REPORT

Summary of Quarterly Landfill Gas and Semi-Annual Water Quality Monitoring

Thomas W. Danehy Park
Cambridge, Massachusetts

June 2023

CDM Smith

City of Cambridge
Department of Public Works

Katherine F. Watkins, Commissioner

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December 26, 2023

Mr. Mark Fairbrother
Section Chief, Solid Waste Management
Massachusetts Department of Environmental Protection
Northeast Region Main Office
150 Presidential Way
Woburn, Massachusetts 01801

Subject: Responsible Official Certification Statement
Danehy Park (Former New Street Landfill)
Cambridge, Massachusetts
June 2023 Sampling Event

Dear Mr. Fairbrother:

In accordance with the Massachusetts Solid Waste Management Regulations (310 CMR 19.011), the City of Cambridge, Massachusetts submits this certification for the attached submittal prepared for us by CDM Smith Inc.

I, James Wilcox, attest under the pains and penalties of perjury that: (a) I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification statement; (b) based upon my inquiry of those persons responsible for obtaining the information, the information contained in this submittal is, to the best of my knowledge, true, accurate, and complete; (c) I am fully authorized to bind the entity required to submit these documents and to make this attestation on behalf of such entity; (d) I am aware that there are significant penalties, including, but not limited to, possible administrative and civil penalties for submitting false, inaccurate, or incomplete information and possible fines and imprisonment for knowingly submitting false, inaccurate, or incomplete information.

Very truly yours,

James Wilcox
City Engineer

Attachment – June 2023 Summary of Quarterly Landfill Gas and Semi-Annual Water Quality Monitoring

75 State Street, Suite 701
Boston, Massachusetts 02109
tel: 617 452-6000
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December 26, 2023

Mr. Mark Fairbrother
Section Chief, Solid Waste Management
Massachusetts Department of Environmental Protection
Northeast Regional Office
150 Presidential Way
Woburn, Massachusetts 01801

Subject: Results of Post-Closure Quarterly Landfill Gas Monitoring
and Semi-Annual Water Quality Monitoring
Danehy Park, Cambridge, Massachusetts
June 2023

Dear Mr. Fairbrother:

On June 7 & 8, 2023, CDM Smith conducted post-closure landfill gas monitoring and semi-annual water quality monitoring at Danehy Park (former New Street Landfill) in Cambridge, Massachusetts. Results of the June 2023 gas and water quality monitoring are included in this letter.

The post-closure landfill gas monitoring program consists of sampling at 40 locations throughout the site and surrounding areas plus one background location. In 2013, the number of locations was reduced from 74 locations required under the former sampling program. This reduction was approved by the Massachusetts Department of Environmental Protection (MassDEP) in a letter dated January 3, 2013. The June 2023 sampling event was conducted in general accordance with this approval and the revised environmental monitoring plan submitted to MassDEP in February 2013.

CDM Smith, on behalf of the City of Cambridge, submitted a revised Post-Closure Environmental Monitoring and Maintenance Plan (Post-Closure Plan) to MassDEP on December 14, 2020. The revised Post-Closure Plan, which is under review by MassDEP, proposed adding 29 sampling locations to the 40 locations currently included in the program, including 16 locations at the new Universal Design Playground. Although the revised Post-Closure Plan has not yet been approved by MassDEP, where possible the proposed additional sampling locations were included in this round of monitoring. Some sampling locations have been destroyed or have not yet been constructed, and other sampling locations have been added as described below.

Quarterly landfill sampling locations are shown on Figure A-1 in **Appendix A**.

CDM Smith notified MassDEP of exceedances of the regulatory limit for landfill gas of 25% of the Lower Explosive Limit (LEL) detected at the property boundary within the required 24-hour period. Results of the June 2023 landfill gas monitoring are included in this letter.

Landfill gas monitoring was also conducted at several utilities in the northwest portion of the site as part of an Immediate Response Action (IRA) conducted under the Massachusetts Contingency Plan (MCP) to address an Imminent Hazard associated with the identification of greater than 10% of the LEL in an underground utility. Results of monitoring conducted as part of the IRA during the quarter were reported in the IRA Status Report submitted via eDEP on July 20, 2023.

Quarterly Landfill Gas Monitoring – June 2023

Analytical Parameters

Concentrations of methane (CH_4) in percent by volume, carbon dioxide (CO_2), hydrogen sulfide (H_2S), oxygen (O_2), and atmospheric pressure were obtained using a Landtec GEM 5000 Gas Analyzer. Atmospheric pressure ranged from 29.83 to 29.91 inches mercury during sampling. The lower explosive limit (LEL) for methane was calculated based on the methane concentration reading from the GEM 5000. Volatile organic compound (VOC) concentrations were obtained using a Photo Ionization Detector (PID), Lamp eV 10.6.

Analytical Results

Tables 1 through 4 in **Appendix B** summarize the landfill gas results for this round. The monitoring results exhibit the typical variability of historical gas readings across the former landfill:

- CH_4 was detected at monitoring well locations W-3, W-5, GW-9R, and MW-101 at final concentrations of 8%, 172%, 20%, and 302% of the Lower Explosive Limit (LEL), respectively. The concentrations of methane exceeded the regulatory limit of 25% of the LEL at the property boundary or beyond at W-5 and MW-101. CDM Smith notified MassDEP of these exceedances via email within the required 24-hour period. A copy of the exceedance notification is provided in **Appendix C**.

- CO_2 was detected at several locations at final concentrations up to 11.7%.

- VOCs were detected at WG-5, MW-101, HYD-4, and HYD-5,with a concentration of 0.8 ppm, 0.6 ppm, 1.5 ppm, and 0.3 ppm respectively.

- H_2S was not detected at any of the locations during this round.

During the June 2023 sampling event, methane exceeding the regulatory limit of 25% LEL was detected at well MW-101, located northeast of the Evolve Fitness building. Methane was not detected at nearby well GW-2 located east of the Evolve Fitness building. MMW-5 located in the Evolve Fitness

parking lot was not sampled this event because it was covered with a stockpile of asphalt. Methane was also not detected in the catch basins located in the Evolve Fitness parking lot or inside the Evolve Fitness building. The area beyond well MW-101 is mostly businesses and paved private property, so no further probes could be conducted to assess gas migration.

Methane exceeding the regulatory limit of 25% LEL continues to be detected at well W-5 located northwest of Briston Arms Apartments (247 Garden Street) between the gas vent trench and the Briston Arms property boundary. Methane was detected in W-3, located inside the Universal Playground along the Briston Arms Apartments property line, but did not exceed the 25% LEL regulatory limit. Recent investigations have detected methane on both sides of the City's property boundary with Briston Arms in excess of the 25% of the LEL. Historic investigations have indicated that buried waste materials are also present on the Briston Arms property. The current owner of 247 Garden Street, the Briston Arms Preservation Associates Limited Partnership (the BAPALP), conducts routine quarterly monitoring of soil gas probes, utilities, and buildings on the Briston Arms property and reports the results to MassDEP.

Methane was not detected at monitoring well MW-102 or PROBE-7 located east of the William J. Malcolm & Son Plumbing and Heating Inc. (Malcolm & Son) property boundary (Figure A-1). PROBE-7 was added to the program in September 2019 to provide an additional gas monitoring point in this area after gas monitoring well GW-3 (located approximately 40 feet southeast of the Malcolm & Son building) was paved over in 2016. Monitoring well GW-3 was replace with GW-3R in 2021. Methane was not detected in GW-3R during the June 2023 event.

Methane was detected at monitoring well GW-9R, which is located in front of the new residential building at 77 New Street, but did not exceed the regulatory limit of 25%. Monitoring well GW-9R was installed in 2021 as a replacement well for monitoring well GW-9, which had not been accessible since 2015 because it was located within the construction area at 77 New Street and was later found to be destroyed. Methane was also not detected at well MW-1A, located on landfill property across the street from 77 New Street.

CDM Smith monitored the catch basins along New Street and at the intersection on Concord Avenue (CB-1, CB-2, CB-3, CB-4, CB-4A, CB-5, CB-6, CB-7, CB-8, CB-9, CB-10, CB-11, CB-12, CB-13, CB-14, CB-15, CB-16, and CB-17). CDM Smith also monitored catch basin CB-22, located in the Apple Cinema parking lot at the north entrance to New Street, and catch basins in the parking lot of Evolve Fitness (CB18 and CB19). Catch basins at the Universal Design Playground (U-CB-1, U-CB-2, U-CB-3, U-CB-4, U-CB-5, U-CB-6, U-CB-7, U-CB-8, U-CB-9, U-CB-10, U-CB-11, U-DB-1, U-DB-2, U-DB-3, U-DB-4) were also screened for landfill gas. The two catch basins formerly located on the 77 New Street property (CB-20 and CB-21) were permanently removed during construction of the residential building on the property in late 2018. Methane was not detected in any catch basins monitored during this sampling round.

Measurements were also collected at the Sherman Street Comfort Station. Combustible gas was not detected inside the comfort station. The proposed restroom facility to be located west of the Field Street parking lot has not yet been installed, and the City is not moving forward with construction of this restroom facility at this time.

Landfill gas probes PROBE-1P and PROBE-5, located northwest of the residential buildings at 77 New Street and 87 New Street, respectively, were sampled in June 2023, and no combustible gas concentrations were detected. CO_2 was detected at concentrations up to 2.2%. PROBE-3, PROBE-4, and PROBE-6 were not sampled, as landfill gas was not detected in catch basin CB-6 or monitoring wells GW-1 or GW-2P, respectively.

CDM Smith monitored the interiors of the three hydrants that remain at the site (HYD-4, HYD-5, and HYD-11) for the presence of landfill gas. HYD-4 and HYD-5 are located in the park, within the site boundary and gas vent trench. HYD-11 is a relatively new hydrant installed just outside the gas vent trench near the City's salt storage shed and new winter brine facility. Methane was not detected in hydrant HYD4, HYD5, or HYD11. VOCs were detected at HYD-4 with a concentration of 1.5 ppm and HYD-5 with a concentration of 0.3 ppm.

