.14	1
Isopropylbenzene	ND		ug/kg	0.84	0.09	1
p-Isopropyltoluene	ND		ug/kg	0.84	0.09	1
Naphthalene	ND		ug/kg	3.3	0.54	1
Acrylonitrile	ND		ug/kg	3.3	0.96	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-02 Date Collected: 07/23/18 09:15

Client ID: SB-2 (0-2) Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE 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/kg	0.84	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.7	0.27	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.7	0.23	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.7	0.16	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.7	0.28	1
1,4-Dioxane	ND		ug/kg	84	29.	1
p-Diethylbenzene	ND		ug/kg	1.7	0.15	1
p-Ethyltoluene	ND		ug/kg	1.7	0.32	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	1.7	0.16	1
Ethyl ether	ND		ug/kg	1.7	0.28	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.2	1.2	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	109		70-130

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-03 Date Collected: 07/23/18 11:40
Client ID: TW-1 Date Received: 07/23/18
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/24/18 11:52
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	16		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: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-03 Date Collected: 07/23/18 11:40

Client ID: TW-1 Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.23	J	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	2.9	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-03 Date Collected: 07/23/18 11:40

Client ID: TW-1 Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE 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	115		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	108		70-130

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-04
Client ID: TW-2
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE

Date Collected: 07/23/18 09:55
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/24/18 11:15
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	0.86		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: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-04 Date Collected: 07/23/18 09:55

Client ID: TW-2 Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE 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	1.7	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-04 Date Collected: 07/23/18 09:55

Client ID: TW-2 Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE 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	116		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	108		70-130

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-05
Client ID: TRIP BLANK
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE

Date Collected: 07/23/18 00:00
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/24/18 10:37
Analyst: PD

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

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-05 Date Collected: 07/23/18 00:00

Client ID: TRIP BLANK Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE 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	3.3	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: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-05 Date Collected: 07/23/18 00:00

Client ID: TRIP BLANK Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE 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	115		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	110		70-130

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD
Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/24/18 09:37
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1138866-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD
Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/24/18 09:37
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1138866-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD
Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/24/18 09:37
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1138866-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	100	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	88		70-130
Dibromofluoromethane	104		70-130

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/24/18 10:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03-05 Batch: WG1138874-5					
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: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD
Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/24/18 10:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03-05 Batch: WG1138874-5					
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: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/24/18 10:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03-05 Batch: WG1138874-5					
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: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/24/18 10:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03-05 Batch: WG1138874-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	111		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1138866-3 WG1138866-4								
Methylene chloride	99		101		70-130	2		30
1,1-Dichloroethane	110		110		70-130	0		30
Chloroform	111		110		70-130	1		30
Carbon tetrachloride	123		122		70-130	1		30
1,2-Dichloropropane	105		106		70-130	1		30
Dibromochloromethane	104		107		70-130	3		30
1,1,2-Trichloroethane	95		101		70-130	6		30
Tetrachloroethene	121		116		70-130	4		30
Chlorobenzene	109		109		70-130	0		30
Trichlorofluoromethane	118		115		70-139	3		30
1,2-Dichloroethane	102		106		70-130	4		30
1,1,1-Trichloroethane	119		117		70-130	2		30
Bromodichloromethane	110		112		70-130	2		30
trans-1,3-Dichloropropene	94		97		70-130	3		30
cis-1,3-Dichloropropene	107		108		70-130	1		30
1,1-Dichloropropene	113		110		70-130	3		30
Bromoform	93		97		70-130	4		30
1,1,2,2-Tetrachloroethane	90		93		70-130	3		30
Benzene	110		108		70-130	2		30
Toluene	106		104		70-130	2		30
Ethylbenzene	102		100		70-130	2		30
Chloromethane	111		106		52-130	5		30
Bromomethane	**165**	Q	**162**	Q	57-147	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167

Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1138866-3 WG1138866-4								
Vinyl chloride	116		117		67-130	1		30
Chloroethane	118		117		50-151	1		30
1,1-Dichloroethene	114		109		65-135	4		30
trans-1,2-Dichloroethene	114		112		70-130	2		30
Trichloroethene	120		116		70-130	3		30
1,2-Dichlorobenzene	109		107		70-130	2		30
1,3-Dichlorobenzene	115		108		70-130	6		30
1,4-Dichlorobenzene	114		108		70-130	5		30
Methyl tert butyl ether	93		98		66-130	5		30
p/m-Xylene	107		105		70-130	2		30
o-Xylene	104		102		70-130	2		30
cis-1,2-Dichloroethene	112		109		70-130	3		30
Dibromomethane	102		109		70-130	7		30
Styrene	98		98		70-130	0		30
Dichlorodifluoromethane	121		110		30-146	10		30
Acetone	102		115		54-140	12		30
Carbon disulfide	103		101		59-130	2		30
2-Butanone	97		111		70-130	13		30
Vinyl acetate	99		107		70-130	8		30
4-Methyl-2-pentanone	72		78		70-130	8		30
1,2,3-Trichloropropane	87		89		68-130	2		30
2-Hexanone	79		88		70-130	11		30
Bromochloromethane	121		123		70-130	2		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1138866-3 WG1138866-4								
2,2-Dichloropropane	113		111		70-130	2		30
1,2-Dibromoethane	99		104		70-130	5		30
1,3-Dichloropropane	92		98		69-130	6		30
1,1,1,2-Tetrachloroethane	107		109		70-130	2		30
Bromobenzene	110		105		70-130	5		30
n-Butylbenzene	108		101		70-130	7		30
sec-Butylbenzene	109		100		70-130	9		30
tert-Butylbenzene	109		100		70-130	9		30
o-Chlorotoluene	103		96		70-130	7		30
p-Chlorotoluene	100		94		70-130	6		30
1,2-Dibromo-3-chloropropane	84		89		68-130	6		30
Hexachlorobutadiene	123		116		67-130	6		30
Isopropylbenzene	104		97		70-130	7		30
p-Isopropyltoluene	111		103		70-130	7		30
Naphthalene	93		95		70-130	2		30
Acrylonitrile	91		98		70-130	7		30
n-Propylbenzene	104		97		70-130	7		30
1,2,3-Trichlorobenzene	107		106		70-130	1		30
1,2,4-Trichlorobenzene	115		112		70-130	3		30
1,3,5-Trimethylbenzene	104		97		70-130	7		30
1,2,4-Trimethylbenzene	105		98		70-130	7		30
1,4-Dioxane	89		94		65-136	5		30
p-Diethylbenzene	111		104		70-130	7		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1138866-3 WG1138866-4								
p-Ethyltoluene	106		99		70-130	7		30
1,2,4,5-Tetramethylbenzene	103		98		70-130	5		30
Ethyl ether	101		102		67-130	1		30
trans-1,4-Dichloro-2-butene	87		90		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	89		92		70-130
Toluene-d8	95		94		70-130
4-Bromofluorobenzene	86		84		70-130
Dibromofluoromethane	106		107		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167

Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-05 Batch: WG1138874-3 WG1138874-4								
Methylene chloride	120		110		70-130	9		20
1,1-Dichloroethane	110		100		70-130	10		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	100		100		63-132	0		20
1,2-Dichloropropane	110		100		70-130	10		20
Dibromochloromethane	86		87		63-130	1		20
1,1,2-Trichloroethane	98		95		70-130	3		20
Tetrachloroethene	77		76		70-130	1		20
Chlorobenzene	87		86		75-130	1		20
Trichlorofluoromethane	96		91		62-150	5		20
1,2-Dichloroethane	120		110		70-130	9		20
1,1,1-Trichloroethane	110		100		67-130	10		20
Bromodichloromethane	120		120		67-130	0		20
trans-1,3-Dichloropropene	91		90		70-130	1		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	83		83		54-136	0		20
1,1,2,2-Tetrachloroethane	100		100		67-130	0		20
Benzene	110		110		70-130	0		20
Toluene	85		84		70-130	1		20
Ethylbenzene	91		90		70-130	1		20
Chloromethane	110		110		64-130	0		20
Bromomethane	110		110		39-139	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-05 Batch: WG1138874-3 WG1138874-4								
Vinyl chloride	100		99		55-140	1		20
Chloroethane	110		100		55-138	10		20
1,1-Dichloroethene	100		96		61-145	4		20
trans-1,2-Dichloroethene	110		100		70-130	10		20
Trichloroethene	110		110		70-130	0		20
1,2-Dichlorobenzene	85		83		70-130	2		20
1,3-Dichlorobenzene	83		81		70-130	2		20
1,4-Dichlorobenzene	83		82		70-130	1		20
Methyl tert butyl ether	120		120		63-130	0		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	120		120		70-130	0		20
1,2,3-Trichloropropane	96		97		64-130	1		20
Acrylonitrile	**140**	Q	**140**	Q	70-130	0		20
Styrene	100		100		70-130	0		20
Dichlorodifluoromethane	93		92		36-147	1		20
Acetone	130		130		58-148	0		20
Carbon disulfide	110		110		51-130	0		20
2-Butanone	**160**	Q	**160**	Q	63-138	0		20
Vinyl acetate	130		130		70-130	0		20
4-Methyl-2-pentanone	100		100		59-130	0		20
2-Hexanone	110		120		57-130	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-05 Batch: WG1138874-3 WG1138874-4								
Bromochloromethane	110		110		70-130	0		20
2,2-Dichloropropane	110		100		63-133	10		20
1,2-Dibromoethane	92		94		70-130	2		20
1,3-Dichloropropane	94		93		70-130	1		20
1,1,1,2-Tetrachloroethane	84		82		64-130	2		20
Bromobenzene	78		76		70-130	3		20
n-Butylbenzene	90		88		53-136	2		20
sec-Butylbenzene	86		83		70-130	4		20
tert-Butylbenzene	82		80		70-130	2		20
o-Chlorotoluene	88		86		70-130	2		20
p-Chlorotoluene	90		86		70-130	5		20
1,2-Dibromo-3-chloropropane	85		89		41-144	5		20
Hexachlorobutadiene	100		99		63-130	1		20
Isopropylbenzene	86		84		70-130	2		20
p-Isopropyltoluene	83		82		70-130	1		20
Naphthalene	**150**	Q	**160**	Q	70-130	6		20
n-Propylbenzene	89		86		69-130	3		20
1,2,3-Trichlorobenzene	**240**	Q	**250**	Q	70-130	4		20
1,2,4-Trichlorobenzene	110		100		70-130	10		20
1,3,5-Trimethylbenzene	88		86		64-130	2		20
1,2,4-Trimethylbenzene	92		89		70-130	3		20
1,4-Dioxane	146		156		56-162	7		20
p-Diethylbenzene	87		85		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167

Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-05 Batch: WG1138874-3 WG1138874-4								
p-Ethyltoluene	88		86		70-130	2		20
1,2,4,5-Tetramethylbenzene	90		90		70-130	0		20
Ethyl ether	120		120		59-134	0		20
trans-1,4-Dichloro-2-butene	89		90		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	110		112		70-130
Toluene-d8	90		90		70-130
4-Bromofluorobenzene	109		109		70-130
Dibromofluoromethane	110		109		70-130

SEMIVOLATILES

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828167
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-01
Client ID: SB-1 (0-2)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE

Date Collected: 07/23/18 10:45
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 07/25/18 04:53
Analyst: PS
Percent Solids: 91%

Extraction Method: EPA 3546
Extraction Date: 07/24/18 09:28

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	19.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	20.	1
Hexachlorobenzene	ND		ug/kg	110	20.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	24.	1
2-Chloronaphthalene	ND		ug/kg	180	18.	1
1,2-Dichlorobenzene	ND		ug/kg	180	32.	1
1,3-Dichlorobenzene	ND		ug/kg	180	31.	1
1,4-Dichlorobenzene	ND		ug/kg	180	31.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	48.	1
2,4-Dinitrotoluene	ND		ug/kg	180	36.	1
2,6-Dinitrotoluene	ND		ug/kg	180	31.	1
Fluoranthene	34	J	ug/kg	110	21.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	19.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	27.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	31.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	18.	1
Hexachlorobutadiene	ND		ug/kg	180	26.	1
Hexachlorocyclopentadiene	ND		ug/kg	510	160	1
Hexachloroethane	ND		ug/kg	140	29.	1
Isophorone	ND		ug/kg	160	23.	1
Naphthalene	ND		ug/kg	180	22.	1
Nitrobenzene	ND		ug/kg	160	27.	1
NDPA/DPA	ND		ug/kg	140	20.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	28.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	180	62.	1
Butyl benzyl phthalate	ND		ug/kg	180	45.	1
Di-n-butylphthalate	ND		ug/kg	180	34.	1
Di-n-octylphthalate	ND		ug/kg	180	61.	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-01 Date Collected: 07/23/18 10:45

Client ID: SB-1 (0-2) Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	180	17.	1
Dimethyl phthalate	ND		ug/kg	180	38.	1
Benzo(a)anthracene	22	J	ug/kg	110	20.	1
Benzo(a)pyrene	ND		ug/kg	140	44.	1
Benzo(b)fluoranthene	31	J	ug/kg	110	30.	1
Benzo(k)fluoranthene	ND		ug/kg	110	29.	1
Chrysene	23	J	ug/kg	110	19.	1
Acenaphthylene	ND		ug/kg	140	28.	1
Anthracene	ND		ug/kg	110	35.	1
Benzo(ghi)perylene	ND		ug/kg	140	21.	1
Fluorene	ND		ug/kg	180	18.	1
Phenanthrene	30	J	ug/kg	110	22.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	21.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	140	25.	1
Pyrene	36	J	ug/kg	110	18.	1
Biphenyl	ND		ug/kg	410	42.	1
4-Chloroaniline	ND		ug/kg	180	33.	1
2-Nitroaniline	ND		ug/kg	180	35.	1
3-Nitroaniline	ND		ug/kg	180	34.	1
4-Nitroaniline	ND		ug/kg	180	74.	1
Dibenzofuran	ND		ug/kg	180	17.	1
2-Methylnaphthalene	ND		ug/kg	220	22.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	19.	1
Acetophenone	ND		ug/kg	180	22.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
p-Chloro-m-cresol	ND		ug/kg	180	27.	1
2-Chlorophenol	ND		ug/kg	180	21.	1
2,4-Dichlorophenol	ND		ug/kg	160	29.	1
2,4-Dimethylphenol	ND		ug/kg	180	59.	1
2-Nitrophenol	ND		ug/kg	390	68.	1
4-Nitrophenol	ND		ug/kg	250	73.	1
2,4-Dinitrophenol	ND		ug/kg	860	84.	1
4,6-Dinitro-o-cresol	ND		ug/kg	470	86.	1
Pentachlorophenol	ND		ug/kg	140	40.	1
Phenol	ND		ug/kg	180	27.	1
2-Methylphenol	ND		ug/kg	180	28.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	28.	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-01 Date Collected: 07/23/18 10:45

