PHASE II ENVIRONMENTAL SITE INVESTIGATION REPORT

for

31-33 Wave Street
Staten Island, New York

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LANGAN

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1.0 INTRODUCTION

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) prepared this Phase II Environmental Site Investigation (ESI) report on behalf of BFC 475 Residential LLC for the properties located at 31-33 Wave Street in the Stapleton Heights neighborhood of Staten Island, New York (the site). The Phase II ESI was conducted in support of due diligence to investigate the recognized environmental conditions (RECs) identified in Langan's March 20, 2020 Phase I Environmental Site Assessment (ESA) for the 475 Bay Street and 31-33 Wave Street properties.

The Phase II ESI included completion of a geophysical survey, advancement of soil borings, installation of permanent groundwater monitoring wells and soil and sub-slab vapor probes, and collection and laboratory analysis of soil, groundwater, soil vapor, sub-slab vapor and indoor air samples. The Phase II ESI field work was completed on April 28, 29, and 30, 2020.

This report is organized as follows:

- Section 2.0: Describes the site background
- Section 3.0: Presents the Phase II ESI methodology
- Section 4.0: Presents the findings of the Phase II ESI
- Section 5.0: Presents conclusions based on the findings
- Section 6.0: Presents recommendations based on the conclusions

2.0 BACKGROUND

2.1 Site Location and Description

The site is located at 31-33 Wave Street in the Stapleton Heights neighborhood of Staten Island, New York, and is identified on the Borough of Staten Island Tax Map as Block 488, Lots 157, 162 and 164. The 6,150-square foot site is located at the southeastern part of the city block bound by Baltic Street to the north, Murray Hulbert Avenue to the east, Wave Street to the south, and Bay Street to the west. Lot 164 is developed with a vacant one-story slab-on-grade building formerly operated as an auto repair and detailing shop. Lots 157 and 162 are asphalt-paved parking lots.

According to the survey drawings prepared by Meridian Layout Inc., dated February 12, 2020, the site elevation ranges from about elevation (el.) 8.76 to el. 6.94[1], and slopes gently east toward The Narrows. The site is located within an urban area characterized by commercial, industrial, residential buildings and parkland. A New York City Transit (NYCT) elevated Staten Island Rail structure runs parallel to the eastern boundary of the site. A Site Location Map is included as Figure 1.

2.2 Proposed Development

The proposed redevelopment project consists of a new 3-story community facility spanning Lots 157, 162 and 164, which will adjoin a 12-story residential building being developed at 475 Bay Street. The development would require excavation to depths of about 5 feet below sidewalk grade to accommodate foundation elements.

2.3 Recognized Environmental Conditions

Langan's March 20, 2020 Phase I ESA identified the following Recognized Environmental Conditions (RECs) for the 31-33 Wave Street properties:

REC 1 – Historic Site Use

Historical operations at the site include auto painting (1937 to 1950), a truck shop (1937 to 1950), auto repair (1934; 1977 to 2019), a gravel and sand company with a gasoline tank (1950 to 1972), used auto sales (1968; 1977 to 1990), unidentified manufacturing (1981 to 1988) and ironworks (1984). Additionally, Lot 164 is identified in the Solid Waste/Landfill (SW/LF) database described as a car dismantling facility. Historical uses of the site may have resulted in releases of petroleum

[1] All elevations shown refer to North American Vertical Datum of 1988 (NAVD88).

products, solvents, chemicals, and/or other hazardous substances that may have affected soil, groundwater, or soil vapor beneath the site.

REC 2 – Potential Former Hydraulic Lift Filled with Liquid

Three rectangular pits filled with water were observed in the former auto repair building located on Lot 164. The pits appeared to be lined with concrete. One pit measured about 15 x 8 x 3 feet and the remaining two measured about 3 x 3 x 3 feet. The pits appear to be remnants of former hydraulic lifts and suspected globules of free product were observed floating on the surface of the water. Although the pits appeared to be lined with concrete the condition of the pits could not be inspected.

REC 3 – Historical Use of the Adjoining and Surrounding Properties

Historical use of the adjoining and surrounding properties include a lumber yard (1898 to 1917), a gasoline service station (1929 to 1934), a coal yard (1934 to 1950), a dry cleaning company with historical generation of hazardous waste and petroleum bulk storage (1934 to present), a filling station with three gasoline tanks (1928 to 1996), a gasoline filling station with petroleum bulk storage and an oil shed (1937 to 1950), a bus garage (1937) and a factory (1937 to 1962). Historical operations on adjoining and surrounding properties may have resulted in releases of petroleum products, solvents, chemicals, and/or other hazardous substances that may have affected groundwater or soil vapor beneath the site.

2.4 Soil and Geology

Based on a review of "Geologic and Geohydrologic Reconnaissance of Staten Island, New York" prepared by Julian Soren for the USGS and dated 1988, the site is underlain by surficial deposits comprised of ground moraine, which is composed of reddish-brown clayey till derived from the Upper Triassic and Lower Jurassic shale and sandstone. Based on "Plate 2 Bedrock Geology of Staten Island and Configuration of Bedrock Surface", prepared by United Stated Department of the Interior Geological Survey in cooperation with the NYSDEC and dated 1986, the ground moraine is underlain by Staten Island Serpentine at the site. Bedrock is anticipated beneath the ground moraine layer at depths of about 30 to 50 feet bgs.

2.5 Hydrogeology

Groundwater flow is typically topographically influenced, as shallow groundwater tends to originate in areas of topographic highs and flow toward areas of topographic lows, such as rivers, stream valleys, ponds, and wetlands. A broader, interconnected hydrogeologic network often governs groundwater flow at depth or in the bedrock aquifer. Groundwater depth and flow direction are also subject to hydrogeologic and anthropogenic variables such as precipitation,

evaporation, extent of vegetative cover, and coverage by impervious surfaces. Other factors influencing groundwater include depth to bedrock, the presence of artificial fill, and variability in local geology and groundwater sources or sinks. Groundwater is inferred to flow to the east towards the Narrows, following the topography and the historical stream illustrated in the 1865 Topographical Atlas of City of New York Including Annexed Territory (Viele Map) created by Egert L. Viele. Groundwater was encountered at depths ranging from 4 to 7 feet bgs

Groundwater in New York City is not used as a potable water source. Potable water is provided to the site by New York City and is obtained from surface impoundments in the Croton, Catskill, and Delaware watersheds. According to the current Federal Emergency Management Agency (FEMA) Effective Flood Insurance Rate Map (FIRM) dated September 5, 2007, the site is located in Zone AE, which is within an area inundated by 1% annual chance of flooding and Zone B, which is within an area inundated by a 0.2% annual chance of flooding.

3.0 FIELD INVESTIGATION

The Phase II ESI included completion of a geophysical survey, advancement of six environmental soil borings, installation of three permanent groundwater monitoring wells, installation of two soil vapor probes, two sub-slab probes, and collection of six soil, three groundwater, two soil vapor, two sub-slab vapor, an ambient air sample and two indoor air samples for laboratory analysis. The Phase II ESI field work was completed from April 28 through 30, 2020. A sample summary is included in Table 1 and sample locations are shown on Figure 2. Photographs taken during the field investigation are included in Appendix A.

3.1 Geophysical Survey

Prior to intrusive sampling, NOVA Geophysical & Environmental, Inc. (NOVA), of Douglaston, New York, conducted a geophysical survey on April 28, 2020. NOVA used ground penetrating radar (GPR) and electromagnetic detection equipment to identify potential underground storage tanks (USTs) and locate buried utilities and anomalies across the site. Boring locations were cleared of any subsurface structures or utilities.

A copy of the geophysical survey report is included in Appendix B.

3.2 Soil Investigation

Soil borings SB04 through SB09[1] were advanced by AARCO Environmental Services Corp. (AARCO) of Lindenhurst, New York. A Langan field engineer was on-site to document field observations and collect soil samples. Soil borings SB08 and SB09 were advanced using a Geoprobe® 420M limited access drill rig and soil borings SB04 through SB07 were advanced using a 7822DT track mounted Geoprobe® direct push drill rig to depths ranging from 15 to 20 feet bgs. Soil samples were collected continuously into 4-foot and 5-foot Macro-Core® sample barrels lined with dedicated acetate sleeves.

Soil samples retrieved from borings were visually classified for soil type, grain size, texture, and moisture content. Each sample was screened for visual, olfactory, and instrumental evidence of a chemical or petroleum release. Instrumental screening for the presence of organic vapors was performed using a photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp. Eighteen soil samples including two quality assurance/ quality control (QA/QC) samples were collected from borings SB04 through SB09 for laboratory analysis. Samples were collected from the upper two-foot interval; the interval exhibiting the greatest degree of impacts, the historic fill and native soil interface or from the groundwater interface; and from the apparent native soil

[1] These borings were installed as part of a larger Remedial Investigation of this site and the adjacent 475 Bay Street site.

interval beneath observed impacts or termination depth of the boring. Samples submitted for volatile organic compound (VOC) analysis were collected directly from the acetate liner into laboratory-supplied Terra Core® soil samplers. The remaining sample volume was homogenized and placed in laboratory-supplied containers for additional analyses. The sample containers were labeled, placed in a laboratory-supplied cooler, and packed on ice (to attempt to maintain a temperature of about 4°C). The samples were picked up and delivered via courier service to York Analytical Laboratories Inc. (York) under standard chain-of-custody protocol. York is a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory located in Stratford, Connecticut.

Soil samples were analyzed for Part 375 List and Target Compound List (TCL) VOCs by United States Environmental Protection Agency (USEPA) Method 8260C, semivolatile organic compounds (SVOCs) by USEPA Method 8270D, pesticides and herbicides by USEPA Method 8081B, polychlorinated biphenyls (PCBs) by USEPA Method 8082A, and Part 375/Target Analyte List (TAL) metals including hexavalent and trivalent chromium by USEPA Methods 6010C.

Following sample collection, boreholes were backfilled to grade with soil cuttings and the ground surface was restored. Soil boring logs are included in Appendix C, soil boring locations are shown on Figure 2, and a soil sample summary is included in Table 1.

3.3 Groundwater Investigation

Three soil borings, SB05, SB06, and SB08, were converted into permanent groundwater monitoring wells. Monitoring well MW08, was installed by inserting 10 feet of 0.01-inch slotted, one-inch diameter, Schedule-40 polyvinyl chloride (PVC) screen with attached riser piping into the boring. Monitoring wells MW05 and MW06 were installed by inserting 10 feet of 0.02-inch, two-inch diameter Schedule-40 PVC screen with attached riser piping into each boring. The screens were positioned to straddle the observed water table. The annulus of each well was filled with clean sand (Morie No. 2) to about 6-inches to one foot above the top of the screen. A hydrated bentonite well seal was installed above the filter sand in each well location and the overlying annulus was filled with grout. Each well was finished with a flush-mounted, bolt-down manhole set into a concrete collar.

Following installation, the monitoring wells were developed and sampled using a peristaltic pump. Prior to sample collection, the wells were purged and attempts were made to stabilize groundwater parameters (pH, conductivity, turbidity, dissolved oxygen, temperature, and oxidation-reduction potential), with turbidity measurements below 50 Nephelometric Turbidity Units (NTU). Stability was not achieved in monitoring well MW08 due to poor recharge. The monitoring well construction log and groundwater sampling log are included as Appendix D.

The groundwater samples were collected into laboratory-supplied glassware and delivered via courier service to York. Groundwater samples were analyzed for TCL VOCs by EPA Method 8260, TCL SVOCs by EPA Method 8270, PCBs by EPA Method 8082, pesticides by USEPA Method 8081B, and total and dissolved (field filtered) metals including hexavalent and trivalent chromium by EPA Methods 6010B/7471A. The groundwater monitoring well locations are shown on Figure 2 and a groundwater sample summary is included in Table 1.

3.4 Soil Vapor Investigation

AARCO installed two soil vapor points (SV04 and SV07) to depths ranging from 2 to 3 feet bgs on Lots 157 and 162 using a Geoprobe® 7822DT track mounted drill rig and two sub-slab points to a depth of two inches beneath the concrete slab of the Lot 164 building using a Geoprobe® 420M limited access drill rig. The sub-slab and soil vapor points were installed in accordance with the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York. Soil vapor sample points consisted of a 1-7/8-inch polyethylene implant attached to polyethylene tubing. Sub-slab sample points consisted of dedicated polyethylene tubing. The annular space around the tubing was backfilled with filter sand followed by bentonite seal at grade. Co-located indoor air samples were collected concurrently with the sub-slab vapor samples.

As a quality assurance/quality control (QA/QC) measure, an inert tracer gas (helium) was introduced into an above-grade sampling chamber before and after sampling to ensure that the soil vapor probes were properly sealed above the target sampling depth, thereby preventing infiltration of ambient air to the subsurface. Direct readings of helium of less than 10 percent prior to sampling were considered sufficient to verify a tight seal. Each soil vapor point was purged using a MultiRAE multi-gas meter at rate of 0.2 liters per minute (L/min) to evacuate a minimum of three sample tubing volumes prior to sample collection. Soil vapor and sub-slab/co-located indoor air samples were collected into laboratory-supplied, batch-certified, 6-Liter Summa® canisters calibrated for 120 or 480 minutes of sampling, respectively. For QA/QC purposes, one ambient air sample was collected about 3 feet above the floor surface during the sampling event. Summa® canisters were labeled and transported via courier to York under standard chain-of-custody protocol for analysis of VOCs by USEPA method TO-15.

Following sample collection, soil vapor implants and tubing were removed and boreholes were backfilled to grade with soil cuttings and patched at surface grade. Soil vapor probe construction and vapor sampling logs are included in Appendix E, soil and sub-slab vapor locations are shown on Figure 2, and soil and sub-slab vapor sample summary is included in Table 1.

4.0 OBSERVATIONS AND RESULTS

4.1 Geophysical Survey

NOVA's geophysical survey identified municipal water, sewer, and gas lines entering the building on Lot 164 from Wave Street. An electric line was also observed running along the northern and eastern boundary of the site. The geophysical survey did not identify any anomalies indicative of underground structures or tanks. Borings were relocated as necessary to avoid subsurface utilities. A copy of the geophysical survey report is included in Appendix B.

4.2 Subsurface Observations

Fill material, generally consisting of fine-grained sand with varying amounts of fine gravel, silt, clay, coal, coal ash, slag, and concrete, wood, and glass fragments, was identified from below surface grade to depths ranging from about 5 to 13 feet bgs. Native soil, typically consisting of fine-grained sand and silt with varying amounts of fine gravel and clay was identified beneath the fill layer to the boring termination depths, ranging from 15 to 20 feet bgs. With the exception of petroleum-like odors identified in SB04 from 14 to 16 feet bgs, evidence of petroleum-like impacts were not identified. A maximum PID reading of 8 parts per million (ppm) was observed in SB06 from a depth 5 to 7 feet bgs.

Groundwater was encountered in soil borings at depths ranging from 4 to 7 feet bgs.

4.3 Soil Sample Results

Soil sample analytical results were compared to Title 6 of the New York Codes, Rules and Regulations (NYCRR) Part 375 Unrestricted Use (UU) and Restricted Use Restricted-Residential (RURR) Soil Cleanup Objectives (SCOs). Analytes exceeding the UU and/or RURR SCOs are summarized below. SCOs are listed in parentheses. Exceedances of RURR SCOs are in bold. Soil sample analytical results are summarized in Table 2, and analytical laboratory reports are included in Appendix F.

SVOCs - The following SVOC was detected above the UU and/or RURR SCOs:

- Indeno(1,2,3-cd)pyrene – **0.559 milligrams per kilogram (mg/kg)** in SB05_0-2 (UU and RURR SCO: 0.5 mg/kg)

Pesticides - The following pesticide was detected above the UU SCOs:

- 4,4'-DDT – 0.00426 mg/kg in SB05_0-2 to 0.0099 mg/kg in SODUP01_042920 (UU SCO: 0.0033 mg/kg)

Metals - The following metals were detected above their respective UU and/or RURR SCOs:

- Barium – **442 mg/kg** in SB08_13-15 (RURR SCO: 350 mg/kg)
- Copper – 60 mg/kg in SB05_0-2 (UU SCO: 50 mg/kg)
- Lead – 66 mg/kg in SB09_13-15 to **2,080 mg/kg** in SB08_13-15 (UU SCO: 63 mg/kg; RURR SCO: 400 mg/kg)
- Mercury – 0.226 mg/kg in SB09_4-6 to **1.33 mg/kg** in SB05_0-2 (UU SCO: 0.18 mg/kg; RURR SCO: 0.81 mg/kg)
- Nickel – 69.9 mg/kg in SB09_4-6 to **325 mg/kg** in SB08_4-6 (UU SCO: 30 mg/kg; RURR 310 mg/kg)
- Selenium – 4.08 mg/kg in SB08_4-6 to 12.60 mg/kg in SB04_0-2 (UU SCO: 3.9 mg/kg)
- Trivalent Chromium – 31 mg/kg in SB08_0-2 to 39.50 mg/kg in SB09_13-15 (UU SCO: 30 mg/kg)
- Zinc – 123 mg/kg in SB08_0-2 to 291 mg/kg in SB08_13-15 (UU SCO: 109 mg/kg)

VOCs, Herbicides and PCBs

VOCs, herbicides, and PCBs were not detected at concentrations above the UU and/or RURR SCOs.

4.4 Groundwater Sample Results

Groundwater results were compared to the NYSDEC Division of Water Technical and Operation Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (SGVs) for Class GA (drinking water). Analytical results from the groundwater sample are summarized in Table 3.

VOCs, SVOCs, PCBs and pesticides were not detected at concentrations above the NYSDEC TOGS SGVs in the collected groundwater samples.

Total and dissolved metals were detected in the samples collected from MW05, MW06, and MW08 at concentrations above the SGVs and are summarized below. SGVs are listed in parentheses:

- Total Iron – 4,940 micrograms per liter (µg/L) in MW08 to 11,400 µg/L in MW06 (SGV: 300 µg/L)
- Total Lead - 184 µg/L in MW08 (SGV: 25 µg/L)
- Total Manganese – 1,730 µg/L in MW06 to 2,900 µg/L in MW05 (SGV: 300 µg/L)
- Total Sodium – 48,400 µg/L in MW06 to 90,900 µg/L in MW05 (SGV: 20,000 µg/L)
- Dissolved Iron – 5,510 µg/L in MW05 to 11,000 µg/L in MW06 (SGV: 300 µg/L)
- Dissolved Manganese – 1,700 µg/L in MW06 to 2,700 µg/L in MW05 (SGV: 300 µg/L)
- Dissolved Sodium – 47,800 µg/L in MW06 to 90,900 µg/L in MW05 (SGV: 20,000 µg/L)

4.5 Soil Vapor Sample Results

The results were evaluated using the Decision Matrices A, B and C (updated May 2017) as referenced in the 2006 NYSDOH Soil Vapor Intrusion Guidance document. The Decision Matrices present recommended actions based on the concentrations of 1,1-dichloroethene, 1,1,1-trichloroethane (TCA), cis-1,2-dichloroethene (DCE), carbon tetrachloride, methylene chloride, trichloroethene (TCE), tetrachloroethene (PCE), and vinyl chloride in soil vapor and indoor air.

Twenty-nine VOCs were detected in the soil and sub-slab vapor samples. Total VOC concentrations in soil samples ranged from 223 micrograms per cubic meter ($\mu g/m^3$) in SS08 to 307 $\mu g/m^3$ in SS09. The compounds evaluated in the NYSDOH Decision Matrices were not detected above the minimum concentrations identified in the matrices. Based on these concentrations, the NYSDOH Decision Matrix recommendations specify "no further action". Soil vapor sample analytical results are summarized in Table 4, and analytical laboratory reports are included in Appendix F.

5.0 CONCLUSIONS

The following is a summary of Phase II findings:

- Fill material, generally consisting of fine-grained sand with varying amounts of fine gravel, silt, clay, coal, coal ash, slag, and concrete, wood, and glass fragments, was identified from below surface grade to depths ranging from 5 to 13 feet bgs. Native soil, typically consisting of fine-grained sand and silt with varying amounts of fine gravel and clay was identified beneath the fill layer to the boring termination depths of 15 to 20 feet bgs.
- Groundwater was encountered at depths ranging from 4 to 7 feet bgs.
- Petroleum-like odors were apparent in SB04 from 14 to 16 feet bgs; however, laboratory testing did not identify petroleum constituents in soil or groundwater. Petroleum-like impacts were not observed in the remainder of the borings.
- SVOCs, pesticides and metals were detected at a concentrations above UU and/or RURR SCOs. Concentrations were consistent with historic fill in New York City.
- Total lead, manganese, and sodium and dissolved manganese and sodium were detected in groundwater at a concentrations exceeding TOGS SGVs. Detections of manganese and sodium are naturally-occurring and the observed concentrations are not indicative of groundwater contamination. Because dissolved lead was not identified in groundwater at concentrations greater than the SGV, detections of total lead in groundwater are likely the result of entrained sediment in groundwater derived from historic fill.
- Total VOC concentrations in soil and sub-slab vapor samples ranged from 223 µg/m^3 in SS08 to 307 µg/m^3 in SS09. The compounds evaluated in the NYSDOH Decision Matrices were either not detected or were detected and concentrations that require "no further action".

6.0 LIMITATIONS

This report was prepared expressly for BFC 475 Residential LLC for the property located at 31-33 Wave Street in Staten Island, New York, and for the objectives defined herein. Langan cannot assume responsibility for the use of this report for any property other than the specific site addressed in this report, or by any third party without specific written authorization from Langan.

The conclusions, opinions, and recommendations provided in this report are based on subsurface conditions ascertained from the analysis of a limited number of samples. Recommendations provided are contingent upon one another and no recommendation should be relied upon or considered effective independent of the others. Actual conditions encountered may differ

substantially from those presented herein and should be brought to our attention whereby we may determine how such changes may affect our conclusions, opinions, and recommendations.

TABLES

Table 1
Sample Summary
Phase II Environmental Site Investigation Report

31-33 Wave Street
Staten Island, New York
Langan Project No. 170610601

No.	Sample Location	Sample ID	Sample Date/Time	Sample Collection Depth (feet bgs)	Sampling Rationale	Sample Analyses
SOIL						
1	SB04	SB04_0-2	4/29/2020	0 to 2	Upper 2 feet of historic fill	TCL / Part 375-list of VOCs & SVOCs, Part 375 PCBs, Pesticides, and Herbicides, TAL / Part 375 Metals including cyanide and hexavalent and trivalent chromium
2		SB04_10-12	4/29/2020	14 to 16	Evidence of greatest impacts	
3		SB04_14-16	4/29/2020	18 to 20	Clean interval below impacts	
4	SB05	SB05_0-2	4/28/2020	0 to 2	Upper 2 feet of historic fill	
5		SB05_6-8	4/28/2020	6 to 8	Groundwater interface	
6		SB05_18-20	4/28/2020	18 to 20	Boring termination depth	
7	SB06	SB06_0-2	4/29/2020	0 to 2	Upper 2 feet of historic fill	
8		SB06_5-7	4/29/2020	5 to 7	Evidence of greatest impacts	
9		SB06_12-14	4/29/2020	12 to 14	Clean interval below impacts	
10	SB07	SB07_0-2	4/29/2020	0 to 2	Upper 2 feet of historic fill	
11		SB07_8-10	4/29/2020	8 to 10	Five feet below the groundwater table	
12		SB07_18-20	4/29/2020	18 to 20	Boring termination depth	
13	SB08	SB08_0-2	4/28/2020	0 to 2	Upper 2 feet of historic fill	
14		SB08_4-6	4/28/2020	4 to 6	Groundwater interface	
15		SB08_13-15	4/28/2020	13 to 15	Boring termination depth	
16	SB09	SB09_0-2	4/28/2020	0 to 2	Upper 2 feet of historic fill	
17		SB09_4-6	4/28/2020	4 to 6	Groundwater interface	
18		SB09_13-15	4/28/2020	13 to 15	Boring termination depth	
GROUNDWATER						
1	MW05	MW05_043020	4/30/2020	Center of water column	Groundwater	TCL VOCs, SVOCs, PCBs, Pesticides, and TAL Metals (total and dissolved [field filtered])
2	MW06	MW06_043020	4/30/2020			
3	MW08	MW08_043020	4/30/2020			

Table 1
Sample Summary
Phase II Environmental Site Investigation Report

31-33 Wave Street
Staten Island, New York
Langan Project No. 170610601

No.	Sample Location	Sample ID	Sample Date/Time	Sample Collection Depth (feet bgs)	Sampling Rationale	Sample Analyses
AIR						
1	SV04	SV04_043020	4/30/2020	3	Soil Vapor	TO-15 VOCs
2	SV07	SV07_043020	4/30/2020	2		
3	SS08	SS08_043020	4/30/2020	14 inches	Sub-slab	
4	SS09	SS09_043020	4/30/2020			
5	IA08	IA08_043020	4/30/2020	Breathing Height	Indoor Air (co-located with sub-slab)	
6	IA09	IA09_043020	4/30/2020			
QA/QC						
N/A	SB04	SODUP01_042920	4/29/2020	0 to 2	Duplicate	TCL / Part 375-list of VOCs & SVOCs, Part 375 PCBs, Pesticides, and Herbicides, TAL / Part 375 Metals including cyanide and hexavalent and trivalent chromium
	N/A	SOFB01_042820	4/28/2020	N/A	Field Blank	
		SOFB02_043020	4/30/2020			
	MW08	GWDUP01_043020	4/30/2020		Duplicate	TCL VOCs, SVOCs, PCBs, Pesticides, and TAL Metals (total and dissolved [field filtered])
	N/A	GWFB01_043020	4/30/2020		Field Blank	
		GWTB01_043020	4/30/2020		Trip Blank	Part 375 VOCs
		AA01_043020	4/30/2020		Ambient Air	TO-15 VOCs

Notes:
1. Sample depth intervals were determined in the field.
2. Soil samples to be analyzed for New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (6 NYCRR) Part 375-list compounds.
3. TBD = to be determined (in the field)
4. VOC = volatile organic compound
5. SVOC = semivolatile organic compound
6. PCB = polychlorinated biphenyl
7. N/A = Not Applicable
8. TCL = Target Compound List
9. TAL = Target Analyte List
10. QA/QC = quality assurance/quality control
11. TO-15 = United States Environmental Protection Agency (USEPA) Method TO-15

Table 2
Soil Sample Analytical Results Summary
Phase II Environmental Site Investigation