Semi-annual Water Quality Monitoring – June 2023

Analytical Parameters

The groundwater at monitoring well GW-2 was field-analyzed for pH, temperature, specific conductivity, and dissolved oxygen. The surface water at detention pond (SW-1) location had water and was able to be sampled during the June 2023 event. Groundwater samples were collected from GW-2 and analyzed for the following parameters by Alpha Analytical Laboratories, Inc. of Westborough, Massachusetts:

- Alkalinity, total dissolved solids (TDS), nitrate-nitrogen, cyanide, sulfate, chloride, and chemical oxygen demand (COD).
- Dissolved metals - RCRA 8 metals, calcium, copper, iron, manganese, sodium, and zinc; and
- Volatile organic compounds (VOCs) via EPA method 8260, with 1,4-dioxane analyzed by EPA Method 8270D-SIM.

Analytical Results

Table 5 in Appendix B provides the results of the groundwater well gauging on June 7, 2023. Table 5 also includes averages, minimums, and maximums of historical groundwater elevations. Groundwater generally flows to the southwest across the site as shown on Figure A-1 in Appendix A.

Tables 6 and **7** in Appendix B provide the June 2023 analytical results for inorganic and field parameters, and VOC analysis, respectively. The corresponding EPA Primary and Secondary Drinking Water Standards and Massachusetts Drinking Water Standard or Maximum Contamination Level (MCL) and Drinking Water Guideline or Secondary Maximum Contamination Level (SMCL) are provided in the tables for reference purposes.

There were no exceedances of MCL's or Primary Standards in the primary or duplicate sample collected from well GW-2 in June 2023. 1,4-Dioxane exceeded the Massachusetts Contingency Plan (MCP) GW-1 standard and MassDEP Office of Research and Standards Drinking Water Guideline of 0.3 µg/l in both the primary and duplicate sample collected from well GW-2 at concentrations of 27.8 µg/l and 28.1 µg/l, respectively.

The June 2023 sampling round exceeded the GW-1 standard for 1,4-dioxane. However, the GW-1 standard is not applicable at this site, as there are no known drinking water wells in the area. Additionally, the City of Cambridge, through the New Street Pump Station operations, maintains a hydraulic gradient to prevent groundwater inflow to Fresh Pond. CDM Smith will continue monitoring for 1,4-dioxane in future sampling events.

The following SMCLs and/or EPA Secondary Standards were exceeded in the primary and duplicate sample collected from well GW-2 in June 2023:

- pH was below the lower limit of the SMCL and EPA Secondary Standard of 6.5 to 8.5 standard units (SU) in the sample collected from groundwater sampling location GW-2 with a value of 5.30 SU.
- TDS exceeded the SMCL and EPA Secondary Standard of 500 mg/l in both the primary and duplicate sample at a concentration of 1,400 mg/l in both.
- Chloride exceeded the SMCL and EPA Secondary Standard of 250 mg/l in both the primary and duplicate sample at a concentration of 520 mg/l and 530 mg/l, respectively.
- Dissolved barium exceeded the SMCL and EPA Secondary Standard of 2,000 µg/l in both the primary and duplicate sample at concentrations of 2,470 µg/l and 2,530 µg/l, respectively.
- Dissolved iron exceeded the SMCL and EPA Secondary Standard of 300 µg/l in both the primary and duplicate sample at concentrations of 38,800 µg/l and 39,400 µg/l, respectively.
- Dissolved manganese exceeded the SMCL and EPA Secondary Standard of 50 µg/l in both the primary and duplicate sample at concentrations of 459 µg/l and 460 µg/l, respectively.

- Dissolved sodium exceeded the SMCL of 20,000 µg/l in both the primary and duplicate sample at concentrations of 308,000 µg/l and 309,000 µg/l, respectively.

SMCLs and EPA Secondary Standards are not health-based standards, but are goals above which taste, odor, color, and corrosivity may discourage use as a public drinking water supply. The elevated levels of TDS, chloride, and dissolved barium, iron, manganese, and sodium do not pose a health risk.

Trace concentrations of chlorobenzene were detected in the primary and duplicate sample collected at GW-2 in June 2023, at a concentration of 2.6 µg/l in both. This concentration is orders of magnitude below the MCL and EPA Primary Standard of 100 µg/l.

Laboratory results for June 2023 are included as **Appendix D**.

Table 8 in Appendix B presents the field measurements for the southeastern end of the detention pond, location SW-1, in June 2023. Field parameters are compared to EPA National Recommended Water Quality Criteria (NRWQC). The only applicable standard is for pH with an acceptable range of 6.5 to 9.0 Standard Units (SU). Measured pH at SW-1 was outside the acceptable NRWQC pH range in at a value of 5.81 SU. pH is listed as a non-priority pollutant by the EPA.

Conclusions and Recommendations

Recent landfill gas monitoring results are generally consistent with the variability of previous historical monitoring data at the site. Exceedances of the regulatory limit of 25% of the LEL at the property boundary were observed near the Briston Arms apartment complex and near the Evolve Fitness building. Recommendations include the following:

- Combustible gas detections greater than the 25% LEL continue to occur at monitoring well W-5, which is located northwest of Briston Arms between the gas vent trench and the property boundary. Combustible gas was also detected at well W-3, located southwest of Briston Arms between the gas vent trench and the property boundary, but below the 25% LEL regulatory limit. The gas vent trench northeast of the Briston Arms is in good condition with no observable sediment or vegetation. The gas vent trench north of the Briston Arms has vegetation growth. Maintenance and vegetation removal are recommended for the portion of the gas vent trench north of the Briston Arms property. The vent trench west of Briston Arms was replaced with a modified vent trench as part of the Universal Design Playground construction. It is understood that the owner of Briston Arms Apartments, BAPALP, conducts routine landfill gas monitoring on the apartment complex property.

- Combustible gas detections greater than 25% LEL continue to be detected at well MW-101, located northeast of the Evolve Fitness building. Methane was not detected in June 2023, nor in recent monitoring rounds, at nearby monitoring wells MMW-3 (located east of the Evolve

Fitness building), MMW-5, or GW2 (located in the Evolve Fitness parking lot); catch basins in the Evolve Fitness parking lot; or inside the Evolve Fitness building. Subsequent to the June 2023 monitoring round, Evolve Fitness was permanently closed. CDM Smith understands that the former Evolve Fitness building will be demolished and replaced with a new combined commercial/residential building.

- Although methane was not detected at PROBE-7, located near the William J. Malcolm & Son building (75 Bay State Road, Cambridge) in June 2023, since methane has periodically been detected at this probe since it was first installed in September 2019, PROBE-7 will continue to be monitored to assess landfill gas in this area. If LEL exceedances continue at wells and probes near the Malcom & Son building, indoor gas sampling within the building should be considered. The City should continue efforts to obtain a right-of-entry access agreement for potential indoor monitoring at this property.

- The next landfill gas monitoring event is scheduled for September 2023.

Please do not hesitate to call me at (617) 452-6532 if you have any questions or require additional information.

Very truly yours,

Nathan E. Jones, P.E., PMP
Project Manager
CDM Smith Inc.

Appendices

Appendix A – Site Plan
Appendix B – Sampling Results Summary Tables
Appendix C – 24-hour Landfill Gas Exceedance Notification to MassDEP
Appendix D – Water Quality Sampling Laboratory Results

cc: James Wilcox, Jennifer Letourneau, Cambridge
John Morey, MassDEP
File Copy

Appendix A

Site Plan

Legend

Proposed Monitoring Location
- Detention Basin
- Catch Basin
- Site Boundary
- Gas Vent Trench
- Limit of Former Clay Pit Excavations
- Parcel Boundaries (2019)

Monitoring Location
- Catch Basin
- Hydrant
- Indoor Gas Sampling
- Monitoring Well
- Surface Water Sampling
- Probe

Water System
- Hydrant
- Gate Valve
- HydrantValve
- ServiceLateral
- Hydrant Lateral
- Water Main

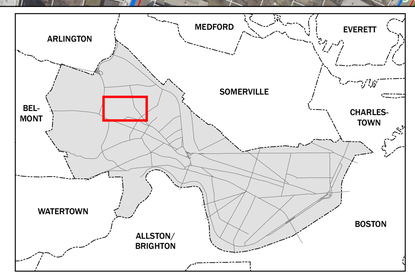
Sewer System
- Pump Station
- Combined Manhole
- Sewage Manhole
- Combined Wastewater
- Sewage Main

Stormwater System
- Catchbasin
- Stormwater Manhole
- Storm Lateral
- Storm Main

Former New Street Landfill
Danehy Park
City of Cambridge, MA

0 100 200 Feet

Basemap: City of Cambridge 2018 Imagery
Source: City of Cambridge, MassGIS and ESRI ArcGIS Online
Coordinate Sys: NAD83 Mass. State Plane Mainland (feet)