Client ID: SB-1 (0-2) Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	180	34.	1
Benzoic Acid	ND		ug/kg	580	180	1
Benzyl Alcohol	ND		ug/kg	180	55.	1
Carbazole	ND		ug/kg	180	18.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	84		25-120
Phenol-d6	88		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	82		30-120
2,4,6-Tribromophenol	86		10-136
4-Terphenyl-d14	67		18-120

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828167
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-02
Client ID: SB-2 (0-2)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE

Date Collected: 07/23/18 09:15
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 07/25/18 09:17
Analyst: PS
Percent Solids: 97%

Extraction Method: EPA 3546
Extraction Date: 07/24/18 09:28

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	130	17.	1
1,2,4-Trichlorobenzene	ND		ug/kg	170	19.	1
Hexachlorobenzene	ND		ug/kg	100	19.	1
Bis(2-chloroethyl)ether	ND		ug/kg	150	23.	1
2-Chloronaphthalene	ND		ug/kg	170	17.	1
1,2-Dichlorobenzene	ND		ug/kg	170	30.	1
1,3-Dichlorobenzene	ND		ug/kg	170	29.	1
1,4-Dichlorobenzene	ND		ug/kg	170	29.	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	45.	1
2,4-Dinitrotoluene	ND		ug/kg	170	34.	1
2,6-Dinitrotoluene	ND		ug/kg	170	29.	1
Fluoranthene	140		ug/kg	100	19.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	170	18.	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	26.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	29.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	180	17.	1
Hexachlorobutadiene	ND		ug/kg	170	24.	1
Hexachlorocyclopentadiene	ND		ug/kg	480	150	1
Hexachloroethane	ND		ug/kg	130	27.	1
Isophorone	ND		ug/kg	150	22.	1
Naphthalene	20	J	ug/kg	170	20.	1
Nitrobenzene	ND		ug/kg	150	25.	1
NDPA/DPA	ND		ug/kg	130	19.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	170	26.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	170	58.	1
Butyl benzyl phthalate	ND		ug/kg	170	42.	1
Di-n-butylphthalate	ND		ug/kg	170	32.	1
Di-n-octylphthalate	ND		ug/kg	170	57.	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-02 Date Collected: 07/23/18 09:15

Client ID: SB-2 (0-2) Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	170	16.	1
Dimethyl phthalate	ND		ug/kg	170	35.	1
Benzo(a)anthracene	110		ug/kg	100	19.	1
Benzo(a)pyrene	88	J	ug/kg	130	41.	1
Benzo(b)fluoranthene	110		ug/kg	100	28.	1
Benzo(k)fluoranthene	39	J	ug/kg	100	27.	1
Chrysene	100		ug/kg	100	17.	1
Acenaphthylene	ND		ug/kg	130	26.	1
Anthracene	ND		ug/kg	100	33.	1
Benzo(ghi)perylene	56	J	ug/kg	130	20.	1
Fluorene	ND		ug/kg	170	16.	1
Phenanthrene	78	J	ug/kg	100	20.	1
Dibenzo(a,h)anthracene	ND		ug/kg	100	19.	1
Indeno(1,2,3-cd)pyrene	55	J	ug/kg	130	23.	1
Pyrene	180		ug/kg	100	17.	1
Biphenyl	ND		ug/kg	380	39.	1
4-Chloroaniline	ND		ug/kg	170	30.	1
2-Nitroaniline	ND		ug/kg	170	32.	1
3-Nitroaniline	ND		ug/kg	170	32.	1
4-Nitroaniline	ND		ug/kg	170	70.	1
Dibenzofuran	ND		ug/kg	170	16.	1
2-Methylnaphthalene	ND		ug/kg	200	20.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	170	18.	1
Acetophenone	ND		ug/kg	170	21.	1
2,4,6-Trichlorophenol	ND		ug/kg	100	32.	1
p-Chloro-m-cresol	ND		ug/kg	170	25.	1
2-Chlorophenol	ND		ug/kg	170	20.	1
2,4-Dichlorophenol	ND		ug/kg	150	27.	1
2,4-Dimethylphenol	ND		ug/kg	170	55.	1
2-Nitrophenol	ND		ug/kg	360	63.	1
4-Nitrophenol	ND		ug/kg	240	68.	1
2,4-Dinitrophenol	ND		ug/kg	800	78.	1
4,6-Dinitro-o-cresol	ND		ug/kg	440	80.	1
Pentachlorophenol	ND		ug/kg	130	37.	1
Phenol	ND		ug/kg	170	25.	1
2-Methylphenol	ND		ug/kg	170	26.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	26.	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-02 Date Collected: 07/23/18 09:15

Client ID: SB-2 (0-2) Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	170	32.	1
Benzoic Acid	ND		ug/kg	540	170	1
Benzyl Alcohol	ND		ug/kg	170	51.	1
Carbazole	ND		ug/kg	170	16.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	92		25-120
Phenol-d6	96		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	92		30-120
2,4,6-Tribromophenol	100		10-136
4-Terphenyl-d14	82		18-120

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828167
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-03
Client ID: TW-1
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE

Date Collected: 07/23/18 11:40
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 07/26/18 19:12
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/24/18 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-03 Date Collected: 07/23/18 11:40

Client ID: TW-1 Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	64		21-120
Phenol-d6	54		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	73		15-120
2,4,6-Tribromophenol	56		10-120
4-Terphenyl-d14	85		41-149

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828167
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-03
Client ID: TW-1
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE

Date Collected: 07/23/18 11:40
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 07/24/18 22:17
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 07/24/18 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-03 Date Collected: 07/23/18 11:40

Client ID: TW-1 Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		21-120
Phenol-d6	53		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	77		15-120
2,4,6-Tribromophenol	93		10-120
4-Terphenyl-d14	98		41-149

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828167
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-04
Client ID: TW-2
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE

Date Collected: 07/23/18 09:55
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 07/26/18 19:40
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/24/18 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-04 Date Collected: 07/23/18 09:55

Client ID: TW-2 Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		21-120
Phenol-d6	55		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	83		15-120
2,4,6-Tribromophenol	57		10-120
4-Terphenyl-d14	95		41-149

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828167
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-04
Client ID: TW-2
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE

Date Collected: 07/23/18 09:55
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 07/24/18 22:43
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 07/24/18 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828167

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-04 Date Collected: 07/23/18 09:55

Client ID: TW-2 Date Received: 07/23/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		21-120
Phenol-d6	64		10-120
Nitrobenzene-d5	115		23-120
2-Fluorobiphenyl	98		15-120
2,4,6-Tribromophenol	109		10-120
4-Terphenyl-d14	120		41-149

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/24/18 09:47
Analyst: PS

Extraction Method: EPA 3546
Extraction Date: 07/23/18 13:40

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1138511-1					
Acenaphthene	ND		ug/kg	130	17.
1,2,4-Trichlorobenzene	ND		ug/kg	160	18.
Hexachlorobenzene	ND		ug/kg	97	18.
Bis(2-chloroethyl)ether	ND		ug/kg	150	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
1,2-Dichlorobenzene	ND		ug/kg	160	29.
1,3-Dichlorobenzene	ND		ug/kg	160	28.
1,4-Dichlorobenzene	ND		ug/kg	160	28.
3,3'-Dichlorobenzidine	ND		ug/kg	160	43.
2,4-Dinitrotoluene	ND		ug/kg	160	32.
2,6-Dinitrotoluene	ND		ug/kg	160	28.
Fluoranthene	ND		ug/kg	97	19.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	17.
4-Bromophenyl phenyl ether	ND		ug/kg	160	25.
Bis(2-chloroisopropyl)ether	ND		ug/kg	190	28.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	16.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	460	150
Hexachloroethane	ND		ug/kg	130	26.
Isophorone	ND		ug/kg	150	21.
Naphthalene	ND		ug/kg	160	20.
Nitrobenzene	ND		ug/kg	150	24.
NDPA/DPA	ND		ug/kg	130	18.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	25.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	56.
Butyl benzyl phthalate	ND		ug/kg	160	41.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	55.
Diethyl phthalate	ND		ug/kg	160	15.

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/24/18 09:47
Analyst: PS

Extraction Method: EPA 3546
Extraction Date: 07/23/18 13:40

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1138511-1					
Dimethyl phthalate	ND		ug/kg	160	34.
Benzo(a)anthracene	ND		ug/kg	97	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	97	27.
Benzo(k)fluoranthene	ND		ug/kg	97	26.
Chrysene	ND		ug/kg	97	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	97	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	97	20.
Dibenzo(a,h)anthracene	ND		ug/kg	97	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	97	16.
Biphenyl	ND		ug/kg	370	38.
4-Chloroaniline	ND		ug/kg	160	30.
2-Nitroaniline	ND		ug/kg	160	31.
3-Nitroaniline	ND		ug/kg	160	31.
4-Nitroaniline	ND		ug/kg	160	67.
Dibenzofuran	ND		ug/kg	160	15.
2-Methylnaphthalene	ND		ug/kg	190	20.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	17.
Acetophenone	ND		ug/kg	160	20.
2,4,6-Trichlorophenol	ND		ug/kg	97	31.
p-Chloro-m-cresol	ND		ug/kg	160	24.
2-Chlorophenol	ND		ug/kg	160	19.
2,4-Dichlorophenol	ND		ug/kg	150	26.
2,4-Dimethylphenol	ND		ug/kg	160	54.
2-Nitrophenol	ND		ug/kg	350	61.

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/24/18 09:47
Analyst: PS

Extraction Method: EPA 3546
Extraction Date: 07/23/18 13:40

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1138511-1					
4-Nitrophenol	ND		ug/kg	230	66.
2,4-Dinitrophenol	ND		ug/kg	780	76.
4,6-Dinitro-o-cresol	ND		ug/kg	420	78.
Pentachlorophenol	ND		ug/kg	130	36.
Phenol	ND		ug/kg	160	24.
2-Methylphenol	ND		ug/kg	160	25.
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	25.
2,4,5-Trichlorophenol	ND		ug/kg	160	31.
Benzoic Acid	ND		ug/kg	530	160
Benzyl Alcohol	ND		ug/kg	160	50.
Carbazole	ND		ug/kg	160	16.
Tentatively Identified Compounds					
No Tentatively Identified Compounds	ND		ug/kg		

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		25-120
Phenol-d6	73		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	74		30-120
2,4,6-Tribromophenol	81		10-136
4-Terphenyl-d14	84		18-120

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/25/18 10:41
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 07/24/18 08:13

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03-04 Batch: WG1138758-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Fluoranthene	ND		ug/l	2.0	0.26
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.66
Hexachlorocyclopentadiene	ND		ug/l	20	0.69
Hexachloroethane	ND		ug/l	2.0	0.58
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
NDPA/DPA	ND		ug/l	2.0	0.42
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/25/18 10:41
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 07/24/18 08:13

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03-04 Batch: WG1138758-1					
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Biphenyl	ND		ug/l	2.0	0.46
4-Chloroaniline	ND		ug/l	5.0	1.1
2-Nitroaniline	ND		ug/l	5.0	0.50
3-Nitroaniline	ND		ug/l	5.0	0.81
4-Nitroaniline	ND		ug/l	5.0	0.80
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/25/18 10:41
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 07/24/18 08:13

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03-04 Batch: WG1138758-1					
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77
Benzoic Acid	ND		ug/l	50	2.6
Benzyl Alcohol	ND		ug/l	2.0	0.59
Carbazole	ND		ug/l	2.0	0.49
Tentatively Identified Compounds					
Total TIC Compounds	34.7	J	ug/l		
Aldol Condensate	34.7	J	ug/l		

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		21-120
Phenol-d6	31		10-120
Nitrobenzene-d5	62		23-120
2-Fluorobiphenyl	68		15-120
2,4,6-Tribromophenol	45		10-120
4-Terphenyl-d14	73		41-149

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 07/24/18 18:21
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 07/24/18 08:13

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 03-04 Batch: WG1138759-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.02
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.01
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 07/24/18 18:21
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 07/24/18 08:13

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 03-04 Batch: WG1138759-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	33		10-120
Nitrobenzene-d5	76		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	73		10-120
4-Terphenyl-d14	81		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1138511-2 WG1138511-3								
Acenaphthene	82		83		31-137	1		50
1,2,4-Trichlorobenzene	88		83		38-107	6		50
Hexachlorobenzene	90		91		40-140	1		50
Bis(2-chloroethyl)ether	75		71		40-140	5		50
2-Chloronaphthalene	93		90		40-140	3		50
1,2-Dichlorobenzene	82		79		40-140	4		50
1,3-Dichlorobenzene	79		78		40-140	1		50
1,4-Dichlorobenzene	80		76		28-104	5		50
3,3'-Dichlorobenzidine	73		75		40-140	3		50
2,4-Dinitrotoluene	107		106		40-132	1		50
2,6-Dinitrotoluene	103		102		40-140	1		50
Fluoranthene	92		94		40-140	2		50
4-Chlorophenyl phenyl ether	85		83		40-140	2		50
4-Bromophenyl phenyl ether	88		89		40-140	1		50
Bis(2-chloroisopropyl)ether	65		63		40-140	3		50
Bis(2-chloroethoxy)methane	82		81		40-117	1		50
Hexachlorobutadiene	87		85		40-140	2		50
Hexachlorocyclopentadiene	63		57		40-140	10		50
Hexachloroethane	85		88		40-140	3		50
Isophorone	89		88		40-140	1		50
Naphthalene	86		84		40-140	2		50
Nitrobenzene	92		89		40-140	3		50
NDPA/DPA	90		91		36-157	1		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1138511-2 WG1138511-3								
n-Nitrosodi-n-propylamine	87		82		32-121	6		50
Bis(2-ethylhexyl)phthalate	104		105		40-140	1		50
Butyl benzyl phthalate	114		117		40-140	3		50
Di-n-butylphthalate	105		105		40-140	0		50
Di-n-octylphthalate	108		110		40-140	2		50
Diethyl phthalate	102		102		40-140	0		50
Dimethyl phthalate	102		99		40-140	3		50
Benzo(a)anthracene	81		83		40-140	2		50
Benzo(a)pyrene	89		90		40-140	1		50
Benzo(b)fluoranthene	91		88		40-140	3		50
Benzo(k)fluoranthene	83		88		40-140	6		50
Chrysene	81		81		40-140	0		50
Acenaphthylene	95		94		40-140	1		50
Anthracene	90		92		40-140	2		50
Benzo(ghi)perylene	85		89		40-140	5		50
Fluorene	89		89		40-140	0		50
Phenanthrene	83		85		40-140	2		50
Dibenzo(a,h)anthracene	88		92		40-140	4		50
Indeno(1,2,3-cd)pyrene	88		90		40-140	2		50
Pyrene	90		92		35-142	2		50
Biphenyl	95		93		54-104	2		50
4-Chloroaniline	73		69		40-140	6		50
2-Nitroaniline	107		104		47-134	3		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1138511-2 WG1138511-3								
3-Nitroaniline	83		86		26-129	4		50
4-Nitroaniline	90		92		41-125	2		50
Dibenzofuran	87		88		40-140	1		50
2-Methylnaphthalene	90		86		40-140	5		50
1,2,4,5-Tetrachlorobenzene	94		88		40-117	7		50
Acetophenone	92		89		14-144	3		50
2,4,6-Trichlorophenol	96		93		30-130	3		50
p-Chloro-m-cresol	**110**	Q	**106**	Q	26-103	4		50
2-Chlorophenol	93		90		25-102	3		50
2,4-Dichlorophenol	101		95		30-130	6		50
2,4-Dimethylphenol	110		107		30-130	3		50
2-Nitrophenol	101		100		30-130	1		50
4-Nitrophenol	**119**	Q	**117**	Q	11-114	2		50
2,4-Dinitrophenol	99		93		4-130	6		50
4,6-Dinitro-o-cresol	93		89		10-130	4		50
Pentachlorophenol	82		82		17-109	0		50
Phenol	83		80		26-90	4		50
2-Methylphenol	89		87		30-130.	2		50
3-Methylphenol/4-Methylphenol	99		98		30-130	1		50
2,4,5-Trichlorophenol	102		98		30-130	4		50
Benzoic Acid	82		78		10-110	5		50
Benzyl Alcohol	103		98		40-140	5		50
Carbazole	90		91		54-128	1		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167

Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1138511-2 WG1138511-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	87		83		25-120
Phenol-d6	87		82		10-120
Nitrobenzene-d5	93		88		23-120
2-Fluorobiphenyl	89		84		30-120
2,4,6-Tribromophenol	93		93		10-136
4-Terphenyl-d14	98		97		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-04 Batch: WG1138758-2 WG1138758-3								
Acenaphthene	68		84		37-111	21		30
1,2,4-Trichlorobenzene	62		75		39-98	19		30
Hexachlorobenzene	67		78		40-140	15		30
Bis(2-chloroethyl)ether	61		75		40-140	21		30
2-Chloronaphthalene	64		81		40-140	23		30
1,2-Dichlorobenzene	60		71		40-140	17		30
1,3-Dichlorobenzene	57		71		40-140	22		30
1,4-Dichlorobenzene	59		70		36-97	17		30
3,3'-Dichlorobenzidine	61		72		40-140	17		30
2,4-Dinitrotoluene	68		84		48-143	21		30
2,6-Dinitrotoluene	72		90		40-140	22		30
Fluoranthene	70		85		40-140	19		30
4-Chlorophenyl phenyl ether	66		82		40-140	22		30
4-Bromophenyl phenyl ether	67		84		40-140	23		30
Bis(2-chloroisopropyl)ether	60		72		40-140	18		30
Bis(2-chloroethoxy)methane	66		80		40-140	19		30
Hexachlorobutadiene	59		74		40-140	23		30
Hexachlorocyclopentadiene	49		68		40-140	**32**	Q	30
Hexachloroethane	57		71		40-140	22		30
Isophorone	64		80		40-140	22		30
Naphthalene	61		78		40-140	24		30
Nitrobenzene	63		75		40-140	17		30
NDPA/DPA	69		85		40-140	21		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-04 Batch: WG1138758-2 WG1138758-3								
n-Nitrosodi-n-propylamine	68		78		29-132	14		30
Bis(2-ethylhexyl)phthalate	70		89		40-140	24		30
Butyl benzyl phthalate	71		85		40-140	18		30
Di-n-butylphthalate	66		84		40-140	24		30
Di-n-octylphthalate	66		84		40-140	24		30
Diethyl phthalate	69		84		40-140	20		30
Dimethyl phthalate	68		85		40-140	22		30
Benzo(a)anthracene	65		82		40-140	23		30
Benzo(a)pyrene	74		92		40-140	22		30
Benzo(b)fluoranthene	75		94		40-140	22		30
Benzo(k)fluoranthene	70		87		40-140	22		30
Chrysene	67		85		40-140	24		30
Acenaphthylene	65		82		45-123	23		30
Anthracene	70		84		40-140	18		30
Benzo(ghi)perylene	70		90		40-140	25		30
Fluorene	68		87		40-140	25		30
Phenanthrene	69		84		40-140	20		30
Dibenzo(a,h)anthracene	73		91		40-140	22		30
Indeno(1,2,3-cd)pyrene	75		94		40-140	22		30
Pyrene	70		84		26-127	18		30
Biphenyl	67		86		40-140	25		30
4-Chloroaniline	58		62		40-140	7		30
2-Nitroaniline	65		83		52-143	24		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-04 Batch: WG1138758-2 WG1138758-3								
3-Nitroaniline	65		79		25-145	19		30
4-Nitroaniline	69		80		51-143	15		30
Dibenzofuran	67		84		40-140	23		30
2-Methylnaphthalene	64		80		40-140	22		30
1,2,4,5-Tetrachlorobenzene	61		77		2-134	23		30
Acetophenone	64		78		39-129	20		30
2,4,6-Trichlorophenol	65		81		30-130	22		30
p-Chloro-m-cresol	68		88		23-97	26		30
2-Chlorophenol	61		78		27-123	24		30
2,4-Dichlorophenol	68		84		30-130	21		30
2,4-Dimethylphenol	67		81		30-130	19		30
2-Nitrophenol	65		82		30-130	23		30
4-Nitrophenol	55		73		10-80	28		30
2,4-Dinitrophenol	52		64		20-130	21		30
4,6-Dinitro-o-cresol	54		69		20-164	24		30
Pentachlorophenol	61		74		9-103	19		30
Phenol	50		61		12-110	20		30
2-Methylphenol	64		80		30-130	22		30
3-Methylphenol/4-Methylphenol	65		79		30-130	19		30
2,4,5-Trichlorophenol	65		86		30-130	28		30
Benzoic Acid	**0**	Q	**0**	Q	10-164	NC		30
Benzyl Alcohol	57		65		26-116	13		30
Carbazole	71		88		55-144	21		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167

Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-04 Batch: WG1138758-2 WG1138758-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	52		66		21-120
Phenol-d6	47		58		10-120
Nitrobenzene-d5	65		76		23-120
2-Fluorobiphenyl	66		83		15-120
2,4,6-Tribromophenol	64		80		10-120
4-Terphenyl-d14	75		95		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 03-04 Batch: WG1138759-2 WG1138759-3								
Acenaphthene	94		88		40-140	7		40
2-Chloronaphthalene	95		88		40-140	8		40
Fluoranthene	113		107		40-140	5		40
Hexachlorobutadiene	87		80		40-140	8		40
Naphthalene	84		79		40-140	6		40
Benzo(a)anthracene	98		92		40-140	6		40
Benzo(a)pyrene	108		100		40-140	8		40
Benzo(b)fluoranthene	105		98		40-140	7		40
Benzo(k)fluoranthene	94		89		40-140	5		40
Chrysene	95		88		40-140	8		40
Acenaphthylene	112		104		40-140	7		40
Anthracene	100		95		40-140	5		40
Benzo(ghi)perylene	106		104		40-140	2		40
Fluorene	104		91		40-140	13		40
Phenanthrene	90		86		40-140	5		40
Dibenzo(a,h)anthracene	107		105		40-140	2		40
Indeno(1,2,3-cd)pyrene	110		107		40-140	3		40
Pyrene	110		104		40-140	6		40
2-Methylnaphthalene	91		85		40-140	7		40
Pentachlorophenol	102		94		40-140	8		40
Hexachlorobenzene	93		88		40-140	6		40
Hexachloroethane	82		76		40-140	8		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167

Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 03-04 Batch: WG1138759-2 WG1138759-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	70		66		21-120
Phenol-d6	60		57		10-120
Nitrobenzene-d5	99		92		23-120
2-Fluorobiphenyl	87		81		15-120
2,4,6-Tribromophenol	96		84		10-120
4-Terphenyl-d14	107		103		41-149

METALS

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828167
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-01
Client ID: SB-1 (0-2)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE
Date Collected: 07/23/18 10:45
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 91%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	4560		mg/kg	8.33	2.25	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Antimony, Total	ND		mg/kg	4.17	0.317	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Arsenic, Total	5.08		mg/kg	0.833	0.173	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Barium, Total	173		mg/kg	0.833	0.145	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Beryllium, Total	0.117	J	mg/kg	0.417	0.028	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Cadmium, Total	0.417	J	mg/kg	0.833	0.082	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Calcium, Total	1360		mg/kg	8.33	2.92	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Chromium, Total	7.58		mg/kg	0.833	0.080	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Cobalt, Total	1.68		mg/kg	1.67	0.138	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Copper, Total	19.7		mg/kg	0.833	0.215	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Iron, Total	6870		mg/kg	4.17	0.752	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Lead, Total	166		mg/kg	4.17	0.223	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Magnesium, Total	367		mg/kg	8.33	1.28	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Manganese, Total	57.0		mg/kg	0.833	0.132	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Mercury, Total	0.669		mg/kg	0.069	0.015	1	07/24/18 07:00	07/24/18 12:09	EPA 7471B	1,7471B	MG
Nickel, Total	4.96		mg/kg	2.08	0.202	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Potassium, Total	182	J	mg/kg	208	12.0	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Selenium, Total	0.433	J	mg/kg	1.67	0.215	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Silver, Total	ND		mg/kg	0.833	0.236	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Sodium, Total	67.9	J	mg/kg	167	2.62	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Thallium, Total	ND		mg/kg	1.67	0.262	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Vanadium, Total	12.4		mg/kg	0.833	0.169	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC
Zinc, Total	376		mg/kg	4.17	0.244	2	07/24/18 06:15	07/24/18 12:12	EPA 3050B	1,6010D	LC

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD
Lab Number: L1828167
Report Date: 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-02
Client ID: SB-2 (0-2)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE
Date Collected: 07/23/18 09:15
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	1230		mg/kg	7.84	2.12	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Antimony, Total	5.63		mg/kg	3.92	0.298	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Arsenic, Total	2.01		mg/kg	0.784	0.163	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Barium, Total	18.0		mg/kg	0.784	0.136	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Beryllium, Total	0.282	J	mg/kg	0.392	0.026	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Cadmium, Total	0.274	J	mg/kg	0.784	0.077	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Calcium, Total	1970		mg/kg	7.84	2.74	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Chromium, Total	3.38		mg/kg	0.784	0.075	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Cobalt, Total	2.60		mg/kg	1.57	0.130	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Copper, Total	32.2		mg/kg	0.784	0.202	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Iron, Total	3590		mg/kg	3.92	0.708	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Lead, Total	74.7		mg/kg	3.92	0.210	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Magnesium, Total	371		mg/kg	7.84	1.21	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Manganese, Total	28.4		mg/kg	0.784	0.125	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Mercury, Total	0.155		mg/kg	0.065	0.014	1	07/24/18 07:00	07/24/18 12:11	EPA 7471B	1,7471B	MG
Nickel, Total	6.39		mg/kg	1.96	0.190	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Potassium, Total	94.8	J	mg/kg	196	11.3	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Selenium, Total	ND		mg/kg	1.57	0.202	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Silver, Total	ND		mg/kg	0.784	0.222	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Sodium, Total	45.8	J	mg/kg	157	2.47	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Thallium, Total	ND		mg/kg	1.57	0.247	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Vanadium, Total	5.28		mg/kg	0.784	0.159	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC
Zinc, Total	205		mg/kg	3.92	0.230	2	07/24/18 06:15	07/24/18 12:17	EPA 3050B	1,6010D	LC

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD
Lab Number: L1828167
Report Date: 07/30/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1138697-1										
Mercury, Total	0.022	J	mg/kg	0.083	0.018	1	07/24/18 07:00	07/24/18 10:25	1,7471B	MG

Prep Information

Digestion Method: EPA 7471B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1138710-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Antimony, Total	ND		mg/kg	2.00	0.152	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Arsenic, Total	ND		mg/kg	0.400	0.083	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Barium, Total	ND		mg/kg	0.400	0.070	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Beryllium, Total	ND		mg/kg	0.200	0.013	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.400	0.039	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Calcium, Total	ND		mg/kg	4.00	1.40	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Chromium, Total	ND		mg/kg	0.400	0.038	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Cobalt, Total	ND		mg/kg	0.800	0.066	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Copper, Total	ND		mg/kg	0.400	0.103	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Iron, Total	ND		mg/kg	2.00	0.361	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Lead, Total	ND		mg/kg	2.00	0.107	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Magnesium, Total	ND		mg/kg	4.00	0.616	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Manganese, Total	ND		mg/kg	0.400	0.064	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Nickel, Total	ND		mg/kg	1.00	0.097	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Potassium, Total	ND		mg/kg	100	5.76	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Selenium, Total	ND		mg/kg	0.800	0.103	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Silver, Total	ND		mg/kg	0.400	0.113	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Sodium, Total	12.3	J	mg/kg	80.0	1.26	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Thallium, Total	ND		mg/kg	0.800	0.126	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Vanadium, Total	ND		mg/kg	0.400	0.081	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC
Zinc, Total	ND		mg/kg	2.00	0.117	1	07/24/18 06:15	07/24/18 09:52	1,6010D	LC

Project Name:	13-16 TO 13-30 BCD	**Lab Number:**	L1828167
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/30/18

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167

Report Date: 07/30/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1138697-2 SRM Lot Number: D098-540								
Mercury, Total	129		-		50-149	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167

Report Date: 07/30/18

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1138710-2 SRM Lot Number: D098-540					
Aluminum, Total	70	-	47-153	-	
Antimony, Total	141	-	6-194	-	
Arsenic, Total	99	-	83-117	-	
Barium, Total	89	-	82-118	-	
Beryllium, Total	94	-	83-117	-	
Cadmium, Total	94	-	82-117	-	
Calcium, Total	86	-	81-118	-	
Chromium, Total	93	-	83-119	-	
Cobalt, Total	95	-	84-116	-	
Copper, Total	94	-	84-116	-	
Iron, Total	96	-	60-140	-	
Lead, Total	93	-	82-117	-	
Magnesium, Total	82	-	76-124	-	
Manganese, Total	91	-	82-118	-	
Nickel, Total	92	-	82-117	-	
Potassium, Total	84	-	69-131	-	
Selenium, Total	99	-	78-121	-	
Silver, Total	95	-	80-120	-	
Sodium, Total	92	-	74-126	-	
Thallium, Total	96	-	80-119	-	
Vanadium, Total	96	-	79-121	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167