31-33 Wave Street
Staten Island, New York
Langan Project No.: 170610601

Location Sample ID Laboratory ID Sample Date Sample Depth (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Restricted-Residential SCOs	SB04 SB04_0-2 20D0818-01 4/29/2020 0-2		SB04 SODUP01_042920 20D0818-12 4/29/2020 0-2		SB04 SB04_14-16 20D0818-03 4/29/2020 14-16		SB04 SB04_18-20 20D0818-04 4/29/2020 18-20		SB05 SB05_0-2 20D0776-04 4/28/2020 0-2		SB05 SB05_6-8 20D0776-05 4/28/2020 6-8		SB05 SB05_18-20 20D0776-06 4/28/2020 18-20		SB06 SB06_0-2 20D0818-05 4/29/2020 0-2		SB06 SB06_5-7 20D0818-06 4/29/2020 5-7		SB06 SB06_12-14 20D0818-07 4/29/2020 12-14	
Volatile Organic Compounds (mg/kg)																						
Acetone	0.05	100	0.0051	U	0.0046	U	0.0057	J	0.033		0.0051	U	0.0067	J	0.009		0.0044	U	0.02		0.0039	U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0026	U	0.0023	U	0.0018	U	0.0043	U	0.0025	U	0.0024	U	0.0022	U	0.0022	U	0.0037	U	0.0019	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	~	~	0.0026	U	0.0023	U	0.0018	U	0.0043	U	0.0025	U	0.0024	U	0.0022	U	0.0022	U	0.0037	U	0.0019	U
Semivolatile Organic Compounds (mg/kg)																						
Acenaphthene	20	100	0.0451	U	0.0458	U	0.0465	U	0.0712	U	0.0443	U	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Acenaphthylene	100	100	0.0451	U	0.0458	U	0.0465	U	0.0712	U	0.0834	JD	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Anthracene	100	100	0.0451	U	0.0458	U	0.0465	U	0.0712	U	0.077	JD	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Benzo(a)Anthracene	1	1	0.152	D	0.113	D	0.0465	U	0.0712	U	0.55	D	0.0471	U	0.0472	U	0.112	D	0.0518	U	0.0482	U
Benzo(a)Pyrene	1	1	0.172	D	0.12	D	0.0465	U	0.0712	U	0.637	D	0.0471	U	0.0472	U	0.104	D	0.0518	U	0.0482	U
Benzo(b)Fluoranthene	1	1	0.166	D	0.134	D	0.0465	U	0.0712	U	0.635	D	0.0471	U	0.0472	U	0.0791	JD	0.0518	U	0.0482	U
Benzo(g,h,i)Perylene	100	100	0.147	D	0.105	D	0.0465	U	0.0712	U	0.512	D	0.0471	U	0.0472	U	0.0589	JD	0.0518	U	0.0482	U
Benzo(k)Fluoranthene	0.8	3.9	0.134	D	0.118	D	0.0465	U	0.0712	U	0.553	D	0.0471	U	0.0472	U	0.0843	JD	0.0518	U	0.0482	U
Benzyl Butyl Phthalate	~	~	0.161	D	0.0789	JD	0.0465	U	0.0712	U	0.142	D	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Bis(2-Ethylhexyl) Phthalate	~	~	0.0841	JD	0.0458	U	0.0465	U	0.0712	U	0.0445	JD	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Carbazole	~	~	0.0451	U	0.0458	U	0.0465	U	0.0712	U	0.0443	U	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Chrysene	1	3.9	0.16	D	0.132	D	0.0465	U	0.0712	U	0.765	D	0.0471	U	0.0472	U	0.0984	D	0.0518	U	0.0482	U
Dibenz(a,h)Anthracene	0.33	0.33	0.0451	U	0.0458	U	0.0465	U	0.0712	U	0.121	D	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Fluoranthene	100	100	0.298	D	0.257	D	0.0465	U	0.0712	U	0.974	D	0.0471	U	0.0472	U	0.166	D	0.0518	U	0.0482	U
Fluorene	30	100	0.0451	U	0.0458	U	0.0465	U	0.0712	U	0.0443	U	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.139	D	0.101	D	0.0465	U	0.0712	U	**0.559**	D	0.0471	U	0.0472	U	0.0679	JD	0.0518	U	0.0482	U
Phenanthrene	100	100	0.119	D	0.138	D	0.0465	U	0.0712	U	0.278	D	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Pyrene	100	100	0.248	D	0.205	D	0.0465	U	0.0712	U	1.03	D	0.0471	U	0.0472	U	0.151	D	0.0518	U	0.0482	U
Pesticides (mg/kg)																						
4,4'-DDE	0.0033	8.9	0.00179	U	0.00178	U	0.00182	U	0.00281	U	0.00175	U	0.00189	U	0.00186	U	0.00183	U	0.00204	U	0.00186	U
4,4'-DDT	0.0033	7.9	**0.0073**	D	**0.0099**	D	0.00182	U	0.00281	U	**0.00426**	DP	0.00189	U	0.00186	U	0.00183	U	0.00204	U	0.00186	U
Alpha Chlordane	0.094	4.2	0.00179	U	0.00178	U	0.00182	U	0.00281	U	0.00175	U	0.00189	U	0.00186	U	0.00183	U	0.00204	U	0.00186	U
Chlordane (alpha and gamma)	~	~	0.0358	U	0.0356	U	0.0363	U	0.0562	U	0.035	U	0.0377	U	0.0371	U	0.0366	U	0.0408	U	0.0372	U
Gamma-Chlordane	~	~	0.00179	U	0.00178	U	0.00182	U	0.00281	U	0.00175	U	0.00189	U	0.00186	U	0.00183	U	0.00204	U	0.00186	U
Herbicides (mg/kg)	~	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Polychlorinated Biphenyls (mg/kg)																						
PCB-1260 (Aroclor 1260)	~	~	0.0181	U	0.018	U	0.0183	U	0.0284	U	0.0177	U	0.019	U	0.0187	U	0.0185	U	0.0206	U	0.0188	U
Total PCBs	0.1	1	0.0181	U	0.018	U	0.0183	U	0.0284	U	0.0177	U	0.019	U	0.0187	U	0.0185	U	0.0206	U	0.0188	U
Inorganics (mg/kg)																						
Aluminum	~	~	2,370		2,580		4,900		13,800		4,430		3,670		5,060		5,720		7,940		6,560	
Arsenic	13	16	2.97		3.28		1.68	U	6.15		6.02		1.73	U	1.7	U	1.68	U	7.02		1.74	U
Barium	350	400	124		33.6		30.4		37.8		207		33.8		32		46		69.1		39	
Cadmium	2.5	4.3	0.713		0.774		0.336	U	0.514	U	0.705		0.345	U	0.34	U	0.337	U	0.373	U	0.348	U
Calcium	~	~	40,100		40,100		945		2,290		15,100		1,230		1,190		25,900		4,820		1,030	
Chromium, Hexavalent	1	110	0.545	U	0.555	U	0.56	U	0.857	U	0.535	U	0.575	U	0.566	U	0.561	U	0.622	U	0.581	U
Chromium, Total	~	~	7.43		6.35		18.4		36.6		21.7		17.5		22		11.7		27.1		24.2	
Chromium, Trivalent	30	180	7.43		6.35		18.4		**36.6**		21.7		17.5		22		11.7		27.1		24.2	
Cobalt	~	~	2.71		2.93		8.3		13.9		7.71		8.57		8.63		5.13		17.7		12.9	
Copper	50	270	21.1		28.2		20		12.8		**60**		18.3		18.5		13.4		31.9		22.4	
Iron	~	~	5,860		7,350		11,000		23,200		15,600		11,400		12,300		8,810		24,100		13,400	
Lead	63	400	**234**		**238**		6.55		17.8		**387**		60.2		7.04		**89.9**		**274**		7.43	
Magnesium	~	~	21,800		21,700		2,850		6,460		8,280		2,750		3,700		9,190		6,660		3,240	
Manganese	1,600	2,000	100		97.9		121		255		153		120		210		101		202		231	
Mercury	0.18	0.81	**0.268**		**0.264**		0.0336	U	0.0514	U	**1.33**		**0.653**		0.034	U	0.0337	U	0.0479		0.0348	U
Nickel	30	310	23.9		24.7		**94.6**		**86.2**		**74.5**		**84.3**		**109**		29.4		**133**		**128**	
Potassium	~	~	308		279		928		1,790		686		709		887		848		747		882	
Selenium	3.9	180	**12.6**		**10.2**		2.8	U	*4.28*	U	2.68	U	2.88	U	2.83	U	2.81	U	3.11	U	2.9	U
Silver	2	180	0.545	U	0.555	U	0.56	U	0.857	U	0.535	U	0.575	U	0.566	U	1.72		0.622	U	0.581	U
Sodium	~	~	93.4		146		88.7		171		279		109		86.7		95.9		127		127	
Vanadium	~	~	13.7		15.6		17.1		36		23.6		19.1		18.4		15.1		29.2		20.5	
Zinc	109	10,000	**136**		100		22.9		51.2		**274**		84.4		21.4		50.2		62.8		23.8	
General Chemistry (%)																						
Solids, Percent	~	~	91.8		90.1		89.3		58.3		93.4		86.9		88.4		89.1		80.4		86.1	

Notes provided on Page 3.
Concentrations above Unrestricted Use SCOs are bolded.
Concentrations above Restricted Use Restricted-Residential SCOs are shaded.

Table 2
Soil Sample Analytical Results Summary
Phase II Environmental Site Investigation

31-33 Wave Street
Staten Island, New York
Langan Project No.: 170610601

Location	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Restricted-Residential SCOs	SB07		SB07		SB07		SB08		SB08		SB08		SB09		SB09		SB09	
Sample ID			SB07_0-2		SB07_8-10		SB07_18-20		SB08_0-2		SB08_4-6		SB08_13-15		SB09_0-2		SB09_4-6		SB09_13-15	
Laboratory ID			20D0818-09		20D0818-10		20D0818-11		20D0776-07		20D0776-08		20D0776-09		20D0776-01		20D0776-02		20D0776-03	
Sample Date			4/29/2020		4/29/2020		4/29/2020		4/28/2020		4/28/2020		4/28/2020		4/28/2020		4/28/2020		4/28/2020	
Sample Depth (feet bgs)			0-2		8-10		18-20		0-2		4-6		13-15		0-2		4-6		13-15	
Volatile Organic Compounds (mg/kg)																				
Acetone	0.05	100	0.0044	U	0.0047	J	0.0067	J	0.01	J	0.005	U	0.0054	U	0.0046	U	0.0037	U	0.03	
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0022	U	0.0021	U	0.0024	U	0.0027	U	0.0025	U	0.0027	U	0.0023	U	0.0018	U	0.0086	
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	~	~	0.0022	U	0.0021	U	0.0024	U	0.0027	U	0.0025	U	0.0027	U	0.0023	U	0.0018	U	0.0024	U
Semivolatile Organic Compounds (mg/kg)																				
Acenaphthene	20	100	0.0459	U	0.0477	U	0.0535	U	0.0439	U	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Acenaphthylene	100	100	0.0459	U	0.0477	U	0.0535	U	0.0439	U	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Anthracene	100	100	0.0459	U	0.0477	U	0.0535	U	0.0701	JD	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Benzo(a)Anthracene	1	1	0.0459	U	0.0477	U	0.0535	U	0.249	D	0.0537	JD	0.321	D	0.0773	JD	0.0441	U	0.0469	U
Benzo(a)Pyrene	1	1	0.0549	JD	0.0477	U	0.0535	U	0.264	D	0.0581	JD	0.322	D	0.0906	D	0.0441	U	0.0469	U
Benzo(b)Fluoranthene	1	1	0.0459	U	0.0477	U	0.0535	U	0.201	D	0.0478	JD	0.326	D	0.0794	JD	0.0441	U	0.0469	U
Benzo(g,h,i)Perylene	100	100	0.0475	JD	0.0477	U	0.0535	U	0.162	D	0.0461	U	0.226	D	0.0604	JD	0.0441	U	0.0469	U
Benzo(k)Fluoranthene	0.8	3.9	0.0483	JD	0.0477	U	0.0535	U	0.186	D	0.0461	U	0.257	D	0.0625	JD	0.0441	U	0.0469	U
Benzyl Butyl Phthalate	~	~	0.169	D	0.0477	U	0.0535	U	0.0439	U	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Bis(2-Ethylhexyl) Phthalate	~	~	0.0658	JD	0.0477	U	0.0535	U	0.24	D	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Carbazole	~	~	0.0459	U	0.0477	U	0.0535	U	0.0439	U	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Chrysene	1	3.9	0.0483	JD	0.0477	U	0.0535	U	0.222	D	0.05	JD	0.305	D	0.0843	JD	0.0441	U	0.0469	U
Dibenz(a,h)Anthracene	0.33	0.33	0.0459	U	0.0477	U	0.0535	U	0.0439	U	0.0461	U	0.0662	JD	0.044	U	0.0441	U	0.0469	U
Fluoranthene	100	100	0.0614	JD	0.0477	U	0.0535	U	0.522	D	0.0758	JD	0.585	D	0.162	D	0.0457	JD	0.0469	U
Fluorene	30	100	0.0459	U	0.0477	U	0.0535	U	0.0439	U	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.0459	U	0.0477	U	0.0535	U	0.189	D	0.0461	U	0.202	D	0.0667	JD	0.0441	U	0.0469	U
Phenanthrene	100	100	0.0459	U	0.0477	U	0.0535	U	0.283	D	0.0461	U	0.244	D	0.0878	JD	0.0441	U	0.0469	U
Pyrene	100	100	0.0556	JD	0.0477	U	0.0535	U	0.457	D	0.0728	JD	0.494	D	0.139	D	0.0441	U	0.0469	U
Pesticides (mg/kg)																				
4,4'-DDE	0.0033	8.9	0.0018	U	0.00185	U	0.00211	U	0.00172	U	0.00183	U	0.00236	U	0.00173	U	0.00175	U	0.00187	U
4,4'-DDT	0.0033	7.9	0.0018	U	0.00185	U	0.00211	U	0.00172	U	0.00183	U	0.00236	U	0.00173	U	0.00175	U	0.00187	U
Alpha Chlordane	0.094	4.2	0.0018	U	0.00185	U	0.00211	U	0.00172	U	0.00183	U	0.00236	U	0.00173	U	0.00175	U	0.00187	U
Chlordane (alpha and gamma)	~	~	0.036	U	0.0369	U	0.0421	U	0.0343	U	0.0365	U	0.0471	U	0.0347	U	0.0351	U	0.0374	U
Gamma-Chlordane	~	~	0.0018	U	0.00185	U	0.00211	U	0.00172	U	0.00183	U	0.00236	U	0.00173	U	0.00175	U	0.00187	U
Herbicides (mg/kg)	~	~	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Polychlorinated Biphenyls (mg/kg)																				
PCB-1260 (Aroclor 1260)	~	~	0.0182	U	0.0186	U	0.0213	U	0.0173	U	0.0184	U	0.0238	U	0.0175	U	0.0177	U	0.0189	U
Total PCBs	0.1	1	0.0182	U	0.0186	U	0.0213	U	0.0173	U	0.0184	U	0.0238	U	0.0175	U	0.0177	U	0.0189	U
Inorganics (mg/kg)																				
Aluminum	~	~	3,740		5,660		10,000		7,770		4,070		3,910		6,170		4,400		6,110	
Arsenic	13	16	2.83		2.11		2.13		2.99		4.44		4.9		1.59	U	1.6	U	1.72	U
Barium	350	400	32.7		34.2		24.6		90.2		106		**442**		35.7		33.6		37.7	
Cadmium	2.5	4.3	0.348		0.346	U	0.388	U	0.316	U	0.334	U	0.433	U	0.317	U	0.321	U	0.345	U
Calcium	~	~	26,100		924		584		19,600		33,600		29,400		1,830		2,060		2,040	
Chromium, Hexavalent	1	110	0.55	U	0.576	U	0.647	U	0.527	U	0.557	U	0.722	U	0.529	U	0.535	U	0.574	U
Chromium, Total	~	~	7.68		24.2		24.2		31		33.6		20		17.4		15.2		39.5	
Chromium, Trivalent	30	180	7.68		24.2		24.2		**31**		**33.6**		20		17.4		15.2		**39.5**	
Cobalt	~	~	4.95		10.5		12.8		12.8		16.6		8.18		8.92		7.21		14.7	
Copper	50	270	20.6		26.3		16.5		48.1		28.8		26.5		20		21.9		19.4	
Iron	~	~	9,200		14,300		15,100		14,900		14,200		10,700		12,600		11,600		15,000	
Lead	63	400	**100**		6.88		8.63		**296**		**441**		**2,080**		13.8		29.1		**66**	
Magnesium	~	~	13,900		6,640		5,150		11,300		22,100		8,090		3,760		3,930		6,890	
Manganese	1,600	2,000	126		269		125		245		247		217		265		200		286	
Mercury	0.18	0.81	0.143		0.0346	U	0.0388	U	**0.771**		**1.28**		**0.54**		0.032		**0.226**		0.0827	
Nickel	30	310	17.7		**155**		**86.2**		**154**		**325**		**114**		**71.3**		**69.9**		**209**	
Potassium	~	~	393		829		916		1,020		856		765		907		872		745	
Selenium	3.9	180	**5.01**		2.88	U	3.23	U	2.64	U	**4.08**		3.61	U	2.64	U	2.67	U	2.87	U
Silver	2	180	0.55	U	0.576	U	0.647	U	0.527	U	0.557	U	0.722	U	0.529	U	0.535	U	0.574	U
Sodium	~	~	222		72		92.8		768		205		205		175		169		139	
Vanadium	~	~	20.3		18.6		22.1		26		14.5		18.1		17.6		17.9		22.1	
Zinc	109	10,000	**283**		24.8		39.9		**123**		**226**		**291**		28.4		30.1		24.2	
General Chemistry (%)																				
Solids, Percent	~	~	90.8		86.8		77.3		94.8		89.7		69.3		94.6		93.5		87	

Notes provided on Page 3.
Concentrations above Unrestricted Use SCOs are bolded.
Concentrations above Restricted Use Restricted-Residential SCOs are shaded.

Table 2
Soil Sample Analytical Results Summary
Phase II Environmental Site Investigation

31-33 Wave Street
Staten Island, New York
Langan Project No.: 170610601

Notes:

1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use and Restricted Use Restricted-Residential Soil Cleanup Objectives (SCO).
2. Only detected analytes are shown in the table.
3. Detected analytical results above Unrestricted Use SCOs are bolded.
4. Detected analytical results above Restricted Use Restricted-Residential SCOs are shaded.
5. Analytical results with reporting limits (RL) above the lowest applicable criteria are italicized.
6. Sample SODUP01_042920 is a duplicate sample of SB04_0-2.
7. ~ = Regulatory limit for this analyte does not exist
8. bgs = below grade surface
9. mg/kg = milligrams per kilogram
10. % = percent
11. ND = Not detected

Qualifiers:

D = The concentration reported is a result of a diluted sample.
J = The analyte was detected above the Method Detection Limit (MDL), but below the RL; therefore, the result is an estimated concentration.
P = The relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.
B = The analyte was found in the associated analysis batch blank.

Table 3
Groundwater Sample Analytical Results Summary
Phase II Environmental Site Investigation

31-33 Wave Street
Staten Island, New York
Langan Project No.: 170610601

Location Sample ID Laboratory ID Sample Date	NYSDEC SGVs	MW05 MW05_043020 20D0850-13 4/30/2020		MW06 MW06_043020 20D0850-11 4/30/2020		MW08 MW08_043020 20D0850-12 4/30/2020		MW08 GWDUP01_043020 20D0850-14 4/30/2020	
Volatile Organic Compounds (µg/L)									
Acetone	50	1.01	J	3.86		1	U	1	U
Chloroform	7	0.2	U	0.2	U	0.57		0.58	
Methyl Ethyl Ketone (2-Butanone)	50	0.2	U	1.63		0.2	U	0.2	U
Tert-Butyl Methyl Ether	10	1.23		1.24		0.2	U	0.2	U
Tetrachloroethene (PCE)	5	0.2	U	0.2	U	0.51		0.46	J
Semivolatile Organic Compounds (µg/L)									
Bis(2-Ethylhexyl) Phthalate	5	0.541	U	1.27		0.541	U	0.541	U
Pesticides (µg/L)	~	ND		ND		ND		ND	
Herbicides (µg/L)	~	ND		ND		ND		ND	
Polychlorinated Biphenyls (µg/L)	~	ND		ND		ND		ND	
Inorganics (µg/L)									
Aluminum	~	270		55.6	U	3,250		99.6	
Antimony	3	1.11	U	1.11	U	1.63		1.66	
Antimony (Dissolved)	3	1.11	U	1.11	U	1.57		1.51	
Arsenic	25	12.5		1.68		22.2		21.1	
Arsenic (Dissolved)	25	11.7		1.71		20.7		20.2	
Barium	1,000	343		198		136		87.9	
Barium (Dissolved)	1,000	307		194		83.6		82.6	
Calcium	~	146,000		102,000		76,600		68,600	
Calcium (Dissolved)	~	138,000		99,100		65,100		64,400	
Chromium, Total	50	5.56	U	5.56	U	13.6		5.56	U
Chromium, Trivalent	~	10	U	10	U	13.6		10	U
Cobalt	~	4.73		4.44	U	4.44	U	4.44	U
Iron	300	**6,770**		**11,400**		**4,940**		278	U
Iron (Dissolved)	300	**5,510**		**11,000**		278	U	278	U
Lead	25	5.56	U	5.56	U	**184**		19.1	
Lead (Dissolved)	25	5.56	U	5.56	U	6.88		5.56	U
Magnesium	35,000	34,500		19,200		15,500		12,900	
Magnesium (Dissolved)	35,000	31,700		18,500		12,500		12,300	
Manganese	300	**2,900**		**1,730**		151		5.63	
Manganese (Dissolved)	300	**2,700**		**1,700**		36.3		40.9	
Mercury (Dissolved)	0.7	0.2	U	0.2	U	0.2844		0.2	U
Nickel	100	11.1	U	11.1	U	69.7		11.1	U
Nickel (Dissolved)	100	11.1	U	11.1	U	12.1		12.3	
Potassium	~	14,700		9,530		12,300		11,500	
Potassium (Dissolved)	~	14,400	B	9,480	B	11,800	B	11,800	B
Selenium	10	1.11	U	1.11	U	2.72		1.77	
Selenium (Dissolved)	10	1.12		1.11	U	2.6		2.48	
Sodium	20,000	**96,000**		**48,400**		**55,800**		**55,800**	
Sodium (Dissolved)	20,000	**90,900**		**47,800**		**54,200**		**54,600**	
Zinc	2,000	29.3		27.8	U	144		93.8	
Zinc (Dissolved)	2,000	27.8	U	27.8	U	50		52.1	

Notes:
1. Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 703.5 and the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA Water (herein collectively referenced as "NYSDEC SGVs").
2. Only detected analytes are shown in the table.
3. Detected analytical results above NYSDEC SGVs are bolded and shaded.
4. Analytical results with reporting limits (RL) above NYSDEC SGVs are italicized.
5. Sample GWDUP01_043020 is a duplicate sample of MW08_043020.
6. ~ = Regulatory limit for this analyte does not exist
7. ug/l = micrograms per liter
8. ND = Not detected

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

Table 4
Soil Vapor Sample Analytical Results Summary
Phase II Environmental Site Investigation

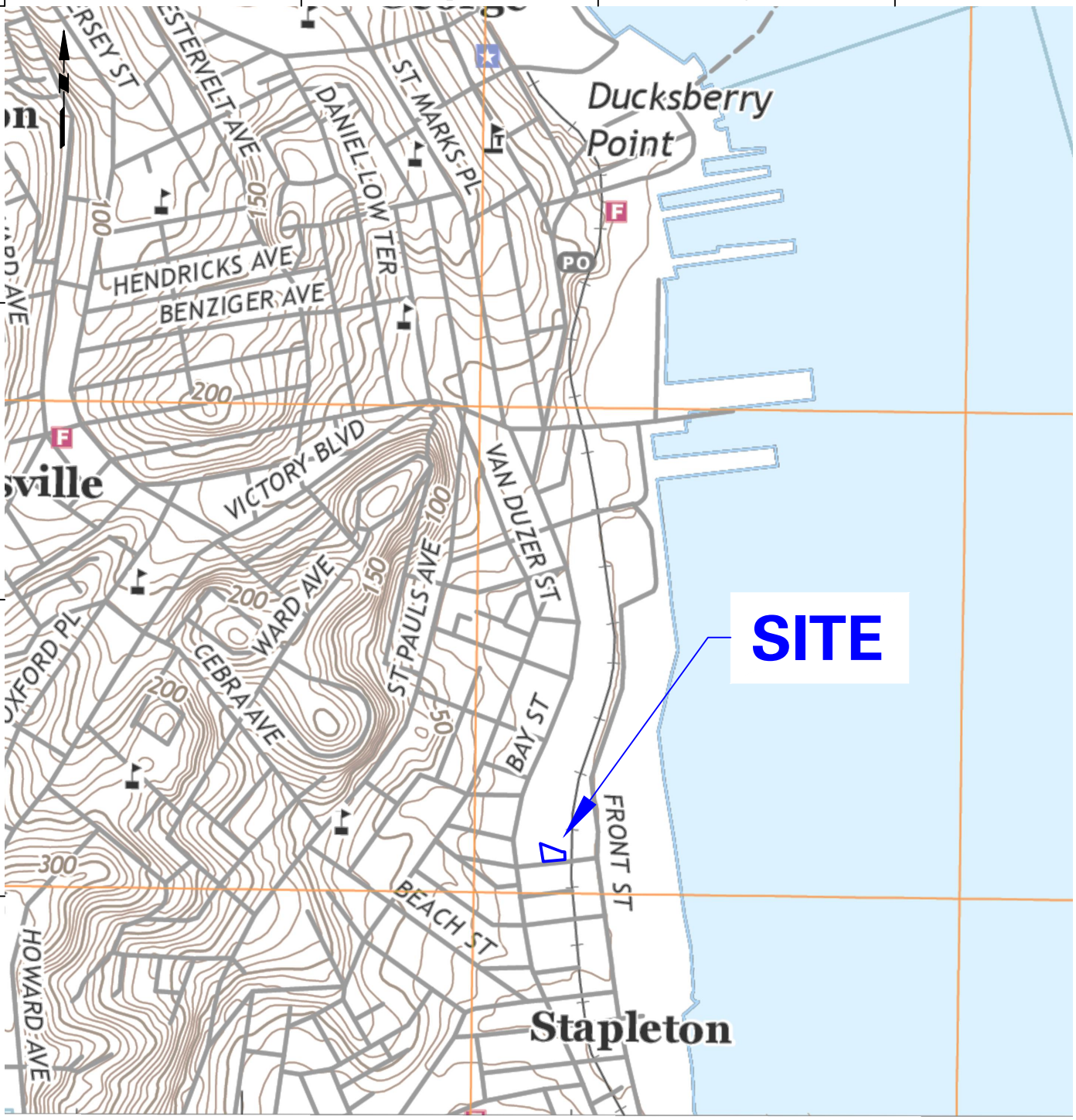
31-33 Wave Street
Staten Island, New York
Langan Project No.: 170610601

Location		AA01		IA08		SS08		IA09		SS09		SV04		SV07	
Sample ID	NYSDOH Decision	AA01_043020		IA08_043020		SS08_043020		IA09_043020		SS09_043020		SV04_043020		SV07_043020	
Laboratory ID	Matrices Minimum	20E0004-03		20E0004-06		20E0004-04		20E0004-07		20E0004-05		20E0004-01		20E0004-02	
Sample Date	Concentrations	4/30/2020		4/30/2020		4/30/2020		4/30/2020		4/30/2020		4/30/2020		4/30/2020	
Sample Type		AA		IA		SSV		IA		SSV		SV		SV	
Volatile Organic Compounds (µg/m³)															
1,2,4-Trimethylbenzene	~	0.39	U	0.55	D	9.9	D	0.47	U	17	D	20	D	28	D
1,3,5-Trimethylbenzene (Mesitylene)	~	0.39	U	0.4	U	2.6	D	0.47	U	3.8	D	8	D	12	D
1,3-Butadiene	~	0.53	U	0.53	U	1.1	U	0.63	U	1.1	U	1.1	U	1.1	D
2-Hexanone	~	0.66	U	0.66	U	1.4	U	0.78	U	1.4	U	3.5	D	2.9	D
4-Ethyltoluene	~	0.39	U	0.4	U	13	D	0.47	U	22	D	11	D	14	D
Acetone	~	6.6	D	8.4	D	6.7	D	4.2	D	4.8	D	54	D	29	D
Benzene	~	0.41	D	0.28	D	3.1	D	0.3	D	2.4	D	2.1	D	9.9	D
Carbon Disulfide	~	0.25	U	0.25	U	1.2	D	0.3	U	4.2	D	4	D	13	D
Carbon Tetrachloride	6	0.5	D	0.51	D	0.42	D	0.48	D	0.26	U	0.4	D	0.25	U
Chloroethane	~	0.21	U	0.21	U	0.44	U	0.25	U	0.44	U	0.42	U	1.1	D
Chloroform	~	0.39	U	0.39	U	9.9	D	0.47	U	0.99	D	5	D	4.2	D
Chloromethane	~	1.2	D	1	D	0.35	U	1.1	D	0.35	U	0.79	D	0.33	U
Cyclohexane	~	0.28	U	0.28	U	1.3	D	0.33	U	3.2	D	1.5	D	7.8	D
Dichlorodifluoromethane	~	1.6	D	1.9	D	2.3	D	1.9	D	2.6	D	2.5	D	2.2	D
Ethylbenzene	~	0.38	D	0.52	D	14	D	0.5	D	19	D	3	D	2.7	D
Isopropanol	~	26	D	9.8	D	4.8	D	1.6	D	4.9	D	29	D	2.3	D
M,P-Xylene	~	1.1	D	1.9	D	55	D	1.6	D	76	D	13	D	12	D
Methyl Ethyl Ketone (2-Butanone)	~	1	D	0.76	D	1.2	D	0.79	D	1.1	D	11	D	8.9	D
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	~	0.33	U	0.33	U	0.69	U	0.39	U	0.69	U	0.65	U	0.79	D
Methyl Methacrylate	~	6.1	D	0.4	D	0.69	U	0.39	U	0.69	U	15	D	0.66	U
Methylene Chloride	100	1.5	D	0.56	U	1.2	U	0.66	U	1.2	U	1.1	U	1.1	U
n-Heptane	~	0.33	U	0.36	D	6.1	D	0.39	U	16	D	8.8	D	11	D
n-Hexane	~	0.42	D	0.28	U	5.8	D	0.34	U	6.5	D	3.5	D	22	D
o-Xylene (1,2-Dimethylbenzene)	~	0.38	D	0.63	D	13	D	0.54	D	19	D	6.8	D	6.8	D
Styrene	~	0.34	D	0.34	U	1.6	D	0.41	U	2.2	D	0.68	U	0.68	U
Tert-Butyl Methyl Ether	~	0.29	U	0.29	U	0.61	U	0.34	U	10	D	0.57	U	0.58	U
Tetrachloroethene (PCE)	100	0.54	U	0.55	U	35	D	0.65	U	20	D	13	D	13	D
Toluene	~	2.2	D	4.7	D	55	D	2.7	D	50	D	8.5	D	13	D
Trichlorofluoromethane	~	1.4	D	1.3	D	1.3	D	1.3	D	1.1	D	1.7	D	2.1	D
Total VOCs	~	51.1		33		243		17		287		226		220	

Notes:
1. Co-located sub-slab vapor and indoor air sample analytical results are evaluated using the New York State Department of Health (NYSDOH) October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York Decision Matrices for Sub-Slab Vapor and Indoor Air and subsequent updates (2017) and soil vapor sample analytical results are compared to the minimum soil vapor concentrations recommending mitigation as set forth in the NYSDOH Decision Matrices.
2. Ambient air sample analytical results are shown for reference only.
3. Only detected analytes are shown in the table.
4. No analytical results are detected above the NYSDOH Decision Matrices.
5. No analytical results are detected above the minimum soil vapor concentrations recommending mitigation.
6. ~ = Regulatory limit for this analyte does not exist
7.ug/m3 = Micrograms per cubic meter
8. AA = Ambient air
9. IA = Indoor air
10. SSV = Sub-slab vapor
11. SV = Soil Vapor
12. VOCs = Volatile Organic Compounds

Qualifiers:
D = The concentration reported is a result of a diluted sample.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL (Reporting Limit); the value shown in the table is the RL.