N W E S

FIGURE A-1
Environmental Monitoring Plan
November 2020

CDM Smith

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Appendix B

Sampling Results Summary Tables

TABLE 1
MONITORING WELLS & BUILDINGS
LANDFILL GAS MONITORING - JUNE 2023
DANEHY PARK

Sampling Location	Date	CH_4 (%)	%LEL	CO_2 (%)	O_2 (%)	VOC (ppm)	H_2S (ppm)
Background	6/7/2023	0.0	0.0	0.0	20.9	0.0	0.0
Evolve Fitness^	6/7/2023	0.0	0.0	0.0	20.9	0.0	0.0
Outside Office Door*+	6/7/2023	0.0	0.0	0.0	20.9	0.0	0.0
Garage Door*+	6/7/2023	0.0	0.0	0.0	20.9	0.0	0.0
Men's Floor Drain*+	6/7/2023	0.0	0.0	0.0	20.9	0.0	0.0
Women's Floor Drain*+	6/7/2023	0.0	0.0	0.0	20.9	0.0	0.0
C-111*	6/7/2023	0.0	0.0	0.2	20.8	0.0	0.0
GW-1*	6/7/2023	0.0	0.0	0.8	20.1	0.0	0.0
GW-2*	6/7/2023	0.0	0.0	0.2	20.8	0.0	0.0
GW-2P*	6/7/2023	0.0	0.0	3.2	17.7	0.0	0.0
GW-3R*[2]	6/8/2023	0.0	0.0	0.3	20.7	0.0	0.0
GW-9R*[3]	6/8/2023	1.0	20.0	0.5	20.6	0.0	0.0
MMW-3*	6/8/2023	0.0	0.0	0.3	20.7	0.0	0.0
MMW-2*	6/8/2023	0.0	0.0	0.3	20.7	0.0	0.0
MMW-4*	6/7/2023	0.0	0.0	0.0	20.9	0.0	0.0
MMW-5*	NS	NS	NS	NS	NS	NS	NS
MW-101*	6/8/2023	15.1	302.0	11.7	3.3	0.6	0.0
MW-102*	6/8/2023	0.0	0.0	1.5	19.1	0.0	0.0
MW-103*	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
MW-105*	6/7/2023	0.0	0.0	0.2	20.8	0.0	0.0
MW-1A*	6/8/2023	0.0	0.0	0.2	20.8	0.0	0.0
W-3*	6/8/2023	0.4	8.0	0.5	20.5	0.0	0.0
W-5*	6/8/2023	8.6	172.0	8.8	10.5	0.8	0.0
W14*	6/8/2023	0.0	0.0	0.3	20.7	0.0	0.0

NOTES:

* 2013 Environmental Monitoring Plan (EMP) sampling location

^ Proposed additional sampling location (2021 EMP)

\+ Indicates location is at the onsite comfort station

1. Wells were purged for approximately 10 minutes before final readings were recorded.

NS - Not Sampled

Note: MMW-5 was not sampled due to large asphalt pile on top of well. CDM-Smith could not access well.

TABLE 2
CATCH BASINS AND MANHOLES
LANDFILL GAS MONITORING - JUNE 2023
DANEHY PARK

Sampling Location	Date	CH_4 (%)	%LEL
CB1^	6/7/2023	0.0	0.0
CB2^	6/7/2023	0.0	0.0
CB3*	6/7/2023	0.0	0.0
CB4*	6/7/2023	0.0	0.0
CB4A^	6/7/2023	0.0	0.0
CB5*	6/7/2023	0.0	0.0
CB6*	6/7/2023	0.0	0.0
CB7*	6/7/2023	0.0	0.0
CB8^	6/7/2023	0.0	0.0
CB9*	6/7/2023	0.0	0.0
CB10^	6/7/2023	0.0	0.0
CB11*	6/7/2023	0.0	0.0
CB12*	6/7/2023	0.0	0.0
CB13*	6/7/2023	0.0	0.0
CB14^	6/7/2023	0.0	0.0
CB15*	6/7/2023	0.0	0.0
CB16^	6/7/2023	0.0	0.0
CB17*	6/7/2023	0.0	0.0
CB18*	6/7/2023	0.0	0.0
CB19*	6/7/2023	0.0	0.0
CB20*[1]	NS	NS	NS
CB21*[1]	NS	NS	NS
CB22^	6/7/2023	0.0	0.0
CB23[2]	NS	NS	NS
CB24[2]	NS	NS	NS
CB25[2]	NS	NS	NS
CB26[2]	NS	NS	NS
DM-1[2]	NS	NS	NS
DM-2[2]	NS	NS	NS
DM-3[2]	NS	NS	NS
DM-4[2]	NS	NS	NS
DM-5[2]	NS	NS	NS
DM-6[2]	NS	NS	NS
SWV-1[2]	NS	NS	NS
SM-1[2]	NS	NS	NS

NOTES:

* 2013 Environmental Monitoring Plan (EMP) sampling location

^ Proposed additional sampling location (2021 EMP)

1. CB20 and CB21 were destroyed in late 2018 during construction

2. Sampling location not an EMP location - not monitored during this round

NS - Not Sampled

TABLE 3
TEMPORARY PROBES & HYDRANTS
LANDFILL GAS MONITORING - JUNE 2023
DANEHY PARK

Sampling Location	Date	CH_4 (%)	%LEL	CO_2 (%)	O_2 (%)	VOC (ppm)	H_2S (ppm)
PROBE-1P*	6/7/2023	0.0	0.0	2.1	18.9	0.0	0.0
PROBE-3^[2]	NS	NS	NS	NS	NS	NS	NS
PROBE-4^[3]	NS	NS	NS	NS	NS	NS	NS
PROBE-5*[4]	6/7/2023	0.0	0.0	2.0	18.9	0.0	0.0
PROBE-6*[5]	NS	NS	NS	NS	NS	NS	NS
PROBE-7^[6]	6/8/2023	0.0	0.0	7.4	13.0	0.0	0.0
HYD-4*	6/7/2023	0.0	0.0	0.0	14.7	1.5	0.0
HYD-5*	6/7/2023	0.0	0.0	0.0	20.6	0.3	0.0
HYD-11^	6/7/2023	0.0	0.0	0.0	20.9	0.0	0.0

NOTES:

* 2013 Environmental Monitoring Plan (EMP) sampling location

^ Proposed additional sampling location (2021 EMP)

1. Probes were purged for approximately 10 minutes before final readings were recorded.
2. Although not a 2013 EMP sampling location, PROBE-3 remains available if methane is detected at location CB-6.
3. Although not a 2013 sampling location, PROBE-4 remains available if methane is detected at location GW-1.
4. PROBE-5 was re-installed. Building construction is completed and area is accessible.
5. PROBE-6 was not sampled, as methane was not detected in GW-2P.
6. Not a 2013 EMP sampling location, PROBE-7 was added in 2019 to temporarily replace destroyed well GW-3.

NS - Not Sampled

TABLE 4
UNIVERSAL DESIGN PLAYGROUND SAMPLING LOCATIONS
LANDFILL GAS MONITORING - JUNE 2023
DANEHY PARK

Sampling Location	Date	CH_4 (%)	%LEL	CO_2 (%)	O_2 (%)	VOC (ppm)	H_2S (ppm)
U-CB-1	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-CB-2	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-CB-3	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-CB-4	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-CB-5	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-CB-6	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-CB-7	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-CB-8	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-CB-9	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-CB-10	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-CB-11	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-DB-1	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-DB-2	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-DB-3	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
U-DB-4	6/8/2023	0.0	0.0	0.0	20.9	0.0	0.0
Restroom Facility	NS	NS	NS	NS	NS	NS	NS

NOTES:

1. Site is still under construction, some catchbasins have not been installed at the time of this sampling round.
2. Restroom Facility was not constructed during this round and could not be sampled.
3. NS Not Sampled

Table 5
Groundwater Elevation Measurements - June 2023
Danehy Park

Well Number	Sample Date	Top of Casing Elevation[1]	PVC Difference[2]	Depth to Groundwater[3]	Elevation[1]	Historical Data			
						Total # of Observ.	Average of All Data [1]	Historical High Level [1]	Historical Low Level [1]
C-111	6/7/2023	23.61	2	5.94	17.67	67	17.44	19.37	15.42
W-19	6/8/2023	24.51	1	6.78	17.73	66	17.59	20.43	14.46
MMW-1	6/9/2023	25.85	1	7.81	18.04	59	18.46	20.39	15.62
MMW-4	6/10/2023	23.01	2	4.45	18.56	56	17.86	18.96	17.05
GW-1	6/11/2023	23.83	2	NA	NA	53	13.27	17.80	9.01
GW-2	6/12/2023	13.44	2	1.78	11.66	61	10.54	13.22	2.04
GW-3R[5]	6/13/2023	21.13	2	6.87	14.26	51	14.64	16.28	13.68

Notes:
(1) Elevations are in feet referenced to the City of Cambridge Datum.
(2) PVC Difference = Measured distance between the top of the PVC and the top of the protective casing
(3) Depth to water measured from top of PVC in feet
(4) NA: Water level was not measured.
(5) GW-3R replaced GW-3 in March 2021. Groundwater level measurements at GW-3R commenced in June 2021. Historical data includes measurements at GW-3 from July 1991 - June 2016.

Table 6
Groundwater Quality Analyses - June 2023
Inorganic Analyses and Field Parameters
Danehy Park

Parameter	Units	6/7/23		Drinking Water MCL
		GW-2	Duplicate	
Temperature	Celsius	13.9	NA	NL
Spec. Cond.	umho/cm	2,441	NA	NL
DO	mg/L	0.61	NA	NL
PH	log units	5.30	NA	6.5-8.5 (3,5)
Alkalinity	mg/L	671	678	NL
TDS	mg/L	1,400	1,400	500 (3,5)
Nitrate	mg/L	<0.100	<0.100	10 (2,4)
Cyanide	mg/L	<0.005	<0.005	0.2 (2,4)
Sulfate	mg/L	<10	<10	250 (3,5)
Chloride	mg/L	520	530	250 (3,5)
Chemical Oxygen Demand	mg/L	71.	73.	NL
Arsenic	ug/l	<5	7.1	10 (2,4)
Barium	ug/l	2,470	2,530	2,000 (2,4)
Cadmium	ug/l	<5	<5	5 (2,4)
Calcium	ug/l	162,000	164,000	NL
Chromium	ug/l	<10	<10	100 (2,4)
Copper	ug/l	<10	<10	1,300 (2,4)
Iron	ug/l	38,800	39,400	300 (3,5)
Lead	ug/l	<10	<10	15 (2,4)
Manganese	ug/l	459	460	50 (3,5)
Mercury	ug/l	<0.2	<0.2	2 (2,4)
Selenium	ug/l	<10	<10	50 (2,4)
Silver	ug/l	<7	<7	100 (3,5)
Sodium	ug/l	308,000	309,000	20,000 (3)
Zinc	ug/l	<50	<50	5,000 (3,5)