Report Date: 07/30/18

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1138710-2 SRM Lot Number: D098-540					
Zinc, Total	94	-	81-119	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1138697-3 QC Sample: L1827037-01 Client ID: MS Sample												
Mercury, Total	0.092	0.14	0.263	**122**	Q	-	-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1138710-3 QC Sample: L1828228-01 Client ID: MS Sample										
Aluminum, Total	5410	182	5620	115		-	-	75-125	-	20
Antimony, Total	1.92J	45.6	44.0	96		-	-	75-125	-	20
Arsenic, Total	4.61	10.9	15.2	97		-	-	75-125	-	20
Barium, Total	58.9	182	229	93		-	-	75-125	-	20
Beryllium, Total	0.183J	4.56	4.35	95		-	-	75-125	-	20
Cadmium, Total	ND	4.65	4.22	91		-	-	75-125	-	20
Calcium, Total	6510	911	6750	**26**	Q	-	-	75-125	-	20
Chromium, Total	13.4	18.2	36.9	**129**	Q	-	-	75-125	-	20
Cobalt, Total	8.01	45.6	47.2	86		-	-	75-125	-	20
Copper, Total	166.	22.8	93.9	**0**	Q	-	-	75-125	-	20
Iron, Total	18200	91.1	15600	**0**	Q	-	-	75-125	-	20
Lead, Total	128.	46.5	155	**58**	Q	-	-	75-125	-	20
Magnesium, Total	3330	911	3700	**40**	Q	-	-	75-125	-	20
Manganese, Total	183.	45.6	203	**44**	Q	-	-	75-125	-	20
Nickel, Total	14.5	45.6	53.6	86		-	-	75-125	-	20
Potassium, Total	915.	911	1680	84		-	-	75-125	-	20
Selenium, Total	ND	10.9	10.5	96		-	-	75-125	-	20
Silver, Total	ND	27.3	26.2	96		-	-	75-125	-	20
Sodium, Total	318.	911	1200	97		-	-	75-125	-	20
Thallium, Total	ND	10.9	8.54	78		-	-	75-125	-	20
Vanadium, Total	29.2	45.6	67.4	84		-	-	75-125	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1138710-3 QC Sample: L1828228-01 Client ID: MS Sample										
Zinc, Total	196.	45.6	208	**26**	Q	-	-	75-125	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167

Report Date: 07/30/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1138697-4 QC Sample: L1827037-01 Client ID: DUP Sample						
Mercury, Total	0.092	0.081	mg/kg	13		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1138710-4 QC Sample: L1828228-01 Client ID: DUP Sample						
Aluminum, Total	5410	5280	mg/kg	2		20
Antimony, Total	1.92J	0.956J	mg/kg	NC		20
Arsenic, Total	4.61	9.02	mg/kg	**65**	Q	20
Barium, Total	58.9	71.7	mg/kg	20		20
Beryllium, Total	0.183J	0.255J	mg/kg	NC		20
Cadmium, Total	ND	ND	mg/kg	NC		20
Calcium, Total	6510	11100	mg/kg	**52**	Q	20
Chromium, Total	13.4	19.9	mg/kg	**39**	Q	20
Cobalt, Total	8.01	8.12	mg/kg	1		20
Copper, Total	166.	121	mg/kg	**31**	Q	20
Iron, Total	18200	32600	mg/kg	**57**	Q	20
Lead, Total	128.	258	mg/kg	**67**	Q	20
Magnesium, Total	3330	2860	mg/kg	15		20
Manganese, Total	183.	278	mg/kg	**41**	Q	20
Nickel, Total	14.5	16.7	mg/kg	14		20
Potassium, Total	915.	720	mg/kg	**24**	Q	20
Selenium, Total	ND	ND	mg/kg	NC		20
Silver, Total	ND	ND	mg/kg	NC		20
Sodium, Total	318.	289	mg/kg	10		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167

Report Date: 07/30/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1138710-4 QC Sample: L1828228-01 Client ID: DUP Sample					
Thallium, Total	ND	ND	mg/kg	NC	20
Vanadium, Total	29.2	27.3	mg/kg	7	20
Zinc, Total	196.	205	mg/kg	4	20

INORGANICS
&
MISCELLANEOUS

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-01
Client ID: SB-1 (0-2)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE

Date Collected: 07/23/18 10:45
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.9		%	0.100	NA	1	-	07/24/18 09:03	121,2540G	RI

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

SAMPLE RESULTS

Lab ID: L1828167-02
Client ID: SB-2 (0-2)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DRIVE

Date Collected: 07/23/18 09:15
Date Received: 07/23/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	97.2		%	0.100	NA	1	-	07/24/18 09:03	121,2540G	RI

Lab Duplicate Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167

Report Date: 07/30/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1138766-1 QC Sample: L1828061-01 Client ID: DUP Sample						
Solids, Total	94.5	92.6	%	2		20

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

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(*)
L1828167-01A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.1	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1828167-01B	Vial Large Septa unpreserved (4oz)	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L1828167-01C	Glass 120ml/4oz unpreserved	A	NA		2.1	Y	Absent		NYTCL-8270(14),TS(7)
L1828167-01X	Vial MeOH preserved split	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L1828167-01Y	Vial Water preserved split	A	NA		2.1	Y	Absent	24-JUL-18 04:11	NYTCL-8260(14)
L1828167-01Z	Vial Water preserved split	A	NA		2.1	Y	Absent	24-JUL-18 04:11	NYTCL-8260(14)
L1828167-02A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.1	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1828167-02B	Vial Large Septa unpreserved (4oz)	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L1828167-02C	Glass 120ml/4oz unpreserved	A	NA		2.1	Y	Absent		NYTCL-8270(14),TS(7)
L1828167-02X	Vial MeOH preserved split	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L1828167-02Y	Vial Water preserved split	A	NA		2.1	Y	Absent	24-JUL-18 04:11	NYTCL-8260(14)
L1828167-02Z	Vial Water preserved split	A	NA		2.1	Y	Absent	24-JUL-18 04:11	NYTCL-8260(14)
L1828167-03A	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L1828167-03B	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L1828167-03C	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L1828167-03D	Amber 250ml unpreserved	A	7	7	2.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1828167-03E	Amber 250ml unpreserved	A	7	7	2.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1828167-04A	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828167
Report Date: 07/30/18

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L1828167-04B	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L1828167-04C	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L1828167-04D	Amber 250ml unpreserved	A	7	7	2.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1828167-04E	Amber 250ml unpreserved	A	7	7	2.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1828167-05A	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L1828167-05B	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	13-16 TO 13-30 BCD	**Lab Number:**	L1828167
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/30/18

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).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
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.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
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.

Report Format: DU Report with 'J' Qualifiers

Project Name:	13-16 TO 13-30 BCD	**Lab Number:**	L1828167
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/30/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the 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:	13-16 TO 13-30 BCD	**Lab Number:**	L1828167
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/30/18

REFERENCES

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

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

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

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 of

Date Rec'd in Lab: 7/27/18

ALPHA Job #: L1833161

Client Information
Client: Tenen Environmental
Address: 121 W 27th St, Ste 702
NY NY 10001
Phone: 646-606-2332
Fax:
Email: Mahmed@tenenenvi.com

Project Information
Project Name: 13-16 to 13-30 BCD
Project Location: 13-16 to 13-30 Beach Channel Drive
Project #
(Use Project name as Project #) X
Project Manager:
ALPHAQuote #:

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
X VOCs 2 Day TAT (GW & Soil); SVOCs & Metals Standard TAT

Please specify Metals or TAL.

Deliverables
X 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:

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	SVOCs	Metals	Total Bottle	Sample Specific Comments
01	SB-1 (0-2)	7/23/18	1045	S	SB	X	X	X		
02	SB-2 (0-2)		0915	S		X	X	X		
03	TW-1		1140	GW		X	X			
04	TW-2		0955	GW		X	X			
05	Trip Blank									

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

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

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

Container Type	A/N	A	A	
Preservative	A/B	A	A	

Relinquished By:	Date/Time	Received By:	Date/Time
	7/23/18 11:50		7-23-18 11:5
	7-23-18 14:05		7/23 14:0
			7/23/18 22:30

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

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

ANALYTICAL REPORT

Lab Number:	L1828472
Client:	Tenen Environmental, LLC 121 West 27th Street Suite 702 New York City, NY 10001
ATTN:	Matt Carroll
Phone:	(646) 606-2332
Project Name:	13-16 TO 13-30 BCD
Project Number:	13-16 TO 13-30 BCD
Report Date:	07/26/18

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1828472-01	SB-3 (5-7)	SOIL	13-16 TO 13-30 BEACH CHANNEL DR.	07/24/18 13:40	07/24/18
L1828472-02	SB-4 (5-7)	SOIL	13-16 TO 13-30 BEACH CHANNEL DR.	07/24/18 12:15	07/24/18
L1828472-03	TW-3	WATER	13-16 TO 13-30 BEACH CHANNEL DR.	07/24/18 15:15	07/24/18
L1828472-04	TW-4	WATER	13-16 TO 13-30 BEACH CHANNEL DR.	07/24/18 13:35	07/24/18
L1828472-05	TRIP BLANK	WATER	13-16 TO 13-30 BEACH CHANNEL DR.	07/24/18 00:00	07/24/18

Project Name:	13-16 TO 13-30 BCD	**Lab Number:**	L1828472
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/26/18

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:	13-16 TO 13-30 BCD	**Lab Number:**	L1828472
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/26/18

Case Narrative (continued)

Report Submission

This report contains the results of the Volatile Organics analysis. The results of all other analyses will be issued under separate cover.

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

Volatile Organics

Any reported concentrations that are below 200 ug/kg may be biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

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: Melissa Cripps Melissa Cripps

Title: Technical Director/Representative Date: 07/26/18

ORGANICS

VOLATILES

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-01
Client ID: SB-3 (5-7)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 13:40
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 07/25/18 17:11
Analyst: AD
Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.6	J	ug/kg	4.4	2.0	1
1,1-Dichloroethane	ND		ug/kg	0.87	0.13	1
Chloroform	ND		ug/kg	1.3	0.12	1
Carbon tetrachloride	ND		ug/kg	0.87	0.20	1
1,2-Dichloropropane	ND		ug/kg	0.87	0.11	1
Dibromochloromethane	ND		ug/kg	0.87	0.12	1
1,1,2-Trichloroethane	ND		ug/kg	0.87	0.23	1
Tetrachloroethene	ND		ug/kg	0.44	0.17	1
Chlorobenzene	ND		ug/kg	0.44	0.11	1
Trichlorofluoromethane	ND		ug/kg	3.5	0.61	1
1,2-Dichloroethane	ND		ug/kg	0.87	0.22	1
1,1,1-Trichloroethane	ND		ug/kg	0.44	0.15	1
Bromodichloromethane	ND		ug/kg	0.44	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.87	0.24	1
cis-1,3-Dichloropropene	ND		ug/kg	0.44	0.14	1
1,3-Dichloropropene, Total	ND		ug/kg	0.44	0.14	1
1,1-Dichloropropene	ND		ug/kg	0.44	0.14	1
Bromoform	ND		ug/kg	3.5	0.22	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.44	0.14	1
Benzene	ND		ug/kg	0.44	0.14	1
Toluene	ND		ug/kg	0.87	0.47	1
Ethylbenzene	ND		ug/kg	0.87	0.12	1
Chloromethane	ND		ug/kg	3.5	0.82	1
Bromomethane	ND		ug/kg	1.7	0.51	1
Vinyl chloride	ND		ug/kg	0.87	0.29	1
Chloroethane	ND		ug/kg	1.7	0.40	1
1,1-Dichloroethene	ND		ug/kg	0.87	0.21	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	0.12	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-01 Date Collected: 07/24/18 13:40

Client ID: SB-3 (5-7) Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/kg	0.44	0.12	1
1,2-Dichlorobenzene	ND		ug/kg	1.7	0.12	1
1,3-Dichlorobenzene	ND		ug/kg	1.7	0.13	1
1,4-Dichlorobenzene	ND		ug/kg	1.7	0.15	1
Methyl tert butyl ether	ND		ug/kg	1.7	0.18	1
p/m-Xylene	ND		ug/kg	1.7	0.49	1
o-Xylene	ND		ug/kg	0.87	0.25	1
Xylenes, Total	ND		ug/kg	0.87	0.25	1
cis-1,2-Dichloroethene	ND		ug/kg	0.87	0.15	1
1,2-Dichloroethene, Total	ND		ug/kg	0.87	0.12	1
Dibromomethane	ND		ug/kg	1.7	0.21	1
Styrene	ND		ug/kg	0.87	0.17	1
Dichlorodifluoromethane	ND		ug/kg	8.7	0.80	1
Acetone	28		ug/kg	8.7	4.2	1
Carbon disulfide	ND		ug/kg	8.7	4.0	1
2-Butanone	ND		ug/kg	8.7	1.9	1
Vinyl acetate	ND		ug/kg	8.7	1.9	1
4-Methyl-2-pentanone	ND		ug/kg	8.7	1.1	1
1,2,3-Trichloropropane	ND		ug/kg	1.7	0.11	1
2-Hexanone	ND		ug/kg	8.7	1.0	1
Bromochloromethane	ND		ug/kg	1.7	0.18	1
2,2-Dichloropropane	ND		ug/kg	1.7	0.18	1
1,2-Dibromoethane	ND		ug/kg	0.87	0.24	1
1,3-Dichloropropane	ND		ug/kg	1.7	0.15	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.44	0.12	1
Bromobenzene	ND		ug/kg	1.7	0.13	1
n-Butylbenzene	ND		ug/kg	0.87	0.15	1
sec-Butylbenzene	ND		ug/kg	0.87	0.13	1
tert-Butylbenzene	ND		ug/kg	1.7	0.10	1
o-Chlorotoluene	ND		ug/kg	1.7	0.17	1
p-Chlorotoluene	ND		ug/kg	1.7	0.09	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.6	0.87	1
Hexachlorobutadiene	ND		ug/kg	3.5	0.15	1
Isopropylbenzene	ND		ug/kg	0.87	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.87	0.10	1
Naphthalene	ND		ug/kg	3.5	0.57	1
Acrylonitrile	ND		ug/kg	3.5	1.0	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-01 Date Collected: 07/24/18 13:40

Client ID: SB-3 (5-7) Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. 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/kg	0.87	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.7	0.28	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.7	0.24	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.7	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.7	0.29	1
1,4-Dioxane	ND		ug/kg	87	31.	1
p-Diethylbenzene	ND		ug/kg	1.7	0.15	1
p-Ethyltoluene	ND		ug/kg	1.7	0.34	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	1.7	0.17	1
Ethyl ether	ND		ug/kg	1.7	0.30	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.4	1.2	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	99		70-130