FIGURES



NOTES:

1. BASE MAP IS REFERENCED FROM UNITED STATES GEOLOGICAL SURVEY (USGS) 7.5-MINUTE SERIES TOPOGRAPHICAL MAPS, JERSEY CITY QUADRANGLE, DATED 2016.

1000 0 500 1000
SCALE IN FEET

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

Project
31-33 WAVE STREET
BLOCK No. 488, LOT Nos. 157, 162, & 164
STATEN ISLAND
RICHMOND COUNTY NEW YORK

Figure Title
SITE LOCATION MAP

Project No. 170610601	Figure No. 1
Date 02/03/2020	
Scale 1" = 1000'	
Drawn By KG / Checked By	
Submission Date	Sheet 1 of 2

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Filename: \\langan.com\data\NYC\data6\170610601\Project Data\CAD\01\SheetFiles\Environmental\Phase II\Figure 1 - Site Location Map.dwg Date: 5/5/2020 Time: 15:07 User: dpalazzolo Style Table: Langan.stb Layout: Site Location Map



LEGEND:

- APPROXIMATE SITE BOUNDARY
- SB01/MW01 — APPROXIMATE SOIL BORING AND MONITORING WELL LOCATION
- SB01/SV01 — APPROXIMATE SOIL BORING AND SOIL VAPOR SAMPLE LOCATION
- SB01/SS01/IA01 — APPROXIMATE SOIL BORING, SUB-SLAB, AND INDOOR AIR SAMPLE LOCATION
- AA01 — APPROXIMATE AMBIENT AIR SAMPLE LOCATION
- SB01/MW01/SS01/IA01 — APPROXIMATE SOIL BORING, MONITORING WELL, SUB-SLAB, AND INDOOR AIR SAMPLE LOCATION

GENERAL NOTES:

1. BASEMAP TAKEN FROM LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE & GEOLOGY, D.P.C. NEARMAP WEB PORTAL, ACCESSED ON JANUARY 29, 2020.
2. BORING LOCATIONS ARE APPROXIMATE AND ARE MEASURED OFF OF EXISTING STRUCTURES

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

50 0 25 50
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Project	31-33 WAVE STREET BLOCK No. 488, LOTS No. 157, 162, 164 STATEN ISLAND RICHMOND COUNTY NEW YORK
Figure Title	BORING LOCATION MAP
Project No.	170610601
Date	05/12/2020
Drawn By	EMS
Checked By	DP
Figure	2
Sheet	2 of 2

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Filename: \\langan.com\data\NYC\data6\170610601\Project Data\CAD\01\SheetFiles\Environmental\Phase II\Figure 2 - Boring Location Plan_as built.dwg Date: 5/15/2020 Time: 10:41 User: eburgess Style Table: Langan.stb Layout: ANSIB-BL (1)

APPENDIX A
SITE PHOTOGRAPHS

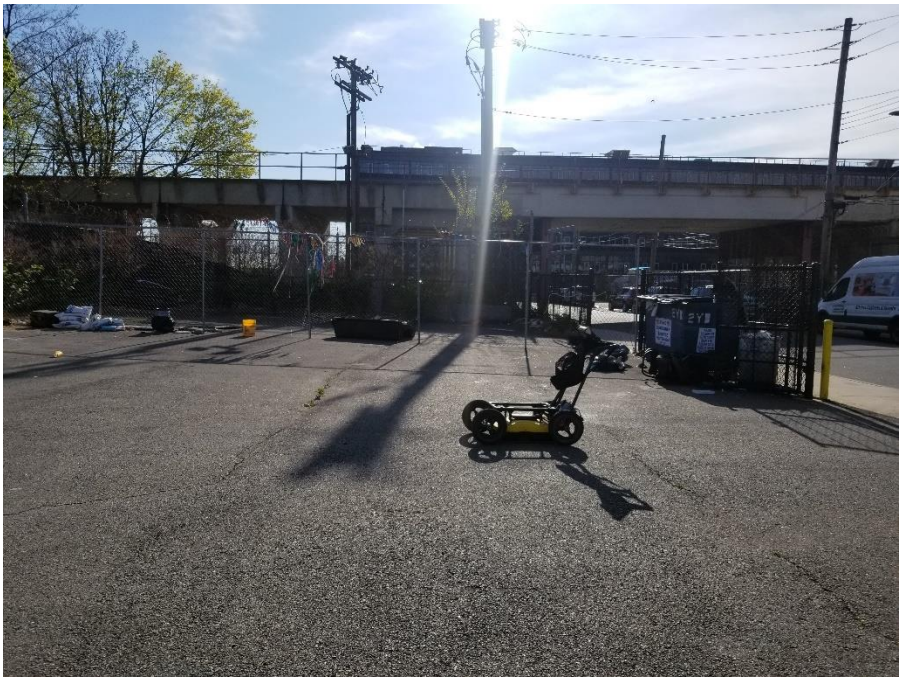


Photo 1: View of NOVA Geophysical surveying the site with ground penetrating radar (GPR). (facing east)

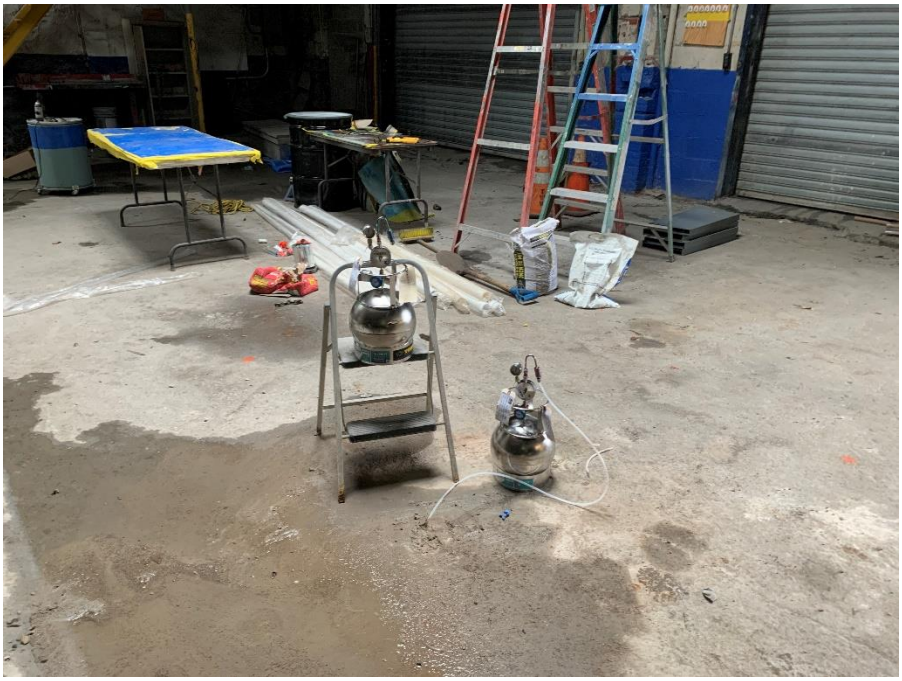


Photo 2: View of sub-slab vapor sample collection in the vacant repair shop.



Photo 3: View of soil from soil boring SB05.



Photo 4: View of soil from soil boring SB07.



Photo 4: View of Langan collecting a groundwater sample from monitoring well MW05.



Photo 5: View of AARCO drilling soil boring SB11 (facing southwest)



Photo 6: View of AARCO installing a soil vapor point SV11.

APPENDIX B
GEOPHYSICAL SURVEY REPORT

GEOPHYSICAL ENGINEERING SURVEY REPORT

Commercial Property
475 Bay Street,
Staten Island, New York 10304

NOVA PROJECT NUMBER:
20-1735

DATED:
May 6, 2020

PREPARED FOR:

LANGAN

21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001-2727

PREPARED BY:

NOVA
GEOPHYSICAL
ENGINEERING
Subsurface Mapping Solutions
56-01 Marathon Parkway # 765
Douglaston, New York 11362
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NOVA GEOPHYSICAL SERVICES

SUBSURFACE MAPPING SOLUTIONS
56-01 Marathon Parkway #765, Douglaston, New York 11362
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May 6, 2020

Dina Palazzolo
Senior Staff Scientist
LANGAN
21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001-2727
P: 212.479.5499 x5618 | E: dapalazzolo@langan.com

Re: Geophysical Engineering Survey (GES) Report
Commercial Property
475 Bay Street,
Staten Island, New York 10304

Dear Ms. Palazzolo,

Nova Geophysical Services (NOVA) is pleased to provide the findings of the geophysical engineering survey (GES) at the above referenced project site: 475 Bay Street, Staten Island, New York 10304 (the "Site").

INTRODUCTION TO GEOPHYSICAL ENGINEERING SURVEY (GES)

NOVA performed a geophysical engineering survey (GES) consisting of a Ground Penetrating Radar (GPR) and Electromagnetic (EM) survey at the site. The purpose of this survey is to locate and identify utilities, underground storage tanks and other substructures on April 28th, 2020.

The equipment selected for this investigation was a Sensors and Software Noggin 250 MHz ground penetrating radar (GPR) with a shielded antenna and a Radio Detection RD7100 Electromagnetic utility locator.

A GPR system consists of a radar control unit, control cable, and transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 250 MHz. The trigger pulse is sent to the transmitter electronics in the transduce via the control cable. The transmitter electronics amplify the trigger pulse into bipolar pulses that are radiated to the surface. The transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit and are represented as color graphic images for interpolation.

A typical electromagnetic (EM) utility locating system consists of a transmitter unit and a receiver unit. The receiver unit can be used independently of the transmitter unit in order to detect utility lines with an inherent EM signature (electric utility lines, water lines, etc.). If needed a current at a specific frequency can also be placed on a utility that is being located. This can be done via the transmitter unit by either direct connection or induction via an EM field varying at specific frequency. The receiver unit is then set to the selected frequency and the electromagnetic field created by the current running through the utility can be located allowing the utility to be marked.

GEOPHYSICAL METHODS

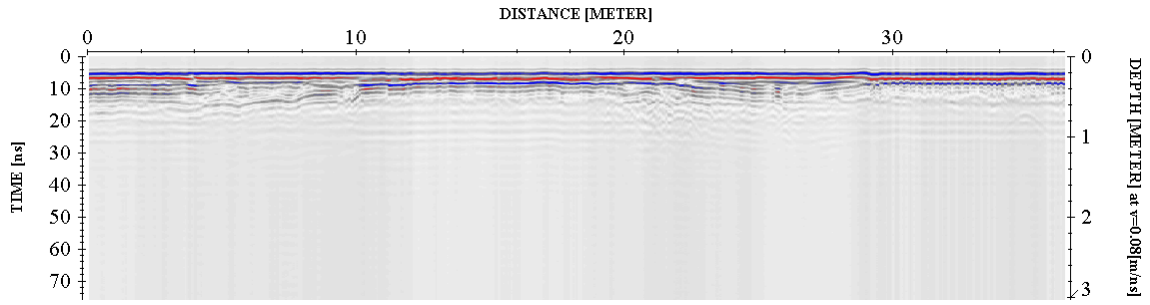
The project site was screened using GPR to search the specified area and inspected for reflections, which could be indicative of substructures and utilities within the subsurface. An EM utility locator was used to help determine the locations of utilities within the survey area.

EM data was collected and interpreted on site and suspected utilities marked as needed. GPR data profiles were collected for the areas of the Site specified by the client and processed as specified below.

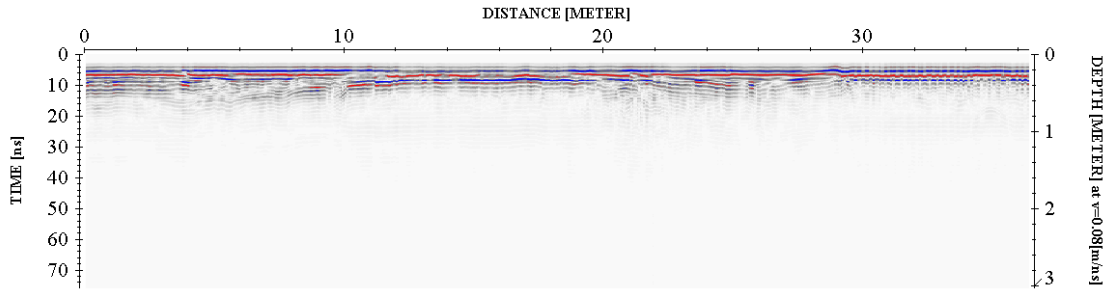
DATA PROCESSING

In order to improve the quality of the results and to better identify anomalies NOVA processed the collected data. The processing work flow is briefly described in this section.

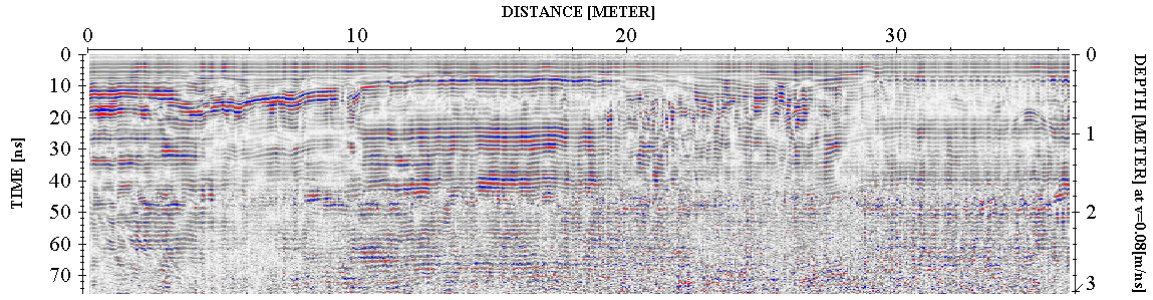
Step 1. Import Raw RAMAC data to standard processing format



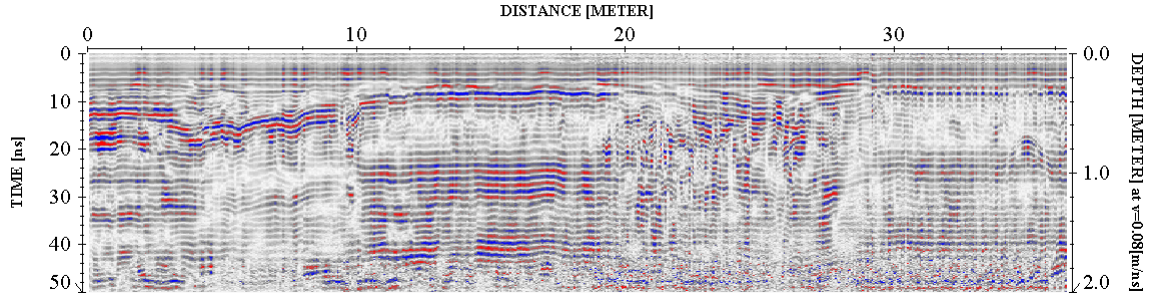
Step 2. Remove instrument noise *(dewow)*



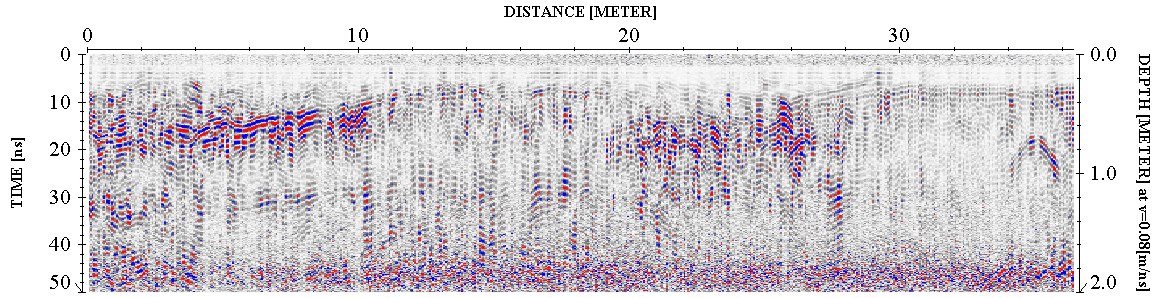
Step 3. Correct for attenuation losses *(energy decay function)*



Step 4. Remove static from bottom of profile *(time cut)*



Step 5. Mute horizontal ringing/noise *(subtracting average)*



The above example shows the significance of data processing. The last image (step 5) has higher resolution than the starting image (raw data – step 1) and represents the subsurface anomalies much more accurately.

PHYSICAL SETTINGS

NOVA observed the following physical conditions at the time of the survey.

Weather: Clear

Temperature: 50° F

Surface: Concrete, Asphalt, Pea Stone

Limitations: The geophysical noise level at the site was high due to being located in an urban environment and reinforced concrete slabs. Additionally, large portions of the site were covered with large, immobile objects. Limiting the coverage of the GPR survey.

RESULTS

The results of the geophysical engineering survey (GES) identified the following at the project site:

- Anomalies resembling potential subsurface utilities (such as sewer, water, gas and electric) were identified within the survey area. Their approximate locations are shown in the survey plan.
- No large geophysical anomalies resembling a potential underground storage tank were identified during the GES.
- All detected subsurface anomalies were marked in the onsite mark out.
- All cleared boring locations were marked in the onsite mark out.

If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

NOVA Geophysical Services



Levent Eskicakit, P.G., E.P.

Project Engineer

Attachments:

Location Map

Survey Plan

Geophysical Images



NOVA Geophysical Services

Subsurface Mapping Solutions
56-01 Marathon Parkway, # 765
Douglaston, New York 11362
Phone (347) 556-7787 * Fax (718) 261-1527
www.novagsi.com

Location Map

SITE:	**Commercial Site** 475 Bay Street, Staten Island, New York 10304
CLIENT:	Langan
DATE:	April 28th, 2020
AUTH:	Chris Steinley

LEGEND



NOVA Geophysical Services

Subsurface Mapping Solutions
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Douglaston, New York 11362
Phone (347) 556-7787 * Fax (718) 261-1527
www.novagsi.com

SURVEY PLAN

SITE:	**Commercial Site** 475 Bay Street, Staten Island, New York 10304
CLIENT:	Langan
DATE:	April 28th, 2020
AUTH:	Chris Steinley

LEGEND

- Survey Area
- Electric
- Sewer
- Water
- Gas

GEOPHYSICAL IMAGES

Commercial Site
475 Bay Street,
Staten Island, New York 10304
April 28th, 2020



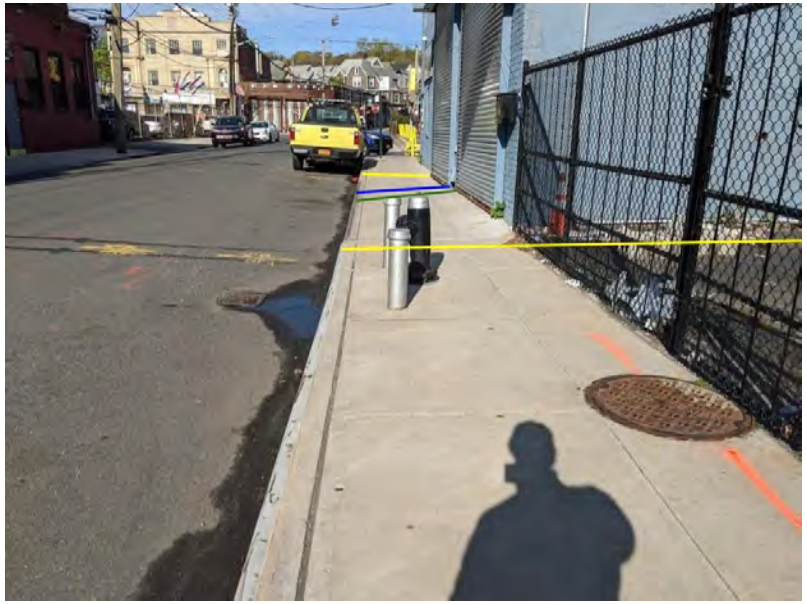






GEOPHYSICAL IMAGES

Commercial Site
475 Bay Street,
Staten Island, New York 10304
April 28th, 2020









GEOPHYSICAL IMAGES

Commercial Site
475 Bay Street,
Staten Island, New York 10304
April 28th, 2020







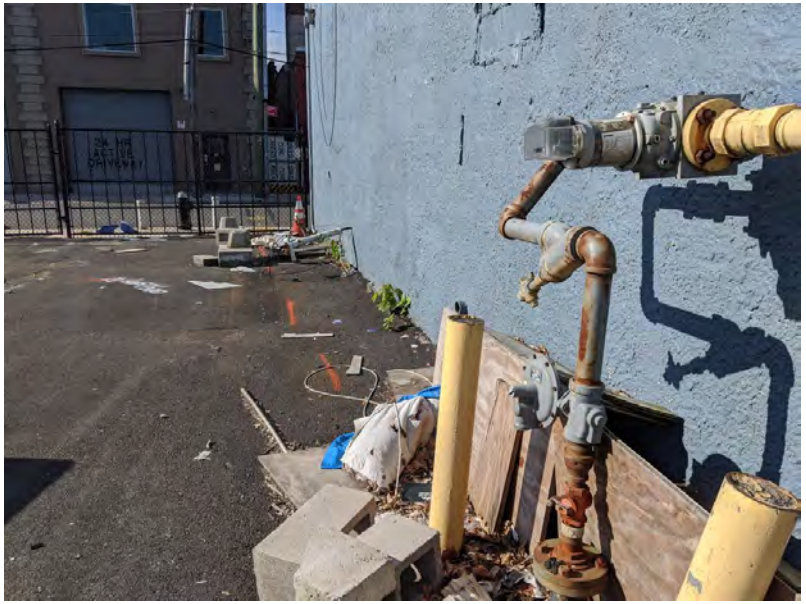


GEOPHYSICAL IMAGES

Commercial Site
475 Bay Street,
Staten Island, New York 10304
April 28th, 2020









GEOPHYSICAL IMAGES

Commercial Site
475 Bay Street,
Staten Island, New York 10304
April 28th, 2020





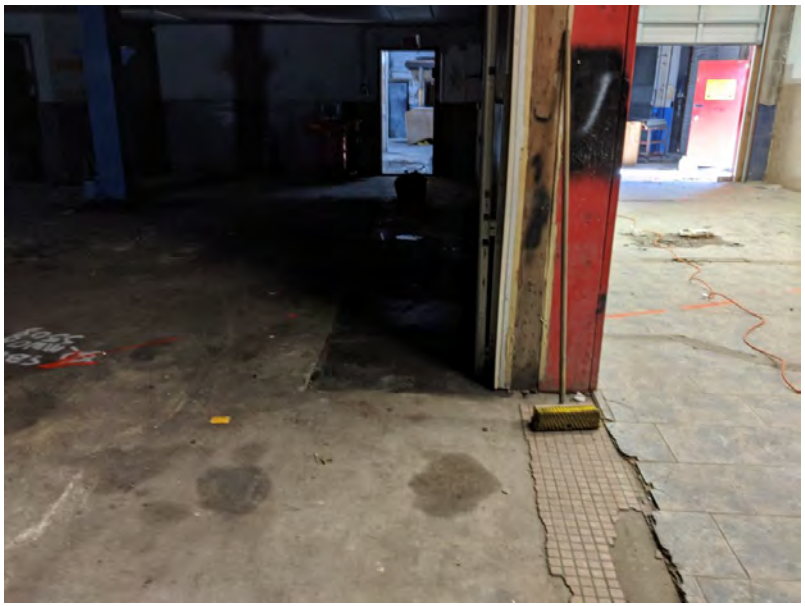


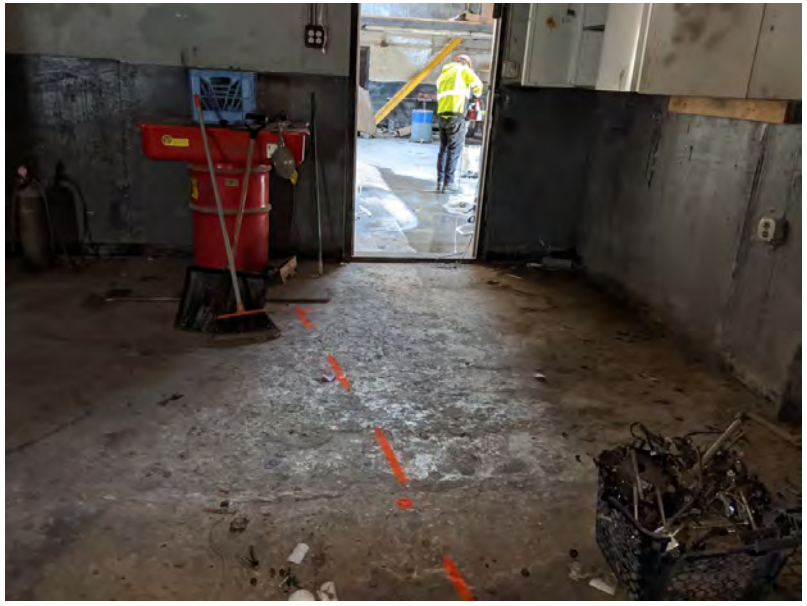


GEOPHYSICAL IMAGES

Commercial Site
475 Bay Street,
Staten Island, New York 10304
April 28th, 2020









GEOPHYSICAL IMAGES

Commercial Site
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Staten Island, New York 10304
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GEOPHYSICAL IMAGES

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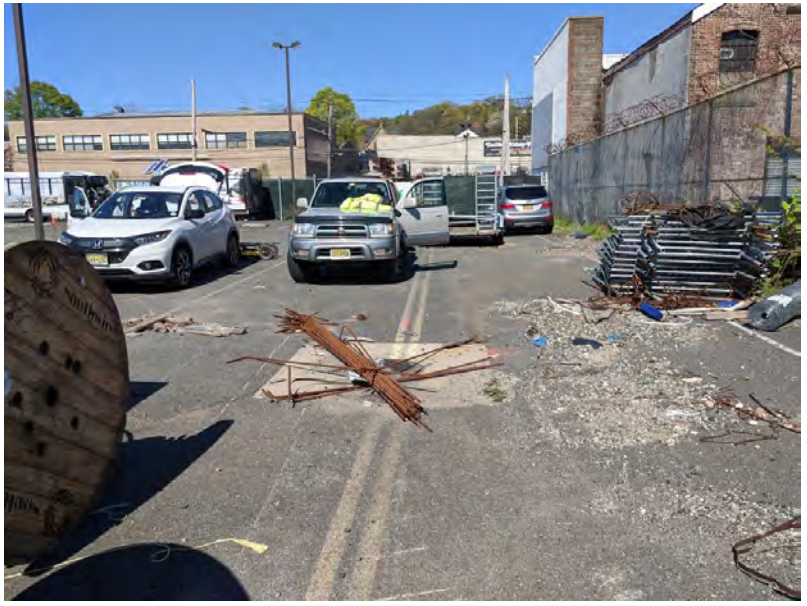
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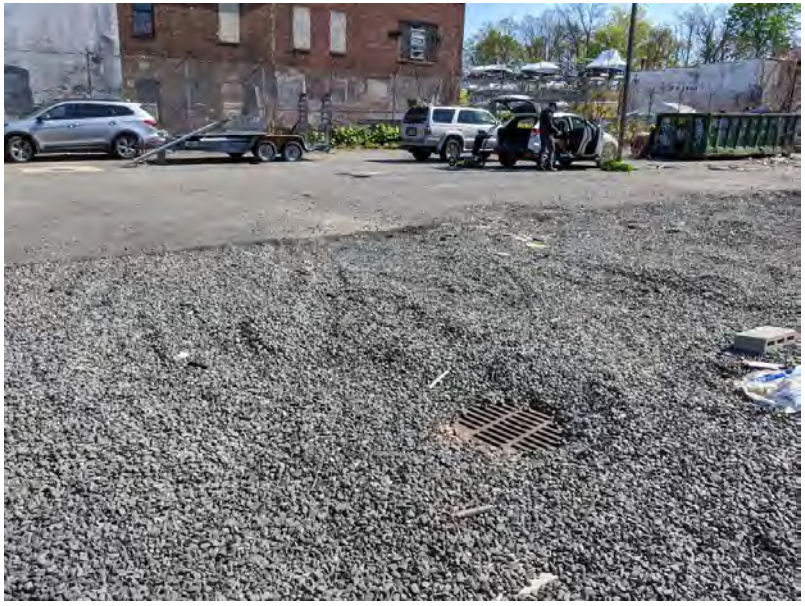
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April 28th, 2020









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Commercial Site

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April 28th, 2020



APPENDIX C
SOIL BORING LOGS

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Log of Boring **SB-04** Sheet 1 of 1