Notes:
(1) Highlighted results equal or exceed drinking water standards
(2) Massachusetts Drinking Water Standard or Maximum Contaminant Level
(3) Massachusetts Drinking Water Guideline or Secondary Maximum Contaminant Level
(4) EPA Primary Maximum Contaminant Level
(5) EPA Secondary Maximum Contaminant Level
<# = Below Reporting Limit
NA = Not Analyzed

Table 7
Groundwater Quality Analyses - June 2023
Volatile Organics by EPA Method 8260[(1)] (All values in µg/l)
Danehy Park

Parameter	CAS	6/7/2023		Drinking Water MCL
		GW-2	GW-2D (duplicate)	
1,1,1,2-Tetrachloroethane	630-20-6	<0.50	<0.50	NL
1,1,1-Trichloroethane	71-55-6	<0.50	<0.50	200 (2,4)
1,1,2,2-Tetrachloroethane	79-34-5	<0.50	<0.50	NL
1,1,2-Trichloroethane	79-00-5	<0.75	<0.75	5 (2,4)
1,1-Dichloroethane	75-34-3	<0.75	<0.75	70 (3)
1,1-Dichloroethene	75-35-4	<0.50	<0.50	7 (2,4)
1,1-Dichloropropene	563-58-6	<2.5	<2.5	NL
1,2,3-Trichlorobenzene	87-61-6	<2.5	<2.5	NL
1,2,3-Trichloropropane	96-18-4	<5.0	<5.0	NL
1,2,4-Trichlorobenzene	120-82-1	<2.5	<2.5	70 (2,4)
1,2,4-Trimethylbenzene	95-63-6	<2.5	<2.5	NL
1,2-Dibromo-3-chloropropane	96-12-8	<2.5	<2.5	0.2 (2)
1,2-Dibromoethane	106-93-4	<2.0	<2.0	0.02 (2)
1,2-Dichlorobenzene	95-50-1	<2.5	<2.5	600 (2,4)
1,2-Dichloroethane	107-06-2	<0.50	<0.50	5 (2,4)
1,2-Dichloroethene, Total	540-59-0	<0.50	<0.50	NL
1,2-Dichloropropane	78-87-5	<1.8	<1.8	5 (2,4)
1,3,5-Trimethylbenzene	108-67-8	<2.5	<2.5	NL
1,3-Dichlorobenzene	541-73-1	<2.5	<2.5	NL
1,3-Dichloropropane	142-28-9	<2.5	<2.5	NL
1,3-Dichloropropene, Total	542-75-6	<0.50	<0.50	NL
1,4-Dichlorobenzene	106-46-7	<2.5	<2.5	5 (2)
1,4-Dichlorobutane	110-56-5	<5.0	<5.0	NL
2,2-Dichloropropane	590-20-7	<2.5	<2.5	NL
2-Butanone	78-93-3	<5.0	<5.0	4,000 (3)
2-Hexanone	591-78-6	<5.0	<5.0	NL
4-Methyl-2-pentanone	108-10-1	<5.0	<5.0	350 (3)
1,4-Dioxane	123-91-1	**27.8**	**28.1**	0.3 (3)
Acetone	67-64-1	<5.0	<5.0	6,300 (3)
Acrylonitrile	107-13-1	<5.0	<5.0	NL
Benzene	71-43-2	<0.50	<0.50	5 (2,4)
Bromobenzene	108-86-1	<2.5	<2.5	NL
Bromochloromethane	74-97-5	<2.5	<2.5	NL
Bromodichloromethane	75-27-4	<0.50	<0.50	NL
Bromoform	75-25-2	<2.0	<2.0	NL
Bromomethane	74-83-9	<1.0	<1.0	10 (3)
Carbon disulfide	75-15-0	<5.0	<5.0	NL
Carbon tetrachloride	56-23-5	<0.50	<0.50	5 (2,4)
Chlorobenzene	108-90-7	**2.6**	**2.6**	100 (2,4)
Chloroethane	75-00-3	<1.0	<1.0	NL
Chloroform	67-66-3	<0.75	<0.75	70 (3)
Chloromethane	74-87-3	<2.5	<2.5	NL
cis-1,2-Dichloroethene	540-59-C	<0.50	<0.50	70 (2,4)
cis-1,3-Dichloropropene	10061-01-5	<0.50	<0.50	0.4 (3)
Dibromochloromethane	124-48-1	<0.50	<0.50	NL
Dibromomethane	74-95-3	<5.0	<5.0	NL
Dichlorodifluoromethane	75-71-8	<5.0	<5.0	1,400 (3)
Ethyl ether	60-29-7	<2.5	<2.5	NL
Ethyl methacrylate	97-63-2	<5.0	<5.0	NL
Ethylbenzene	100-41-4	<0.50	<0.50	700 (2,4)
Hexachlorobutadiene	87-68-3	<0.50	<0.50	NL
Isopropylbenzene	98-82-8	<0.50	<0.50	NL
Methyl tert butyl ether	1634-04-4	<1.0	<1.0	70(3)
Methylene chloride	75-09-2	<3.0	<3.0	5 (2,4)
n-Butylbenzene	104-51-8	<0.50	<0.50	NL
n-Propylbenzene	103-65-1	<0.50	<0.50	NL
Naphthalene	91-20-3	<2.5	<2.5	140 (3)
o-Chlorotoluene	95-49-8	<2.5	<2.5	NL
o-Xylene	95-47-6	<1.0	<1.0	10,000 (total xylenes)
p-Chlorotoluene	106-43-4	<2.5	<2.5	NL
p-Isopropyltoluene	99-87-6	<0.50	<0.50	NL
p/m-Xylene	179601-23-1	<1.0	<1.0	10,000 (total xylenes)
sec-Butylbenzene	135-98-8	<0.50	<0.50	NL
Styrene	100-42-5	<1.0	<1.0	100 (2,4)
tert-Butylbenzene	98-06-6	<2.5	<2.5	NL
Tetrachloroethene	127-18-4	<0.50	<0.50	5 (2,4)
Tetrahydrofuran	109-99-9	<5.0	<5.0	1,300 (3)
Toluene	108-88-3	<0.75	<0.75	1,000 (2,4)
trans-1,2-Dichloroethene	156-60-5	<0.75	<0.75	100
trans-1,3-Dichloropropene	10067-02-6	<0.50	<0.50	0.4 (3)
trans-1,4-Dichloro-2-butene	110-57-6	<2.5	<2.5	NL
Trichloroethene	79-01-6	<0.50	<0.50	5 (2,4)
Trichlorofluoromethane	75-69-4	<2.5	<2.5	NL
Vinyl acetate	108-05-4	<5.0	<5.0	NL
Vinyl chloride	75-01-4	<1.0	<1.0	2 (2,4)
Xylenes, Total	1330-20-7	<1.0	<1.0	10,000 (total xylenes)

Notes:
(1) 1,4-dioxane is analyzed by EPA Method 8270D-SIM to achieve the low detection limit required
(2) Massachusetts Drinking Water Standard or Maximum Contaminant Level
(3) Massachusetts Drinking Water Guideline or Secondary Maximum Contaminant Level
(4) EPA Primary Maximum Contaminant Level
(5) Highlighted results equal or exceed drinking water standards
<# = Below Reporting Limit
NL - No Limit

Table 8
Water Quality Results for the Detention Pond (SW-1) - June 2023
Danehy Park

Parameter	Units	NRWQC[2,3]	June 2023
pH	standard units	6.5-9	5.81
Temperature	Celsius	NL	15.8
Specific Conductivity	umhos/cm[3]	NL	168
Dissolved Oxygen	mg/L	NL	4.99

Notes:

(1) Highlighted areas: concentration equals or exceeds NRWQC

(2) NRWQC: National Recommended Water Quality Criteria for Freshwater Based Surface Water, https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table

(3) Criterion Continuous Conentration (CCC) values are compared to, if none are available, Criterion Maximum Concentration (CMC) values are used.

(4) NS: No Sample

Appendix C

24-hour Landfill Gas Exceedance Notification to MassDEP

Jones, Nathan E.

From: Jones, Nathan E.
Sent: Thursday, June 8, 2023 9:50 PM
To: Fairbrother, Mark (DEP)
Cc: Morey, John (DEP); Spieler, Richard (DEP); Wilcox, Jim; Friedman, Jerry; 'Greg Katz'; bhaskell@langdonenv.com; Miller, Andrew; Dolan, Michael
Subject: Danehy Park Landfill Cambridge - Notice of Landfill Gas Exceedance - 6/8/2023
Attachments: Danehy Park - Site Plan.pdf

Mark,

In accordance with 310 CMR 19.132(4)(h), CDM Smith on behalf of the City of Cambridge notifies MassDEP that during landfill gas sampling conducted today, Thursday, June 8, 2023, at Danehy Park (former New Street Landfill), the concentrations of methane gas exceeded 25% of the Lower Explosive Limit (LEL) at the following landfill gas monitoring locations, shown on the attached figure:

Monitoring Well	Initial Methane (% LEL)	Final Methane (% LEL)
MW-101	324%	302%
W-5	196%	172%
GW-9R	36%	20%

These results are consistent with previous monitoring conducted at the Site.

Methane was detected above the 25% LEL regulatory limit in monitoring well MW-101, located northeast of the Evolve Fitness Building. No methane exceedances were found in nearby monitoring wells MWW-3, MWW-5, or GW-2. The area beyond well MW-101 is mostly businesses and paved private property, so no further probes could be conducted to assess gas migration. The former Evolve Fitness Building was unoccupied and could not be accessed for monitoring. The last exceedance at MW-101 was during the March 2023 round.