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-02
Client ID: SB-4 (5-7)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 12:15
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 07/25/18 17:38
Analyst: AD
Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.1	J	ug/kg	3.7	1.7	1
1,1-Dichloroethane	ND		ug/kg	0.74	0.11	1
Chloroform	0.14	J	ug/kg	1.1	0.10	1
Carbon tetrachloride	ND		ug/kg	0.74	0.17	1
1,2-Dichloropropane	ND		ug/kg	0.74	0.09	1
Dibromochloromethane	ND		ug/kg	0.74	0.10	1
1,1,2-Trichloroethane	ND		ug/kg	0.74	0.20	1
Tetrachloroethene	ND		ug/kg	0.37	0.14	1
Chlorobenzene	ND		ug/kg	0.37	0.09	1
Trichlorofluoromethane	ND		ug/kg	3.0	0.52	1
1,2-Dichloroethane	ND		ug/kg	0.74	0.19	1
1,1,1-Trichloroethane	ND		ug/kg	0.37	0.12	1
Bromodichloromethane	ND		ug/kg	0.37	0.08	1
trans-1,3-Dichloropropene	ND		ug/kg	0.74	0.20	1
cis-1,3-Dichloropropene	ND		ug/kg	0.37	0.12	1
1,3-Dichloropropene, Total	ND		ug/kg	0.37	0.12	1
1,1-Dichloropropene	ND		ug/kg	0.37	0.12	1
Bromoform	ND		ug/kg	3.0	0.18	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.37	0.12	1
Benzene	ND		ug/kg	0.37	0.12	1
Toluene	ND		ug/kg	0.74	0.40	1
Ethylbenzene	ND		ug/kg	0.74	0.10	1
Chloromethane	ND		ug/kg	3.0	0.69	1
Bromomethane	ND		ug/kg	1.5	0.43	1
Vinyl chloride	ND		ug/kg	0.74	0.25	1
Chloroethane	ND		ug/kg	1.5	0.34	1
1,1-Dichloroethene	ND		ug/kg	0.74	0.18	1
trans-1,2-Dichloroethene	ND		ug/kg	1.1	0.10	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-02 Date Collected: 07/24/18 12:15

Client ID: SB-4 (5-7) Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/kg	0.37	0.10	1
1,2-Dichlorobenzene	ND		ug/kg	1.5	0.11	1
1,3-Dichlorobenzene	ND		ug/kg	1.5	0.11	1
1,4-Dichlorobenzene	ND		ug/kg	1.5	0.13	1
Methyl tert butyl ether	ND		ug/kg	1.5	0.15	1
p/m-Xylene	ND		ug/kg	1.5	0.42	1
o-Xylene	ND		ug/kg	0.74	0.22	1
Xylenes, Total	ND		ug/kg	0.74	0.22	1
cis-1,2-Dichloroethene	ND		ug/kg	0.74	0.13	1
1,2-Dichloroethene, Total	ND		ug/kg	0.74	0.10	1
Dibromomethane	ND		ug/kg	1.5	0.18	1
Styrene	ND		ug/kg	0.74	0.14	1
Dichlorodifluoromethane	ND		ug/kg	7.4	0.68	1
Acetone	18		ug/kg	7.4	3.6	1
Carbon disulfide	ND		ug/kg	7.4	3.4	1
2-Butanone	ND		ug/kg	7.4	1.6	1
Vinyl acetate	ND		ug/kg	7.4	1.6	1
4-Methyl-2-pentanone	ND		ug/kg	7.4	0.95	1
1,2,3-Trichloropropane	ND		ug/kg	1.5	0.09	1
2-Hexanone	ND		ug/kg	7.4	0.87	1
Bromochloromethane	ND		ug/kg	1.5	0.15	1
2,2-Dichloropropane	ND		ug/kg	1.5	0.15	1
1,2-Dibromoethane	ND		ug/kg	0.74	0.21	1
1,3-Dichloropropane	ND		ug/kg	1.5	0.12	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.37	0.10	1
Bromobenzene	ND		ug/kg	1.5	0.11	1
n-Butylbenzene	ND		ug/kg	0.74	0.12	1
sec-Butylbenzene	ND		ug/kg	0.74	0.11	1
tert-Butylbenzene	ND		ug/kg	1.5	0.09	1
o-Chlorotoluene	ND		ug/kg	1.5	0.14	1
p-Chlorotoluene	ND		ug/kg	1.5	0.08	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.2	0.74	1
Hexachlorobutadiene	ND		ug/kg	3.0	0.12	1
Isopropylbenzene	ND		ug/kg	0.74	0.08	1
p-Isopropyltoluene	ND		ug/kg	0.74	0.08	1
Naphthalene	ND		ug/kg	3.0	0.48	1
Acrylonitrile	ND		ug/kg	3.0	0.85	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-02 Date Collected: 07/24/18 12:15

Client ID: SB-4 (5-7) Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. 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/kg	0.74	0.13	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.5	0.24	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.5	0.20	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.5	0.14	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.5	0.25	1
1,4-Dioxane	ND		ug/kg	74	26.	1
p-Diethylbenzene	ND		ug/kg	1.5	0.13	1
p-Ethyltoluene	ND		ug/kg	1.5	0.28	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	1.5	0.14	1
Ethyl ether	ND		ug/kg	1.5	0.25	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	3.7	1.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	102		70-130

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-03 Date Collected: 07/24/18 15:15
Client ID: TW-3 Date Received: 07/24/18
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/25/18 10:53
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	0.36	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: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-03 Date Collected: 07/24/18 15:15

Client ID: TW-3 Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. 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	20		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: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-03 Date Collected: 07/24/18 15:15

Client ID: TW-3 Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. 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	121		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	110		70-130

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-04 Date Collected: 07/24/18 13:35
Client ID: TW-4 Date Received: 07/24/18
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/25/18 11:21
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	2.3	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	0.24	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	0.82	J	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: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-04 Date Collected: 07/24/18 13:35

Client ID: TW-4 Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. 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	70		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	3.0	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: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-04 Date Collected: 07/24/18 13:35

Client ID: TW-4 Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. 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	117		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	111		70-130

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-05
Client ID: TRIP BLANK
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 00:00
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/25/18 11:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	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: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-05 Date Collected: 07/24/18 00:00

Client ID: TRIP BLANK Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. 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: 13-16 TO 13-30 BCD **Lab Number:** L1828472

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-05 Date Collected: 07/24/18 00:00

Client ID: TRIP BLANK Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. 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	121		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	109		70-130

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/25/18 09:57
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03-05 Batch: WG1139369-5					
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: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/25/18 09:57
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03-05 Batch: WG1139369-5					
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: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/25/18 09:57
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03-05 Batch: WG1139369-5					
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	115		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	108		70-130

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/25/18 09:03
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-02 Batch: WG1139392-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD
Lab Number: L1828472
Report Date: 07/26/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/25/18 09:03
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-02 Batch: WG1139392-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD
Lab Number: L1828472
Report Date: 07/26/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/25/18 09:03
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-02 Batch: WG1139392-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	100	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-05 Batch: WG1139369-3 WG1139369-4								
Methylene chloride	83		84		70-130	1		20
1,1-Dichloroethane	88		89		70-130	1		20
Chloroform	90		92		70-130	2		20
Carbon tetrachloride	99		99		63-132	0		20
1,2-Dichloropropane	86		87		70-130	1		20
Dibromochloromethane	93		95		63-130	2		20
1,1,2-Trichloroethane	84		85		70-130	1		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	86		86		75-130	0		20
Trichlorofluoromethane	90		90		62-150	0		20
1,2-Dichloroethane	96		96		70-130	0		20
1,1,1-Trichloroethane	95		98		67-130	3		20
Bromodichloromethane	91		93		67-130	2		20
trans-1,3-Dichloropropene	90		90		70-130	0		20
cis-1,3-Dichloropropene	86		88		70-130	2		20
1,1-Dichloropropene	87		88		70-130	1		20
Bromoform	120		120		54-136	0		20
1,1,2,2-Tetrachloroethane	77		76		67-130	1		20
Benzene	89		91		70-130	2		20
Toluene	86		83		70-130	4		20
Ethylbenzene	89		88		70-130	1		20
Chloromethane	91		92		64-130	1		20
Bromomethane	81		86		39-139	6		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-05 Batch: WG1139369-3 WG1139369-4								
Vinyl chloride	83		84		55-140	1		20
Chloroethane	92		91		55-138	1		20
1,1-Dichloroethene	87		88		61-145	1		20
trans-1,2-Dichloroethene	90		89		70-130	1		20
Trichloroethene	89		90		70-130	1		20
1,2-Dichlorobenzene	86		86		70-130	0		20
1,3-Dichlorobenzene	88		89		70-130	1		20
1,4-Dichlorobenzene	87		85		70-130	2		20
Methyl tert butyl ether	86		86		63-130	0		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	87		92		70-130	6		20
Dibromomethane	89		88		70-130	1		20
1,2,3-Trichloropropane	79		77		64-130	3		20
Acrylonitrile	93		98		70-130	5		20
Styrene	110		105		70-130	5		20
Dichlorodifluoromethane	52		52		36-147	0		20
Acetone	110		99		58-148	11		20
Carbon disulfide	80		81		51-130	1		20
2-Butanone	110		120		63-138	9		20
Vinyl acetate	110		110		70-130	0		20
4-Methyl-2-pentanone	81		81		59-130	0		20
2-Hexanone	96		99		57-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-05 Batch: WG1139369-3 WG1139369-4								
Bromochloromethane	96		96		70-130	0		20
2,2-Dichloropropane	99		97		63-133	2		20
1,2-Dibromoethane	88		86		70-130	2		20
1,3-Dichloropropane	83		83		70-130	0		20
1,1,1,2-Tetrachloroethane	93		93		64-130	0		20
Bromobenzene	92		90		70-130	2		20
n-Butylbenzene	81		81		53-136	0		20
sec-Butylbenzene	83		83		70-130	0		20
tert-Butylbenzene	85		84		70-130	1		20
o-Chlorotoluene	84		83		70-130	1		20
p-Chlorotoluene	83		83		70-130	0		20
1,2-Dibromo-3-chloropropane	88		86		41-144	2		20
Hexachlorobutadiene	100		100		63-130	0		20
Isopropylbenzene	84		83		70-130	1		20
p-Isopropyltoluene	85		85		70-130	0		20
Naphthalene	78		77		70-130	1		20
n-Propylbenzene	83		81		69-130	2		20
1,2,3-Trichlorobenzene	90		89		70-130	1		20
1,2,4-Trichlorobenzene	91		90		70-130	1		20
1,3,5-Trimethylbenzene	86		85		64-130	1		20
1,2,4-Trimethylbenzene	**58**	Q	**59**	Q	70-130	2		20
1,4-Dioxane	72		70		56-162	3		20
p-Diethylbenzene	82		81		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472

Report Date: 07/26/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-05 Batch: WG1139369-3 WG1139369-4								
p-Ethyltoluene	84		84		70-130	0		20
1,2,4,5-Tetramethylbenzene	83		80		70-130	4		20
Ethyl ether	77		78		59-134	1		20
trans-1,4-Dichloro-2-butene	92		88		70-130	4		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	114		115		70-130
Toluene-d8	102		99		70-130
4-Bromofluorobenzene	93		90		70-130
Dibromofluoromethane	109		107		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-02 Batch: WG1139392-3 WG1139392-4								
Methylene chloride	101		104		70-130	3		30
1,1-Dichloroethane	108		109		70-130	1		30
Chloroform	102		102		70-130	0		30
Carbon tetrachloride	90		89		70-130	1		30
1,2-Dichloropropane	110		105		70-130	5		30
Dibromochloromethane	97		95		70-130	2		30
1,1,2-Trichloroethane	112		105		70-130	6		30
Tetrachloroethene	92		88		70-130	4		30
Chlorobenzene	96		92		70-130	4		30
Trichlorofluoromethane	75		76		70-139	1		30
1,2-Dichloroethane	107		105		70-130	2		30
1,1,1-Trichloroethane	98		97		70-130	1		30
Bromodichloromethane	104		104		70-130	0		30
trans-1,3-Dichloropropene	115		111		70-130	4		30
cis-1,3-Dichloropropene	108		109		70-130	1		30
1,1-Dichloropropene	98		97		70-130	1		30
Bromoform	98		101		70-130	3		30
1,1,2,2-Tetrachloroethane	110		109		70-130	1		30
Benzene	100		101		70-130	1		30
Toluene	109		104		70-130	5		30
Ethylbenzene	102		100		70-130	2		30
Chloromethane	106		103		52-130	3		30
Bromomethane	69		72		57-147	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472

Report Date: 07/26/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-02 Batch: WG1139392-3 WG1139392-4								
Vinyl chloride	96		96		67-130	0		30
Chloroethane	86		84		50-151	2		30
1,1-Dichloroethene	98		96		65-135	2		30
trans-1,2-Dichloroethene	98		96		70-130	2		30
Trichloroethene	95		95		70-130	0		30
1,2-Dichlorobenzene	94		92		70-130	2		30
1,3-Dichlorobenzene	94		95		70-130	1		30
1,4-Dichlorobenzene	91		90		70-130	1		30
Methyl tert butyl ether	97		98		66-130	1		30
p/m-Xylene	102		100		70-130	2		30
o-Xylene	99		97		70-130	2		30
cis-1,2-Dichloroethene	101		98		70-130	3		30
Dibromomethane	98		98		70-130	0		30
Styrene	101		97		70-130	4		30
Dichlorodifluoromethane	98		95		30-146	3		30
Acetone	117		93		54-140	23		30
Carbon disulfide	107		103		59-130	4		30
2-Butanone	86		78		70-130	10		30
Vinyl acetate	102		99		70-130	3		30
4-Methyl-2-pentanone	115		98		70-130	16		30
1,2,3-Trichloropropane	112		112		68-130	0		30
2-Hexanone	85		84		70-130	1		30
Bromochloromethane	91		90		70-130	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-02 Batch: WG1139392-3 WG1139392-4								
2,2-Dichloropropane	109		110		70-130	1		30
1,2-Dibromoethane	101		99		70-130	2		30
1,3-Dichloropropane	116		111		69-130	4		30
1,1,1,2-Tetrachloroethane	96		95		70-130	1		30
Bromobenzene	94		99		70-130	5		30
n-Butylbenzene	107		108		70-130	1		30
sec-Butylbenzene	98		99		70-130	1		30
tert-Butylbenzene	94		95		70-130	1		30
o-Chlorotoluene	105		106		70-130	1		30
p-Chlorotoluene	107		106		70-130	1		30
1,2-Dibromo-3-chloropropane	89		86		68-130	3		30
Hexachlorobutadiene	95		98		67-130	3		30
Isopropylbenzene	97		97		70-130	0		30
p-Isopropyltoluene	95		96		70-130	1		30
Naphthalene	85		87		70-130	2		30
Acrylonitrile	90		96		70-130	6		30
n-Propylbenzene	103		105		70-130	2		30
1,2,3-Trichlorobenzene	97		97		70-130	0		30
1,2,4-Trichlorobenzene	93		94		70-130	1		30
1,3,5-Trimethylbenzene	100		103		70-130	3		30
1,2,4-Trimethylbenzene	104		103		70-130	1		30
1,4-Dioxane	80		78		65-136	3		30
p-Diethylbenzene	91		91		70-130	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472