Project: 31-33 Wave Street	Project No.: 170610601
Location: Staten Island, NY	Elevation and Datum: NA
Drilling Company: AARCO Environmental Services, Corp.	Date Started: 4/29/20 — Date Finished: 4/29/20
Drilling Equipment: Geoprobe 7822 DT	Completion Depth: 20 ft — Rock Depth: NA
Size and Type of Bit: 4' Macrocore 2 1/4" diameter	Number of Samples: Disturbed 5 — Undisturbed NA — Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ 5.5 — Completion ▼ NA — 24 HR. ▼ NA
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Thomas Harer
Sampler: 2-inch-diameter acetate liner	Field Engineer: Deirdre Casey
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		R1a (0-2"): Black coarse angular GRAVEL (dry)[ASPHALT]	0					0.0	
		R1b (2-7"): Dark brownish black fine to coarse SAND, some silt, trace coal ash, trace coal (moist)[FILL]	1					0.0	
		R1c (7-12"): Orangish brown fine SAND, trace silt, trace fine gravel (moist) [FILL]						0.0	SB04_0-2 and SODUP01_042920 at 1410
		R1d (12-26"): Brown to black fine to coarse SAND, trace coal, trace coal ash (moist)[FILL]	2	R1	MACROCORE	32		0.0	
		R1e (26-32"): Brown fine SAND, some silt, trace fine gravel (moist)[FILL]	3						
			4						
			5 ▽						
		R2a (0-6"): Brown fine SAND, some silt, trace fine gravel (moist)[FILL]	6					0.0	
		R2b (6-15"): Dark reddish brown fine SAND, some silt, some gravel (wet)[FILL]						0.0	
		R2c (15-27"): Dark gray to black fine SAND, some coal ash, trace coarse sand (wet)[FILL]	7	R2	MACROCORE	27		0.0	
			8					0.0	
			9						
		R3a (0-5"): Dark grayish brown sandy SILT (wet)[FILL]	10					0.0	
		R3b (5-15"): Dark grayish brown gravelly SILT, trace fine sand (wet)[FILL]						0.0	
			11	R3	MACROCORE	17		0.0	SB04_10-12 at 1415
		R3c (15-17"): Dark grayish brown sandy SILT, trace fine sand (wet)[FILL]	12					0.0	
		R4 (0-30"): Dark reddish brown fine SAND, some silt, trace fine gravel (wet)[SP-SC]	13						
								0.0	
			14	R4	MACROCORE	30		0.0	Petroleum-like odor
								0.0	
			15					0.0	SB04_14-16 at 1420
								0.0	
		R5a (0-12"): Dark grayish reddish brown SILT, trace fine sand, trace fine gravel (wet)[SP-SC]	16					0.0	
		R5b (12-22"): Dark grayish reddish brown SILT, some fine sand, trace fine gravel (wet)[SP-SC]						0.0	
			17					0.0	SB04_18-20 at 1425
		R5c (22-44"): Dark grayish reddish brown SILT, trace fine sand, trace fine gravel (wet)[SP-SC]						0.0	End of boring at 20 feet, below grade surface (bgs). Borehole was backfilled with soil cuttings to surface grade and patched with asphalt. Installed SV04 at 3.5 feet bgs. See soil vapor logs for details.
			18	R5	MACROCORE	44		0.0	
								0.0	
			19					0.0	
			20					0.0	

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Log of Boring **SB-05** Sheet 1 of 1

Project: 31-33 Wave Street	Project No.: 170610601
Location: Staten Island, NY	Elevation and Datum: NA
Drilling Company: AARCO Environmental Services, Corp.	Date Started: 4/28/20 — Date Finished: 4/28/20
Drilling Equipment: Geoprobe 7822 DT	Completion Depth: 20 ft — Rock Depth: NA
Size and Type of Bit: 4' Macrocore 2 1/4" diameter	Number of Samples: Disturbed 5 — Undisturbed NA — Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ 7 — Completion ▼ NA — 24 HR. ▼ NA
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Thomas Harer
Sampler: 2-inch-diameter acetate liner	Field Engineer: Deirdre Casey
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		R1a (0-3"): Black coarse angular GRAVEL (dry)[ASPHALT]	0						
		R1b (3-13"): Dark brown to black coarse SAND, some fine angular gravel, trace coal/slag (dry)[FILL]	1					0.0	SB05_0-2 at 1310
		R1c (13-18"): Dark reddish brown fine SAND, some silt, trace fine angular gravel (moist)[FILL]	2	R1	MACROCORE	18		0.0	
			3					0.0	
			4						
		R2a (0-17"): Orange brown to brown fine SAND, some silt, trace angular coarse gravel (moist)	5						
			6					0.0	SB05_6-8 at 1325
		R2b (17-21"): Dark brown to black fine SAND, some silt, trace angular coarse gravel (moist) ▽	7	R2	MACROCORE	33		0.0	
		R2c (21-33"): Dark reddish brown fine sand, some silt (wet)	8					0.0	
		R3 (0-48"): Dark brown fine SAND, some silt (wet)	9					0.0	
			10	R3	MACROCORE	48		0.0	
			11					0.0	
			12					0.0	
		R4 (0-31"): Dark brown fine SAND, some silt (wet)	13						
			14	R4	MACROCORE	31		0.0	
			15					0.0	
		R5a (0-41"): Dark brown fine SAND, some silt (wet)	16					0.0	
			17					0.0	
			18	R5	MACROCORE	48		0.0	SB05_18-20 at 1345
		R5b (41-48"): Black SILT, some fine sand, trace clay (wet)	19					0.0	End of boring at 20 feet, below grade surface (bgs). Installed MW-05 screened from 4 to 14 feet bgs. See construction logs for details.
			20					0.0	

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Log of Boring **SB-06** Sheet 1 of 1

Project: 31-33 Wave Street	Project No.: 170610601
Location: Staten Island, NY	Elevation and Datum: NA
Drilling Company: AARCO Environmental Services, Corp.	Date Started: 4/29/20 — Date Finished: 4/29/20
Drilling Equipment: Geoprobe 7822 DT	Completion Depth: 20 ft — Rock Depth: NA
Size and Type of Bit: 4' Macrocore 2 1/4" diameter	Number of Samples: Disturbed 5, Undisturbed NA, Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ 4, Completion ▼ NA, 24 HR. ▼ NA
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Thomas Harer
Sampler: 2-inch-diameter acetate liner	Field Engineer: Deirdre Casey
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		R1a (0-2"): Black coarse angular GRAVEL (dry)[ASPHALT]	0					0.0	
		R1b (2-8"): Light gray medium angular GRAVEL (dry)[CONCRETE]						0.0	
		R1c (8-15"): Dark reddish brown fine SAND, trace silt (moist)[FILL]	1	R1	MACROCORE	25		0.0	SB06_0-2 at 0900
		R1d (15-25"): Gray to black fine SAND, trace coal ash, trace wood, trace coal, Trace tile (moist)[FILL]	2					0.0	
			3						
		▽	4						
		R2a (0-6"): Grayish reddish brown fine SAND, trace wood, trace coarse sand (wet)[FILL]	5						
		R2b (6-15"): Tannish brown to mottled gray SILT, trace wood, trace glass, trace coal, trace coal ash, trace clay, trace fine sand (wet)[FILL]						0.0	
		R2c (15-20"): Dark brown SILT, trace wood, trace glass, trace fine gravel (wet)[FILL]	6	R2	MACROCORE	23		8.0	SB06_5-7 at 0905
		R2d (20-23"): Dark reddish brown fine SAND, trace wood, trace silt (wet)[FILL]	7					1.7	
								0.0	
								0.0	
		R3a (0-12"): Grayish brown fine SAND, trace silt, trace fine gravel (wet)[FILL]	8						
		R3b (12-35"): Reddish brown fine SAND, some silt, trace wood (wet)[FILL]	9						
			10	R3	MACROCORE	35		0.0	
								0.0	
			11					0.0	
								0.0	
			12					0.0	
		R4 (0-28"): Reddish brown fine SAND, some silt (wet)[SP-SM]						0.0	
			13						SB06_12-14 at 0910
								0.0	
			14	R4	MACROCORE	28		0.0	
								0.0	
			15					0.0	
								0.0	
			16						
		R5a (0-28"): Reddish brown fine SAND, some silt (wet)[SP-SM]							
			17					0.0	SB06_18-20 at 0915
								0.0	Mild organic odor 19-20 ft bgs.
			18	R5	MACROCORE	33		0.0	End of boring at 20 feet,
		R5b (28-33"): Grayish black SILT, trace clay, trace fine sand (wet)[GW-GM]						0.0	below grade surface (bgs).Installed MW-06
			19					0.0	screened from 2 to 12 feet
								1.6	bgs. See construction logs for details.
			20						

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Log of Boring **SB-07** Sheet 1 of 1

Project: 31-33 Wave Street	Project No.: 170610601
Location: Staten Island, NY	Elevation and Datum: NA
Drilling Company: AARCO Environmental Services, Corp.	Date Started: 4/29/20 — Date Finished: 4/29/20
Drilling Equipment: Geoprobe 420M	Completion Depth: 20 ft — Rock Depth: NA
Size and Type of Bit: 4' Macrocore 2 1/4" diameter	Number of Samples: Disturbed 5 — Undisturbed NA — Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ 4 — Completion ▼ NA — 24 HR. ▼ NA
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Thomas Harer
Sampler: 2-inch-diameter acetate liner	Field Engineer: Deirdre Casey
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		R1a (0-2"): Black coarse angular GRAVEL (dry)[ASPHALT]	0					0.0	
		R1b (2-6"): Dark brown fine SAND, some fine gravel, trace silt (moist)[FILL]	1					0.0	
		R1c (6-14"): Dark reddish brown fine SAND, some silt (moist)[FILL]						0.0	SB07_0-2 at 1145
		R1d (14-32"): Brown fine SAND, trace fine gravel, Coal and coal ash lens 19-20 and 24-25 (moist)	2	R1	MACROCORE	32		0.0	
			3					0.0	
			4 ▽						
		R2 (0-12"): Dark reddish brown fine SAND, trace wood, trace coal, trace coal ash, trace silt, trace fine gravel (wet)[FILL]	5						
			6	R2	MACROCORE	12		0.0	
			7					0.0	
			8					0.0	
		R3 (0-17"): Reddish brown fine SAND, trace silt, trace fine gravel [SP-SC]	9						SB07_8-10 at 1150.
			10	R3	MACROCORE	17		0.0	
			11					0.0	
			12					0.0	
		R4 (0-22"): Reddish brown fine SAND, trace silt, trace fine gravel [SP-SC]	13						
			14	R4	MACROCORE	22		0.0	
			15					0.0	
			16					0.0	
		R5a (0-10"): Reddish brown fine SAND, trace silt, trace fine gravel							
		R5b (10-20"): Dark gray SILT, some clay, trace fine sand (wet)[SP-SC]	17					0.0	SB07_18-20 at 1200
		R5c (20-32"): Grayish tan fine SAND, trace silt, trace fine gravel (wet)[SP-SC]	18	R5	MACROCORE	32		0.0	End of boring at 20 feet, below grade surface (bgs). Borehole was backfilled with soil cuttings to surface grade and patched with asphalt. Installed SV04 at 2 feet bgs. See soil vapor logs for details.
			19					0.0	
			20					0.0	

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Log of Boring **SB-08** Sheet 1 of 1

Project: 31-33 Wave Street	Project No.: 170610601
Location: Staten Island, NY	Elevation and Datum: NA
Drilling Company: AARCO Environmental Services, Corp.	Date Started: 4/28/20 — Date Finished: 4/28/20
Drilling Equipment: Geoprobe 420M	Completion Depth: 15 ft — Rock Depth: NA
Size and Type of Bit: 4' Macrocore 2 1/4" diameter	Number of Samples: Disturbed 5 — Undisturbed NA — Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ 5 — Completion ▼ NA — 24 HR. ▼ NA
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Julio Galaraza
Sampler: 2-inch-diameter acetate liner	Field Engineer: Deirdre Casey
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		R1a (0-12") Gray medium SAND (dry)[CONCRETE]	0					0.0	
								0.0	
		R1b (12-24"): Grayish brown fine SAND, trace gravel (dry)[FILL]	1	R1	MACROCORE	24		0.0	
			2						SB08_0-2 at 1450
			3						
			4	R2	MACROCORE	12			
			▽ 5					0.0	
		R2a (0-6"): Light reddish brown fine SAND, trace fine gravel (wet)[FILL]						0.0	SB08_4-6 at 1455
		R2b (6-12"): Reddish brown SAND, trace fine gravel (wet)[FILL]	6					0.0	
		R3a (0-24"): Brown fine SAND, trace fine gravel (wet)[FILL]	7	R3	MACROCORE	30			
			8					0.0	
		R3b (24-30"): Light brownish olive fine SAND, trace medium sand, trace fine gravel (wet)						0.0	
			9					0.0	
		R4 (0-18"): Brownish olive fine SAND, some medium sand, trace fine gravel (wet)	10	R4	MACROCORE	18			
			11					0.0	
								0.0	
								0.0	
			12					0.0	
			13	R5	MACROCORE	30			SB08_13-15 at 1500
		R5 (0-30"): Brown fine SAND, trace fine gravel (wet)						0.0	
			14					0.0	
								0.0	
			15					0.0	End of boring at 15 feet, below grade surface (bgs). Installed MW-08 screened from 1 to 11 feet bgs. See construction logs for details.
			16						
			17						
			18						
			19						
			20						

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Log of Boring **SB-09** Sheet 1 of 1

Project: 31-33 Wave Street	Project No.: 170610601
Location: Staten Island, NY	Elevation and Datum: NA
Drilling Company: AARCO Environmental Services, Corp.	Date Started: 4/28/20 — Date Finished: 4/28/20
Drilling Equipment: Geoprobe 420M	Completion Depth: 15 ft — Rock Depth: NA
Size and Type of Bit: 3' Macrocore 2 1/4" diameter	Number of Samples: Disturbed 5 — Undisturbed NA — Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ 6 — Completion ▼ NA — 24 HR. ▼ NA
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Julio Galaraza
Sampler: 2-inch-diameter acetate liner	Field Engineer: Deirdre Casey
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		R1a (0-12"): Gray medium SAND (dry)[CONCRETE]	0	R1	MACROCORE	29		0.0	
		R1b (12-23"): Reddish brown fine SAND, trace fine gravel [CH]	1					0.0	SB09_0-2 at 1330
		R1c (23-27"): Reddish brown clayey SILT, some fine sand, trace fine gravel (moist)[FILL]	2					0.0	
		R1d (27-29"): Black coarse angular GRAVEL (dry)[ASPHALT]	3						
		R2a (0-18"): Reddish brown fine SAND, trace fine gravel (moist)[FILL]	4	R2	MACROCORE	24		0.0	SB09_4-6 at 1335
			5					0.1	
		R2b (18-20"): Grayish olive CLAY, trace fine gravel (moist)						0.0	
		R2c (20-24"): Light gray coarse SAND, trace coal, trace gravel (moist)	6					0.2	
		R3a (0-18"): Brownish olive fine SAND, trace gravel (wet)[FILL]	7	R3	MACROCORE	36			
		R3b (18-36"): Black clayey SAND, trace wood, trace fine gravel (wet)	8					0.0	
								0.0	
		R4 (0-6"): Brownish gray medium SAND, trace fine gravel (wet)	9					0.0	
			10	R4	MACROCORE	6			
			11					0.0	
								0.0	
		R5a (0-12"): Brown silty fine SAND (wet)[NATIVE]	12						
			13	R5	MACROCORE	18			SB09_13-15 at 1340
								0.0	
			14					0.0	
		R5b (12-18"): Gray CLAY, trace fine gravel (wet)[CL]						0.0	
			15					0.0	End of boring at 15 feet, below grade surface (bgs). Borehole was backfilled with soil cuttings to surface grade and patched with asphalt.
			16						
			17						
			18						
			19						
			20						

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APPENDIX D
WELL CONSTRUCTION AND GROUNDWATER SAMPLING LOGS

WELL CONSTRUCTION AND DEVELOPMENT SUMMARY

Well No. **MW-05**

PROJECT		PROJECT NO.	
31-33 Wave Street		170610601	
LOCATION		**ELEVATION AND DATUM**	
Staten Island, New York		el.	NAVD88
DRILLING AGENCY		**DATE STARTED**	**DATE FINISHED**
AARCO Environmental Services, Corp.		4/28/2020	4/28/2020
DRILLING EQUIPMENT		**DRILLER**	
Geoprobe® 7822 DT		Thomas Harer	
SIZE AND TYPE OF BIT		**INSPECTOR**	
4-inch Direct Push		Deirdre Casey	
BOREHOLE DIAMETER		**TYPE OF WELL (OVERBURDEN / BEDROCK)**	
2-1/4 inch		Overburden	
RISER MATERIAL	**DIAMETER**	**TYPE OF BACKFILL MATERIAL**	
PVC	2-Inch	Sand	
TYPE OF SCREEN	**DIAMETER**	**TYPE OF WELL PACK**	**TYPE OF SEAL MATERIAL**
PVC No. 10 Slot	2-Inch	No. 2 Sand	Bentonite

METHOD OF INSTALLATION

A Geoprobe 7822DT was used to advance the boring to approximately 20 feet below grade surface (bgs). A permanent 2-inch PVC monitoring well was installed, which consisted of 10' of 10-slot (0.010-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 4 to 14 feet bgs with riser from about grade surface to about 3 feet bgs. The annulus was filled with sand to 4 feet bgs, sealed with hydrated bentonite, and completed to surface grade with clean sand.

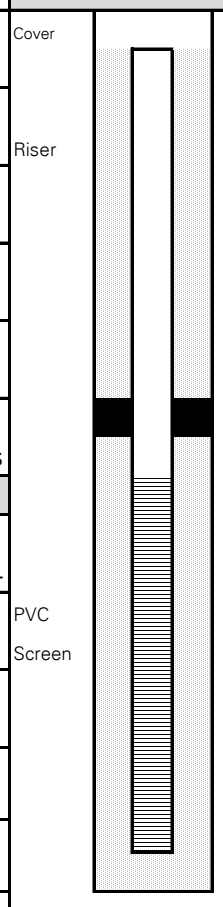
WELL DEVELOPMENT DATA

SURGE BLOCK DIAMETER	N/A	**TYPE PUMP**		Submersible	**DEVELOPMENT CONFIRMATION**
DRILLER OR LANGAN	Driller	**MAX PUMP RATE**		1 LPM	Well Developed on 4/29/2020 until groundwater was no longer turbid
NUMBER OF SURGE CYCLES	N/A	**TOTAL VOLUME**		~10 Gal	

TOP OF CASING	**ELEVATION** N/A	**DEPTH (ft)** N/A
TOP OF SEAL	**ELEVATION** N/A	**DEPTH (ft)** 0.5
TOP OF FILTER	**ELEVATION** N/A	**DEPTH (ft)** 3
TOP OF SCREEN	**ELEVATION** N/A	**DEPTH (ft)** 4.0
BOTTOM OF BORING	**ELEVATION** N/A	**DEPTH (ft)** 14
SCREEN LENGTH		10 ft
SLOT SIZE		No. 10 Slot; 0.010 Inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER (ft bgs)
N/A	4/30/2020	10.24



WELL DETAILS	SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
		0
		3
		4.00
		14.00

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WELL CONSTRUCTION AND DEVELOPMENT SUMMARY

Well No. **MW-06**

PROJECT		PROJECT NO.	
31-33 Wave Street		170610601	
LOCATION		**ELEVATION AND DATUM**	
Staten Island, New York		el.	NAVD88
DRILLING AGENCY		**DATE STARTED**	**DATE FINISHED**
AARCO Environmental Services, Corp.		4/29/2020	4/29/2020
DRILLING EQUIPMENT		**DRILLER**	
Geoprobe® 7822 DT		Thomas Harer	
SIZE AND TYPE OF BIT		**INSPECTOR**	
4-inch Direct Push		Deirdre Casey	
BOREHOLE DIAMETER		**TYPE OF WELL (OVERBURDEN / BEDROCK)**	
2-1/4 inch		Overburden	
RISER MATERIAL	**DIAMETER**	**TYPE OF BACKFILL MATERIAL**	
PVC	2-Inch	Sand	
TYPE OF SCREEN	**DIAMETER**	**TYPE OF WELL PACK**	**TYPE OF SEAL MATERIAL**
PVC No. 10 Slot	2-Inch	No. 2 Sand	Bentonite

METHOD OF INSTALLATION

A Geoprobe 7822DT was used to advance the boring to approximately 12 feet below grade surface (bgs). A permanent 2-inch PVC monitoring well was installed, which consisted of 10' of 10-slot (0.010-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 2 to 12 feet bgs with riser from grade surface to about 2 feet bgs. The annulus was filled with sand to 1 foot bgs and sealed with hydrated bentonite to surface grade.

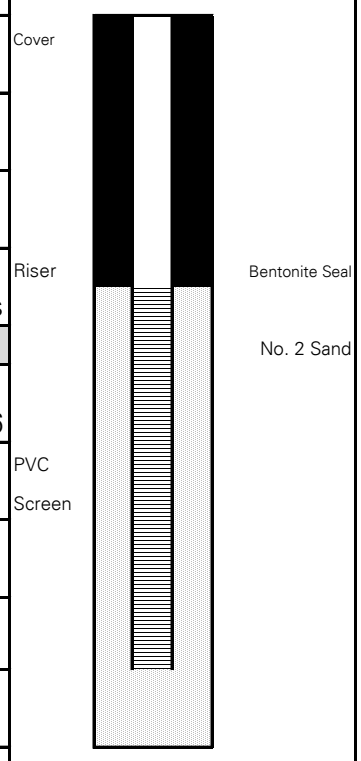
WELL DEVELOPMENT DATA

SURGE BLOCK DIAMETER	N/A	**TYPE PUMP**	Submersible	**DEVELOPMENT CONFIRMATION**
DRILLER OR LANGAN	Driller	**MAX PUMP RATE**	1 LPM	Well Developed on 4/29/2020 until groundwater was no longer turbid
NUMBER OF SURGE CYCLES	N/A	**TOTAL VOLUME**	~10 Gal	

TOP OF CASING	**ELEVATION** N/A	**DEPTH (ft)** N/A
TOP OF SEAL	**ELEVATION** N/A	**DEPTH (ft)** 0.5
TOP OF FILTER	**ELEVATION** N/A	**DEPTH (ft)** 1
TOP OF SCREEN	**ELEVATION** N/A	**DEPTH (ft)** 2.0
BOTTOM OF BORING	**ELEVATION** N/A	**DEPTH (ft)** 12
SCREEN LENGTH		10 ft
SLOT SIZE		No. 10 Slot; 0.010 Inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER (ft bgs)
N/A	4/30/2020	3.56



WELL DETAILS	SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
		0
		1
		11.00
		EOB

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WELL CONSTRUCTION AND DEVELOPMENT SUMMARY

Well No. **MW-08**

PROJECT		PROJECT NO.	
31-33 Wave Street		170610601	
LOCATION		**ELEVATION AND DATUM**	
Staten Island, New York		el. N/A	NAVD88
DRILLING AGENCY		**DATE STARTED**	**DATE FINISHED**
AARCO Environmental Services, Corp.		4/28/2020	4/29/2020
DRILLING EQUIPMENT		**DRILLER**	
Geoprobe® 420 M		Julio Yolozo	
SIZE AND TYPE OF BIT		**INSPECTOR**	
2-inch Direct Push		Deirdre Casey	
BOREHOLE DIAMETER		**TYPE OF WELL (OVERBURDEN / BEDROCK)**	
1-1/4 inch		Overburden	
RISER MATERIAL	**DIAMETER**	**TYPE OF BACKFILL MATERIAL**	
PVC	1-Inch	Sand	
TYPE OF SCREEN	**DIAMETER**	**TYPE OF WELL PACK**	**TYPE OF SEAL MATERIAL**
PVC No. 10 Slot	1-Inch	No. 2 Sand	Bentonite

METHOD OF INSTALLATION

A Geoprobe 420M was used to advance the boring to approximately 15 feet below grade surface (bgs). A permanent 1-inch PVC monitoring well was installed, which consisted of 10' of 10-slot (0.010-inch) well screen, and a solid 1" PVC riser. Well screen was installed from approximately 1 to 11 feet bgs with riser from about grade surface to about 1 foot bgs. The annulus was filled with sand to 1 foot bgs and sealed with hydrated bentonite to surface grade.

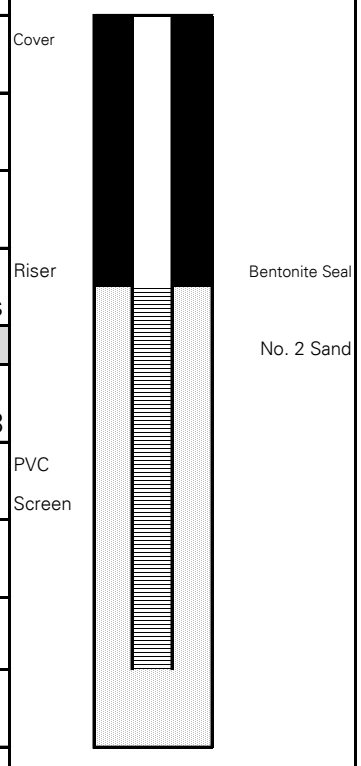
WELL DEVELOPMENT DATA

SURGE BLOCK DIAMETER	N/A	**TYPE PUMP**	Peristaltic	**DEVELOPMENT CONFIRMATION**
DRILLER OR LANGAN	Driller	**MAX PUMP RATE**	0.4 LPM	Well Developed on 4/29/2020 until groundwater was no longer turbid
NUMBER OF SURGE CYCLES	N/A	**TOTAL VOLUME**	~5 Gal	

TOP OF CASING	**ELEVATION** N/A	**DEPTH (ft)** N/A
TOP OF SEAL	**ELEVATION** N/A	**DEPTH (ft)** 0
TOP OF FILTER	**ELEVATION** N/A	**DEPTH (ft)** 1
TOP OF SCREEN	**ELEVATION** N/A	**DEPTH (ft)** 1.0
BOTTOM OF BORING	**ELEVATION** N/A	**DEPTH (ft)** 11
SCREEN LENGTH		10 ft
SLOT SIZE		No. 10 Slot; 0.010 Inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER (ft bgs)
N/A	4/30/2020	3.73



WELL DETAILS	SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
		0
		1
		11.00
		EOB

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Groundwater Sampling Logs

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	**31-33 Wave Street**	**Well No:**	MW05	**Water Quality Device Model:**	**Horiba U52**	**Weather:**	55-58F Rain		MW05_043020
Project Number:	**170610601**	**Well Depth:**	14'	**Pine Number:**	**51666**	**Background PID (ppm):**	0	**Sample(s):**	
Site Location:	**Staten Island**	**Well Diameter:**	2"	**Pump Make and Model:**	**Peristaltic Pump**	**PID Beneath Inner Cap (ppm):**	0		
Sampling Personnel:	**Luke McCartney**	**Well Screen Interval:**	4' 14'	**Pine Number:** **Tubing Diameter:**	**51860** **3/16 ID x 3/8 OD**	**Pump Intake Depth:** **Depth to Water Before Purge:**	12.50 10.24	**Sample Date:** **Sample Time:**	4/30/2020 16:40

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
15:23	14.78	7.38	61	0.638	271	1.76					**N/A**
15:28	14.23	7.43	22	0.589	459	0.69		0.6	3		**N/A**
15:33	14.23	7.36	-23	0.582	993	1.08		0.4	5		**N**
15:38	14.21	7.33	-60	0.628	623	0.50		0.3	6.5		**N**
15:43	14.15	7.39	-83	0.619	557	2.36		0.3	8	Slight brown, no odor	**N**
15:48	14.08	7.41	-104	0.652	524	1.59		0.4	10		**N**
15:53	14.10	7.43	-98	0.657	338	3.29		0.3	11.5		**N**
15:58								0.1	12		**N**
16:03	14.27	7.53	-95	0.658	125	3.79		0.2	13		**N**
16:08	14.12	7.49	-96	0.666	129	0.63		0.3	14.5	Clear, no odor	**N**
16:13	14.07	7.49	-101	0.660	129	2.61		0.2	15.5		**N**
16:18	14.07	7.49	-102	0.661	129	2.95		0.3	17		**N**
16:23	Well pumped dry - allow recharge and sample										**N**
16:40	Well Sampled										**N**
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N

Notes:

1. Well depths and groundwater depths were measured in feet below the top of well casing.
2. Well and tubing diameters are measured in inches.
3. PID = Photoionization Detector
4. PPM = Parts per million
5. pH = Hydrogen ion concentration
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
8. DTW = Depth to water
9. mS/cm = milli-Siemans per centimeter
10. NTU = Nephelometric Turbidity Unit

Groundwater Sampling Logs

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	**31-33 Wave Street**	**Well No:**	MW06	**Water Quality Device Model:**	**Horiba U52**	**Weather:**	55-58F Rain		MW06_043020
Project Number:	**170610601**	**Well Depth:**	11'	**Pine Number:**	**51666**	**Background PID (ppm):**	0	**Sample(s):**	
Site Location:	**Staten Island**	**Well Diameter:**	2"	**Pump Make and Model:**	**Peristaltic Pump**	**PID Beneath Inner Cap (ppm):**	0		
Sampling		**Well Screen**	1'	**Pine Number:**	**51860**	**Pump Intake Depth:**	5.00	**Sample Date:**	4/30/2020
Personnel:	**Luke McCartney**	**Interval:**	11'	**Tubing Diameter:**	**3/16 ID x 3/8 OD**	**Depth to Water Before Purge:**	3.56	**Sample Time:**	14:14