Methane was detected above the 25% LEL regulatory limit in monitoring well W-5, located near Briston Arms Apartments. Methane was detected in nearby monitoring well W-3, but below the 25% LEL regulatory limit. Methane was last detected in excess of 25% LEL in well W-5 during the March 2023 round. The area beyond well W-5 is paved private property (Briston Arms). As noted in the revised Post-Closure Monitoring and Maintenance Plan (December 2020), currently under review by MassDEP, waste and methane in excess of 25% of the LEL are known to be present in the subsurface on both the Danehy Park and Briston Arms properties. Therefore, the City requested eliminating the compliance boundary between the two properties pursuant to the reporting requirements of 310 CMR 19.132(4)(h). The City will continue to report exceedances of 25% LEL in wells located along the property boundary with Briston Arms, which includes W-3 and W-5, while this request is under review by MassDEP.

Methane was also detected at well GW-9R, located in front of the new apartment building at 77 New Street. The initial reading at well GW-9R exceeded 25% LEL, but the final reading was below 25% LEL. GW-9R was installed in March 2021 to replace GW-9, which had been destroyed by the construction at 77 New Street. GW-9R has had similar methane concentrations close to the 25% LEL regulatory limit since it was installed in March 2021. No methane was detected in PROBE-5, located behind (west of) the 77 New Street building.

If you have any questions or concerns, please feel free to contact me at (617) 452-6563.

Thank you,
Nathan

Nathan E. Jones, PE, PMP
Environmental Engineer | Project Manager
CDM Smith
75 State Street, Boston, MA 02109
Office: 617.452.6563
Mobile: 617.460.4374
jonesne@cdmsmith.com
cdmsmith.com

Appendix D

Water Quality Sampling Laboratory Results

ANALYTICAL REPORT

Lab Number:	L2331881
Client:	CDM Smith, Inc. 75 State Street Suite 701 Boston, MA 02109
ATTN:	Nathan Jones
Phone:	(617) 452-6563
Project Name:	DANEHY PARK
Project Number:	0139-239391-PM.RT.FY
Report Date:	07/11/23

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

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

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881
Report Date: 07/11/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2331881-01	GW-2	WATER	CAMBRIDGE, MA	06/07/23 12:00	06/07/23
L2331881-02	GW-2D	WATER	CAMBRIDGE, MA	06/07/23 12:30	06/07/23
L2331881-03	TRIP BLANK	WATER	CAMBRIDGE, MA	06/01/23 00:00	06/07/23

Project Name:	DANEHY PARK	**Lab Number:**	L2331881
Project Number:	0139-239391-PM.RT.FY	**Report Date:**	07/11/23

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. 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 Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data 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.

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 Alpha Project Manager 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 Project Management at 800-624-9220 with any questions.

Project Name:	DANEHY PARK	**Lab Number:**	L2331881
Project Number:	0139-239391-PM.RT.FY	**Report Date:**	07/11/23

Case Narrative (continued)

Dissolved Metals

The WG1795477-3 MS recoveries, performed on L2331881-01, are outside the acceptance criteria for barium (73%) and selenium (127%). A post digestion spike was performed and was within acceptance criteria.

The WG1795477-3 MS recoveries for calcium (10%) and iron (0%), performed on L2331881-01, do not apply because the sample concentrations are greater than four times the spike amounts added.

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

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 07/11/23

ORGANICS

VOLATILES

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY
Lab Number: L2331881
Report Date: 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-01
Client ID: GW-2
Sample Location: CAMBRIDGE, MA

Date Collected: 06/07/23 12:00
Date Received: 06/07/23
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/17/23 07:52
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	--	1
1,1-Dichloroethane	ND		ug/l	0.75	--	1
Chloroform	ND		ug/l	0.75	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.8	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.75	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	2.6		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.5	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.75	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	--	1

Project Name: DANEHY PARK **Lab Number:** L2331881

Project Number: 0139-239391-PM.RT.FY **Report Date:** 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-01 Date Collected: 06/07/23 12:00

Client ID: GW-2 Date Received: 06/07/23

Sample Location: CAMBRIDGE, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	2.5	--	1
1,3-Dichlorobenzene	ND		ug/l	2.5	--	1
1,4-Dichlorobenzene	ND		ug/l	2.5	--	1
Methyl tert butyl ether	ND		ug/l	1.0	--	1
p/m-Xylene	ND		ug/l	1.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Dibromomethane	ND		ug/l	5.0	--	1
1,4-Dichlorobutane	ND		ug/l	5.0	--	1
1,2,3-Trichloropropane	ND		ug/l	5.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	5.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Ethyl methacrylate	ND		ug/l	5.0	--	1
Acrylonitrile	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.5	--	1
Tetrahydrofuran	ND		ug/l	5.0	--	1
2,2-Dichloropropane	ND		ug/l	2.5	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.5	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	2.5	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	2.5	--	1
o-Chlorotoluene	ND		ug/l	2.5	--	1
p-Chlorotoluene	ND		ug/l	2.5	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1

Project Name: DANEHY PARK
Lab Number: L2331881
Project Number: 0139-239391-PM.RT.FY
Report Date: 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-01
Client ID: GW-2
Sample Location: CAMBRIDGE, MA
Date Collected: 06/07/23 12:00
Date Received: 06/07/23
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	2.5	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	--	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--	1
Ethyl ether	ND		ug/l	2.5	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	113		70-130

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY
Lab Number: L2331881
Report Date: 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-02
Client ID: GW-2D
Sample Location: CAMBRIDGE, MA
Date Collected: 06/07/23 12:30
Date Received: 06/07/23
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/17/23 08:15
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	--	1
1,1-Dichloroethane	ND		ug/l	0.75	--	1
Chloroform	ND		ug/l	0.75	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.8	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.75	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	2.6		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.5	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.75	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	--	1

Project Name: DANEHY PARK **Lab Number:** L2331881

Project Number: 0139-239391-PM.RT.FY **Report Date:** 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-02 Date Collected: 06/07/23 12:30

Client ID: GW-2D Date Received: 06/07/23

Sample Location: CAMBRIDGE, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	2.5	--	1
1,3-Dichlorobenzene	ND		ug/l	2.5	--	1
1,4-Dichlorobenzene	ND		ug/l	2.5	--	1
Methyl tert butyl ether	ND		ug/l	1.0	--	1
p/m-Xylene	ND		ug/l	1.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Dibromomethane	ND		ug/l	5.0	--	1
1,4-Dichlorobutane	ND		ug/l	5.0	--	1
1,2,3-Trichloropropane	ND		ug/l	5.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	5.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Ethyl methacrylate	ND		ug/l	5.0	--	1
Acrylonitrile	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.5	--	1
Tetrahydrofuran	ND		ug/l	5.0	--	1
2,2-Dichloropropane	ND		ug/l	2.5	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.5	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	2.5	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	2.5	--	1
o-Chlorotoluene	ND		ug/l	2.5	--	1
p-Chlorotoluene	ND		ug/l	2.5	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1

Project Name: DANEHY PARK
Lab Number: L2331881
Project Number: 0139-239391-PM.RT.FY
Report Date: 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-02
Client ID: GW-2D
Sample Location: CAMBRIDGE, MA
Date Collected: 06/07/23 12:30
Date Received: 06/07/23
Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	2.5	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	--	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--	1
Ethyl ether	ND		ug/l	2.5	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	111		70-130

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY
Lab Number: L2331881
Report Date: 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-03
Client ID: TRIP BLANK
Sample Location: CAMBRIDGE, MA

Date Collected: 06/01/23 00:00
Date Received: 06/07/23
Field Prep: None

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/17/23 08:38
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	--	1
1,1-Dichloroethane	ND		ug/l	0.75	--	1
Chloroform	ND		ug/l	0.75	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.8	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.75	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.5	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.75	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	--	1

Project Name: DANEHY PARK **Lab Number:** L2331881

Project Number: 0139-239391-PM.RT.FY **Report Date:** 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-03 Date Collected: 06/01/23 00:00

Client ID: TRIP BLANK Date Received: 06/07/23

Sample Location: CAMBRIDGE, MA Field Prep: None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	2.5	--	1
1,3-Dichlorobenzene	ND		ug/l	2.5	--	1
1,4-Dichlorobenzene	ND		ug/l	2.5	--	1
Methyl tert butyl ether	ND		ug/l	1.0	--	1
p/m-Xylene	ND		ug/l	1.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Dibromomethane	ND		ug/l	5.0	--	1
1,4-Dichlorobutane	ND		ug/l	5.0	--	1
1,2,3-Trichloropropane	ND		ug/l	5.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	5.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Ethyl methacrylate	ND		ug/l	5.0	--	1
Acrylonitrile	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.5	--	1
Tetrahydrofuran	ND		ug/l	5.0	--	1
2,2-Dichloropropane	ND		ug/l	2.5	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.5	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	2.5	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	2.5	--	1
o-Chlorotoluene	ND		ug/l	2.5	--	1
p-Chlorotoluene	ND		ug/l	2.5	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY
Lab Number: L2331881
Report Date: 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-03
Client ID: TRIP BLANK
Sample Location: CAMBRIDGE, MA
Date Collected: 06/01/23 00:00
Date Received: 06/07/23
Field Prep: None

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	2.5	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	--	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--	1
Ethyl ether	ND		ug/l	2.5	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	111		70-130

Project Name: DANEHY PARK **Lab Number:** L2331881

Project Number: 0139-239391-PM.RT.FY **Report Date:** 07/11/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 06/17/23 07:28
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1793046-5					
Methylene chloride	ND		ug/l	3.0	--
1,1-Dichloroethane	ND		ug/l	0.75	--
Chloroform	ND		ug/l	0.75	--
Carbon tetrachloride	ND		ug/l	0.50	--
1,2-Dichloropropane	ND		ug/l	1.8	--
Dibromochloromethane	ND		ug/l	0.50	--
1,1,2-Trichloroethane	ND		ug/l	0.75	--
Tetrachloroethene	ND		ug/l	0.50	--
Chlorobenzene	ND		ug/l	0.50	--
Trichlorofluoromethane	ND		ug/l	2.5	--
1,2-Dichloroethane	ND		ug/l	0.50	--
1,1,1-Trichloroethane	ND		ug/l	0.50	--
Bromodichloromethane	ND		ug/l	0.50	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,3-Dichloropropene, Total	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.5	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	0.75	--
Ethylbenzene	ND		ug/l	0.50	--
Chloromethane	ND		ug/l	2.5	--
Bromomethane	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	0.50	--
trans-1,2-Dichloroethene	ND		ug/l	0.75	--
1,2-Dichloroethene, Total	ND		ug/l	0.50	--