Report Date: 07/26/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-02 Batch: WG1139392-3 WG1139392-4								
p-Ethyltoluene	99		100		70-130	1		30
1,2,4,5-Tetramethylbenzene	91		91		70-130	0		30
Ethyl ether	99		103		67-130	4		30
trans-1,4-Dichloro-2-butene	108		114		70-130	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	106		105		70-130
Toluene-d8	104		101		70-130
4-Bromofluorobenzene	108		108		70-130
Dibromofluoromethane	99		99		70-130

INORGANICS
&
MISCELLANEOUS

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-01
Client ID: SB-3 (5-7)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 13:40
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.6		%	0.100	NA	1	-	07/25/18 09:05	121,2540G	RI

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

SAMPLE RESULTS

Lab ID: L1828472-02
Client ID: SB-4 (5-7)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 12:15
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92.5		%	0.100	NA	1	-	07/25/18 09:05	121,2540G	RI

Lab Duplicate Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472

Report Date: 07/26/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1139262-1 QC Sample: L1828445-12 Client ID: DUP Sample						
Solids, Total	87.7	89.6	%	2		20

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828472
Report Date: 07/26/18

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(*)
L1828472-01A	Vial Large Septa unpreserved (4oz)	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L1828472-01B	Glass 60ml unpreserved split	A	NA		2.4	Y	Absent		TS(7)
L1828472-01X	Vial MeOH preserved split	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L1828472-01Y	Vial Water preserved split	A	NA		2.4	Y	Absent	25-JUL-18 04:46	NYTCL-8260(14)
L1828472-01Z	Vial Water preserved split	A	NA		2.4	Y	Absent	25-JUL-18 04:46	NYTCL-8260(14)
L1828472-02A	Vial Large Septa unpreserved (4oz)	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L1828472-02B	Glass 60ml unpreserved split	A	NA		2.4	Y	Absent		TS(7)
L1828472-02X	Vial MeOH preserved split	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L1828472-02Y	Vial Water preserved split	A	NA		2.4	Y	Absent	25-JUL-18 04:46	NYTCL-8260(14)
L1828472-02Z	Vial Water preserved split	A	NA		2.4	Y	Absent	25-JUL-18 04:46	NYTCL-8260(14)
L1828472-03A	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L1828472-03B	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L1828472-03C	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L1828472-04A	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L1828472-04B	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L1828472-04C	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L1828472-05A	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L1828472-05B	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	13-16 TO 13-30 BCD	**Lab Number:**	L1828472
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/26/18

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).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
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.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
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.

Report Format: DU Report with 'J' Qualifiers

Project Name:	13-16 TO 13-30 BCD	**Lab Number:**	L1828472
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/26/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the 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:	13-16 TO 13-30 BCD	**Lab Number:**	L1828472
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/26/18

REFERENCES

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

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

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

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 of

Project Information

Project Name: 13-16 to 13-30 BCD
Project Location: 13-16 to 13-30 Beach Channel Dr
Project #
(Use Project name as Project #) X
Project Manager:
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:

Client Information

Client: Haren Env
Address: 121 N 2nd St, Fl 702
Ny NY 10001
Phone: 646-606-2332
Fax:
Email: mahmed@haren-env.com

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

* VOCs (soil & gw) 2 DAY TAT; SVOCs & Metals (soil & gw) Standard TAT

Please specify Metals or TAL.

ANALYSIS

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

Total # Bottles

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	SVOCs	metals						Sample Specific Comments
2042[illegible]-1	SB-3 (5-7)	7/24/18	1340	S	SB	X	X	X						
-2	SB-4 (5-7)		1215	S		X	X	X						
-3	TW-3		1535	GW		X	X							
-4	TW-4		1335	GW		X	X							
-5	Trip blank													

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

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

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

Container Type	A/V	A	A		
Preservative	A/B	A	A		

Relinquished By:	Date/Time	Received By:	Date/Time
	7/24/18 1620		7/24-18 16:20
	7/24-18 1950		7/24/18 2320
	7/24 2315		7/25/18 0220

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:	L1828521
Client:	Tenen Environmental, LLC 121 West 27th Street Suite 702 New York City, NY 10001
ATTN:	Mohamed Ahmed
Phone:	(646) 606-2332
Project Name:	13-16 TO 13-30 BCD
Project Number:	13-16 TO 13-30 BCD
Report Date:	07/31/18

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1828521-01	SB-3 (5-7)	SOIL	13-16 TO 13-30 BEACH CHANNEL DR.	07/24/18 13:40	07/24/18
L1828521-02	SB-4 (5-7)	SOIL	13-16 TO 13-30 BEACH CHANNEL DR.	07/24/18 12:15	07/24/18
L1828521-03	TW-3	WATER	13-16 TO 13-30 BEACH CHANNEL DR.	07/24/18 15:15	07/24/18
L1828521-04	TW-4	WATER	13-16 TO 13-30 BEACH CHANNEL DR.	07/24/18 13:35	07/24/18

Project Name:	13-16 TO 13-30 BCD	**Lab Number:**	L1828521
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/31/18

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:	13-16 TO 13-30 BCD	**Lab Number:**	L1828521
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/31/18

Case Narrative (continued)

Report Submission

The results of the Volatile Organics analysis were issued under separate cover.

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

Semivolatile Organics

The WG1140027-3 LCSD recovery, associated with L1828521-03 and -04, is below the acceptance criteria for benzoic acid (0%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

Total Metals

L1828521-01 and -02: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by matrix interferences encountered during analysis.

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: Melissa Cripps Melissa Cripps

Title: Technical Director/Representative Date: 07/31/18

ORGANICS

SEMIVOLATILES

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD
Lab Number: L1828521
Report Date: 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-01
Client ID: SB-3 (5-7)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 13:40
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 07/30/18 18:58
Analyst: ALS
Percent Solids: 90%

Extraction Method: EPA 3546
Extraction Date: 07/28/18 11:53

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	19.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	21.	1
Hexachlorobenzene	ND		ug/kg	110	20.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	24.	1
2-Chloronaphthalene	ND		ug/kg	180	18.	1
1,2-Dichlorobenzene	ND		ug/kg	180	32.	1
1,3-Dichlorobenzene	ND		ug/kg	180	31.	1
1,4-Dichlorobenzene	ND		ug/kg	180	32.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	48.	1
2,4-Dinitrotoluene	ND		ug/kg	180	36.	1
2,6-Dinitrotoluene	ND		ug/kg	180	31.	1
Fluoranthene	ND		ug/kg	110	21.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	19.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	28.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	31.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	18.	1
Hexachlorobutadiene	ND		ug/kg	180	26.	1
Hexachlorocyclopentadiene	ND		ug/kg	520	160	1
Hexachloroethane	ND		ug/kg	140	29.	1
Isophorone	ND		ug/kg	160	23.	1
Naphthalene	ND		ug/kg	180	22.	1
Nitrobenzene	ND		ug/kg	160	27.	1
NDPA/DPA	ND		ug/kg	140	20.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	28.	1
Bis(2-ethylhexyl)phthalate	120	J	ug/kg	180	62.	1
Butyl benzyl phthalate	ND		ug/kg	180	45.	1
Di-n-butylphthalate	ND		ug/kg	180	34.	1
Di-n-octylphthalate	ND		ug/kg	180	61.	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828521

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-01 Date Collected: 07/24/18 13:40

Client ID: SB-3 (5-7) Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	180	17.	1
Dimethyl phthalate	ND		ug/kg	180	38.	1
Benzo(a)anthracene	ND		ug/kg	110	20.	1
Benzo(a)pyrene	ND		ug/kg	140	44.	1
Benzo(b)fluoranthene	ND		ug/kg	110	30.	1
Benzo(k)fluoranthene	ND		ug/kg	110	29.	1
Chrysene	ND		ug/kg	110	19.	1
Acenaphthylene	ND		ug/kg	140	28.	1
Anthracene	ND		ug/kg	110	35.	1
Benzo(ghi)perylene	ND		ug/kg	140	21.	1
Fluorene	ND		ug/kg	180	18.	1
Phenanthrene	ND		ug/kg	110	22.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	21.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	140	25.	1
Pyrene	ND		ug/kg	110	18.	1
Biphenyl	ND		ug/kg	410	42.	1
4-Chloroaniline	ND		ug/kg	180	33.	1
2-Nitroaniline	ND		ug/kg	180	35.	1
3-Nitroaniline	ND		ug/kg	180	34.	1
4-Nitroaniline	ND		ug/kg	180	75.	1
Dibenzofuran	ND		ug/kg	180	17.	1
2-Methylnaphthalene	ND		ug/kg	220	22.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	19.	1
Acetophenone	ND		ug/kg	180	22.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
p-Chloro-m-cresol	ND		ug/kg	180	27.	1
2-Chlorophenol	ND		ug/kg	180	21.	1
2,4-Dichlorophenol	ND		ug/kg	160	29.	1
2,4-Dimethylphenol	ND		ug/kg	180	60.	1
2-Nitrophenol	ND		ug/kg	390	68.	1
4-Nitrophenol	ND		ug/kg	250	74.	1
2,4-Dinitrophenol	ND		ug/kg	870	84.	1
4,6-Dinitro-o-cresol	ND		ug/kg	470	87.	1
Pentachlorophenol	ND		ug/kg	140	40.	1
Phenol	ND		ug/kg	180	27.	1
2-Methylphenol	ND		ug/kg	180	28.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	28.	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828521

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-01 Date Collected: 07/24/18 13:40

Client ID: SB-3 (5-7) Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	180	34.	1
Benzoic Acid	ND		ug/kg	580	180	1
Benzyl Alcohol	ND		ug/kg	180	55.	1
Carbazole	ND		ug/kg	180	18.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		25-120
Phenol-d6	70		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	67		30-120
2,4,6-Tribromophenol	74		10-136
4-Terphenyl-d14	64		18-120

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828521
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-02
Client ID: SB-4 (5-7)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 12:15
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 07/30/18 19:23
Analyst: ALS
Percent Solids: 93%

Extraction Method: EPA 3546
Extraction Date: 07/28/18 11:53

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	18.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	20.	1
Hexachlorobenzene	ND		ug/kg	110	20.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	24.	1
2-Chloronaphthalene	ND		ug/kg	180	18.	1
1,2-Dichlorobenzene	ND		ug/kg	180	32.	1
1,3-Dichlorobenzene	ND		ug/kg	180	30.	1
1,4-Dichlorobenzene	ND		ug/kg	180	31.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	47.	1
2,4-Dinitrotoluene	ND		ug/kg	180	35.	1
2,6-Dinitrotoluene	ND		ug/kg	180	30.	1
Fluoranthene	ND		ug/kg	110	20.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	19.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	27.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	30.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	18.	1
Hexachlorobutadiene	ND		ug/kg	180	26.	1
Hexachlorocyclopentadiene	ND		ug/kg	510	160	1
Hexachloroethane	ND		ug/kg	140	29.	1
Isophorone	ND		ug/kg	160	23.	1
Naphthalene	ND		ug/kg	180	22.	1
Nitrobenzene	ND		ug/kg	160	26.	1
NDPA/DPA	ND		ug/kg	140	20.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	27.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	180	61.	1
Butyl benzyl phthalate	ND		ug/kg	180	45.	1
Di-n-butylphthalate	ND		ug/kg	180	34.	1
Di-n-octylphthalate	ND		ug/kg	180	60.	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828521

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-02 Date Collected: 07/24/18 12:15

Client ID: SB-4 (5-7) Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	180	16.	1
Dimethyl phthalate	ND		ug/kg	180	37.	1
Benzo(a)anthracene	ND		ug/kg	110	20.	1
Benzo(a)pyrene	ND		ug/kg	140	43.	1
Benzo(b)fluoranthene	ND		ug/kg	110	30.	1
Benzo(k)fluoranthene	ND		ug/kg	110	28.	1
Chrysene	ND		ug/kg	110	18.	1
Acenaphthylene	ND		ug/kg	140	27.	1
Anthracene	ND		ug/kg	110	34.	1
Benzo(ghi)perylene	ND		ug/kg	140	21.	1
Fluorene	ND		ug/kg	180	17.	1
Phenanthrene	ND		ug/kg	110	22.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	20.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	140	25.	1
Pyrene	ND		ug/kg	110	18.	1
Biphenyl	ND		ug/kg	400	41.	1
4-Chloroaniline	ND		ug/kg	180	32.	1
2-Nitroaniline	ND		ug/kg	180	34.	1
3-Nitroaniline	ND		ug/kg	180	33.	1
4-Nitroaniline	ND		ug/kg	180	73.	1
Dibenzofuran	ND		ug/kg	180	17.	1
2-Methylnaphthalene	ND		ug/kg	210	21.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	18.	1
Acetophenone	ND		ug/kg	180	22.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
p-Chloro-m-cresol	ND		ug/kg	180	26.	1
2-Chlorophenol	ND		ug/kg	180	21.	1
2,4-Dichlorophenol	ND		ug/kg	160	28.	1
2,4-Dimethylphenol	ND		ug/kg	180	58.	1
2-Nitrophenol	ND		ug/kg	380	67.	1
4-Nitrophenol	ND		ug/kg	250	72.	1
2,4-Dinitrophenol	ND		ug/kg	850	83.	1
4,6-Dinitro-o-cresol	ND		ug/kg	460	85.	1
Pentachlorophenol	ND		ug/kg	140	39.	1
Phenol	ND		ug/kg	180	27.	1
2-Methylphenol	ND		ug/kg	180	27.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	28.	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828521

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-02 Date Collected: 07/24/18 12:15

Client ID: SB-4 (5-7) Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	180	34.	1
Benzoic Acid	ND		ug/kg	570	180	1
Benzyl Alcohol	ND		ug/kg	180	54.	1
Carbazole	ND		ug/kg	180	17.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		25-120
Phenol-d6	82		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	81		30-120
2,4,6-Tribromophenol	87		10-136
4-Terphenyl-d14	79		18-120

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828521
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-03
Client ID: TW-3
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 15:15
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 07/29/18 22:00
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/27/18 08:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	0.44	J	ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828521

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-03 Date Collected: 07/24/18 15:15

Client ID: TW-3 Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		21-120
Phenol-d6	63		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	88		15-120
2,4,6-Tribromophenol	89		10-120
4-Terphenyl-d14	113		41-149

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828521
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-03
Client ID: TW-3
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 15:15
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 07/29/18 20:59
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 07/27/18 08:53

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828521

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-03 Date Collected: 07/24/18 15:15

Client ID: TW-3 Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		21-120
Phenol-d6	60		10-120
Nitrobenzene-d5	103		23-120
2-Fluorobiphenyl	89		15-120
2,4,6-Tribromophenol	108		10-120
4-Terphenyl-d14	118		41-149

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828521
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-04
Client ID: TW-4
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 13:35
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 07/29/18 22:28
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/27/18 08:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	1.4	J	ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828521

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-04 Date Collected: 07/24/18 13:35