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
13:14	13.67	7.91	-93	0.367	78.4	1.57			0		**N/A**
13:19	14.05	7.56	-137	0.383	40.10	0.00		0.2	1		**N/A**
13:24	14.07	7.41	-147	0.397	26.40	0.00		0.3	2.5		**N**
13:29	14.07	7.35	-150	0.406	14.80	0.00		0.3	4		**N**
13:34	14.08	7.33	-152	0.406	11.60	0.00		0.2	5		**N**
13:39	14.09	7.31	-154	0.416	8.70	0.00		0.5	7.5		**N**
13:44	14.12	7.30	-154	0.419	8.60	0.00		0.2	8.5	Clear, no odor	**N**
13:49	14.18	7.29	-155	0.418	5.0	0.00		0.3	10		**N**
13:54	14.24	7.29	-155	0.417	6.5	0.00		0.4	12		**N**
13:59	14.24	7.28	-155	0.420	2.2	0.00		0.4	14		**N**
14:04	14.22	7.28	-154	0.422	2.3	0.00		0.4	16		**N**
14:09	14.24	7.27	-154	0.426	0.0	0.00		0.4	18		**Y**
14:14	14.19	7.28	-154	0.424	0.7	0.00		0.4	20		**Y**

Notes:
1. Well depths and groundwater depths were measured in feet below the top of well casing.
2. Well and tubing diameters are measured in inches.
3. PID = Photoionization Detector
4. PPM = Parts per million
5. pH = Hydrogen ion concentration
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
8. DTW = Depth to water
9. mS/cm = milli-Siemans per centimeter
10. NTU = Nephelometric Turbidity Unit

Groundwater Sampling Logs

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	**31-33 Wave Street**	**Well No:**	MW08	**Water Quality Device Model:**	**Horiba U52**	**Weather:**	55-58F Rain		MW08_043020
Project Number:	**170610601**	**Well Depth:**	11'	**Pine Number:**	**51666**	**Background PID (ppm):**	0	**Sample(s):**	GWDUP01_043020
Site Location:	**Staten Island**	**Well Diameter:**	1"	**Pump Make and Model:**	**Peristaltic Pump**	**PID Beneath Inner Cap (ppm):**	0		
Sampling		**Well Screen**	1'	**Pine Number:**	**51860**	**Pump Intake Depth:**	4.50	**Sample Date:**	4/30/2020
Personnel:	**Luke McCartney**	**Interval:**	11'	**Tubing Diameter:**	**3/16 ID x 3/8 OD**	**Depth to Water Before Purge:**	3.73	**Sample Time:**	10:55

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
9:55	12.92	6.29	212	0.349	1000	5.69			0		**N/A**
10:00	12.89	7.03	187	0.326	1000	5.40		0.5	2.5	Brown, no odor	**N/A**
10:05	12.87	7.30	185	0.325	846	5.6		0.25	3.75		**N**
10:10	12.86	7.47	187	0.329	284	5.60		0.2	4.75		**N**
10:15	12.85	7.53	189	0.329	224	5.56		0.2	5.75		**N**
10:20	12.82	7.58	192	0.332	68.3	5.64		0.25	7		**N**
10:25	12.80	7.61	195	0.334	45.5	5.71		0.35	8.75		**N**
10:30	12.79	7.66	197	0.336	38.2	5.77		0.25	10	Clear, no odor	**N**
10:35	12.78	7.67	198	0.337	39.4	5.90		0.25	11.25		**N**
10:40	12.78	7.68	199	0.338	62.9	5.62		0.35	13		**N**
10:45	12.77	7.69	202	0.339	51.3	5.64		0.3	14.5		**N**
10:50	12.77	7.70	203	0.340	20.7	5.60		0.5	17		**N**
10:55	12.76	7.71	205	0.340	15.9	5.57					**N**

Notes:
1. Well depths and groundwater depths were measured in feet below the top of well casing.
2. Well and tubing diameters are measured in inches.
3. PID = Photoionization Detector
4. PPM = Parts per million
5. pH = Hydrogen ion concentration
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
8. DTW = Depth to water
9. mS/cm = milli-Siemans per centimeter
10. NTU = Nephelometric Turbidity Unit

APPENDIX E
SOIL VAPOR CONSTRUCTION AND SAMPLING LOGS

SUB-SLAB SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SS08

PROJECT: 31-33 Wave Street		**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York		**SURFACE ELEVATION AND DATUM:** n/a	
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services Corp.		**INSTALLATION DATE STARTED:** 4/28/2020	**DATE FINISHED:** 4/28/2020
INSTALLATION FOREMAN: Ron Dixon		**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSTALLATION EQUIPMENT: Geoprobe® 420 M		**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
INSPECTOR: Deirdre Casey		**SAMPLER:** Luke McCartney	
POTENTIAL SAMPLE INTERFERENCES: None observed		**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 54-58°F Wind: 16-24 mph SE Precipitation: Rain/cloudy Pressure: 1015-1019 MB	

METHOD OF INSTALLATION AND PURGING:
AARCO advanced subslab vapor point to 14-inches below the top of the slab. A small amount of No. 2 sand was backfilled into the borehole to set the vapor tubing. No. 2 sand was backfilled around the tubing to 3 inches bgs, and the remainder of the borehole was sealed with bentonite.

TUBING TYPE/DIAMETER: 1/4-Inch Teflon-lined Polyethylene Tubing		**TYPE OF MATERIAL ABOVE SEAL:** Hydrated bentonite	
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe		**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite	
BOREHOLE DIAMETER: 2-inch		**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand	
PURGE VOLUME (L):	0.067		
PURGE FLOW RATE (ML/MIN):	200		
PID AFTER PURGE (PPM):	0		
HELIUM TESTS	Pre-sampling / Post-sampling		
HELIUM TEST IN BUCKET(%):	21.2% / 19.7%		
HELIUM TEST IN TUBE (PPM):	0.0% / 0.0%		
SAMPLE START TIME:	9:13		
SAMPLE STOP TIME:	17:13		
TOTAL SAMPLE TIME (MIN):	480		
REGULATOR FLOW RATE (L/MIN):	0.009673		
VOLUME OF SAMPLE (LITERS):	6		
PID AFTER SAMPLE (PPM):	0		
SAMPLE MOISTURE CONTENT:	n/a		
CAN SERIAL NUMBER:	16956		
REGULATOR SERIAL NUMBER:	5610		
CAN START VACUUM PRESS. (" HG):	-29.75		
CAN STOP VACUUM PRESS. (" HG):	-7		

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	**DEPTH (INCHES FROM SURFACE)**	**NOTES**
Top of Seal	0.00	
Top of Pack	3 inches	
Probe Depth	14 inches	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

Sample Name: SS08_043020

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SUB-SLAB SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SS09

PROJECT: 31-33 Wave Street		**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York		**SURFACE ELEVATION AND DATUM:** n/a	
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services Corp.		**INSTALLATION DATE STARTED:** 4/28/2020	**DATE FINISHED:** 4/28/2020
INSTALLATION FOREMAN: Ron Dixon		**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSTALLATION EQUIPMENT: Geoprobe® 420 M		**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
INSPECTOR: Deirdre Casey		**SAMPLER:** Luke McCartney	
POTENTIAL SAMPLE INTERFERENCES: None observed		**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 54-58°F Wind: 16-24 mph SE Precipitation: Rain/cloudy Pressure: 1015-1019 MB	

METHOD OF INSTALLATION AND PURGING:
AARCO advanced subslab vapor point to 14-inches below the top of the slab. A small amount of No. 2 sand was backfilled into the borehole to set the vapor tubing. No. 2 sand was backfilled around the tubing to 2 inches bgs, and the remainder of the borehole was sealed with bentonite.

TUBING TYPE/DIAMETER: 1/4-Inch Teflon-lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** Hydrated bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2-inch	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.067	
PURGE FLOW RATE (ML/MIN):	200	
PID AFTER PURGE (PPM):	0.4	
HELIUM TESTS	Pre-sampling	Post-sampling
HELIUM TEST IN BUCKET(%):	18.5%	23.4%
HELIUM TEST IN TUBE (PPM):	0.0%	0.0%
SAMPLE START TIME:	9:12	
SAMPLE STOP TIME:	17:12	
TOTAL SAMPLE TIME (MIN):	480	
REGULATOR FLOW RATE (L/MIN):	0.01151	
VOLUME OF SAMPLE (LITERS):	6	
PID AFTER SAMPLE (PPM):	0.2	
SAMPLE MOISTURE CONTENT:	n/a	
CAN SERIAL NUMBER:	18302	
REGULATOR SERIAL NUMBER:	Y15	
CAN START VACUUM PRESS. (" HG):	-31.5	
CAN STOP VACUUM PRESS. (" HG):	-7	

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	**DEPTH (INCHES FROM SURFACE)**	**NOTES**
Top of Seal	0.00	
Top of Pack	3.00	
Probe Depth	14.00	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

Sample Name: SS09_043020

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV04

PROJECT: 31-33 Wave Street	**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York	**SURFACE ELEVATION AND DATUM:** n/a	
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services Corp.	**INSTALLATION DATE STARTED:** 4/29/2020	**DATE FINISHED:** 4/29/2020
INSTALLATION FOREMAN: Ron Dixon	**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT	**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
INSPECTOR: Deirdre Casey	**SAMPLER:** Luke McCartney	
POTENTIAL SAMPLE INTERFERENCES: None Observed	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 54-58°F Wind: 16-24 mph SE Precipitation: Rain/cloudy Pressure: 1015-1019 MB	

METHOD OF INSTALLATION AND PURGING:
Advance Geoprobe 7822DT to 3 feet below grade surface (bgs), install 2-inch polyethylene probe, backfill with No. 2 sand to 2 feet bgs, and sealed with hydrated bentonite to surface with hydrated bentonite.

TUBING TYPE/DIAMETER: 1/4-Inch Teflon-lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** Hydrated bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: None	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2-inch	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.067	
PURGE FLOW RATE (ML/MIN):	200	
PID AFTER PURGE (PPM):	0.1	
HELIUM TESTS	Pre-sampling	Post-sampling
HELIUM TEST IN BUCKET(%):	14.3%	17.1%
HELIUM TEST IN TUBE (PPM):	0.0%	0.0%
SAMPLE START TIME:	12:33	
SAMPLE STOP TIME:	14:33	
TOTAL SAMPLE TIME (MIN):	120	
REGULATOR FLOW RATE (L/MIN):	0.004556	
VOLUME OF SAMPLE (LITERS):	6	
PID AFTER SAMPLE (PPM):	0.1	
SAMPLE MOISTURE CONTENT:	n/a	
CAN SERIAL NUMBER:	467	
REGULATOR SERIAL NUMBER:	Y12	
CAN START VACUUM PRESS. (" HG):	-30	
CAN STOP VACUUM PRESS. (" HG):	-5.5	

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	**DEPTH (FEET FROM SURFACE)**	**NOTES**
SURFACE		
Top of Seal	0	
Top of Pack	2	
Tube Depth	3	
SURFACE		

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

Sample Name: SV04__043020

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV07

PROJECT: 31-33 Wave Street	**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York	**SURFACE ELEVATION AND DATUM:** n/a	
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services Corp.	**INSTALLATION DATE STARTED:** 4/29/2020	**DATE FINISHED:** 4/29/2020
INSTALLATION FOREMAN: Ron Dixon	**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT	**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
INSPECTOR: Deirdre Casey	**SAMPLER:** Luke McCartney	
POTENTIAL SAMPLE INTERFERENCES: None Observed	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 54-58°F Wind: 16-24 mph SE Precipitation: Rain/cloudy Pressure: 1015-1019 MB	

METHOD OF INSTALLATION AND PURGING:
Advance Geoprobe 7822DT to 2 feet below grade surface (bgs), install 2-inch polyethylene probe, backfill with No. 2 sand to 1 feet bgs, and sealed with hydrated bentonite to surface with hydrated bentonite.

TUBING TYPE/DIAMETER: 1/4-Inch Teflon-lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** Hydrated bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: None	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2-inch	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.067	
PURGE FLOW RATE (ML/MIN):	200	
PID AFTER PURGE (PPM):	0	
HELIUM TESTS	Pre-sampling	Post-sampling
HELIUM TEST IN BUCKET(%):	25.1%	15.5%
HELIUM TEST IN TUBE (PPM):	0.0%	0.0%
SAMPLE START TIME:	12:30	
SAMPLE STOP TIME:	14:30	
TOTAL SAMPLE TIME (MIN):	120	
REGULATOR FLOW RATE (L/MIN):	0.004435	
VOLUME OF SAMPLE (LITERS):	6	
PID AFTER SAMPLE (PPM):	0	
SAMPLE MOISTURE CONTENT:	n/a	
CAN SERIAL NUMBER:	23996	
REGULATOR SERIAL NUMBER:	6878	
CAN START VACUUM PRESS. (" HG):	-31.5	
CAN STOP VACUUM PRESS. (" HG):	-7.75	

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	**DEPTH (FEET FROM SURFACE)**	**NOTES**
SURFACE		
SURFACE		
Top of Seal	0	
Top of Pack	1	
Tube Depth	2	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

Sample Name: SV07__043020

INDOOR AIR SAMPLING LOG SHEET

Sample Number: IA09

PROJECT: 31-33 Wave Street	**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York	**SURFACE ELEVATION AND DATUM:** N/A	
SAMPLER: Luke McCartney	**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSPECTOR: Luke McCartney	**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
POTENTIAL SAMPLE INTERFERENCES: None Observed	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):**	
	Temp:	54-58°F
	Wind:	16-24 mph SE
	Precipitation:	Rain/cloudy
	Pressure:	1015-1019 MB

METHOD OF INSTALLATION AND SAMPLING:

Langan field screened the sample location with a MiniRAE 3000 photoionization detector prior to sampling. Sample consisted of 6L Summa canister fitted with an 8-hour flow control valve. The flow controller was zeroed and valve opened to initiate the 8-hour sample collection. The sample and flow controller were checked each hour during sampling to ensure proper operation.

SAMPLE DETAILS

HEIGHT ABOVE GROUND (FT):	3.5
PID BEFORE SAMPLE (PPM):	0.0
SAMPLE START TIME:	9:23
SAMPLE STOP TIME:	17:23
TOTAL SAMPLE TIME (MIN):	480
REGULATOR FLOW RATE (L/MIN):	0.00977
VOLUME OF SAMPLE (LITERS):	6
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	n/a
CAN SERIAL NUMBER:	Y3
REGULATOR SERIAL NUMBER:	28316
CAN START VACUUM PRESS. (" HG):	-29.9
CAN STOP VACUUM PRESS. (" HG):	-8

SAMPLE LOCATION SKETCH

See Sample Location Plan

Paired with SS09_043020

NOTES

Sample Name: IA09__043020

Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

INDOOR AIR SAMPLING LOG SHEET

Sample Number: IA08

PROJECT: 31-33 Wave Street	**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York	**SURFACE ELEVATION AND DATUM:** N/A	
SAMPLER: Luke McCartney	**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSPECTOR: Luke McCartney	**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
POTENTIAL SAMPLE INTERFERENCES: None Observed	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):**	
	Temp:	54-58°F
	Wind:	16-24 mph SE
	Precipitation:	Rain/cloudy
	Pressure:	1015-1019 MB

METHOD OF INSTALLATION AND SAMPLING:

Langan field screened the sample location with a MiniRAE 3000 photoionization detector prior to sampling. Sample consisted of 6L Summa canister fitted with an 8-hour flow control valve. The flow controller was zeroed and valve opened to initiate the 8-hour sample collection. The sample and flow controller were checked each hour during sampling to ensure proper operation.

SAMPLE DETAILS

HEIGHT ABOVE GROUND (FT):	3.5
PID BEFORE SAMPLE (PPM):	0.0
SAMPLE START TIME:	9:12
SAMPLE STOP TIME:	17:12
TOTAL SAMPLE TIME (MIN):	480
REGULATOR FLOW RATE (L/MIN):	0.01105
VOLUME OF SAMPLE (LITERS):	6
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	n/a
CAN SERIAL NUMBER:	18295
REGULATOR SERIAL NUMBER:	Y34
CAN START VACUUM PRESS. (" HG):	-30
CAN STOP VACUUM PRESS. (" HG):	-6

SAMPLE LOCATION SKETCH

See Sample Location Plan

Paired with SS08_043020

NOTES

Sample Name: IA08_042030

Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

AMBIENT AIR SAMPLING LOG SHEET

Sample Number: AA01

PROJECT: 31-33 Wave Street	**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York	**SURFACE ELEVATION AND DATUM:** N/A	
SAMPLER: Luke McCartney	**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSPECTOR: Luke McCartney	**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
POTENTIAL SAMPLE INTERFERENCES: None Observed	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):**	
	Temp:	54-58°F
	Wind:	16-24 mph SE
	Precipitation:	Rain/cloudy
	Pressure:	1015-1019 MB

METHOD OF INSTALLATION AND SAMPLING:

Langan field screened the sample location with a MiniRAE 3000 photoionization detector prior to sampling. Sample consisted of 6L Summa canister fitted with a 2-hour flow control valve. The flow controller was zeroed and valve opened to initiate the 2-hour sample collection. The sample and flow controller were checked each hour during sampling to ensure proper operation.

SAMPLE DETAILS

HEIGHT ABOVE GROUND (FT):	3.5
PID BEFORE SAMPLE (PPM):	0.0
SAMPLE START TIME:	12:35
SAMPLE STOP TIME:	14:31
TOTAL SAMPLE TIME (MIN):	116
REGULATOR FLOW RATE (L/MIN):	0.04393
VOLUME OF SAMPLE (LITERS):	6
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	n/a
CAN SERIAL NUMBER:	15529
REGULATOR SERIAL NUMBER:	7361
CAN START VACUUM PRESS. (" HG):	-28
CAN STOP VACUUM PRESS. (" HG):	-4.25

SAMPLE LOCATION SKETCH

See Sample Location Plan

Ambient air sample was centrally located in parking area between SV04 and SV07

NOTES

Sample Name: AA01_043020

Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

APPENDIX F
LABORATORY ANALYTICAL REPORTS

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Report Date: 05/11/2020
Client Project ID: 170610601
York Project (SDG) No.: 20D0776

Report Date: 05/11/2020
Client Project ID: 170610601
York Project (SDG) No.: 20D0776

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 28, 2020 and listed below. The project was identified as your project: **170610601**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20D0776-01	SB09_0-2	Soil	04/28/2020	04/28/2020
20D0776-02	SB09_4-6	Soil	04/28/2020	04/28/2020
20D0776-03	SB09_13-15	Soil	04/28/2020	04/28/2020
20D0776-04	SB05_0-2	Soil	04/28/2020	04/28/2020
20D0776-05	SB05_6-8	Soil	04/28/2020	04/28/2020
20D0776-06	SB05_18-20	Soil	04/28/2020	04/28/2020
20D0776-07	SB08_0-2	Soil	04/28/2020	04/28/2020
20D0776-08	SB08_4-6	Soil	04/28/2020	04/28/2020
20D0776-09	SB08_13-15	Soil	04/28/2020	04/28/2020
20D0776-10	SOFB_042820	Water	04/28/2020	04/28/2020

General Notes for York Project (SDG) No.: 20D0776

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 05/11/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: SB09_0-2 **York Sample ID:** 20D0776-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:30 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 16:55	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*48.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.358	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0674	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0465	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0317	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**0.131**	J	ug/kg dry	0.0789	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0448	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0611	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0524	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.119	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0767	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0445	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0764	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.107	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.107	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**0.211**	J	ug/kg dry	0.0940	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0478	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT

Sample Information

Client Sample ID: SB09_0-2 **York Sample ID:** 20D0776-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:30 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0504	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0524	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0675	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0262	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.187	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*62.8 %*		*25-150*
Surrogate: M5PFHxA	*65.3 %*		*25-150*
Surrogate: M4PFHpA	*73.4 %*		*25-150*
Surrogate: M3PFHxS	*66.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*76.2 %*		*25-150*
Surrogate: M6PFDA	*80.0 %*		*25-150*
Surrogate: M7PFUdA	*67.0 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*63.0 %*		*25-150*
Surrogate: M2PFTeDA	*59.8 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*93.8 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*67.3 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*66.6 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*59.0 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*74.3 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*81.2 %*		*25-150*
Surrogate: M2-6:2 FTS	*170 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*206 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*80.3 %*		*25-150*

Sample Information

Client Sample ID: SB09_4-6 **York Sample ID:** 20D0776-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:35 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.52	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 14:20	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.344	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0647	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0447	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0304	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.140**	J	ug/kg dry	0.0758	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0430	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0587	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0503	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.114	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0736	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0427	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0733	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.102	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.102	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0902	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0458	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT

Sample Information

Client Sample ID: SB09_4-6 **York Sample ID:** 20D0776-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:35 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0484	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0503	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0648	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0251	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.179	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*69.1 %*	*25-150*
Surrogate: M5PFHxA	*71.9 %*	*25-150*
Surrogate: M4PFHpA	*78.2 %*	*25-150*
Surrogate: M3PFHxS	*72.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*79.1 %*	*25-150*
Surrogate: M6PFDA	*82.6 %*	*25-150*
Surrogate: M7PFUdA	*71.5 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*70.1 %*	*25-150*
Surrogate: M2PFTeDA	*67.9 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*102 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*72.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*71.3 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*57.6 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*72.3 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*72.8 %*	*25-150*
Surrogate: M2-6:2 FTS	*99.7 %*	*25-150*
Surrogate: M2-8:2 FTS	*122 %*	*25-150*
Surrogate: M9PFNA	*84.9 %*	*25-150*

Sample Information

Client Sample ID: SB09_13-15 **York Sample ID:** 20D0776-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:40 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.35	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 14:38	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*46.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.383	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0720	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0497	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0339	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.401**	J	ug/kg dry	0.0844	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0479	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0654	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0560	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.127	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0820	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0475	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0817	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.114	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.114	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.100	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0510	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT

Sample Information

Client Sample ID: SB09_13-15 **York Sample ID:** 20D0776-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:40 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0539	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0560	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0721	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0280	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.200	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*61.8 %*		*25-150*
Surrogate: M5PFHxA	*62.8 %*		*25-150*
Surrogate: M4PFHpA	*68.2 %*		*25-150*
Surrogate: M3PFHxS	*63.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*70.2 %*		*25-150*
Surrogate: M6PFDA	*75.3 %*		*25-150*
Surrogate: M7PFUdA	*65.0 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*61.5 %*		*25-150*
Surrogate: M2PFTeDA	*66.1 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*90.5 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*62.7 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*61.8 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*60.2 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*73.8 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*90.6 %*		*25-150*
Surrogate: M2-6:2 FTS	*139 %*		*25-150*
Surrogate: M2-8:2 FTS	*259 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*76.6 %*		*25-150*

Sample Information

Client Sample ID: SB05_0-2 **York Sample ID:** 20D0776-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:10 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.80	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 14:55	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.366	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.165**	J	ug/kg dry	0.0690	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.0863**	J	ug/kg dry	0.0476	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
355-46-4	*** Perfluorohexanesulfonic acid (PFHxS)**	**0.0411**	J	ug/kg dry	0.0325	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.372**	J	ug/kg dry	0.0808	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**5.30**		ug/kg dry	0.0459	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
375-95-1	*** Perfluorononanoic acid (PFNA)**	**0.0952**	J	ug/kg dry	0.0626	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
335-76-2	*** Perfluorodecanoic acid (PFDA)**	**0.179**	J	ug/kg dry	0.0536	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
2058-94-8	*** Perfluoroundecanoic acid (PFUnA)**	**0.126**	J	ug/kg dry	0.122	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
307-55-1	*** Perfluorododecanoic acid (PFDoA)**	**0.0873**	J	ug/kg dry	0.0785	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
72629-94-8	*** Perfluorotridecanoic acid (PFTrDA)**	**0.0689**	J	ug/kg dry	0.0455	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0782	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.109	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.109	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
2706-90-3	*** Perfluoropentanoic acid (PFPeA)**	**0.369**	J	ug/kg dry	0.0962	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
754-91-6	*** Perfluoro-1-octanesulfonamide (FOSA)**	**0.0541**	J	ug/kg dry	0.0489	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT

Sample Information

Client Sample ID: SB05_0-2 **York Sample ID:** 20D0776-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:10 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0516	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
335-77-3	*** Perfluoro-1-decanesulfonic acid (PFDS)**	**0.0556**	J	ug/kg dry	0.0536	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0691	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0268	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.191	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*71.6 %*		*25-150*
Surrogate: M5PFHxA	*74.7 %*		*25-150*
Surrogate: M4PFHpA	*77.1 %*		*25-150*
Surrogate: M3PFHxS	*74.7 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*84.4 %*		*25-150*
Surrogate: M6PFDA	*85.3 %*		*25-150*
Surrogate: M7PFUdA	*71.8 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*68.9 %*		*25-150*
Surrogate: M2PFTeDA	*66.6 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*108 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*67.2 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*73.5 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*61.5 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*93.4 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*94.2 %*		*25-150*
Surrogate: M2-6:2 FTS	*309 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*300 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*84.9 %*		*25-150*

Sample Information

Client Sample ID: SB05_6-8 **York Sample ID:** 20D0776-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:25 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.62	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 15:29	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*46.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.381	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0717	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0495	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0337	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.136**	J	ug/kg dry	0.0840	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.213**	J	ug/kg dry	0.0477	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0651	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0557	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.127	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0816	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0473	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0813	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.114	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.113	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.100	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0508	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT

Sample Information

Client Sample ID: SB05_6-8 **York Sample ID:** 20D0776-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:25 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0536	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0557	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0718	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0279	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.199	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*71.3 %*	*25-150*
Surrogate: M5PFHxA	*75.2 %*	*25-150*
Surrogate: M4PFHpA	*79.6 %*	*25-150*
Surrogate: M3PFHxS	*75.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*79.2 %*	*25-150*
Surrogate: M6PFDA	*83.7 %*	*25-150*
Surrogate: M7PFUdA	*76.3 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*74.5 %*	*25-150*
Surrogate: M2PFTeDA	*66.0 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*108 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*73.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*72.2 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*61.4 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*73.1 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*73.1 %*	*25-150*
Surrogate: M2-6:2 FTS	*90.0 %*	*25-150*
Surrogate: M2-8:2 FTS	*102 %*	*25-150*
Surrogate: M9PFNA	*84.6 %*	*25-150*

Sample Information

Client Sample ID: **SB05_18-20** **York Sample ID:** **20D0776-06**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:45 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 15:47	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*46.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.358	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0674	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0465	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0317	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.0871**	J	ug/kg dry	0.0789	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0448	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0611	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0524	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.119	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0767	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0445	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0764	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.107	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.107	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0940	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0477	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT

Sample Information

Client Sample ID: SB05_18-20 **York Sample ID:** 20D0776-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:45 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0504	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0524	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0675	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0262	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.187	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*74.3 %*	*25-150*
Surrogate: M5PFHxA	*74.6 %*	*25-150*
Surrogate: M4PFHpA	*84.1 %*	*25-150*
Surrogate: M3PFHxS	*76.3 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*79.7 %*	*25-150*
Surrogate: M6PFDA	*79.9 %*	*25-150*
Surrogate: M7PFUdA	*74.9 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*75.8 %*	*25-150*
Surrogate: M2PFTeDA	*71.7 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*114 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*75.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*77.7 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*65.7 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*68.9 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*70.7 %*	*25-150*
Surrogate: M2-6:2 FTS	*84.6 %*	*25-150*
Surrogate: M2-8:2 FTS	*84.0 %*	*25-150*
Surrogate: M9PFNA	*87.7 %*	*25-150*

Sample Information

Client Sample ID: SB08_0-2 **York Sample ID:** 20D0776-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 2:50 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.90	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 16:04	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.360	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0679	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0468	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0319	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.100**	J	ug/kg dry	0.0795	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.0563**	J	ug/kg dry	0.0451	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0616	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0527	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.120	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0772	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0448	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0769	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.107	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.107	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0946	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0481	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT

Sample Information

Client Sample ID: SB08_0-2 **York Sample ID:** 20D0776-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 2:50 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0508	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0527	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0680	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0264	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.188	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*69.1 %*	*25-150*
Surrogate: M5PFHxA	*70.1 %*	*25-150*
Surrogate: M4PFHpA	*78.9 %*	*25-150*
Surrogate: M3PFHxS	*72.0 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*80.0 %*	*25-150*
Surrogate: M6PFDA	*83.6 %*	*25-150*
Surrogate: M7PFUdA	*76.0 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*72.3 %*	*25-150*
Surrogate: M2PFTeDA	*62.5 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*107 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*73.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*69.9 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*64.8 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*78.0 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*77.4 %*	*25-150*
Surrogate: M2-6:2 FTS	*112 %*	*25-150*
Surrogate: M2-8:2 FTS	*128 %*	*25-150*
Surrogate: M9PFNA	*88.8 %*	*25-150*