Project Name: DANEHY PARK **Lab Number:** L2331881

Project Number: 0139-239391-PM.RT.FY **Report Date:** 07/11/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 06/17/23 07:28
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1793046-5					
Trichloroethene	ND		ug/l	0.50	--
1,2-Dichlorobenzene	ND		ug/l	2.5	--
1,3-Dichlorobenzene	ND		ug/l	2.5	--
1,4-Dichlorobenzene	ND		ug/l	2.5	--
Methyl tert butyl ether	ND		ug/l	1.0	--
p/m-Xylene	ND		ug/l	1.0	--
o-Xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	0.50	--
Dibromomethane	ND		ug/l	5.0	--
1,4-Dichlorobutane	ND		ug/l	5.0	--
Iodomethane	ND		ug/l	5.0	--
1,2,3-Trichloropropane	ND		ug/l	5.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	5.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	5.0	--
2-Butanone	ND		ug/l	5.0	--
Vinyl acetate	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Ethyl methacrylate	ND		ug/l	5.0	--
Acrolein	ND		ug/l	5.0	--
Acrylonitrile	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.5	--
Tetrahydrofuran	ND		ug/l	5.0	--
2,2-Dichloropropane	ND		ug/l	2.5	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.5	--

Project Name: DANEHY PARK **Lab Number:** L2331881

Project Number: 0139-239391-PM.RT.FY **Report Date:** 07/11/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 06/17/23 07:28
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1793046-5					
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--
Bromobenzene	ND		ug/l	2.5	--
n-Butylbenzene	ND		ug/l	0.50	--
sec-Butylbenzene	ND		ug/l	0.50	--
tert-Butylbenzene	ND		ug/l	2.5	--
o-Chlorotoluene	ND		ug/l	2.5	--
p-Chlorotoluene	ND		ug/l	2.5	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	--
Hexachlorobutadiene	ND		ug/l	0.50	--
Isopropylbenzene	ND		ug/l	0.50	--
p-Isopropyltoluene	ND		ug/l	0.50	--
Naphthalene	ND		ug/l	2.5	--
n-Propylbenzene	ND		ug/l	0.50	--
1,2,3-Trichlorobenzene	ND		ug/l	2.5	--
1,2,4-Trichlorobenzene	ND		ug/l	2.5	--
1,3,5-Trimethylbenzene	ND		ug/l	2.5	--
1,3,5-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.5	--
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--
Halothane	ND		ug/l	2.5	--
Ethyl ether	ND		ug/l	2.5	--
Methyl Acetate	ND		ug/l	10	--
Ethyl Acetate	ND		ug/l	10	--
Isopropyl Ether	ND		ug/l	2.0	--
Cyclohexane	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	10	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY
Lab Number: L2331881
Report Date: 07/11/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 06/17/23 07:28
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1793046-5					
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	10	--
Methyl cyclohexane	ND		ug/l	10	--
p-Diethylbenzene	ND		ug/l	2.0	--
4-Ethyltoluene	ND		ug/l	2.0	--
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	113		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: DANEHY PARK

Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881

Report Date: 07/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1793046-3 WG1793046-4								
Methylene chloride	100		100		70-130	0		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	100		110		70-130	10		20
Carbon tetrachloride	110		110		63-132	0		20
1,2-Dichloropropane	96		96		70-130	0		20
Dibromochloromethane	98		100		63-130	2		20
1,1,2-Trichloroethane	95		96		70-130	1		20
Tetrachloroethene	120		120		70-130	0		20
Chlorobenzene	110		110		75-130	0		25
Trichlorofluoromethane	120		120		62-150	0		20
1,2-Dichloroethane	95		96		70-130	1		20
1,1,1-Trichloroethane	110		110		67-130	0		20
Bromodichloromethane	94		96		67-130	2		20
trans-1,3-Dichloropropene	91		92		70-130	1		20
cis-1,3-Dichloropropene	95		96		70-130	1		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	89		93		54-136	4		20
1,1,2,2-Tetrachloroethane	86		88		67-130	2		20
Benzene	99		100		70-130	1		25
Toluene	100		110		70-130	10		25
Ethylbenzene	100		110		70-130	10		20
Chloromethane	81		79		64-130	3		20
Bromomethane	71		72		39-139	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: DANEHY PARK

Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881

Report Date: 07/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1793046-3 WG1793046-4								
Vinyl chloride	96		96		55-140	0		20
Chloroethane	100		110		55-138	10		20
1,1-Dichloroethene	110		110		61-145	0		25
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	110		100		70-130	10		25
1,2-Dichlorobenzene	100		110		70-130	10		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	88		91		63-130	3		20
p/m-Xylene	110		115		70-130	4		20
o-Xylene	110		110		70-130	0		20
cis-1,2-Dichloroethene	100		110		70-130	10		20
Dibromomethane	97		98		70-130	1		20
1,4-Dichlorobutane	81		84		70-130	4		20
Iodomethane	**67**	Q	**68**	Q	70-130	1		20
1,2,3-Trichloropropane	84		87		64-130	4		20
Styrene	110		110		70-130	0		20
Dichlorodifluoromethane	90		91		36-147	1		20
Acetone	65		64		58-148	2		20
Carbon disulfide	100		100		51-130	0		20
2-Butanone	73		76		63-138	4		20
Vinyl acetate	98		96		70-130	2		20
4-Methyl-2-pentanone	73		75		59-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881
Report Date: 07/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1793046-3 WG1793046-4								
2-Hexanone	72		73		57-130	1		20
Ethyl methacrylate	84		86		70-130	2		20
Acrolein	92		88		70-130	4		20
Acrylonitrile	79		79		70-130	0		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	72		75		58-130	4		20
2,2-Dichloropropane	110		110		63-133	0		20
1,2-Dibromoethane	95		99		70-130	4		20
1,3-Dichloropropane	94		96		70-130	2		20
1,1,1,2-Tetrachloroethane	100		110		64-130	10		20
Bromobenzene	100		110		70-130	10		20
n-Butylbenzene	100		100		53-136	0		20
sec-Butylbenzene	100		110		70-130	10		20
tert-Butylbenzene	100		110		70-130	10		20
o-Chlorotoluene	100		100		70-130	0		20
p-Chlorotoluene	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	83		83		41-144	0		20
Hexachlorobutadiene	110		120		63-130	9		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	110		110		70-130	0		20
Naphthalene	84		88		70-130	5		20
n-Propylbenzene	100		100		69-130	0		20
1,2,3-Trichlorobenzene	95		98		70-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881
Report Date: 07/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1793046-3 WG1793046-4								
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	100		100		64-130	0		20
1,3,5-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
trans-1,4-Dichloro-2-butene	71		74		70-130	4		20
Halothane	110		120		70-130	9		20
Ethyl ether	92		90		59-134	2		20
Methyl Acetate	**69**	Q	73		70-130	6		20
Ethyl Acetate	71		73		70-130	3		20
Isopropyl Ether	86		86		70-130	0		20
Cyclohexane	100		100		70-130	0		20
Tert-Butyl Alcohol	72		72		70-130	0		20
Ethyl-Tert-Butyl-Ether	86		88		70-130	2		20
Tertiary-Amyl Methyl Ether	86		88		66-130	2		20
1,4-Dioxane	84		80		56-162	5		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	120		120		70-130	0		20
Methyl cyclohexane	100		110		70-130	10		20
p-Diethylbenzene	100		100		70-130	0		20
4-Ethyltoluene	100		110		70-130	10		20
1,2,4,5-Tetramethylbenzene	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: DANEHY PARK

Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881

Report Date: 07/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1793046-3 WG1793046-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	105		105		70-130
Toluene-d8	106		105		70-130
4-Bromofluorobenzene	101		101		70-130
Dibromofluoromethane	111		109		70-130

SEMIVOLATILES

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY
Lab Number: L2331881
Report Date: 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-01
Client ID: GW-2
Sample Location: CAMBRIDGE, MA

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/14/23 16:13
Analyst: TPR

Date Collected: 06/07/23 12:00
Date Received: 06/07/23
Field Prep: Refer to COC

Extraction Method: EPA 3510C
Extraction Date: 06/13/23 19:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	27800		ng/l	139	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY
Lab Number: L2331881
Report Date: 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-02
Client ID: GW-2D
Sample Location: CAMBRIDGE, MA

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/14/23 16:37
Analyst: TPR

Date Collected: 06/07/23 12:30
Date Received: 06/07/23
Field Prep: Refer to COC

Extraction Method: EPA 3510C
Extraction Date: 06/13/23 19:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	28100		ng/l	139	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	46		15-110

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY
Lab Number: L2331881
Report Date: 07/11/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 06/14/23 07:30
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 06/13/23 19:47

Parameter	Result	Qualifier	Units	RL	MDL
1,4 Dioxane by 8270E-SIM - Mansfield Lab for sample(s): 01-02 Batch: WG1790789-1					
1,4-Dioxane	ND		ng/l	150	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	50		15-110

Lab Control Sample Analysis

Batch Quality Control

Project Name: DANEHY PARK

Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881

Report Date: 07/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by 8270E-SIM - Mansfield Lab	Associated sample(s): 01-02		Batch: WG1790789-2	WG1790789-3				
1,4-Dioxane	119		120		40-140	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	52		52		15-110