Client ID: TW-4 Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	9.8		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	84.		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	24.	J	ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		21-120
Phenol-d6	60		10-120
Nitrobenzene-d5	87		23-120
2-Fluorobiphenyl	92		15-120
2,4,6-Tribromophenol	86		10-120
4-Terphenyl-d14	111		41-149

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828521
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-04
Client ID: TW-4
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 13:35
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 07/29/18 21:25
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 07/27/18 08:53

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: 13-16 TO 13-30 BCD **Lab Number:** L1828521

Project Number: 13-16 TO 13-30 BCD **Report Date:** 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-04 Date Collected: 07/24/18 13:35

Client ID: TW-4 Date Received: 07/24/18

Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR. Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		21-120
Phenol-d6	57		10-120
Nitrobenzene-d5	106		23-120
2-Fluorobiphenyl	89		15-120
2,4,6-Tribromophenol	110		10-120
4-Terphenyl-d14	116		41-149

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/27/18 20:59
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 07/26/18 23:29

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03-04 Batch: WG1140027-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Fluoranthene	ND		ug/l	2.0	0.26
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.66
Hexachlorocyclopentadiene	ND		ug/l	20	0.69
Hexachloroethane	ND		ug/l	2.0	0.58
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
NDPA/DPA	ND		ug/l	2.0	0.42
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/27/18 20:59
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 07/26/18 23:29

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03-04 Batch: WG1140027-1					
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Biphenyl	ND		ug/l	2.0	0.46
4-Chloroaniline	ND		ug/l	5.0	1.1
2-Nitroaniline	ND		ug/l	5.0	0.50
3-Nitroaniline	ND		ug/l	5.0	0.81
4-Nitroaniline	ND		ug/l	5.0	0.80
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/27/18 20:59
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 07/26/18 23:29

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03-04 Batch: WG1140027-1					
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77
Benzoic Acid	ND		ug/l	50	2.6
Benzyl Alcohol	ND		ug/l	2.0	0.59
Carbazole	ND		ug/l	2.0	0.49
Tentatively Identified Compounds					
Total TIC Compounds	37.7	J	ug/l		
Unknown	1.64	J	ug/l		
Aldol Condensates	36.1	J	ug/l		

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		21-120
Phenol-d6	74		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	91		15-120
2,4,6-Tribromophenol	52		10-120
4-Terphenyl-d14	119		41-149

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 07/27/18 15:39
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 07/26/18 23:32

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 03-04 Batch: WG1140028-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.02
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.01
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 07/27/18 15:39
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 07/26/18 23:32

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 03-04 Batch: WG1140028-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		21-120
Phenol-d6	69		10-120
Nitrobenzene-d5	104		23-120
2-Fluorobiphenyl	96		15-120
2,4,6-Tribromophenol	112		10-120
4-Terphenyl-d14	125		41-149

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/29/18 13:15
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 07/28/18 03:40

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1140471-1					
Acenaphthene	ND		ug/kg	130	17.
1,2,4-Trichlorobenzene	ND		ug/kg	160	18.
Hexachlorobenzene	ND		ug/kg	97	18.
Bis(2-chloroethyl)ether	ND		ug/kg	140	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
1,2-Dichlorobenzene	ND		ug/kg	160	29.
1,3-Dichlorobenzene	ND		ug/kg	160	28.
1,4-Dichlorobenzene	ND		ug/kg	160	28.
3,3'-Dichlorobenzidine	ND		ug/kg	160	43.
2,4-Dinitrotoluene	ND		ug/kg	160	32.
2,6-Dinitrotoluene	ND		ug/kg	160	28.
Fluoranthene	ND		ug/kg	97	18.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	17.
4-Bromophenyl phenyl ether	ND		ug/kg	160	25.
Bis(2-chloroisopropyl)ether	ND		ug/kg	190	28.
Bis(2-chloroethoxy)methane	ND		ug/kg	170	16.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	460	150
Hexachloroethane	ND		ug/kg	130	26.
Isophorone	ND		ug/kg	140	21.
Naphthalene	ND		ug/kg	160	20.
Nitrobenzene	ND		ug/kg	140	24.
NDPA/DPA	ND		ug/kg	130	18.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	25.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	56.
Butyl benzyl phthalate	ND		ug/kg	160	41.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	55.
Diethyl phthalate	ND		ug/kg	160	15.

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/29/18 13:15
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 07/28/18 03:40

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1140471-1					
Dimethyl phthalate	ND		ug/kg	160	34.
Benzo(a)anthracene	ND		ug/kg	97	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	97	27.
Benzo(k)fluoranthene	ND		ug/kg	97	26.
Chrysene	ND		ug/kg	97	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	97	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	97	20.
Dibenzo(a,h)anthracene	ND		ug/kg	97	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	22.
Pyrene	ND		ug/kg	97	16.
Biphenyl	ND		ug/kg	370	38.
4-Chloroaniline	ND		ug/kg	160	29.
2-Nitroaniline	ND		ug/kg	160	31.
3-Nitroaniline	ND		ug/kg	160	30.
4-Nitroaniline	ND		ug/kg	160	67.
Dibenzofuran	ND		ug/kg	160	15.
2-Methylnaphthalene	ND		ug/kg	190	20.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	17.
Acetophenone	ND		ug/kg	160	20.
2,4,6-Trichlorophenol	ND		ug/kg	97	31.
p-Chloro-m-cresol	ND		ug/kg	160	24.
2-Chlorophenol	ND		ug/kg	160	19.
2,4-Dichlorophenol	ND		ug/kg	140	26.
2,4-Dimethylphenol	ND		ug/kg	160	53.
2-Nitrophenol	ND		ug/kg	350	61.

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/29/18 13:15
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 07/28/18 03:40

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1140471-1					
4-Nitrophenol	ND		ug/kg	230	66.
2,4-Dinitrophenol	ND		ug/kg	780	75.
4,6-Dinitro-o-cresol	ND		ug/kg	420	78.
Pentachlorophenol	ND		ug/kg	130	36.
Phenol	ND		ug/kg	160	24.
2-Methylphenol	ND		ug/kg	160	25.
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	25.
2,4,5-Trichlorophenol	ND		ug/kg	160	31.
Benzoic Acid	ND		ug/kg	520	160
Benzyl Alcohol	ND		ug/kg	160	50.
Carbazole	ND		ug/kg	160	16.
Tentatively Identified Compounds					
No Tentatively Identified Compounds	ND		ug/kg		

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	115		25-120
Phenol-d6	119		10-120
Nitrobenzene-d5	109		23-120
2-Fluorobiphenyl	105		30-120
2,4,6-Tribromophenol	107		10-136
4-Terphenyl-d14	**121**	Q	18-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521

Report Date: 07/31/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-04 Batch: WG1140027-2 WG1140027-3								
Acenaphthene	74		78		37-111	5		30
1,2,4-Trichlorobenzene	65		69		39-98	6		30
Hexachlorobenzene	76		79		40-140	4		30
Bis(2-chloroethyl)ether	66		72		40-140	9		30
2-Chloronaphthalene	73		77		40-140	5		30
1,2-Dichlorobenzene	60		67		40-140	11		30
1,3-Dichlorobenzene	59		66		40-140	11		30
1,4-Dichlorobenzene	59		66		36-97	11		30
3,3'-Dichlorobenzidine	70		70		40-140	0		30
2,4-Dinitrotoluene	72		74		48-143	3		30
2,6-Dinitrotoluene	81		84		40-140	4		30
Fluoranthene	80		81		40-140	1		30
4-Chlorophenyl phenyl ether	74		80		40-140	8		30
4-Bromophenyl phenyl ether	74		80		40-140	8		30
Bis(2-chloroisopropyl)ether	65		70		40-140	7		30
Bis(2-chloroethoxy)methane	70		72		40-140	3		30
Hexachlorobutadiene	62		70		40-140	12		30
Hexachlorocyclopentadiene	51		57		40-140	11		30
Hexachloroethane	58		65		40-140	11		30
Isophorone	68		73		40-140	7		30
Naphthalene	68		74		40-140	8		30
Nitrobenzene	66		72		40-140	9		30
NDPA/DPA	80		82		40-140	2		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-04 Batch: WG1140027-2 WG1140027-3								
n-Nitrosodi-n-propylamine	71		75		29-132	5		30
Bis(2-ethylhexyl)phthalate	82		84		40-140	2		30
Butyl benzyl phthalate	77		81		40-140	5		30
Di-n-butylphthalate	77		79		40-140	3		30
Di-n-octylphthalate	73		77		40-140	5		30
Diethyl phthalate	79		82		40-140	4		30
Dimethyl phthalate	82		85		40-140	4		30
Benzo(a)anthracene	75		78		40-140	4		30
Benzo(a)pyrene	83		86		40-140	4		30
Benzo(b)fluoranthene	76		87		40-140	13		30
Benzo(k)fluoranthene	85		80		40-140	6		30
Chrysene	78		76		40-140	3		30
Acenaphthylene	75		78		45-123	4		30
Anthracene	77		79		40-140	3		30
Benzo(ghi)perylene	81		84		40-140	4		30
Fluorene	76		81		40-140	6		30
Phenanthrene	76		78		40-140	3		30
Dibenzo(a,h)anthracene	81		83		40-140	2		30
Indeno(1,2,3-cd)pyrene	83		90		40-140	8		30
Pyrene	78		80		26-127	3		30
Biphenyl	74		80		40-140	8		30
4-Chloroaniline	54		53		40-140	2		30
2-Nitroaniline	74		75		52-143	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-04 Batch: WG1140027-2 WG1140027-3								
3-Nitroaniline	68		72		25-145	6		30
4-Nitroaniline	72		74		51-143	3		30
Dibenzofuran	74		78		40-140	5		30
2-Methylnaphthalene	71		76		40-140	7		30
1,2,4,5-Tetrachlorobenzene	69		74		2-134	7		30
Acetophenone	66		72		39-129	9		30
2,4,6-Trichlorophenol	71		74		30-130	4		30
p-Chloro-m-cresol	79		79		23-97	0		30
2-Chlorophenol	68		72		27-123	6		30
2,4-Dichlorophenol	72		77		30-130	7		30
2,4-Dimethylphenol	72		61		30-130	17		30
2-Nitrophenol	68		76		30-130	11		30
4-Nitrophenol	61		64		10-80	5		30
2,4-Dinitrophenol	43		40		20-130	7		30
4,6-Dinitro-o-cresol	66		66		20-164	0		30
Pentachlorophenol	53		51		9-103	4		30
Phenol	56		59		12-110	5		30
2-Methylphenol	70		72		30-130	3		30
3-Methylphenol/4-Methylphenol	70		71		30-130	1		30
2,4,5-Trichlorophenol	80		79		30-130	1		30
Benzoic Acid	50		**0**	Q	10-164	NC		30
Benzyl Alcohol	61		65		26-116	6		30
Carbazole	79		80		55-144	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521

Report Date: 07/31/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03-04 Batch: WG1140027-2 WG1140027-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	66		71		21-120
Phenol-d6	59		62		10-120
Nitrobenzene-d5	70		78		23-120
2-Fluorobiphenyl	82		87		15-120
2,4,6-Tribromophenol	76		81		10-120
4-Terphenyl-d14	99		103		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 03-04 Batch: WG1140028-2 WG1140028-3								
Acenaphthene	82		81		40-140	1		40
2-Chloronaphthalene	82		80		40-140	2		40
Fluoranthene	99		98		40-140	1		40
Hexachlorobutadiene	74		72		40-140	3		40
Naphthalene	74		73		40-140	1		40
Benzo(a)anthracene	87		84		40-140	4		40
Benzo(a)pyrene	96		93		40-140	3		40
Benzo(b)fluoranthene	94		91		40-140	3		40
Benzo(k)fluoranthene	97		92		40-140	5		40
Chrysene	84		83		40-140	1		40
Acenaphthylene	98		96		40-140	2		40
Anthracene	91		88		40-140	3		40
Benzo(ghi)perylene	77		78		40-140	1		40
Fluorene	92		91		40-140	1		40
Phenanthrene	80		79		40-140	1		40
Dibenzo(a,h)anthracene	87		81		40-140	7		40
Indeno(1,2,3-cd)pyrene	76		77		40-140	1		40
Pyrene	96		94		40-140	2		40
2-Methylnaphthalene	79		78		40-140	1		40
Pentachlorophenol	78		70		40-140	11		40
Hexachlorobenzene	81		79		40-140	3		40
Hexachloroethane	71		69		40-140	3		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521

Report Date: 07/31/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 03-04 Batch: WG1140028-2 WG1140028-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	70		73		21-120
Phenol-d6	59		62		10-120
Nitrobenzene-d5	96		97		23-120
2-Fluorobiphenyl	83		86		15-120
2,4,6-Tribromophenol	90		99		10-120
4-Terphenyl-d14	105		109		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1140471-2 WG1140471-3								
Acenaphthene	97		102		31-137	5		50
1,2,4-Trichlorobenzene	96		95		38-107	1		50
Hexachlorobenzene	101		108		40-140	7		50
Bis(2-chloroethyl)ether	97		96		40-140	1		50
2-Chloronaphthalene	100		104		40-140	4		50
1,2-Dichlorobenzene	93		93		40-140	0		50
1,3-Dichlorobenzene	90		88		40-140	2		50
1,4-Dichlorobenzene	91		90		28-104	1		50
3,3'-Dichlorobenzidine	95		98		40-140	3		50
2,4-Dinitrotoluene	109		116		40-132	6		50
2,6-Dinitrotoluene	110		112		40-140	2		50
Fluoranthene	108		112		40-140	4		50
4-Chlorophenyl phenyl ether	97		104		40-140	7		50
4-Bromophenyl phenyl ether	105		110		40-140	5		50
Bis(2-chloroisopropyl)ether	100		98		40-140	2		50
Bis(2-chloroethoxy)methane	103		102		40-117	1		50
Hexachlorobutadiene	93		94		40-140	1		50
Hexachlorocyclopentadiene	69		74		40-140	7		50
Hexachloroethane	88		86		40-140	2		50
Isophorone	101		101		40-140	0		50
Naphthalene	94		97		40-140	3		50
Nitrobenzene	97		95		40-140	2		50
NDPA/DPA	103		108		36-157	5		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1140471-2 WG1140471-3								
n-Nitrosodi-n-propylamine	100		100		32-121	0		50
Bis(2-ethylhexyl)phthalate	106		108		40-140	2		50
Butyl benzyl phthalate	111		112		40-140	1		50
Di-n-butylphthalate	106		110		40-140	4		50
Di-n-octylphthalate	106		108		40-140	2		50
Diethyl phthalate	100		104		40-140	4		50
Dimethyl phthalate	102		107		40-140	5		50
Benzo(a)anthracene	101		103		40-140	2		50
Benzo(a)pyrene	109		109		40-140	0		50
Benzo(b)fluoranthene	101		117		40-140	15		50
Benzo(k)fluoranthene	110		97		40-140	13		50
Chrysene	102		104		40-140	2		50
Acenaphthylene	103		108		40-140	5		50
Anthracene	104		109		40-140	5		50
Benzo(ghi)perylene	103		107		40-140	4		50
Fluorene	100		106		40-140	6		50
Phenanthrene	101		105		40-140	4		50
Dibenzo(a,h)anthracene	103		108		40-140	5		50
Indeno(1,2,3-cd)pyrene	103		110		40-140	7		50
Pyrene	105		107		35-142	2		50
Biphenyl	103		**109**	Q	54-104	6		50
4-Chloroaniline	82		87		40-140	6		50
2-Nitroaniline	108		114		47-134	5		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1140471-2 WG1140471-3								
3-Nitroaniline	87		91		26-129	4		50
4-Nitroaniline	100		104		41-125	4		50
Dibenzofuran	99		107		40-140	8		50
2-Methylnaphthalene	99		104		40-140	5		50
1,2,4,5-Tetrachlorobenzene	101		106		40-117	5		50
Acetophenone	102		103		14-144	1		50
2,4,6-Trichlorophenol	104		111		30-130	7		50
p-Chloro-m-cresol	**104**	Q	**112**	Q	26-103	7		50
2-Chlorophenol	**103**	Q	**104**	Q	25-102	1		50
2,4-Dichlorophenol	108		111		30-130	3		50
2,4-Dimethylphenol	107		107		30-130	0		50
2-Nitrophenol	103		103		30-130	0		50
4-Nitrophenol	107		**115**	Q	11-114	7		50
2,4-Dinitrophenol	75		89		4-130	17		50
4,6-Dinitro-o-cresol	92		103		10-130	11		50
Pentachlorophenol	88		96		17-109	9		50
Phenol	**102**	Q	**100**	Q	26-90	2		50
2-Methylphenol	108		110		30-130.	2		50
3-Methylphenol/4-Methylphenol	105		106		30-130	1		50
2,4,5-Trichlorophenol	107		116		30-130	8		50
Benzoic Acid	46		56		10-110	20		50
Benzyl Alcohol	104		103		40-140	1		50
Carbazole	107		110		54-128	3		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521