METALS

Project Name: DANEHY PARK
Lab Number: L2331881
Project Number: 0139-239391-PM.RT.FY
Report Date: 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-01
Client ID: GW-2
Sample Location: CAMBRIDGE, MA
Date Collected: 06/07/23 12:00
Date Received: 06/07/23
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	ND		mg/l	0.0050	--	1	06/26/23 14:28	07/10/23 21:04	EPA 3005A	1,6010D	AMW
Barium, Dissolved	2.47		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:47	EPA 3005A	1,6010D	AMW
Cadmium, Dissolved	ND		mg/l	0.0050	--	1	06/26/23 14:28	07/10/23 15:47	EPA 3005A	1,6010D	AMW
Calcium, Dissolved	162.		mg/l	0.100	--	1	06/26/23 14:28	07/10/23 15:47	EPA 3005A	1,6010D	AMW
Chromium, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:47	EPA 3005A	1,6010D	AMW
Copper, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:47	EPA 3005A	1,6010D	AMW
Iron, Dissolved	38.8		mg/l	0.0500	--	1	06/26/23 14:28	07/10/23 15:47	EPA 3005A	1,6010D	AMW
Lead, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:47	EPA 3005A	1,6010D	AMW
Manganese, Dissolved	0.459		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:47	EPA 3005A	1,6010D	AMW
Mercury, Dissolved	ND		mg/l	0.00020	--	1	07/05/23 10:01	07/05/23 13:44	EPA 7470A	1,7470A	GMG
Selenium, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:47	EPA 3005A	1,6010D	AMW
Silver, Dissolved	ND		mg/l	0.0070	--	1	06/26/23 14:28	07/10/23 15:47	EPA 3005A	1,6010D	AMW
Sodium, Dissolved	308.		mg/l	2.00	--	1	06/26/23 14:28	07/10/23 15:47	EPA 3005A	1,6010D	AMW
Zinc, Dissolved	ND		mg/l	0.0500	--	1	06/26/23 14:28	07/10/23 15:47	EPA 3005A	1,6010D	AMW

Project Name: DANEHY PARK
Lab Number: L2331881
Project Number: 0139-239391-PM.RT.FY
Report Date: 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-02
Client ID: GW-2D
Sample Location: CAMBRIDGE, MA
Date Collected: 06/07/23 12:30
Date Received: 06/07/23
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	0.0071		mg/l	0.0050	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW
Barium, Dissolved	2.53		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW
Cadmium, Dissolved	ND		mg/l	0.0050	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW
Calcium, Dissolved	164.		mg/l	0.100	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW
Chromium, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW
Copper, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW
Iron, Dissolved	39.4		mg/l	0.0500	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW
Lead, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW
Manganese, Dissolved	0.460		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW
Mercury, Dissolved	ND		mg/l	0.00020	--	1	07/05/23 10:01	07/05/23 13:48	EPA 7470A	1,7470A	GMG
Selenium, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW
Silver, Dissolved	ND		mg/l	0.0070	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW
Sodium, Dissolved	309.		mg/l	2.00	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW
Zinc, Dissolved	ND		mg/l	0.0500	--	1	06/26/23 14:28	07/10/23 15:33	EPA 3005A	1,6010D	AMW

Project Name: DANEHY PARK **Lab Number:** L2331881

Project Number: 0139-239391-PM.RT.FY **Report Date:** 07/11/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1795477-1										
Arsenic, Dissolved	ND		mg/l	0.0050	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW
Barium, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW
Cadmium, Dissolved	ND		mg/l	0.0050	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW
Calcium, Dissolved	ND		mg/l	0.100	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW
Chromium, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW
Copper, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW
Iron, Dissolved	ND		mg/l	0.0500	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW
Lead, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW
Manganese, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW
Selenium, Dissolved	ND		mg/l	0.0100	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW
Silver, Dissolved	ND		mg/l	0.0070	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW
Sodium, Dissolved	ND		mg/l	2.00	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW
Zinc, Dissolved	ND		mg/l	0.0500	--	1	06/26/23 14:28	07/10/23 15:24	1,6010D	AMW

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1799442-1										
Mercury, Dissolved	ND		mg/l	0.00020	--	1	07/05/23 10:01	07/05/23 12:56	1,7470A	GMG

Prep Information

Digestion Method: EPA 7470A

Lab Control Sample Analysis

Batch Quality Control

Project Name: DANEHY PARK

Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881

Report Date: 07/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1795477-2								
Arsenic, Dissolved	103		-		80-120	-		
Barium, Dissolved	94		-		80-120	-		
Cadmium, Dissolved	96		-		80-120	-		
Calcium, Dissolved	100		-		80-120	-		
Chromium, Dissolved	98		-		80-120	-		
Copper, Dissolved	92		-		80-120	-		
Iron, Dissolved	96		-		80-120	-		
Lead, Dissolved	100		-		80-120	-		
Manganese, Dissolved	96		-		80-120	-		
Selenium, Dissolved	114		-		80-120	-		
Silver, Dissolved	97		-		80-120	-		
Sodium, Dissolved	100		-		80-120	-		
Zinc, Dissolved	92		-		80-120	-		
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1799442-2								
Mercury, Dissolved	101		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881
Report Date: 07/11/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1795477-3 QC Sample: L2331881-01 Client ID: GW-2												
Arsenic, Dissolved	ND	0.12	0.119	99		-	-		75-125	-		20
Barium, Dissolved	2.47	2	3.93	**73**	Q	-	-		75-125	-		20
Cadmium, Dissolved	ND	0.053	0.0457	86		-	-		75-125	-		20
Calcium, Dissolved	162	10	163	**10**	Q	-	-		75-125	-		20
Chromium, Dissolved	ND	0.2	0.174	87		-	-		75-125	-		20
Copper, Dissolved	ND	0.25	0.233	93		-	-		75-125	-		20
Iron, Dissolved	38.8	1	38.6	**0**	Q	-	-		75-125	-		20
Lead, Dissolved	ND	0.53	0.550	104		-	-		75-125	-		20
Manganese, Dissolved	0.459	0.5	0.833	75		-	-		75-125	-		20
Selenium, Dissolved	ND	0.12	0.152	**127**	Q	-	-		75-125	-		20
Silver, Dissolved	ND	0.05	0.0483	97		-	-		75-125	-		20
Sodium, Dissolved	308	10	316	80		-	-		75-125	-		20
Zinc, Dissolved	ND	0.5	0.418	84		-	-		75-125	-		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1799442-3 QC Sample: L2333507-05 Client ID: MS Sample												
Mercury, Dissolved	ND	0.005	0.00481	96		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881
Report Date: 07/11/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1795477-4 QC Sample: L2331881-01 Client ID: GW-2						
Barium, Dissolved	2.47	2.47	mg/l	0		20
Cadmium, Dissolved	ND	ND	mg/l	NC		20
Calcium, Dissolved	162	159	mg/l	2		20
Chromium, Dissolved	ND	ND	mg/l	NC		20
Copper, Dissolved	ND	ND	mg/l	NC		20
Iron, Dissolved	38.8	39.0	mg/l	1		20
Lead, Dissolved	ND	ND	mg/l	NC		20
Manganese, Dissolved	0.459	0.463	mg/l	1		20
Selenium, Dissolved	ND	ND	mg/l	NC		20
Silver, Dissolved	ND	ND	mg/l	NC		20
Sodium, Dissolved	308	312	mg/l	1		20
Zinc, Dissolved	ND	ND	mg/l	NC		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1795477-4 QC Sample: L2331881-01 Client ID: GW-2						
Arsenic, Dissolved	ND	ND	mg/l	NC		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1799442-4 QC Sample: L2333507-05 Client ID: DUP Sample						
Mercury, Dissolved	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881
Report Date: 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-01
Client ID: GW-2
Sample Location: CAMBRIDGE, MA

Date Collected: 06/07/23 12:00
Date Received: 06/07/23
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	671.		mg CaCO3/L	2.00	NA	1	-	06/21/23 08:27	121,2320B	MKT
Solids, Total Dissolved	1400		mg/l	20	--	2	-	06/14/23 06:09	121,2540C	DEW
Cyanide, Total	ND		mg/l	0.005	--	1	06/21/23 13:00	06/21/23 15:51	1,9010C/9012B	JER
Chloride	520		mg/l	10	--	10	-	06/23/23 16:01	1,9251	JER
Nitrogen, Nitrate	ND		mg/l	0.100	--	1	-	06/08/23 09:09	121,4500NO3-F	KAF
Sulfate	ND		mg/l	10	--	1	06/23/23 14:30	06/23/23 14:30	1,9038	MRW
Chemical Oxygen Demand	71.		mg/l	20	--	1	06/24/23 13:05	06/24/23 18:03	121,5220D	CVN

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881
Report Date: 07/11/23

SAMPLE RESULTS

Lab ID: L2331881-02
Client ID: GW-2D
Sample Location: CAMBRIDGE, MA

Date Collected: 06/07/23 12:30
Date Received: 06/07/23
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	678.		mg CaCO3/L	10.0	NA	5	-	06/21/23 17:40	121,2320B	MKT
Solids, Total Dissolved	1400		mg/l	20	--	2	-	06/14/23 06:09	121,2540C	DEW
Cyanide, Total	ND		mg/l	0.005	--	1	06/21/23 13:00	06/21/23 15:52	1,9010C/9012B	JER
Chloride	530		mg/l	10	--	10	-	06/23/23 16:07	1,9251	JER
Nitrogen, Nitrate	ND		mg/l	0.100	--	1	-	06/08/23 09:11	121,4500NO3-F	KAF
Sulfate	ND		mg/l	10	--	1	06/23/23 14:30	06/23/23 14:30	1,9038	MRW
Chemical Oxygen Demand	73.		mg/l	20	--	1	06/24/23 13:05	06/24/23 18:04	121,5220D	CVN