Report Date: 07/31/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1140471-2 WG1140471-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	106		105		25-120
Phenol-d6	111		112		10-120
Nitrobenzene-d5	102		102		23-120
2-Fluorobiphenyl	103		107		30-120
2,4,6-Tribromophenol	110		117		10-136
4-Terphenyl-d14	112		115		18-120

METALS

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828521
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-01
Client ID: SB-3 (5-7)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.
Date Collected: 07/24/18 13:40
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	543		mg/kg	8.51	2.30	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Antimony, Total	ND		mg/kg	4.25	0.323	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Arsenic, Total	1.55		mg/kg	0.851	0.177	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Barium, Total	2.37		mg/kg	0.851	0.148	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Beryllium, Total	0.043	J	mg/kg	0.425	0.028	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.851	0.083	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Calcium, Total	218		mg/kg	8.51	2.98	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Chromium, Total	4.46		mg/kg	0.851	0.082	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Cobalt, Total	0.349	J	mg/kg	1.70	0.141	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Copper, Total	0.868		mg/kg	0.851	0.219	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Iron, Total	2080		mg/kg	4.25	0.768	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Lead, Total	0.970	J	mg/kg	4.25	0.228	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Magnesium, Total	60.5		mg/kg	8.51	1.31	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Manganese, Total	8.89		mg/kg	0.851	0.135	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Mercury, Total	ND		mg/kg	0.070	0.015	1	07/26/18 08:00	07/27/18 20:24	EPA 7471B	1,7471B	EA
Nickel, Total	1.45	J	mg/kg	2.13	0.206	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Potassium, Total	62.6	J	mg/kg	213	12.2	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Selenium, Total	ND		mg/kg	1.70	0.219	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Silver, Total	ND		mg/kg	0.851	0.241	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Sodium, Total	9.85	J	mg/kg	170	2.68	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Thallium, Total	ND		mg/kg	1.70	0.268	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Vanadium, Total	2.67		mg/kg	0.851	0.173	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC
Zinc, Total	4.04	J	mg/kg	4.25	0.249	2	07/31/18 08:00	07/31/18 14:08	EPA 3050B	1,6010D	LC

Project Name: 13-16 TO 13-30 BCD
Lab Number: L1828521
Project Number: 13-16 TO 13-30 BCD
Report Date: 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-02
Client ID: SB-4 (5-7)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.
Date Collected: 07/24/18 12:15
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	414		mg/kg	8.19	2.21	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Antimony, Total	ND		mg/kg	4.10	0.311	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Arsenic, Total	2.01		mg/kg	0.819	0.170	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Barium, Total	2.13		mg/kg	0.819	0.142	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Beryllium, Total	0.041	J	mg/kg	0.410	0.027	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.819	0.080	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Calcium, Total	945		mg/kg	8.19	2.87	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Chromium, Total	5.18		mg/kg	0.819	0.079	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Cobalt, Total	0.475	J	mg/kg	1.64	0.136	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Copper, Total	1.20		mg/kg	0.819	0.211	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Iron, Total	2820		mg/kg	4.10	0.740	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Lead, Total	0.803	J	mg/kg	4.10	0.219	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Magnesium, Total	47.1		mg/kg	8.19	1.26	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Manganese, Total	16.7		mg/kg	0.819	0.130	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Mercury, Total	ND		mg/kg	0.068	0.014	1	07/26/18 08:00	07/27/18 20:25	EPA 7471B	1,7471B	EA
Nickel, Total	1.86	J	mg/kg	2.05	0.198	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Potassium, Total	47.2	J	mg/kg	205	11.8	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Selenium, Total	0.319	J	mg/kg	1.64	0.211	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Silver, Total	ND		mg/kg	0.819	0.232	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Sodium, Total	9.48	J	mg/kg	164	2.58	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Thallium, Total	ND		mg/kg	1.64	0.258	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Vanadium, Total	3.53		mg/kg	0.819	0.166	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC
Zinc, Total	3.83	J	mg/kg	4.10	0.240	2	07/31/18 08:00	07/31/18 14:13	EPA 3050B	1,6010D	LC

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD
Lab Number: L1828521
Report Date: 07/31/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1139656-1										
Mercury, Total	ND		mg/kg	0.083	0.018	1	07/26/18 08:00	07/27/18 19:37	1,7471B	EA

Prep Information

Digestion Method: EPA 7471B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1141144-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Antimony, Total	ND		mg/kg	2.00	0.152	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Arsenic, Total	ND		mg/kg	0.400	0.083	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Barium, Total	ND		mg/kg	0.400	0.070	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Beryllium, Total	ND		mg/kg	0.200	0.013	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.400	0.039	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Calcium, Total	ND		mg/kg	4.00	1.40	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Chromium, Total	ND		mg/kg	0.400	0.038	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Cobalt, Total	ND		mg/kg	0.800	0.066	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Copper, Total	ND		mg/kg	0.400	0.103	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Iron, Total	1.52	J	mg/kg	2.00	0.361	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Lead, Total	ND		mg/kg	2.00	0.107	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Magnesium, Total	ND		mg/kg	4.00	0.616	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Manganese, Total	0.216	J	mg/kg	0.400	0.064	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Nickel, Total	ND		mg/kg	1.00	0.097	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Potassium, Total	ND		mg/kg	100	5.76	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Selenium, Total	ND		mg/kg	0.800	0.103	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Silver, Total	ND		mg/kg	0.400	0.113	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Sodium, Total	1.73	J	mg/kg	80.0	1.26	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Thallium, Total	ND		mg/kg	0.800	0.126	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Vanadium, Total	ND		mg/kg	0.400	0.081	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC
Zinc, Total	ND		mg/kg	2.00	0.117	1	07/31/18 08:00	07/31/18 12:32	1,6010D	LC

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD
Lab Number: L1828521
Report Date: 07/31/18

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521

Report Date: 07/31/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1139656-2 SRM Lot Number: D098-540								
Mercury, Total	117		-		50-149	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521

Report Date: 07/31/18

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1141144-2 SRM Lot Number: D098-540					
Aluminum, Total	61	-	47-153	-	
Antimony, Total	142	-	6-194	-	
Arsenic, Total	90	-	83-117	-	
Barium, Total	102	-	82-118	-	
Beryllium, Total	99	-	83-117	-	
Cadmium, Total	84	-	82-117	-	
Calcium, Total	98	-	81-118	-	
Chromium, Total	98	-	83-119	-	
Cobalt, Total	86	-	84-116	-	
Copper, Total	98	-	84-116	-	
Iron, Total	79	-	60-140	-	
Lead, Total	85	-	82-117	-	
Magnesium, Total	90	-	76-124	-	
Manganese, Total	98	-	82-118	-	
Nickel, Total	83	-	82-117	-	
Potassium, Total	75	-	69-131	-	
Selenium, Total	89	-	78-121	-	
Silver, Total	85	-	80-120	-	
Sodium, Total	79	-	74-126	-	
Thallium, Total	84	-	80-119	-	
Vanadium, Total	82	-	79-121	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521

Report Date: 07/31/18

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1141144-2 SRM Lot Number: D098-540					
Zinc, Total	87	-	81-119	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1139656-3 QC Sample: L1828448-02 Client ID: MS Sample												
Mercury, Total	ND	0.135	0.181	**134**	Q	-	-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery		Recovery Limits	RPD		RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1141144-3 WG1141144-4 QC Sample: L1828692-19 Client ID: MS Sample												
Aluminum, Total	3150	222	3970	**369**	Q	3930	**353**	Q	75-125	1		20
Antimony, Total	ND	55.6	54.5	98		53.6	97		75-125	2		20
Arsenic, Total	4.53	13.3	18.4	104		17.3	96		75-125	6		20
Barium, Total	96.9	222	342	110		302	93		75-125	12		20
Beryllium, Total	0.336J	5.56	5.80	104		5.66	102		75-125	2		20
Cadmium, Total	0.179J	5.67	5.84	103		5.69	101		75-125	3		20
Calcium, Total	1670	1110	3790	**191**	Q	2620	86		75-125	**37**	Q	20
Chromium, Total	6.52	22.2	29.6	104		28.8	101		75-125	3		20
Cobalt, Total	5.29	55.6	57.9	95		56.7	93		75-125	2		20
Copper, Total	24.5	27.8	61.4	**133**	Q	51.0	96		75-125	19		20
Iron, Total	3300	111	4860	**1400**	Q	3470	**154**	Q	75-125	**33**	Q	20
Lead, Total	87.5	56.7	138	89		120	**58**	Q	75-125	14		20
Magnesium, Total	134.	1110	1250	100		1180	95		75-125	6		20
Manganese, Total	98.7	55.6	172	**132**	Q	141	77		75-125	20		20
Nickel, Total	10.4	55.6	63.8	96		62.0	93		75-125	3		20
Potassium, Total	286.	1110	1340	95		1410	102		75-125	5		20
Selenium, Total	0.537J	13.3	13.2	99		13.1	99		75-125	1		20
Silver, Total	ND	33.3	33.1	99		32.4	98		75-125	2		20
Sodium, Total	110.J	1110	1220	110		1200	109		75-125	2		20
Thallium, Total	ND	13.3	11.8	88		11.7	88		75-125	1		20
Vanadium, Total	15.2	55.6	72.5	103		68.8	97		75-125	5		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1141144-3 WG1141144-4 QC Sample: L1828692-19 Client ID: MS Sample										
Zinc, Total	66.4	55.6	150	**150**	Q	132	119	75-125	13	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1139656-4 QC Sample: L1828448-02 Client ID: DUP Sample						
Mercury, Total	ND	0.015J	mg/kg	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-01
Client ID: SB-3 (5-7)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 13:40
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.6		%	0.100	NA	1	-	07/25/18 09:05	121,2540G	RI

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

SAMPLE RESULTS

Lab ID: L1828521-02
Client ID: SB-4 (5-7)
Sample Location: 13-16 TO 13-30 BEACH CHANNEL DR.

Date Collected: 07/24/18 12:15
Date Received: 07/24/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92.5		%	0.100	NA	1	-	07/25/18 09:05	121,2540G	RI

Lab Duplicate Analysis

Batch Quality Control

Project Name: 13-16 TO 13-30 BCD

Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521

Report Date: 07/31/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1139262-1 QC Sample: L1828445-12 Client ID: DUP Sample						
Solids, Total	87.7	89.6	%	2		20

Project Name: 13-16 TO 13-30 BCD
Project Number: 13-16 TO 13-30 BCD

Lab Number: L1828521
Report Date: 07/31/18

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(*)
L1828521-01A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.4	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1828521-01B	Glass 120ml/4oz unpreserved	A	NA		2.4	Y	Absent		NYTCL-8270(14)
L1828521-02A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.4	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1828521-02B	Glass 120ml/4oz unpreserved	A	NA		2.4	Y	Absent		NYTCL-8270(14)
L1828521-03A	Amber 250ml unpreserved	A	7	7	2.4	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1828521-03B	Amber 250ml unpreserved	A	7	7	2.4	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1828521-04A	Amber 250ml unpreserved	A	7	7	2.4	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1828521-04B	Amber 250ml unpreserved	A	7	7	2.4	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)

*Values in parentheses indicate holding time in days

Project Name:	13-16 TO 13-30 BCD	**Lab Number:**	L1828521
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/31/18

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).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
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.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
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.

Report Format: DU Report with 'J' Qualifiers

Project Name:	13-16 TO 13-30 BCD	**Lab Number:**	L1828521
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/31/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the 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:	13-16 TO 13-30 BCD	**Lab Number:**	L1828521
Project Number:	13-16 TO 13-30 BCD	**Report Date:**	07/31/18

REFERENCES

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

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

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 of

Date Rec'd in Lab: 7/24/18

ALPHA Job #:

Client Information
Client: Tenen Env
Address: 121 W 27th St 5th Flr
NY NY 10001
Phone: 646-606-2332
Fax:
Email: mahmed@tenen-env.com

Project Information
Project Name: 13-16 to 13-30 BCD
Project Location: 13-16 to 13-30 Beach Channel Dr
Project #
(Use Project name as Project #) X
Project Manager:
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:
* VOCs (soil & gw) 2 DAY TAT; SVOCs & Metals (soil & gw) Standard TAT

Please specify Metals or TAL.

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	SVOCs	metals						Sample Specific Comments
29521-01	SB-3 (5-7)	7/24/18	1340	S	SB	X	X	X						
02	SB-4 (5-7)		1215	S		X	X	X						
03	TW-3		1535	GW		X	X							
04	TW-4		1335	GW		X	X							
	Trip blank													

ANALYSIS

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

Total Bottle

Container Type	A/V	A	A							
Preservative	A/B	A	A							

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	7/24/18 1624		7/24/18 16:20
	7/24/18 1950		7/24/18 1950
	7/24 2310		7/24/18 2310

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)

IM 07/24/18