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY
Lab Number: L2331881
Report Date: 07/11/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1788550-1										
Nitrogen, Nitrate	ND		mg/l	0.100	--	1	-	06/08/23 04:37	121,4500NO3-F	KAF
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1790978-1										
Solids, Total Dissolved	ND		mg/l	10	--	1	-	06/14/23 06:09	121,2540C	DEW
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1794104-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	06/21/23 08:05	121,2320B	MKT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1794114-1										
Cyanide, Total	ND		mg/l	0.005	--	1	06/21/23 13:00	06/21/23 15:24	1,9010C/9012B	JER
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1795213-1										
Sulfate	ND		mg/l	10	--	1	06/23/23 14:30	06/23/23 14:30	1,9038	MRW
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1795374-1										
Chloride	ND		mg/l	1.0	--	1	-	06/23/23 15:12	1,9251	JER
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1795678-1										
Chemical Oxygen Demand	ND		mg/l	20	--	1	06/24/23 13:05	06/24/23 17:58	121,5220D	CVN

Lab Control Sample Analysis

Batch Quality Control

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881
Report Date: 07/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1788550-2								
Nitrogen, Nitrate	99		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1790978-2								
Solids, Total Dissolved	97		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1794104-2								
Alkalinity, Total	107		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1794114-2 WG1794114-3								
Cyanide, Total	94		93		85-115	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1795213-2								
Sulfate	95		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1795374-2								
Chloride	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1795678-2								
Chemical Oxygen Demand	96		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881
Report Date: 07/11/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1788550-4 QC Sample: L2331656-01 Client ID: MS Sample												
Nitrogen, Nitrate	0.134	4	3.22	**77**	Q	-	-		83-113	-		17
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1794104-4 QC Sample: L2331931-05 Client ID: MS Sample												
Alkalinity, Total	135	100	239	104		-	-		86-116	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1794114-4 WG1794114-5 QC Sample: L2331649-11 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.207	104		0.195	98		80-120	6		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1795213-4 QC Sample: L2331624-10 Client ID: MS Sample												
Sulfate	ND	20	20	100		-	-		55-147	-		14
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1795374-4 QC Sample: L2331881-01 Client ID: GW-2												
Chloride	520	20	540	100		-	-		58-140	-		7
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1795678-4 QC Sample: L2331624-01 Client ID: MS Sample												
Chemical Oxygen Demand	71	238	300	96		-	-		84-120	-		12

Lab Duplicate Analysis

Batch Quality Control

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881
Report Date: 07/11/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1788550-3 QC Sample: L2331656-01 Client ID: DUP Sample						
Nitrogen, Nitrate	0.134	0.102	mg/l	**27**	Q	17
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1790978-3 QC Sample: L2331760-02 Client ID: DUP Sample						
Solids, Total Dissolved	2900	3200	mg/l	10		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1794104-3 QC Sample: L2331931-05 Client ID: DUP Sample						
Alkalinity, Total	135	136	mg CaCO3/L	0		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1795213-3 QC Sample: L2331624-10 Client ID: DUP Sample						
Sulfate	ND	ND	mg/l	NC		14
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1795374-3 QC Sample: L2331881-01 Client ID: GW-2						
Chloride	520	530	mg/l	2		7
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1795678-3 QC Sample: L2331624-01 Client ID: DUP Sample						
Chemical Oxygen Demand	71	67	mg/l	6		12

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881
Report Date: 07/11/23

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(*)
L2331881-01A	Vial HCl preserved	A	NA		2.4	Y	Absent		8260(14)
L2331881-01B	Vial HCl preserved	A	NA		2.4	Y	Absent		8260(14)
L2331881-01C	Vial HCl preserved	A	NA		2.4	Y	Absent		8260(14)
L2331881-01D	Plastic 120ml H2SO4 preserved	A	<2	<2	2.4	Y	Absent		COD-5220(28)
L2331881-01E	Plastic 250ml unpreserved/No Headspace	A	NA		2.4	Y	Absent		ALK-T-2320(14)
L2331881-01F	Plastic 250ml HNO3 preserved	A	<2	<2	2.4	Y	Absent		PB-SI(180),FE-SI(180),BA-SI(180),NA-SI(180),AG-SI(180),AS-SI(180),MN-SI(180),CU-SI(180),CD-SI(180),CR-SI(180),HG-S(28),ZN-SI(180),SE-SI(180),CA-SI(180)
L2331881-01G	Plastic 250ml NaOH preserved	A	>12	>12	2.4	Y	Absent		TCN-9010(14)
L2331881-01H	Amber 250ml unpreserved	A	7	7	2.4	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2331881-01I	Amber 250ml unpreserved	A	7	7	2.4	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2331881-01J	Plastic 500ml unpreserved	A	7	7	2.4	Y	Absent		CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L2331881-02A	Vial HCl preserved	A	NA		2.4	Y	Absent		8260(14)
L2331881-02B	Vial HCl preserved	A	NA		2.4	Y	Absent		8260(14)
L2331881-02C	Vial HCl preserved	A	NA		2.4	Y	Absent		8260(14)
L2331881-02D	Plastic 120ml H2SO4 preserved	A	<2	<2	2.4	Y	Absent		COD-5220(28)
L2331881-02E	Plastic 250ml unpreserved/No Headspace	A	NA		2.4	Y	Absent		ALK-T-2320(14)
L2331881-02F	Plastic 250ml HNO3 preserved	A	<2	<2	2.4	Y	Absent		PB-SI(180),FE-SI(180),BA-SI(180),AS-SI(180),CU-SI(180),AG-SI(180),NA-SI(180),MN-SI(180),CD-SI(180),CR-SI(180),CA-SI(180),SE-SI(180),ZN-SI(180),HG-S(28)
L2331881-02G	Plastic 250ml NaOH preserved	A	>12	>12	2.4	Y	Absent		TCN-9010(14)
L2331881-02H	Amber 250ml unpreserved	A	7	7	2.4	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2331881-02I	Amber 250ml unpreserved	A	7	7	2.4	Y	Absent		A2-1,4-DIOXANE-SIM(7)

*Values in parentheses indicate holding time in days

Project Name: DANEHY PARK
Project Number: 0139-239391-PM.RT.FY

Lab Number: L2331881
Report Date: 07/11/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2331881-02J	Plastic 500ml unpreserved	A	7	7	2.4	Y	Absent		CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L2331881-03A	Vial HCl preserved	A	NA		2.4	Y	Absent		8260(14)
L2331881-03B	Vial HCl preserved	A	NA		2.4	Y	Absent		8260(14)

*Values in parentheses indicate holding time in days

Project Name:	DANEHY PARK	**Lab Number:**	L2331881
Project Number:	0139-239391-PM.RT.FY	**Report Date:**	07/11/23

GLOSSARY

Acronyms

DL - 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 limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

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.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

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. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

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.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

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.

Report Format: Data Usability Report

Project Name:	DANEHY PARK	**Lab Number:**	L2331881
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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.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

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'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

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.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

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.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

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.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

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

Report Format: Data Usability Report

Project Name:	DANEHY PARK	**Lab Number:**	L2331881
Project Number:	0139-239391-PM.RT.FY	**Report Date:**	07/11/23

Data Qualifiers

ND - Not detected at the reporting limit (RL) for the sample.

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.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	DANEHY PARK	**Lab Number:**	L2331881
Project Number:	0139-239391-PM.RT.FY	**Report Date:**	07/11/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

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 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
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**, 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 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: 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 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, 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, EPA 537.1.

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, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

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

CHAIN OF COUNTODY

PAGE 1 OF 1

Date Rec'd in Lab: 6/8/23

ALPHA Job #: L2331881

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Project Information

Project Name: DANEHY PARK
Project Location: CAMBRIDGE, MA.
Project #: 0139-239391-PM.RT.FY2023
Project Manager: NATHAN JONES
ALPHA Quote #:

Report Information - Data Deliverables

☑ ADEx ☑ EMAIL

Billing Information

☑ Same as Client info PO #:

Client Information

Client: CDM-SMITH
Address: 75 STATE STREET, SUITE 701, BOSTON, MA. 02109
Phone: 617-452-6563
Email: jonesne@cdmsmith.com

Regulatory Requirements & Project Information Requirements

- ☐ Yes ☑ No MA MCP Analytical Methods
- ☐ Yes ☐ No CT RCP Analytical Methods
- ☐ Yes ☑ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
- ☐ Yes ☑ No GW1 Standards (Info Required for Metals & EPH with Targets)
- ☐ Yes ☑ No NPDES RGP
- ☐ Other State /Fed Program ____ Criteria ____

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Additional Project Information:

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☑ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13 (Fe, Cu)	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☐ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	TCN	COD	ALKALINITY	WET CHEM: TDS, NO3, SO4, Cl	1,4 DIOXANE 8270		Sample Comments	TOTAL # BOTTLES
31881 01	GW-2	6-7-23	1200	MW	MD	X			X					X	X	X	X	X			10
02	GW-2D	6-7-23	1230	MW	MD	X			X					X	X	X	X	X			10
03	TRIP BLANK	6-1-23	–	–	S	X															2
Container Type						V			P					P	P	P	P	A			
Preservative						B			C					E	D	A	A	A			

SAMPLE INFO
Filtration
☑ Field
☐ Lab to do
Preservation
☐ Lab to do

Container Type	Preservative
P= Plastic	A= None
A= Amber glass	B= HCl
V= Vial	C= HNO_3
G= Glass	D= H_2SO_4
B= Bacteria cup	E= NaOH
C= Cube	F= MeOH
O= Other	G= $NaHSO_4$
E= Encore	H = $Na_2S_2O_3$
D= BOD Bottle	I= Ascorbic Acid
	J = NH_4Cl
	K= Zn Acetate
	O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	6-7-23 1415	[signature]	6/7/23 1415
[signature]	6/7/23	N. Ruiz AAL	6-7-23 1600
N. Ruiz AAL	6-7-23 1759	[signature]	6/7/23 1759

CDM Smith

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