Sample Information

Client Sample ID: **SB08_4-6** **York Sample ID:** **20D0776-08**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 2:55 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.90	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 16:21	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.353	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0665	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0459	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0313	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.0779	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.193**	J	ug/kg dry	0.0442	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0604	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0517	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.117	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0757	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0439	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0754	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.105	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.105	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0928	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0471	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT

Sample Information

Client Sample ID: SB08_4-6 **York Sample ID:** 20D0776-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 2:55 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0498	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0517	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0666	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0258	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.184	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*68.5 %*	*25-150*
Surrogate: M5PFHxA	*72.1 %*	*25-150*
Surrogate: M4PFHpA	*81.7 %*	*25-150*
Surrogate: M3PFHxS	*72.9 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*79.3 %*	*25-150*
Surrogate: M6PFDA	*78.1 %*	*25-150*
Surrogate: M7PFUdA	*74.9 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*67.9 %*	*25-150*
Surrogate: M2PFTeDA	*61.6 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*105 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*73.5 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*72.6 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*66.4 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*74.5 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*73.5 %*	*25-150*
Surrogate: M2-6:2 FTS	*103 %*	*25-150*
Surrogate: M2-8:2 FTS	*76.6 %*	*25-150*
Surrogate: M9PFNA	*84.7 %*	*25-150*

Sample Information

Client Sample ID: SB08_13-15 **York Sample ID:** 20D0776-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 3:00 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.52	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 16:37	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.493	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0928	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0641	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0436	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.109	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.162**	J	ug/kg dry	0.0617	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0842	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0721	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.164	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.106	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0612	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.105	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.147	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.147	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.129	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0657	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT

Sample Information

Client Sample ID: SB08_13-15 **York Sample ID:** 20D0776-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 3:00 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0694	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0721	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0929	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0360	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.257	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*78.1 %*	*25-150*
Surrogate: M5PFHxA	*78.7 %*	*25-150*
Surrogate: M4PFHpA	*86.8 %*	*25-150*
Surrogate: M3PFHxS	*79.7 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*82.4 %*	*25-150*
Surrogate: M6PFDA	*75.6 %*	*25-150*
Surrogate: M7PFUdA	*65.6 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*62.3 %*	*25-150*
Surrogate: M2PFTeDA	*52.2 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*116 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*76.0 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*78.3 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*59.2 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*64.0 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*61.0 %*	*25-150*
Surrogate: M2-6:2 FTS	*89.8 %*	*25-150*
Surrogate: M2-8:2 FTS	*79.7 %*	*25-150*
Surrogate: M9PFNA	*87.9 %*	*25-150*

Sample Information

Client Sample ID: SOFB_042820 **York Sample ID:** 20D0776-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Water	April 28, 2020 3:10 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/01/2020 07:31	05/05/2020 14:46	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*60.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ng/L	0.294	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**0.647**	J	ng/L	0.471	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ng/L	0.635	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ng/L	0.281	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ng/L	0.531	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ng/L	0.292	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ng/L	0.524	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ng/L	0.531	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
2355-31-9	* N-MeFOSAA	ND		ng/L	0.529	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
2991-50-6	* N-EtFOSAA	ND		ng/L	0.557	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**0.842**	J	ng/L	0.452	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ng/L	0.296	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT

Sample Information

Client Sample ID: SOFB_042820 **York Sample ID:** 20D0776-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Water	April 28, 2020 3:10 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ng/L	0.415	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND	PF-CCV-L	ng/L	0.492	5.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND	PF-CCV-L	ng/L	0.399	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**2.48**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*69.0 %*	*25-150*
Surrogate: M5PFHxA	*62.1 %*	*25-150*
Surrogate: M4PFHpA	*65.6 %*	*25-150*
Surrogate: M3PFHxS	*66.1 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*59.7 %*	*25-150*
Surrogate: M6PFDA	*60.0 %*	*25-150*
Surrogate: M7PFUdA	*45.5 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*36.4 %*	*25-150*
Surrogate: M2PFTeDA	*17.8 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*98.6 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*63.3 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*65.0 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*68.0 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*47.8 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*44.0 %*	*25-150*
Surrogate: M2-6:2 FTS	*49.4 %*	*25-150*
Surrogate: M2-8:2 FTS	*54.7 %*	*25-150*
Surrogate: M9PFNA	*60.2 %*	*25-150*

Analytical Batch Summary

Batch ID: BD01331 **Preparation Method:** SPE Ext-PFAS-EPA 537.1M **Prepared By:** KT

YORK Sample ID	Client Sample ID	Preparation Date
20D0776-10	SOFB_042820	04/30/20
BD01331-BLK1	Blank	04/30/20
BD01331-BS1	LCS	04/30/20

Batch ID: BE00002 **Preparation Method:** EPA 3550C **Prepared By:** LM

YORK Sample ID	Client Sample ID	Preparation Date
20D0776-01	SB09_0-2	05/01/20
20D0776-02	SB09_4-6	05/01/20
20D0776-03	SB09_13-15	05/01/20
20D0776-04	SB05_0-2	05/01/20
20D0776-05	SB05_6-8	05/01/20
20D0776-06	SB05_18-20	05/01/20
20D0776-07	SB08_0-2	05/01/20
20D0776-08	SB08_4-6	05/01/20
20D0776-09	SB08_13-15	05/01/20
BE00002-BLK1	Blank	05/01/20
BE00002-BS1	LCS	05/01/20
BE00002-MS1	Matrix Spike	05/01/20
BE00002-MSD1	Matrix Spike Dup	05/01/20

Batch ID: BE00004 **Preparation Method:** EPA 3535A **Prepared By:** CTD

YORK Sample ID	Client Sample ID	Preparation Date
20D0776-10	SOFB_042820	05/01/20
BE00004-BLK1	Blank	05/01/20
BE00004-BS1	LCS	05/01/20

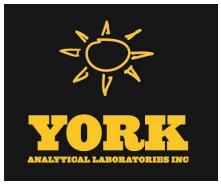
Batch ID: BE00136 **Preparation Method:** SPE PFAS Extraction-Soil-EPA 537m **Prepared By:** KT

YORK Sample ID	Client Sample ID	Preparation Date
20D0776-01	SB09_0-2	05/05/20
20D0776-02	SB09_4-6	05/05/20
20D0776-03	SB09_13-15	05/05/20
20D0776-04	SB05_0-2	05/05/20
20D0776-05	SB05_6-8	05/05/20
20D0776-06	SB05_18-20	05/05/20
20D0776-07	SB08_0-2	05/05/20
20D0776-08	SB08_4-6	05/05/20
20D0776-09	SB08_13-15	05/05/20
BE00136-BLK1	Blank	05/05/20
BE00136-BS1	LCS	05/05/20

Semivolatile Organic Compounds by GC/MS/SIM - Quality Control Data

York Analytical Laboratories, Inc.

Analyte		Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00002 - EPA 3550C												
Blank (BE00002-BLK1)	Blank								Prepared: 05/01/2020 Analyzed: 05/04/2020			
1,4-Dioxane		ND	9.90	ug/kg								
Surrogate: 1,4-Dioxane-d8		*248*		*"*	*495*		*50.0*	*39-83.1*				
LCS (BE00002-BS1)	LCS								Prepared: 05/01/2020 Analyzed: 05/04/2020			
1,4-Dioxane		425	9.90	ug/kg	495		85.8	40-130				
Surrogate: 1,4-Dioxane-d8		*277*		*"*	*495*		*56.0*	*39-83.1*				
Matrix Spike (BE00002-MS1)	Matrix Spike	*Source sample: 20D0776-09 (SB08_13-15)							Prepared: 05/01/2020 Analyzed: 05/04/2020			
1,4-Dioxane		218	9.90	ug/kg	495	ND	44.0	40-130				
Surrogate: 1,4-Dioxane-d8		*228*		*"*	*495*		*46.0*	*40-130*				
Matrix Spike Dup (BE00002-M	Matrix Spike Dup	*Source sample: 20D0776-09 (SB08_13-15)							Prepared: 05/01/2020 Analyzed: 05/04/2020			
1,4-Dioxane		218	9.90	ug/kg	495	ND	44.0	40-130		0.00	30	
Surrogate: 1,4-Dioxane-d8		*228*		*"*	*495*		*46.0*	*40-130*				
Batch BE00004 - EPA 3535A												
Blank (BE00004-BLK1)	Blank								Prepared: 05/01/2020 Analyzed: 05/05/2020			
1,4-Dioxane		ND	0.200	ug/L								
Surrogate: 1,4-Dioxane-d8		*3.80*		*"*	*5.00*		*76.0*	*36.6-118*				
LCS (BE00004-BS1)	LCS								Prepared: 05/01/2020 Analyzed: 05/05/2020			
1,4-Dioxane		5.00	0.200	ug/L	5.00		100	50-130				
Surrogate: 1,4-Dioxane-d8		*3.40*		*"*	*5.00*		*68.0*	*36.6-118*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

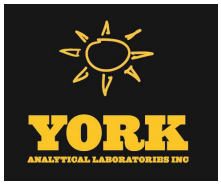
York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD01331 - SPE Ext-PFAS-EPA 537.1M											
Blank (BD01331-BLK1) Blank									Prepared: 04/30/2020 Analyzed: 05/06/2020		
Perfluorobutanesulfonic acid (PFBS)	ND	2.00	ng/L								
Perfluorohexanoic acid (PFHxA)	ND	2.00	"								
Perfluoroheptanoic acid (PFHpA)	ND	2.00	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	2.00	"								
Perfluorooctanoic acid (PFOA)	ND	2.00	"								
Perfluorooctanesulfonic acid (PFOS)	ND	2.00	"								
Perfluorononanoic acid (PFNA)	ND	2.00	"								
Perfluorodecanoic acid (PFDA)	ND	2.00	"								
Perfluoroundecanoic acid (PFUnA)	ND	2.00	"								
Perfluorododecanoic acid (PFDoA)	ND	2.00	"								
Perfluorotridecanoic acid (PFTrDA)	ND	2.00	"								
Perfluorotetradecanoic acid (PFTA)	ND	2.00	"								
N-MeFOSAA	ND	2.00	"								
N-EtFOSAA	ND	2.00	"								
Perfluoropentanoic acid (PFPeA)	0.862	2.00	"								
Perfluoro-1-octanesulfonamide (FOSA)	0.352	2.00	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	2.00	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	2.00	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	ND	5.00	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	ND	2.00	"								
Perfluoro-n-butanoic acid (PFBA)	3.30	2.00	"								
Surrogate: M3PFBS	*51.1*		"	*74.3*		*68.8*	*25-150*				
Surrogate: M5PFHxA	*50.4*		"	*80.0*		*63.0*	*25-150*				
Surrogate: M4PFHpA	*54.1*		"	*80.0*		*67.6*	*25-150*				
Surrogate: M3PFHxS	*52.1*		"	*75.7*		*68.9*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*52.3*		"	*80.0*		*65.4*	*25-150*				
Surrogate: M6PFDA	*51.2*		"	*80.0*		*64.0*	*25-150*				
Surrogate: M7PFUdA	*41.8*		"	*80.0*		*52.2*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*40.2*		"	*80.0*		*50.3*	*25-150*				
Surrogate: M2PFTeDA	*34.1*		"	*80.0*		*42.6*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*58.2*		"	*80.0*		*72.7*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*51.7*		"	*76.6*		*67.6*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*46.9*		"	*80.0*		*58.6*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*57.0*		"	*80.0*		*71.2*	*10-150*				
Surrogate: d3-N-MeFOSAA	*41.7*		"	*80.0*		*52.1*	*25-150*				
Surrogate: d5-N-EtFOSAA	*36.5*		"	*80.0*		*45.6*	*25-150*				
Surrogate: M2-6:2 FTS	*41.2*		"	*75.9*		*54.3*	*25-150*				
Surrogate: M2-8:2 FTS	*44.9*		"	*76.6*		*58.6*	*25-150*				
Surrogate: M9PFNA	*53.8*		"	*80.0*		*67.3*	*25-150*				

PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD01331 - SPE Ext-PFAS-EPA 537.1M											
LCS (BD01331-BS1) LCS									Prepared: 04/30/2020 Analyzed: 05/06/2020		
Perfluorobutanesulfonic acid (PFBS)	60.7	2.00	ng/L	70.8		85.7	50-130				
Perfluorohexanoic acid (PFHxA)	71.4	2.00	"	80.0		89.2	50-130				
Perfluoroheptanoic acid (PFHpA)	68.3	2.00	"	80.0		85.4	50-130				
Perfluorohexanesulfonic acid (PFHxS)	51.6	2.00	"	59.2		87.2	50-130				
Perfluorooctanoic acid (PFOA)	70.4	2.00	"	80.0		88.0	50-130				
Perfluorooctanesulfonic acid (PFOS)	52.6	2.00	"	58.4		90.1	50-130				
Perfluorononanoic acid (PFNA)	61.4	2.00	"	76.8		80.0	50-130				
Perfluorodecanoic acid (PFDA)	69.4	2.00	"	80.0		86.7	50-130				
Perfluoroundecanoic acid (PFUnA)	68.1	2.00	"	80.0		85.2	50-130				
Perfluorododecanoic acid (PFDoA)	60.6	2.00	"	80.0		75.7	50-130				
Perfluorotridecanoic acid (PFTrDA)	65.1	2.00	"	80.0		81.3	50-130				
Perfluorotetradecanoic acid (PFTA)	69.1	2.00	"	80.0		86.4	50-130				
N-MeFOSAA	62.6	2.00	"	80.0		78.3	50-130				
N-EtFOSAA	67.7	2.00	"	80.0		84.6	50-130				
Perfluoropentanoic acid (PFPeA)	68.8	2.00	"	80.0		86.0	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	66.6	2.00	"	80.0		83.2	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	71.2	2.00	"	79.6		89.4	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	63.3	2.00	"	77.2		82.0	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	71.5	5.00	"	76.0		94.1	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	48.2	2.00	"	76.8		62.8	50-130				
Perfluoro-n-butanoic acid (PFBA)	74.4	2.00	"	80.0		92.9	50-130				
Surrogate: M3PFBS	*56.2*		"	*74.3*		*75.6*	*25-150*				
Surrogate: M5PFHxA	*55.2*		"	*80.0*		*69.0*	*25-150*				
Surrogate: M4PFHpA	*56.0*		"	*80.0*		*70.0*	*25-150*				
Surrogate: M3PFHxS	*55.0*		"	*75.7*		*72.7*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*52.8*		"	*80.0*		*66.1*	*25-150*				
Surrogate: M6PFDA	*54.0*		"	*80.0*		*67.4*	*25-150*				
Surrogate: M7PFUdA	*42.1*		"	*80.0*		*52.6*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*40.7*		"	*80.0*		*50.8*	*25-150*				
Surrogate: M2PFTeDA	*33.6*		"	*80.0*		*42.0*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*86.9*		"	*80.0*		*109*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*53.7*		"	*76.6*		*70.1*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*57.8*		"	*80.0*		*72.3*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*62.1*		"	*80.0*		*77.6*	*10-150*				
Surrogate: d3-N-MeFOSAA	*44.5*		"	*80.0*		*55.6*	*25-150*				
Surrogate: d5-N-EtFOSAA	*39.6*		"	*80.0*		*49.5*	*25-150*				
Surrogate: M2-6:2 FTS	*45.3*		"	*75.9*		*59.7*	*25-150*				
Surrogate: M2-8:2 FTS	*46.5*		"	*76.6*		*60.7*	*25-150*				
Surrogate: M9PFNA	*54.8*		"	*80.0*		*68.4*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00136 - SPE PFAS Extraction-Soil-EPA 537m											
Blank (BE00136-BLK1) Blank									Prepared: 05/05/2020 Analyzed: 05/09/2020		
Perfluorobutanesulfonic acid (PFBS)	ND	0.490	ug/kg wet								
Perfluorohexanoic acid (PFHxA)	ND	0.490	"								
Perfluoroheptanoic acid (PFHpA)	ND	0.490	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	0.490	"								
Perfluorooctanoic acid (PFOA)	ND	0.490	"								
Perfluorooctanesulfonic acid (PFOS)	ND	0.490	"								
Perfluorononanoic acid (PFNA)	ND	0.490	"								
Perfluorodecanoic acid (PFDA)	ND	0.490	"								
Perfluoroundecanoic acid (PFUnA)	ND	0.490	"								
Perfluorododecanoic acid (PFDoA)	ND	0.490	"								
Perfluorotridecanoic acid (PFTrDA)	ND	0.490	"								
Perfluorotetradecanoic acid (PFTA)	ND	0.490	"								
N-MeFOSAA	ND	0.490	"								
N-EtFOSAA	ND	0.490	"								
Perfluoropentanoic acid (PFPeA)	ND	0.490	"								
Perfluoro-1-octanesulfonamide (FOSA)	ND	0.490	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	0.490	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	0.490	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	ND	0.490	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	ND	0.490	"								
Perfluoro-n-butanoic acid (PFBA)	ND	0.490	"								
Surrogate: M3PFBS	*3.67*		"	*4.55*		*80.8*	*25-150*				
Surrogate: M5PFHxA	*3.94*		"	*4.90*		*80.6*	*25-150*				
Surrogate: M4PFHpA	*4.15*		"	*4.90*		*84.8*	*25-150*				
Surrogate: M3PFHxS	*3.81*		"	*4.63*		*82.2*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*4.22*		"	*4.90*		*86.2*	*25-150*				
Surrogate: M6PFDA	*4.06*		"	*4.90*		*83.0*	*25-150*				
Surrogate: M7PFUdA	*3.92*		"	*4.90*		*80.0*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*4.28*		"	*4.90*		*87.5*	*25-150*				
Surrogate: M2PFTeDA	*3.99*		"	*4.90*		*81.5*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*5.63*		"	*4.90*		*115*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*4.01*		"	*4.69*		*85.7*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.93*		"	*4.90*		*80.3*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.63*		"	*4.90*		*74.1*	*10-150*				
Surrogate: d3-N-MeFOSAA	*3.82*		"	*4.90*		*77.9*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.00*		"	*4.90*		*81.7*	*25-150*				
Surrogate: M2-6:2 FTS	*4.34*		"	*4.65*		*93.4*	*25-150*				
Surrogate: M2-8:2 FTS	*4.17*		"	*4.69*		*89.0*	*25-150*				
Surrogate: M9PFNA	*4.63*		"	*4.90*		*94.5*	*25-150*				

PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00136 - SPE PFAS Extraction-Soil-EPA 537m											
LCS (BE00136-BS1) LCS									Prepared: 05/05/2020 Analyzed: 05/09/2020		
Perfluorobutanesulfonic acid (PFBS)	4.24	0.481	ug/kg wet	4.26		99.6	50-130				
Perfluorohexanoic acid (PFHxA)	4.52	0.481	"	4.81		93.9	50-130				
Perfluoroheptanoic acid (PFHpA)	4.23	0.481	"	4.81		87.9	50-130				
Perfluorohexanesulfonic acid (PFHxS)	3.40	0.481	"	3.56		95.6	50-130				
Perfluorooctanoic acid (PFOA)	4.25	0.481	"	4.81		88.3	50-130				
Perfluorooctanesulfonic acid (PFOS)	3.28	0.481	"	3.51		93.5	50-130				
Perfluorononanoic acid (PFNA)	4.04	0.481	"	4.62		87.5	50-130				
Perfluorodecanoic acid (PFDA)	4.48	0.481	"	4.81		93.1	50-130				
Perfluoroundecanoic acid (PFUnA)	4.40	0.481	"	4.81		91.5	50-130				
Perfluorododecanoic acid (PFDoA)	4.48	0.481	"	4.81		93.2	50-130				
Perfluorotridecanoic acid (PFTrDA)	4.38	0.481	"	4.81		91.0	50-130				
Perfluorotetradecanoic acid (PFTA)	4.51	0.481	"	4.81		93.9	50-130				
N-MeFOSAA	4.62	0.481	"	4.81		96.0	50-130				
N-EtFOSAA	4.45	0.481	"	4.81		92.5	50-130				
Perfluoropentanoic acid (PFPeA)	4.44	0.481	"	4.81		92.4	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	4.93	0.481	"	4.81		103	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	4.84	0.481	"	4.78		101	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	4.02	0.481	"	4.64		86.5	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	3.99	0.481	"	4.57		87.3	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.48	0.481	"	4.62		119	50-130				
Perfluoro-n-butanoic acid (PFBA)	4.57	0.481	"	4.81		95.1	50-130				
Surrogate: M3PFBS	*3.24*		"	*4.47*		*72.6*	*25-150*				
Surrogate: M5PFHxA	*3.47*		"	*4.81*		*72.2*	*25-150*				
Surrogate: M4PFHpA	*3.71*		"	*4.81*		*77.2*	*25-150*				
Surrogate: M3PFHxS	*3.38*		"	*4.55*		*74.2*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.74*		"	*4.81*		*77.7*	*25-150*				
Surrogate: M6PFDA	*3.61*		"	*4.81*		*75.1*	*25-150*				
Surrogate: M7PFUdA	*3.44*		"	*4.81*		*71.6*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*3.47*		"	*4.81*		*72.1*	*25-150*				
Surrogate: M2PFTeDA	*3.41*		"	*4.81*		*70.8*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*5.04*		"	*4.81*		*105*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*3.44*		"	*4.60*		*74.8*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.54*		"	*4.81*		*73.6*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.16*		"	*4.81*		*65.6*	*10-150*				
Surrogate: d3-N-MeFOSAA	*3.51*		"	*4.81*		*73.0*	*25-150*				
Surrogate: d5-N-EtFOSAA	*3.22*		"	*4.81*		*66.9*	*25-150*				
Surrogate: M2-6:2 FTS	*3.82*		"	*4.56*		*83.8*	*25-150*				
Surrogate: M2-8:2 FTS	*3.59*		"	*4.61*		*77.9*	*25-150*				
Surrogate: M9PFNA	*4.06*		"	*4.81*		*84.3*	*25-150*				

Sample and Data Qualifiers Relating to This Work Order

PFSu-L	The isotopically labeled surrogate recovered below lab control limits due to a matrix effect. Isotope Dilution was applied.
PFSu-H	The isotopically labeled surrogate recovered above lab control limits due to a matrix effect. Isotope Dilution was applied.
PF-CCV-L	The CCV recovery was slightly below acceptable limits for the qualified compound. However, sample results are not biased low because results are corrected for isotope recovery.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

York Analytical Laboratories, Inc.
120 Research Drive, Stratford, CT 06615 | 132-02 89th Ave, Queens, NY 11418
clientservices@yorklab.com
www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20D0776

Page 1 of ____

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company: Same
Address: 360 West 31st Street New York NY 10001	Address:	Address: Same
Phone: 212 479 5400	Phone:	Phone: same
Contact: Kim Semon	Contact: Dina Palazzolo	Contact: same
E-mail: KSemon@langan.com	E-mail: DPalazzolo@langan.com	E-mail: Same

YOUR Project Number: 170610601

YOUR Project Name: 475 Bay Street

YOUR PO#:

Turn-Around Time

RUSH - Next Day	
RUSH - Two Day	
RUSH - Three Day	
RUSH - Four Day	
Standard (5-7 Day)	X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below)
Deirdre Casey

Matrix Codes
S - soil / solid
GW - groundwater
DW - drinking water
WW - wastewater
O - Oil ; Other

Samples From
New York X
New Jersey
Connecticut
Pennsylvania
Other

Report / EDD Type (circle selections)
Summary Report; QA Report; NY ASP A Package; NY ASP B Package; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.
Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
SB09_0-2	S	4/28/20 1330	VOC, SVOC, PCB, Pest, Herb, TAL Metals (cyanide, hexavalent chromium) PFAS & 1,4-dioxane	4 VOCs, 1 SOC 1 407
SB09_4-6	S	4/28/20 1335		
SB09_13-15	S	4/28/20 1340		
SB05_0-2	S	4/28/20 1310		
SB05_6-8	S	4/28/20 1325		
SB05_18-20	S	4/28/20 1345		
SB08_0-2	S	4/28/20 1450		
~~SB08_6-8~~ SB08_4-6	S	4/28/20 1455		
SB08_13-15	S	4/28/20 1500		
SOFB01_042820	QA/QC	4/28/20 1510		4 (L), 3 VOA, 1 1000, 4 202

Comments:
Low volume SB08 (0-2, 6-4, 13-15)

Preservation: (check all that apply)
HCl X MeOH X HNO3 X H2SO4 ___ NaOH X ZnAc ___
Ascorbic Acid ___ Other: ___

Special Instruction
Field Filtered ____
Lab to Filter ____

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Deirdre Casey Langan	4/28/20 1520	E Sylvia	4/28/20	E Sylvia	4/28/20 1900
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temp. Received at Lab
				TC Mahler	4/28/20 1900 / 2.6 Degrees C

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Report Date: 05/12/2020
Client Project ID: 170610601
York Project (SDG) No.: 20D0818

Report Date: 05/12/2020
Client Project ID: 170610601
York Project (SDG) No.: 20D0818

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 29, 2020 and listed below. The project was identified as your project: **170610601**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20D0818-01	SB04_0-2	Soil	04/29/2020	04/29/2020
20D0818-03	SB04_14-16	Soil	04/29/2020	04/29/2020
20D0818-04	SB04_18-20	Soil	04/29/2020	04/29/2020
20D0818-05	SB06_0-2	Soil	04/29/2020	04/29/2020
20D0818-06	SB06_5-7	Soil	04/29/2020	04/29/2020
20D0818-07	SB06_12-14	Soil	04/29/2020	04/29/2020
20D0818-09	SB07_0-2	Soil	04/29/2020	04/29/2020
20D0818-10	SB07_8-10	Soil	04/29/2020	04/29/2020
20D0818-11	SB07_18-20	Soil	04/29/2020	04/29/2020
20D0818-12	SODUP01_042920	Soil	04/29/2020	04/29/2020

General Notes for York Project (SDG) No.: 20D0818

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 05/12/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: SB04_0-2 **York Sample ID:** 20D0818-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 2:10 pm	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 17:12	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*40.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.365	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.148**	J	ug/kg dry	0.0687	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.200**	J	ug/kg dry	0.0474	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0323	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.311**	J	ug/kg dry	0.0804	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**2.48**		ug/kg dry	0.0456	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
375-95-1	*** Perfluorononanoic acid (PFNA)**	**0.145**	J	ug/kg dry	0.0623	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
335-76-2	*** Perfluorodecanoic acid (PFDA)**	**0.153**	J	ug/kg dry	0.0533	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
2058-94-8	*** Perfluoroundecanoic acid (PFUnA)**	**0.183**	J	ug/kg dry	0.121	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
307-55-1	*** Perfluorododecanoic acid (PFDoA)**	**0.125**	J	ug/kg dry	0.0781	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
72629-94-8	*** Perfluorotridecanoic acid (PFTrDA)**	**0.0869**	J	ug/kg dry	0.0453	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
376-06-7	*** Perfluorotetradecanoic acid (PFTA)**	**0.0856**	J	ug/kg dry	0.0778	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.109	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
2991-50-6	*** N-EtFOSAA**	**0.114**	J	ug/kg dry	0.109	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
2706-90-3	*** Perfluoropentanoic acid (PFPeA)**	**0.118**	J	ug/kg dry	0.0958	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0487	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT

Sample Information

Client Sample ID: SB04_0-2 **York Sample ID:** 20D0818-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 2:10 pm	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0514	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
335-77-3	*** Perfluoro-1-decanesulfonic acid (PFDS)**	**0.0745**	J	ug/kg dry	0.0533	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0688	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
39108-34-4	*** 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)**	**0.0308**	J	ug/kg dry	0.0267	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**1.28**		ug/kg dry	0.190	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*58.5 %*		*25-150*
Surrogate: M5PFHxA	*55.8 %*		*25-150*
Surrogate: M4PFHpA	*73.3 %*		*25-150*
Surrogate: M3PFHxS	*61.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*66.2 %*		*25-150*
Surrogate: M6PFDA	*66.6 %*		*25-150*
Surrogate: M7PFUdA	*62.4 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*52.5 %*		*25-150*
Surrogate: M2PFTeDA	*49.0 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*76.1 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*61.0 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*53.8 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*40.9 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*85.7 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*87.4 %*		*25-150*
Surrogate: M2-6:2 FTS	*279 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*304 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*68.6 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**91.8**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 08:57	04/30/2020 13:00	STN

Sample Information

Client Sample ID: SB04_14-16 **York Sample ID:** 20D0818-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 2:20 pm	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.52	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 17:29	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*46.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.369	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**0.0849**	J	ug/kg dry	0.0695	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
375-85-9	* **Perfluoroheptanoic acid (PFHpA)**	**0.119**	J	ug/kg dry	0.0480	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0327	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**0.104**	J	ug/kg dry	0.0814	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0462	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0631	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0540	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.123	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0791	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0459	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0788	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.110	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.110	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0969	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0492	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT

Sample Information

Client Sample ID: SB04_14-16 **York Sample ID:** 20D0818-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 2:20 pm	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0520	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0540	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0696	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0270	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**0.214**	J	ug/kg dry	0.193	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*68.9 %*	*25-150*
Surrogate: M5PFHxA	*66.6 %*	*25-150*
Surrogate: M4PFHpA	*94.0 %*	*25-150*
Surrogate: M3PFHxS	*72.7 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*73.9 %*	*25-150*
Surrogate: M6PFDA	*76.0 %*	*25-150*
Surrogate: M7PFUdA	*78.0 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*74.4 %*	*25-150*
Surrogate: M2PFTeDA	*75.2 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*91.7 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*74.0 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*66.1 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*70.0 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*79.9 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*87.5 %*	*25-150*
Surrogate: M2-6:2 FTS	*77.4 %*	*25-150*
Surrogate: M2-8:2 FTS	*92.9 %*	*25-150*
Surrogate: M9PFNA	*81.3 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**89.3**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 08:57	04/30/2020 13:00	STN

Sample Information

Client Sample ID: SB04_18-20 **York Sample ID:** 20D0818-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 2:25 pm	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.80	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 17:46	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*40.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.590	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.197**	J	ug/kg dry	0.111	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.232**	J	ug/kg dry	0.0767	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0523	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.340**	J	ug/kg dry	0.130	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0739	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.101	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0864	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.196	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.126	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0734	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.126	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.176	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.176	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.155	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0788	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT

Sample Information

Client Sample ID: SB04_18-20 **York Sample ID:** 20D0818-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 2:25 pm	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0831	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0864	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.111	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0432	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**0.591**	J	ug/kg dry	0.308	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*57.5 %*		*25-150*
Surrogate: M5PFHxA	*54.1 %*		*25-150*
Surrogate: M4PFHpA	*75.5 %*		*25-150*
Surrogate: M3PFHxS	*61.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*62.4 %*		*25-150*
Surrogate: M6PFDA	*69.9 %*		*25-150*
Surrogate: M7PFUdA	*64.0 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*61.1 %*		*25-150*
Surrogate: M2PFTeDA	*60.7 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*75.3 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*61.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*52.5 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*58.4 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*83.4 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*91.8 %*		*25-150*
Surrogate: M2-6:2 FTS	*145 %*		*25-150*
Surrogate: M2-8:2 FTS	*297 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*68.5 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**58.3**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 10:41	04/30/2020 13:03	STN

Sample Information

Client Sample ID: SB06_0-2 **York Sample ID:** 20D0818-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 9:00 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.90	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 18:04	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.377	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.108**	J	ug/kg dry	0.0709	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.0962**	J	ug/kg dry	0.0489	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0334	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.0935**	J	ug/kg dry	0.0831	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.468**	J	ug/kg dry	0.0471	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0643	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
335-76-2	*** Perfluorodecanoic acid (PFDA)**	**0.434**	J	ug/kg dry	0.0551	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
2058-94-8	*** Perfluoroundecanoic acid (PFUnA)**	**0.381**	J	ug/kg dry	0.125	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
307-55-1	*** Perfluorododecanoic acid (PFDoA)**	**0.111**	J	ug/kg dry	0.0807	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0468	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0804	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.112	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.112	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0989	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
754-91-6	*** Perfluoro-1-octanesulfonamide (FOSA)**	**0.125**	J	ug/kg dry	0.0502	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT

Sample Information

Client Sample ID: SB06_0-2 **York Sample ID:** 20D0818-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 9:00 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0530	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
335-77-3	*** Perfluoro-1-decanesulfonic acid (PFDS)**	**0.101**	J	ug/kg dry	0.0551	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0710	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
39108-34-4	* **1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)**	**0.0629**	J	ug/kg dry	0.0275	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**0.197**	J	ug/kg dry	0.197	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*60.1 %*	*25-150*
Surrogate: M5PFHxA	*58.2 %*	*25-150*
Surrogate: M4PFHpA	*83.2 %*	*25-150*
Surrogate: M3PFHxS	*63.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*64.7 %*	*25-150*
Surrogate: M6PFDA	*60.4 %*	*25-150*
Surrogate: M7PFUdA	*59.0 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*56.4 %*	*25-150*
Surrogate: M2PFTeDA	*56.9 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*83.4 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*58.3 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*58.9 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*56.9 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*58.6 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*66.9 %*	*25-150*
Surrogate: M2-6:2 FTS	*72.4 %*	*25-150*
Surrogate: M2-8:2 FTS	*74.9 %*	*25-150*
Surrogate: M9PFNA	*69.2 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**89.1**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 08:57	04/30/2020 13:00	STN

Sample Information

Client Sample ID: SB06_5-7 **York Sample ID:** 20D0818-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 9:05 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 18:38	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*42.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.412	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.0845**	J	ug/kg dry	0.0776	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.101**	J	ug/kg dry	0.0536	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0365	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.118**	J	ug/kg dry	0.0909	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.207**	J	ug/kg dry	0.0516	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0704	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0603	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.137	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0883	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0512	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0879	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.123	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.123	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.108	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0550	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT

Sample Information

Client Sample ID: SB06_5-7 **York Sample ID:** 20D0818-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 9:05 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0580	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0603	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0777	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0301	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.215	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*56.9 %*	*25-150*
Surrogate: M5PFHxA	*56.4 %*	*25-150*
Surrogate: M4PFHpA	*79.8 %*	*25-150*
Surrogate: M3PFHxS	*60.8 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*63.9 %*	*25-150*
Surrogate: M6PFDA	*66.1 %*	*25-150*
Surrogate: M7PFUdA	*61.2 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*62.7 %*	*25-150*
Surrogate: M2PFTeDA	*63.0 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*78.0 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*59.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*56.2 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*57.5 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*71.1 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*77.7 %*	*25-150*
Surrogate: M2-6:2 FTS	*76.3 %*	*25-150*
Surrogate: M2-8:2 FTS	*101 %*	*25-150*
Surrogate: M9PFNA	*70.9 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**80.4**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 08:57	04/30/2020 13:00	STN

Sample Information

Client Sample ID: **SB06_12-14** **York Sample ID:** **20D0818-07**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 9:10 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.35	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 18:55	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*48.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.370	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.0864**	J	ug/kg dry	0.0697	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.0682**	J	ug/kg dry	0.0481	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0328	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.181**	J	ug/kg dry	0.0816	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0463	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0632	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0541	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.123	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0793	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0460	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0790	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.110	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.110	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0972	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0494	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT

Sample Information

Client Sample ID: SB06_12-14 **York Sample ID:** 20D0818-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 9:10 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0521	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0541	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0698	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0271	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.193	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*66.8 %*	*25-150*
Surrogate: M5PFHxA	*62.7 %*	*25-150*
Surrogate: M4PFHpA	*88.5 %*	*25-150*
Surrogate: M3PFHxS	*70.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*68.2 %*	*25-150*
Surrogate: M6PFDA	*77.6 %*	*25-150*
Surrogate: M7PFUdA	*67.0 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*62.9 %*	*25-150*
Surrogate: M2PFTeDA	*60.0 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*89.6 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*69.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*63.2 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*67.7 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*68.9 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*74.3 %*	*25-150*
Surrogate: M2-6:2 FTS	*69.2 %*	*25-150*
Surrogate: M2-8:2 FTS	*85.8 %*	*25-150*
Surrogate: M9PFNA	*73.3 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**86.1**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 08:57	04/30/2020 13:00	STN

Sample Information

Client Sample ID: SB07_0-2 **York Sample ID:** 20D0818-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 11:45 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 19:12	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.377	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.268**	J	ug/kg dry	0.0709	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.157**	J	ug/kg dry	0.0490	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0334	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.148**	J	ug/kg dry	0.0831	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**1.68**		ug/kg dry	0.0472	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0644	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
335-76-2	*** Perfluorodecanoic acid (PFDA)**	**0.172**	J	ug/kg dry	0.0551	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.125	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
307-55-1	*** Perfluorododecanoic acid (PFDoA)**	**0.0903**	J	ug/kg dry	0.0807	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0468	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0804	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.112	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.112	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
2706-90-3	*** Perfluoropentanoic acid (PFPeA)**	**0.155**	J	ug/kg dry	0.0989	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0503	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT

Sample Information

Client Sample ID: **SB07_0-2** **York Sample ID:** **20D0818-09**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 11:45 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0531	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
335-77-3	*** Perfluoro-1-decanesulfonic acid (PFDS)**	**0.0652**	J	ug/kg dry	0.0551	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0711	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0276	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**0.264**	J	ug/kg dry	0.197	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*57.0 %*		*25-150*
Surrogate: M5PFHxA	*54.1 %*		*25-150*
Surrogate: M4PFHpA	*73.6 %*		*25-150*
Surrogate: M3PFHxS	*58.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*63.8 %*		*25-150*
Surrogate: M6PFDA	*60.0 %*		*25-150*
Surrogate: M7PFUdA	*46.3 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*31.2 %*		*25-150*
Surrogate: M2PFTeDA	*23.1 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*78.6 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*56.1 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*52.4 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*15.4 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*59.5 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*54.0 %*		*25-150*
Surrogate: M2-6:2 FTS	*151 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*145 %*		*25-150*
Surrogate: M9PFNA	*67.2 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**90.8**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 10:41	04/30/2020 13:03	STN

Sample Information

Client Sample ID: SB07_8-10 **York Sample ID:** 20D0818-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 11:50 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.90	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 19:29	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.386	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.0994**	J	ug/kg dry	0.0727	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.136**	J	ug/kg dry	0.0502	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0342	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.0851	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0483	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0660	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0565	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.128	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0827	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0480	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0824	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.115	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.115	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.101	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0515	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT

Sample Information

Client Sample ID: SB07_8-10 **York Sample ID:** 20D0818-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 11:50 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0544	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0565	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0728	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0282	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.202	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*63.6 %*	*25-150*
Surrogate: M5PFHxA	*60.9 %*	*25-150*
Surrogate: M4PFHpA	*80.0 %*	*25-150*
Surrogate: M3PFHxS	*67.7 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*65.0 %*	*25-150*
Surrogate: M6PFDA	*69.5 %*	*25-150*
Surrogate: M7PFUdA	*65.6 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*60.5 %*	*25-150*
Surrogate: M2PFTeDA	*59.7 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*87.9 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*68.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*60.4 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*52.3 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*72.0 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*68.0 %*	*25-150*
Surrogate: M2-6:2 FTS	*75.1 %*	*25-150*
Surrogate: M2-8:2 FTS	*69.1 %*	*25-150*
Surrogate: M9PFNA	*72.8 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**86.8**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 10:41	04/30/2020 13:03	STN

Sample Information

Client Sample ID: **SB07_18-20** **York Sample ID:** **20D0818-11**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 11:55 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.35	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 19:46	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*42.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.441	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.123**	J	ug/kg dry	0.0830	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.138**	J	ug/kg dry	0.0573	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0390	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.152**	J	ug/kg dry	0.0972	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0552	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0753	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0645	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.146	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0945	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0548	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0941	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.131	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.131	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.116	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0588	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT

Sample Information

Client Sample ID: SB07_18-20 **York Sample ID:** 20D0818-11

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 11:55 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0621	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0645	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0831	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0322	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.230	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*67.5 %*		*25-150*
Surrogate: M5PFHxA	*62.4 %*		*25-150*
Surrogate: M4PFHpA	*86.1 %*		*25-150*
Surrogate: M3PFHxS	*70.1 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*68.2 %*		*25-150*
Surrogate: M6PFDA	*81.9 %*		*25-150*
Surrogate: M7PFUdA	*75.4 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*64.9 %*		*25-150*
Surrogate: M2PFTeDA	*67.9 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*89.9 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*72.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*61.5 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*54.5 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*72.3 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*90.3 %*		*25-150*
Surrogate: M2-6:2 FTS	*82.2 %*		*25-150*
Surrogate: M2-8:2 FTS	*203 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*75.9 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**77.3**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 10:41	04/30/2020 13:03	STN

Sample Information

Client Sample ID: SODUP01_042920 **York Sample ID:** 20D0818-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 12:00 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.43	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 12:12	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*54.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.384	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.427**	J	ug/kg dry	0.0724	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.181**	J	ug/kg dry	0.0500	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0341	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.274**	J	ug/kg dry	0.0848	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**2.15**		ug/kg dry	0.0481	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
375-95-1	*** Perfluorononanoic acid (PFNA)**	**0.115**	J	ug/kg dry	0.0657	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
335-76-2	*** Perfluorodecanoic acid (PFDA)**	**0.182**	J	ug/kg dry	0.0562	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
2058-94-8	*** Perfluoroundecanoic acid (PFUnA)**	**0.149**	J	ug/kg dry	0.128	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0824	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0478	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
376-06-7	*** Perfluorotetradecanoic acid (PFTA)**	**0.111**	J	ug/kg dry	0.0821	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.115	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.114	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
2706-90-3	*** Perfluoropentanoic acid (PFPeA)**	**0.198**	J	ug/kg dry	0.101	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
754-91-6	*** Perfluoro-1-octanesulfonamide (FOSA)**	**0.0845**	J	ug/kg dry	0.0513	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT

Sample Information

Client Sample ID: SODUP01_042920 **York Sample ID:** 20D0818-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 12:00 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0542	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0562	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0725	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0281	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**1.12**		ug/kg dry	0.201	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*59.3 %*		*25-150*
Surrogate: M5PFHxA	*51.7 %*		*25-150*
Surrogate: M4PFHpA	*73.0 %*		*25-150*
Surrogate: M3PFHxS	*61.5 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*66.9 %*		*25-150*
Surrogate: M6PFDA	*49.8 %*		*25-150*
Surrogate: M7PFUdA	*32.5 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*15.0 %*	PFSu-L	*25-150*
Surrogate: M2PFTeDA	*3.63 %*	PFSu-L	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*84.2 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*49.3 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*57.0 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*0.361 %*	PFSu-L	*10-150*
Surrogate: d3-N-MeFOSAA	*41.4 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*32.4 %*		*25-150*
Surrogate: M2-6:2 FTS	*249 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*151 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*67.0 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**90.1**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 10:41	04/30/2020 13:03	STN

Analytical Batch Summary

Batch ID: BD01298 **Preparation Method:** % Solids Prep **Prepared By:** TJM

YORK Sample ID	Client Sample ID	Preparation Date
20D0818-01	SB04_0-2	04/30/20
20D0818-03	SB04_14-16	04/30/20
20D0818-05	SB06_0-2	04/30/20
20D0818-06	SB06_5-7	04/30/20
20D0818-07	SB06_12-14	04/30/20
BD01298-DUP1	Duplicate	04/30/20

Batch ID: BD01313 **Preparation Method:** % Solids Prep **Prepared By:** TJM

YORK Sample ID	Client Sample ID	Preparation Date
20D0818-04	SB04_18-20	04/30/20
20D0818-09	SB07_0-2	04/30/20
20D0818-10	SB07_8-10	04/30/20
20D0818-11	SB07_18-20	04/30/20
20D0818-12	SODUP01_042920	04/30/20
BD01313-DUP1	Duplicate	04/30/20

Batch ID: BE00002 **Preparation Method:** EPA 3550C **Prepared By:** LM

YORK Sample ID	Client Sample ID	Preparation Date
20D0818-01	SB04_0-2	05/01/20
20D0818-03	SB04_14-16	05/01/20
20D0818-04	SB04_18-20	05/01/20
20D0818-05	SB06_0-2	05/01/20
20D0818-06	SB06_5-7	05/01/20
20D0818-07	SB06_12-14	05/01/20
20D0818-09	SB07_0-2	05/01/20
20D0818-10	SB07_8-10	05/01/20
20D0818-11	SB07_18-20	05/01/20
BE00002-BLK1	Blank	05/01/20
BE00002-BS1	LCS	05/01/20

Batch ID: BE00118 **Preparation Method:** EPA 3550C **Prepared By:** LM

YORK Sample ID	Client Sample ID	Preparation Date
20D0818-12	SODUP01_042920	05/05/20
BE00118-BLK1	Blank	05/05/20
BE00118-BS1	LCS	05/05/20

Batch ID: BE00266 **Preparation Method:** SPE PFAS Extraction-Soil-EPA 537m **Prepared By:** KHA

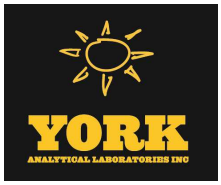
YORK Sample ID	Client Sample ID	Preparation Date
20D0818-01	SB04_0-2	05/07/20

20D0818-03	SB04_14-16	05/07/20
20D0818-04	SB04_18-20	05/07/20
20D0818-05	SB06_0-2	05/07/20
20D0818-06	SB06_5-7	05/07/20
20D0818-07	SB06_12-14	05/07/20
20D0818-09	SB07_0-2	05/07/20
20D0818-10	SB07_8-10	05/07/20
20D0818-11	SB07_18-20	05/07/20
20D0818-12	SODUP01_042920	05/07/20
BE00266-BLK1	Blank	05/07/20
BE00266-BS1	LCS	05/07/20
BE00266-MS1	Matrix Spike	05/07/20
BE00266-MSD1	Matrix Spike Dup	05/07/20

Semivolatile Organic Compounds by GC/MS/SIM - Quality Control Data

York Analytical Laboratories, Inc.

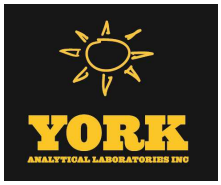
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00002 - EPA 3550C											
Blank (BE00002-BLK1) Blank									Prepared: 05/01/2020 Analyzed: 05/04/2020		
1,4-Dioxane	ND	9.90	ug/kg								
Surrogate: 1,4-Dioxane-d8	*248*		*"*	*495*		*50.0*	*39-83.1*				
LCS (BE00002-BS1) LCS									Prepared: 05/01/2020 Analyzed: 05/04/2020		
1,4-Dioxane	425	9.90	ug/kg	495		85.8	40-130				
Surrogate: 1,4-Dioxane-d8	*277*		*"*	*495*		*56.0*	*39-83.1*				
Batch BE00118 - EPA 3550C											
Blank (BE00118-BLK1) Blank									Prepared: 05/05/2020 Analyzed: 05/06/2020		
1,4-Dioxane	ND	9.90	ug/kg								
Surrogate: 1,4-Dioxane-d8	*356*		*"*	*495*		*72.0*	*39-83.1*				
LCS (BE00118-BS1) LCS									Prepared: 05/05/2020 Analyzed: 05/06/2020		
1,4-Dioxane	455	9.90	ug/kg	495		92.0	40-130				
Surrogate: 1,4-Dioxane-d8	*624*		*"*	*495*		*126*	*39-83.1*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

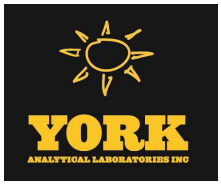
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00266 - SPE PFAS Extraction-Soil-EPA 537m											
Blank (BE00266-BLK1) Blank									Prepared: 05/07/2020 Analyzed: 05/11/2020		
Perfluorobutanesulfonic acid (PFBS)	ND	0.478	ug/kg wet								
Perfluorohexanoic acid (PFHxA)	0.0901	0.478	"								
Perfluoroheptanoic acid (PFHpA)	0.102	0.478	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	0.478	"								
Perfluorooctanoic acid (PFOA)	ND	0.478	"								
Perfluorooctanesulfonic acid (PFOS)	ND	0.478	"								
Perfluorononanoic acid (PFNA)	ND	0.478	"								
Perfluorodecanoic acid (PFDA)	ND	0.478	"								
Perfluoroundecanoic acid (PFUnA)	ND	0.478	"								
Perfluorododecanoic acid (PFDoA)	ND	0.478	"								
Perfluorotridecanoic acid (PFTrDA)	ND	0.478	"								
Perfluorotetradecanoic acid (PFTA)	ND	0.478	"								
N-MeFOSAA	ND	0.478	"								
N-EtFOSAA	ND	0.478	"								
Perfluoropentanoic acid (PFPeA)	ND	0.478	"								
Perfluoro-1-octanesulfonamide (FOSA)	ND	0.478	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	0.478	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	0.478	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	ND	0.478	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	0.0363	0.478	"								
Perfluoro-n-butanoic acid (PFBA)	ND	0.478	"								
Surrogate: M3PFBS	*3.28*		"	*4.44*		*74.0*	*25-150*				
Surrogate: M5PFHxA	*3.42*		"	*4.78*		*71.5*	*25-150*				
Surrogate: M4PFHpA	*4.74*		"	*4.78*		*99.3*	*25-150*				
Surrogate: M3PFHxS	*3.69*		"	*4.52*		*81.5*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.84*		"	*4.78*		*80.3*	*25-150*				
Surrogate: M6PFDA	*3.92*		"	*4.78*		*82.0*	*25-150*				
Surrogate: M7PFUdA	*3.55*		"	*4.78*		*74.2*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*2.94*		"	*4.78*		*61.5*	*25-150*				
Surrogate: M2PFTeDA	*3.42*		"	*4.78*		*71.7*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*4.60*		"	*4.78*		*96.3*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*3.74*		"	*4.57*		*81.9*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.37*		"	*4.78*		*70.5*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.53*		"	*4.78*		*73.9*	*10-150*				
Surrogate: d3-N-MeFOSAA	*3.58*		"	*4.78*		*74.9*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.01*		"	*4.78*		*84.0*	*25-150*				
Surrogate: M2-6:2 FTS	*5.61*		"	*4.53*		*124*	*25-150*				
Surrogate: M2-8:2 FTS	*5.09*		"	*4.58*		*111*	*25-150*				
Surrogate: M9PFNA	*4.06*		"	*4.78*		*85.0*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

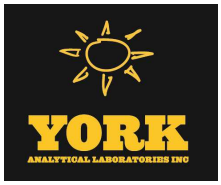
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00266 - SPE PFAS Extraction-Soil-EPA 537m											
LCS (BE00266-BS1) LCS								Prepared: 05/07/2020 Analyzed: 05/11/2020			
Perfluorobutanesulfonic acid (PFBS)	4.55	0.478	ug/kg wet	4.23		108	50-130				
Perfluorohexanoic acid (PFHxA)	4.76	0.478	"	4.78		99.6	50-130				
Perfluoroheptanoic acid (PFHpA)	3.74	0.478	"	4.78		78.2	50-130				
Perfluorohexanesulfonic acid (PFHxS)	3.69	0.478	"	3.53		104	50-130				
Perfluorooctanoic acid (PFOA)	5.02	0.478	"	4.78		105	50-130				
Perfluorooctanesulfonic acid (PFOS)	3.74	0.478	"	3.49		107	50-130				
Perfluorononanoic acid (PFNA)	4.62	0.478	"	4.59		101	50-130				
Perfluorodecanoic acid (PFDA)	4.82	0.478	"	4.78		101	50-130				
Perfluoroundecanoic acid (PFUnA)	5.09	0.478	"	4.78		107	50-130				
Perfluorododecanoic acid (PFDoA)	4.99	0.478	"	4.78		104	50-130				
Perfluorotridecanoic acid (PFTrDA)	4.67	0.478	"	4.78		97.7	50-130				
Perfluorotetradecanoic acid (PFTA)	4.97	0.478	"	4.78		104	50-130				
N-MeFOSAA	4.47	0.478	"	4.78		93.7	50-130				
N-EtFOSAA	4.56	0.478	"	4.78		95.4	50-130				
Perfluoropentanoic acid (PFPeA)	4.79	0.478	"	4.78		100	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	5.13	0.478	"	4.78		107	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	5.27	0.478	"	4.75		111	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	4.14	0.478	"	4.61		89.9	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	4.66	0.478	"	4.54		103	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.27	0.478	"	4.59		115	50-130				
Perfluoro-n-butanoic acid (PFBA)	5.03	0.478	"	4.78		105	50-130				
Surrogate: M3PFBS	*3.19*		*"*	*4.44*		*71.9*	*25-150*				
Surrogate: M5PFHxA	*3.27*		*"*	*4.78*		*68.5*	*25-150*				
Surrogate: M4PFHpA	*4.49*		*"*	*4.78*		*94.0*	*25-150*				
Surrogate: M3PFHxS	*3.49*		*"*	*4.52*		*77.3*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.42*		*"*	*4.78*		*71.6*	*25-150*				
Surrogate: M6PFDA	*3.45*		*"*	*4.78*		*72.2*	*25-150*				
Surrogate: M7PFUdA	*3.37*		*"*	*4.78*		*70.6*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*3.44*		*"*	*4.78*		*72.0*	*25-150*				
Surrogate: M2PFTeDA	*3.32*		*"*	*4.78*		*69.5*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*4.39*		*"*	*4.78*		*92.0*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*3.47*		*"*	*4.57*		*75.9*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.06*		*"*	*4.78*		*64.0*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.65*		*"*	*4.78*		*76.3*	*10-150*				
Surrogate: d3-N-MeFOSAA	*3.95*		*"*	*4.78*		*82.7*	*25-150*				
Surrogate: d5-N-EtFOSAA	*3.81*		*"*	*4.78*		*79.8*	*25-150*				
Surrogate: M2-6:2 FTS	*4.13*		*"*	*4.53*		*91.1*	*25-150*				
Surrogate: M2-8:2 FTS	*3.84*		*"*	*4.58*		*84.0*	*25-150*				
Surrogate: M9PFNA	*3.62*		*"*	*4.78*		*75.9*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00266 - SPE PFAS Extraction-Soil-EPA 537m											
Matrix Spike (BE00266-MS1) Matrix Spike	*Source sample: 20D0818-01 (SB04_0-2)								Prepared: 05/07/2020 Analyzed: 05/11/2020		
Perfluorobutanesulfonic acid (PFBS)	4.74	0.525	ug/kg dry	4.65	ND	102	25-150				
Perfluorohexanoic acid (PFHxA)	4.97	0.525	"	5.25	0.148	91.7	25-150				
Perfluoroheptanoic acid (PFHpA)	4.22	0.525	"	5.25	0.200	76.5	25-150				
Perfluorohexanesulfonic acid (PFHxS)	4.39	0.525	"	3.89	ND	113	25-150				
Perfluorooctanoic acid (PFOA)	4.99	0.525	"	5.25	0.311	89.1	25-150				
Perfluorooctanesulfonic acid (PFOS)	8.21	0.525	"	3.84	2.48	149	25-150				
Perfluorononanoic acid (PFNA)	4.84	0.525	"	5.04	0.145	93.1	25-150				
Perfluorodecanoic acid (PFDA)	4.69	0.525	"	5.25	0.153	86.4	25-150				
Perfluoroundecanoic acid (PFUnA)	5.02	0.525	"	5.25	0.183	92.0	25-150				
Perfluorododecanoic acid (PFDoA)	4.92	0.525	"	5.25	0.125	91.2	25-150				
Perfluorotridecanoic acid (PFTrDA)	4.51	0.525	"	5.25	0.0869	84.2	25-150				
Perfluorotetradecanoic acid (PFTA)	4.94	0.525	"	5.25	0.0856	92.5	25-150				
N-MeFOSAA	4.53	0.525	"	5.25	ND	86.3	25-150				
N-EtFOSAA	5.33	0.525	"	5.25	0.114	99.3	25-150				
Perfluoropentanoic acid (PFPeA)	4.81	0.525	"	5.25	0.118	89.3	25-150				
Perfluoro-1-octanesulfonamide (FOSA)	5.15	0.525	"	5.25	ND	98.1	25-150				
Perfluoro-1-heptanesulfonic acid (PFHpS)	5.85	0.525	"	5.23	ND	112	25-150				
Perfluoro-1-decanesulfonic acid (PFDS)	4.25	0.525	"	5.07	0.0745	82.4	25-150				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	4.35	0.525	"	4.99	ND	87.1	25-150				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.86	0.525	"	5.04	0.0308	116	25-150				
Perfluoro-n-butanoic acid (PFBA)	6.37	0.525	"	5.25	1.28	97.0	25-150				
Surrogate: M3PFBS	*2.94*		"	*4.88*		*60.1*	*25-150*				
Surrogate: M5PFHxA	*3.01*		"	*5.25*		*57.2*	*25-150*				
Surrogate: M4PFHpA	*3.92*		"	*5.25*		*74.7*	*25-150*				
Surrogate: M3PFHxS	*3.18*		"	*4.97*		*63.9*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.60*		"	*5.25*		*68.6*	*25-150*				
Surrogate: M6PFDA	*3.62*		"	*5.25*		*69.0*	*25-150*				
Surrogate: M7PFUdA	*3.22*		"	*5.25*		*61.2*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*2.85*		"	*5.25*		*54.2*	*25-150*				
Surrogate: M2PFTeDA	*2.68*		"	*5.25*		*51.0*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*4.05*		"	*5.25*		*77.1*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*2.82*		"	*5.03*		*56.1*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.00*		"	*5.25*		*57.2*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*2.60*		"	*5.25*		*49.5*	*10-150*				
Surrogate: d3-N-MeFOSAA	*4.76*		"	*5.25*		*90.7*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.73*		"	*5.25*		*89.9*	*25-150*				
Surrogate: M2-6:2 FTS	*15.1*		"	*4.99*		*302*	*25-150*				
Surrogate: M2-8:2 FTS	*15.3*		"	*5.03*		*303*	*25-150*				
Surrogate: M9PFNA	*3.64*		"	*5.25*		*69.3*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00266 - SPE PFAS Extraction-Soil-EPA 537m											
Matrix Spike Dup (BE00266-M Matrix Spike Dup	*Source sample: 20D0818-01 (SB04_0-2)								Prepared: 05/07/2020 Analyzed: 05/11/2020		
Perfluorobutanesulfonic acid (PFBS)	4.79	0.507	ug/kg dry	4.48	ND	107	25-150		1.14	35	
Perfluorohexanoic acid (PFHxA)	5.08	0.507	"	5.07	0.148	97.4	25-150		2.22	35	
Perfluoroheptanoic acid (PFHpA)	4.28	0.507	"	5.07	0.200	80.6	25-150		1.53	35	
Perfluorohexanesulfonic acid (PFHxS)	4.38	0.507	"	3.75	ND	117	25-150		0.243	35	
Perfluorooctanoic acid (PFOA)	5.10	0.507	"	5.07	0.311	94.6	25-150		2.18	35	
Perfluorooctanesulfonic acid (PFOS)	7.81	0.507	"	3.70	2.48	144	25-150		4.96	35	
Perfluorononanoic acid (PFNA)	4.65	0.507	"	4.86	0.145	92.7	25-150		4.03	35	
Perfluorodecanoic acid (PFDA)	4.71	0.507	"	5.07	0.153	90.0	25-150		0.350	35	
Perfluoroundecanoic acid (PFUnA)	5.26	0.507	"	5.07	0.183	100	25-150		4.68	35	
Perfluorododecanoic acid (PFDoA)	4.92	0.507	"	5.07	0.125	94.7	25-150		0.0959	35	
Perfluorotridecanoic acid (PFTrDA)	4.54	0.507	"	5.07	0.0869	87.9	25-150		0.600	35	
Perfluorotetradecanoic acid (PFTA)	4.91	0.507	"	5.07	0.0856	95.3	25-150		0.662	35	
N-MeFOSAA	4.81	0.507	"	5.07	ND	94.9	25-150		5.92	35	
N-EtFOSAA	4.90	0.507	"	5.07	0.114	94.6	25-150		8.40	35	
Perfluoropentanoic acid (PFPeA)	4.98	0.507	"	5.07	0.118	95.9	25-150		3.40	35	
Perfluoro-1-octanesulfonamide (FOSA)	5.09	0.507	"	5.07	ND	101	25-150		1.15	35	
Perfluoro-1-heptanesulfonic acid (PFHpS)	5.53	0.507	"	5.04	ND	110	25-150		5.58	35	
Perfluoro-1-decanesulfonic acid (PFDS)	3.77	0.507	"	4.89	0.0745	75.6	25-150		12.0	35	
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	4.53	0.507	"	4.81	ND	94.2	25-150		4.10	35	
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.98	0.507	"	4.86	0.0308	122	25-150		1.96	35	
Perfluoro-n-butanoic acid (PFBA)	6.66	0.507	"	5.07	1.28	106	25-150		4.46	35	
Surrogate: M3PFBS	*2.77*		"	*4.71*		*58.9*	*25-150*				
Surrogate: M5PFHxA	*2.85*		"	*5.07*		*56.2*	*25-150*				
Surrogate: M4PFHpA	*3.65*		"	*5.07*		*72.1*	*25-150*				
Surrogate: M3PFHxS	*2.94*		"	*4.79*		*61.4*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.37*		"	*5.07*		*66.5*	*25-150*				
Surrogate: M6PFDA	*3.38*		"	*5.07*		*66.8*	*25-150*				
Surrogate: M7PFUdA	*2.88*		"	*5.07*		*56.8*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*2.59*		"	*5.07*		*51.1*	*25-150*				
Surrogate: M2PFTeDA	*2.47*		"	*5.07*		*48.7*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*3.93*		"	*5.07*		*77.5*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*2.92*		"	*4.85*		*60.2*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*2.81*		"	*5.07*		*55.5*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*2.45*		"	*5.07*		*48.4*	*10-150*				
Surrogate: d3-N-MeFOSAA	*4.31*		"	*5.07*		*85.0*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.19*		"	*5.07*		*82.8*	*25-150*				
Surrogate: M2-6:2 FTS	*14.3*		"	*4.81*		*296*	*25-150*				
Surrogate: M2-8:2 FTS	*14.6*		"	*4.85*		*301*	*25-150*				
Surrogate: M9PFNA	*3.53*		"	*5.07*		*69.6*	*25-150*				

Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD01298 - % Solids Prep											
Duplicate (BD01298-DUP1) Duplicate	*Source sample: 20D0818-07 (SB06_12-14)							Prepared & Analyzed: 04/30/2020			
% Solids	85.9	0.100	%		86.1				0.295	20	
Batch BD01313 - % Solids Prep											
Duplicate (BD01313-DUP1) Duplicate	*Source sample: 20D0818-12 (SODUP01_042920)							Prepared & Analyzed: 04/30/2020			
% Solids	91.8	0.100	%		90.1				1.88	20	

Sample and Data Qualifiers Relating to This Work Order

PFSu-L	The isotopically labeled surrogate recovered below lab control limits due to a matrix effect. Isotope Dilution was applied.
PFSu-H	The isotopically labeled surrogate recovered above lab control limits due to a matrix effect. Isotope Dilution was applied.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

York Analytical Laboratories, Inc.
120 Research Drive, Stratford, CT 06615
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clientservices@yorklab.com
www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No.: 20D0818

Page ____ of ____

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company: Same
Address: 360 west 31st Street New York, NY	Address:	Address: Same
Phone.: 2124795400	Phone.:	Phone.: Same
Contact: Kim Semon	Contact: Dina Palazzolo	Contact: Same
E-mail: KSemon@langan.com	E-mail: DPalazzolo@langan.com	E-mail: Same

YOUR Project Number: 170610601

YOUR Project Name: 475 Bay Street

YOUR PO#:

Turn-Around Time

- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- Standard (5-7 Day): X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below)
Deirdre Casey

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil; Other

Samples From: New York X; New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections): Summary Report; QA Report; NY ASP A Package; NY ASP B Package; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
SB04_0-2	S	4/29 1410	VOC, SVOC, PCB, Pest, Herb, Metals (hex/tri chromium & cyanide), PFAS, 1,4 dioxane	4oz(1) 8oz(1) 4oz, (1) 16oz
SB04_10-12	S	4/29 1415	↓	
SB04_14-16	S	4/29 1420	↓	
SB04_18-20	S	4/29 1425	HOLD	
SB06_0-2	S	4/29 0900	VOC SVOC PCB PEST herb inorganics (hex tri chrom cyanide) PFAS, 14dioxane	
SB06_5-7	S	4/29 0905	↓	
SB06_12-14	S	4/29 0910	↓	
SB06_18-20	S	4/29 0915	HOLD	
SB07_0-2	S	4/29 1145	VOC SVOC PCB Pest herb inorganics (hex tri chrom cyanide) PFAS, 14dioxane	
SB07_8-10	S	4/29 1150	↓	

Comments:
Part375/TCL VOCs & SVOC
TAL Metals (including hex/trichromd cyanide)

Preservation: (check all that apply)
HCl ___ MeOH X HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___
Ascorbic Acid ___ Other: ___

Special Instruction: Field Filtered ____ Lab to Filter ____

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Langan 1511	4/29/20 1511		4/28/20		4/28/20 1750
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time
				TC Mahl	4/29/20 1750

Temp. Received at Lab: 3.5 Degrees C

York Analytical Laboratories, Inc.
120 Research Drive, Stratford, CT 06615
132-02 89th Ave, Queens, NY 11418
clientservices@yorklab.com
www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20D0818

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company: same
Address: 360 west 31st Street NewYorkNY 10001	Address:	Address: same
Phone.: 212 479 5400	Phone.:	Phone.: same
Contact: Kim Semon	Contact: Dina Palazzolo	Contact: same
E-mail: KSemon@langan.com	E-mail: DPalazzolo@langan.com	E-mail: same

YOUR Project Number: 170161601

YOUR Project Name: 475 Bay street

YOUR PO#:

Turn-Around Time

- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- Standard (5-7 Day) X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below)
Deirdre Casey

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil; Other

Samples From: New York X; New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections)

Summary Report	CT RCP	Standard Excel EDD
QA Report	CT RCP DQA/DUE	EQuIS (Standard)
NY ASP A Package	NJDEP Reduced Deliverables	NYSDEC EQuIS
NY ASP B Package	NJDKQP	NJDEP SRP HazSite
		Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
SB07-18-20	S	4/29 1155	VOC, SVOC, PCB, Pest, Herb, Metals (hex chromium & cyanide), PFAS & 1,4 dioxane	9 vials, (1) 8oz, (1) 4oz, (1) 8oz
SODUP01-042920	S	4/29 —	↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	

Comments:

Preservation: (check all that apply)
HCl ___ MeOH X HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___
Ascorbic Acid ___ Other: ___

Special Instruction: Field Filtered ___ Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Deirdre Casey Langan	4/29 1511	E Shafer	4/29/20	E Shafer	4/29/20 1750
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temp. Received at Lab
				TC Mahler	4/29/20 1750 / 3.5 Degrees C

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Report Date: 05/11/2020
Client Project ID: 170610601
York Project (SDG) No.: 20D0849

Report Date: 05/11/2020
Client Project ID: 170610601
York Project (SDG) No.: 20D0849

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 30, 2020 and listed below. The project was identified as your project: **170610601**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20D0849-01	SB16_0-2	Soil	04/30/2020	04/30/2020
20D0849-02	SB16_14-16	Soil	04/30/2020	04/30/2020
20D0849-03	SB16_18-20	Soil	04/30/2020	04/30/2020
20D0849-04	SB12_0-2	Soil	04/30/2020	04/30/2020
20D0849-05	SB12_8-10	Soil	04/30/2020	04/30/2020
20D0849-06	SB12_18-20	Soil	04/30/2020	04/30/2020
20D0849-07	SB11_0-2	Soil	04/30/2020	04/30/2020
20D0849-08	SB11_10-12	Soil	04/30/2020	04/30/2020
20D0849-09	SB11_18-20	Soil	04/30/2020	04/30/2020
20D0849-10	SOFB02_043020	Water	04/30/2020	04/30/2020
20D0849-11	MW06_043020	Water	04/30/2020	04/30/2020
20D0849-12	MW08_043020	Water	04/30/2020	04/30/2020
20D0849-13	MW05_043020	Water	04/30/2020	04/30/2020
20D0849-14	GWDUP01_043020	Water	04/30/2020	04/30/2020
20D0849-15	GWFB01_043020	Water	04/30/2020	04/30/2020

General Notes for York Project (SDG) No.: 20D0849

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 05/11/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: SB16_0-2 **York Sample ID:** 20D0849-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 9:15 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 17:20	KH

Surrogate Recoveries	Result		Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*38.0 %*	S-08	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.350	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0660	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0456	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0310	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.313**	J	ug/kg dry	0.0773	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.393**	J	ug/kg dry	0.0438	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0599	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
335-76-2	*** Perfluorodecanoic acid (PFDA)**	**0.0606**	J	ug/kg dry	0.0513	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.116	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0751	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0435	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0748	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.105	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.104	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0920	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
754-91-6	*** Perfluoro-1-octanesulfonamide (FOSA)**	**0.0522**	J	ug/kg dry	0.0468	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT

Sample Information

Client Sample ID: SB16_0-2 **York Sample ID:** 20D0849-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 9:15 am	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0494	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0513	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0661	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0256	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**0.185**	J	ug/kg dry	0.183	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*61.9 %*		*25-150*
Surrogate: M5PFHxA	*60.5 %*		*25-150*
Surrogate: M4PFHpA	*72.0 %*		*25-150*
Surrogate: M3PFHxS	*63.4 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*70.4 %*		*25-150*
Surrogate: M6PFDA	*70.2 %*		*25-150*
Surrogate: M7PFUdA	*57.7 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*55.2 %*		*25-150*
Surrogate: M2PFTeDA	*58.8 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*88.4 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*59.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*61.5 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*51.8 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*64.4 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*74.2 %*		*25-150*
Surrogate: M2-6:2 FTS	*117 %*		*25-150*
Surrogate: M2-8:2 FTS	*174 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*77.7 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**87.1**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SB16_14-16 **York Sample ID:** 20D0849-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 9:20 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.90	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 12:46	KH

Surrogate Recoveries	Result		Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*50.0 %*	S-08	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.372	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0700	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0484	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0329	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.0820	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0465	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0635	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0544	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.124	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0797	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0462	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0794	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.111	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.111	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0977	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0496	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT

Sample Information

Client Sample ID: SB16_14-16 **York Sample ID:** 20D0849-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 9:20 am	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0524	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0544	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0701	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0272	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.194	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*70.6 %*	*25-150*
Surrogate: M5PFHxA	*71.5 %*	*25-150*
Surrogate: M4PFHpA	*81.1 %*	*25-150*
Surrogate: M3PFHxS	*73.8 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*79.7 %*	*25-150*
Surrogate: M6PFDA	*82.0 %*	*25-150*
Surrogate: M7PFUdA	*76.8 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*70.0 %*	*25-150*
Surrogate: M2PFTeDA	*66.3 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*105 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*76.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*74.0 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*59.8 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*76.4 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*67.4 %*	*25-150*
Surrogate: M2-6:2 FTS	*77.7 %*	*25-150*
Surrogate: M2-8:2 FTS	*86.9 %*	*25-150*
Surrogate: M9PFNA	*83.5 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**84.3**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: **SB16_18-20** **York Sample ID:** **20D0849-03**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 9:25 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.52	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 13:03	KH

Surrogate Recoveries	Result		Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*28.0 %*	S-08	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.446	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0841	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0580	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0395	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.165**	J	ug/kg dry	0.0985	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0559	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0763	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0653	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.148	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0957	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0555	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0953	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.133	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.133	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.117	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0596	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT

Sample Information

Client Sample ID: SB16_18-20 **York Sample ID:** 20D0849-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 9:25 am	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0629	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0653	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0842	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0327	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.233	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*74.8 %*	*25-150*
Surrogate: M5PFHxA	*75.3 %*	*25-150*
Surrogate: M4PFHpA	*83.1 %*	*25-150*
Surrogate: M3PFHxS	*75.5 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*72.9 %*	*25-150*
Surrogate: M6PFDA	*56.1 %*	*25-150*
Surrogate: M7PFUdA	*50.5 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*43.4 %*	*25-150*
Surrogate: M2PFTeDA	*37.1 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*110 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*56.1 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*76.6 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*45.9 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*48.3 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*47.2 %*	*25-150*
Surrogate: M2-6:2 FTS	*73.8 %*	*25-150*
Surrogate: M2-8:2 FTS	*53.3 %*	*25-150*
Surrogate: M9PFNA	*66.9 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**77.9**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SB12_0-2 **York Sample ID:** 20D0849-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 11:45 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.62	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 13:20	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.355	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0668	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0461	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0314	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.166**	J	ug/kg dry	0.0783	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.292**	J	ug/kg dry	0.0444	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0606	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0519	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.118	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0760	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0441	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0757	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.106	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.106	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
2706-90-3	*** Perfluoropentanoic acid (PFPeA)**	**0.111**	J	ug/kg dry	0.0932	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0473	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT

Sample Information

Client Sample ID: SB12_0-2 **York Sample ID:** 20D0849-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 11:45 am	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0500	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0519	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0669	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0260	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.185	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*67.8 %*		*25-150*
Surrogate: M5PFHxA	*70.5 %*		*25-150*
Surrogate: M4PFHpA	*79.2 %*		*25-150*
Surrogate: M3PFHxS	*69.0 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*78.6 %*		*25-150*
Surrogate: M6PFDA	*74.8 %*		*25-150*
Surrogate: M7PFUdA	*63.8 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*64.8 %*		*25-150*
Surrogate: M2PFTeDA	*63.6 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*100 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*62.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*69.6 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*62.6 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*84.5 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*86.7 %*		*25-150*
Surrogate: M2-6:2 FTS	*154 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*186 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*83.2 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**90.8**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SB12_8-10 **York Sample ID:** 20D0849-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 11:50 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.43	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 13:37	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*42.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.385	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0725	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0500	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0341	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.0849	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0482	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0658	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0563	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.128	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0825	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0478	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0822	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.115	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.115	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.101	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0514	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT

Sample Information

Client Sample ID: SB12_8-10 **York Sample ID:** 20D0849-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 11:50 am	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0542	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0563	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0726	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0282	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.201	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*68.3 %*	*25-150*
Surrogate: M5PFHxA	*70.7 %*	*25-150*
Surrogate: M4PFHpA	*79.9 %*	*25-150*
Surrogate: M3PFHxS	*71.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*79.4 %*	*25-150*
Surrogate: M6PFDA	*83.6 %*	*25-150*
Surrogate: M7PFUdA	*75.1 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*71.4 %*	*25-150*
Surrogate: M2PFTeDA	*71.1 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*100 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*76.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*71.1 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*66.1 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*78.3 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*84.1 %*	*25-150*
Surrogate: M2-6:2 FTS	*91.9 %*	*25-150*
Surrogate: M2-8:2 FTS	*128 %*	*25-150*
Surrogate: M9PFNA	*84.6 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**81.5**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: **SB12_18-20** **York Sample ID:** **20D0849-06**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 11:55 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 14:11	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*48.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.370	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0698	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0482	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0328	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.0894**	J	ug/kg dry	0.0817	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0464	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0633	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0542	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.123	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0794	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0460	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0791	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.111	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.110	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0973	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0494	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT

Sample Information

Client Sample ID: SB12_18-20 **York Sample ID:** 20D0849-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 11:55 am	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0522	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0542	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0699	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0271	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.193	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*66.5 %*	*25-150*
Surrogate: M5PFHxA	*68.3 %*	*25-150*
Surrogate: M4PFHpA	*77.3 %*	*25-150*
Surrogate: M3PFHxS	*70.2 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*73.2 %*	*25-150*
Surrogate: M6PFDA	*72.2 %*	*25-150*
Surrogate: M7PFUdA	*68.8 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*67.8 %*	*25-150*
Surrogate: M2PFTeDA	*71.1 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*99.3 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*72.0 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*69.1 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*57.6 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*67.2 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*72.5 %*	*25-150*
Surrogate: M2-6:2 FTS	*76.5 %*	*25-150*
Surrogate: M2-8:2 FTS	*72.1 %*	*25-150*
Surrogate: M9PFNA	*78.3 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**84.5**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SB11_0-2 **York Sample ID:** 20D0849-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 2:40 pm	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.52	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 14:28	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.360	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0678	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0468	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0319	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.0795	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0451	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0615	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0527	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.120	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0772	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0448	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0769	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.107	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.107	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0946	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0481	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT

Sample Information

Client Sample ID: SB11_0-2 **York Sample ID:** 20D0849-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 2:40 pm	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0507	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0527	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0679	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0263	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.188	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*64.0 %*		*25-150*
Surrogate: M5PFHxA	*64.9 %*		*25-150*
Surrogate: M4PFHpA	*75.8 %*		*25-150*
Surrogate: M3PFHxS	*67.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*74.4 %*		*25-150*
Surrogate: M6PFDA	*72.5 %*		*25-150*
Surrogate: M7PFUdA	*67.5 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*61.7 %*		*25-150*
Surrogate: M2PFTeDA	*57.2 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*93.3 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*63.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*65.1 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*51.4 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*75.6 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*80.5 %*		*25-150*
Surrogate: M2-6:2 FTS	*128 %*		*25-150*
Surrogate: M2-8:2 FTS	*190 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*83.4 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**89.6**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SB11_10-12 **York Sample ID:** 20D0849-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 2:45 pm	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.62	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 14:46	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*42.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.467	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0880	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0608	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0414	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.113**	J	ug/kg dry	0.103	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0585	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0798	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0684	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.155	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.100	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0581	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0997	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.139	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.139	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.123	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0624	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT

Sample Information

Client Sample ID: SB11_10-12 **York Sample ID:** 20D0849-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 2:45 pm	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0658	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0684	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0881	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0342	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.244	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*71.4 %*		*25-150*
Surrogate: M5PFHxA	*72.5 %*		*25-150*
Surrogate: M4PFHpA	*82.0 %*		*25-150*
Surrogate: M3PFHxS	*73.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*84.3 %*		*25-150*
Surrogate: M6PFDA	*90.1 %*		*25-150*
Surrogate: M7PFUdA	*66.7 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*67.7 %*		*25-150*
Surrogate: M2PFTeDA	*73.5 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*108 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*73.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*73.5 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*63.1 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*101 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*100 %*		*25-150*
Surrogate: M2-6:2 FTS	*228 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*365 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*90.6 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**71.1**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SB11_18-20 **York Sample ID:** 20D0849-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 2:50 pm	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.80	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 15:03	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.383	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0720	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0497	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0339	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.0844	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0479	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0654	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0560	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.127	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0820	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0476	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0817	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.114	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.114	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.100	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0511	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT

Sample Information

Client Sample ID: SB11_18-20 **York Sample ID:** 20D0849-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 2:50 pm	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0539	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0560	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0722	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0280	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.200	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*61.9 %*	*25-150*
Surrogate: M5PFHxA	*69.3 %*	*25-150*
Surrogate: M4PFHpA	*78.0 %*	*25-150*
Surrogate: M3PFHxS	*63.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*72.7 %*	*25-150*
Surrogate: M6PFDA	*70.2 %*	*25-150*
Surrogate: M7PFUdA	*63.5 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*64.8 %*	*25-150*
Surrogate: M2PFTeDA	*65.1 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*102 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*62.8 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*69.0 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*58.7 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*67.5 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*67.4 %*	*25-150*
Surrogate: M2-6:2 FTS	*70.9 %*	*25-150*
Surrogate: M2-8:2 FTS	*77.3 %*	*25-150*
Surrogate: M9PFNA	*79.8 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**84.2**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SOFB02_043020 **York Sample ID:** 20D0849-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 12:00 pm	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/04/2020 07:55	05/05/2020 16:32	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*68.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ng/L	0.294	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**0.936**	J	ng/L	0.471	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ng/L	0.635	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ng/L	0.281	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**0.669**	J	ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ng/L	0.292	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ng/L	0.524	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
2355-31-9	* N-MeFOSAA	ND		ng/L	0.529	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
2991-50-6	* N-EtFOSAA	ND		ng/L	0.557	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**1.94**	J	ng/L	0.452	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ng/L	0.296	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT

Sample Information

Client Sample ID: SOFB02_043020 **York Sample ID:** 20D0849-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 12:00 pm	04/30/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ng/L	0.415	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ng/L	0.492	5.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ng/L	0.399	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**2.78**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*57.0 %*	*25-150*
Surrogate: M5PFHxA	*58.4 %*	*25-150*
Surrogate: M4PFHpA	*67.7 %*	*25-150*
Surrogate: M3PFHxS	*59.8 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*60.6 %*	*25-150*
Surrogate: M6PFDA	*59.7 %*	*25-150*
Surrogate: M7PFUdA	*53.3 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*46.2 %*	*25-150*
Surrogate: M2PFTeDA	*28.8 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*78.1 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*58.9 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*57.1 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*52.3 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*52.2 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*48.8 %*	*25-150*
Surrogate: M2-6:2 FTS	*64.8 %*	*25-150*
Surrogate: M2-8:2 FTS	*68.5 %*	*25-150*
Surrogate: M9PFNA	*59.3 %*	*25-150*

Sample Information

Client Sample ID: MW06_043020 **York Sample ID:** 20D0849-11

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 2:14 pm	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/04/2020 07:55	05/05/2020 16:50	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*72.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* **Perfluorobutanesulfonic acid (PFBS)**	**9.45**		ng/L	0.294	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**22.3**		ng/L	0.471	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
375-85-9	* **Perfluoroheptanoic acid (PFHpA)**	**20.5**		ng/L	0.635	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
355-46-4	* **Perfluorohexanesulfonic acid (PFHxS)**	**2.69**		ng/L	0.281	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**178**		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
1763-23-1	* **Perfluorooctanesulfonic acid (PFOS)**	**130**		ng/L	0.292	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
375-95-1	* **Perfluorononanoic acid (PFNA)**	**9.87**		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
335-76-2	* **Perfluorodecanoic acid (PFDA)**	**2.52**		ng/L	0.524	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
376-06-7	* **Perfluorotetradecanoic acid (PFTA)**	**0.537**	J	ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
2355-31-9	* N-MeFOSAA	ND		ng/L	0.529	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
2991-50-6	* **N-EtFOSAA**	**0.726**	J	ng/L	0.557	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**23.2**		ng/L	0.452	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
754-91-6	* **Perfluoro-1-octanesulfonamide (FOSA)**	**0.700**	J	ng/L	0.296	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT

Sample Information

Client Sample ID: MW06_043020 **York Sample ID:** 20D0849-11

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 2:14 pm	04/30/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	*** Perfluoro-1-heptanesulfonic acid (PFHpS)**	**0.894**	J	ng/L	0.415	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ng/L	0.492	5.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ng/L	0.399	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**18.2**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*50.4 %*		*25-150*
Surrogate: M5PFHxA	*48.9 %*		*25-150*
Surrogate: M4PFHpA	*58.2 %*		*25-150*
Surrogate: M3PFHxS	*57.7 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*58.9 %*		*25-150*
Surrogate: M6PFDA	*64.4 %*		*25-150*
Surrogate: M7PFUdA	*49.7 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*35.3 %*		*25-150*
Surrogate: M2PFTeDA	*8.07 %*	PFSu-L	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*49.1 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*56.3 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*45.2 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*24.7 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*56.8 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*55.5 %*		*25-150*
Surrogate: M2-6:2 FTS	*208 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*140 %*		*25-150*
Surrogate: M9PFNA	*67.6 %*		*25-150*

Sample Information

Client Sample ID: MW08_043020 **York Sample ID:** 20D0849-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 10:55 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/04/2020 07:55	05/05/2020 17:08	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*68.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* **Perfluorobutanesulfonic acid (PFBS)**	**0.933**	J	ng/L	0.294	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**3.22**		ng/L	0.471	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
375-85-9	* **Perfluoroheptanoic acid (PFHpA)**	**2.59**		ng/L	0.635	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
355-46-4	* **Perfluorohexanesulfonic acid (PFHxS)**	**0.618**	J	ng/L	0.281	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**27.7**		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
1763-23-1	* **Perfluorooctanesulfonic acid (PFOS)**	**10.9**		ng/L	0.292	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
375-95-1	* **Perfluorononanoic acid (PFNA)**	**0.984**	J	ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ng/L	0.524	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
376-06-7	* **Perfluorotetradecanoic acid (PFTA)**	**0.671**	J	ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
2355-31-9	* **N-MeFOSAA**	**0.712**	J	ng/L	0.529	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
2991-50-6	* N-EtFOSAA	ND		ng/L	0.557	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**3.08**		ng/L	0.452	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
754-91-6	* **Perfluoro-1-octanesulfonamide (FOSA)**	**0.816**	J	ng/L	0.296	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT

Sample Information

Client Sample ID: MW08_043020 **York Sample ID:** 20D0849-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 10:55 am	04/30/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ng/L	0.415	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ng/L	0.492	5.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ng/L	0.399	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**5.47**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*50.5 %*		*25-150*
Surrogate: M5PFHxA	*49.1 %*		*25-150*
Surrogate: M4PFHpA	*62.0 %*		*25-150*
Surrogate: M3PFHxS	*54.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*53.5 %*		*25-150*
Surrogate: M6PFDA	*51.5 %*		*25-150*
Surrogate: M7PFUdA	*36.9 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*26.1 %*		*25-150*
Surrogate: M2PFTeDA	*5.21 %*	PFSu-L	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*48.8 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*49.3 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*46.8 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*31.6 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*43.0 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*38.9 %*		*25-150*
Surrogate: M2-6:2 FTS	*71.5 %*		*25-150*
Surrogate: M2-8:2 FTS	*63.9 %*		*25-150*
Surrogate: M9PFNA	*56.8 %*		*25-150*

Sample Information

Client Sample ID: MW05_043020 **York Sample ID:** 20D0849-13

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 12:00 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/04/2020 07:55	05/05/2020 17:26	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*68.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* **Perfluorobutanesulfonic acid (PFBS)**	**14.9**		ng/L	0.294	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**17.7**		ng/L	0.471	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
375-85-9	* **Perfluoroheptanoic acid (PFHpA)**	**17.2**		ng/L	0.635	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
355-46-4	* **Perfluorohexanesulfonic acid (PFHxS)**	**3.87**		ng/L	0.281	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**143**		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
1763-23-1	* **Perfluorooctanesulfonic acid (PFOS)**	**84.3**		ng/L	0.292	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
375-95-1	* **Perfluorononanoic acid (PFNA)**	**8.35**		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
335-76-2	* **Perfluorodecanoic acid (PFDA)**	**1.28**	J	ng/L	0.524	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
2355-31-9	* N-MeFOSAA	ND		ng/L	0.529	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
2991-50-6	* N-EtFOSAA	ND		ng/L	0.557	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**16.9**		ng/L	0.452	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ng/L	0.296	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT

Sample Information

Client Sample ID: MW05_043020 **York Sample ID:** 20D0849-13

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 12:00 am	04/30/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	*** Perfluoro-1-heptanesulfonic acid (PFHpS)**	**2.42**		ng/L	0.415	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ng/L	0.492	5.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ng/L	0.399	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**17.4**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*48.0 %*		*25-150*
Surrogate: M5PFHxA	*46.8 %*		*25-150*
Surrogate: M4PFHpA	*55.7 %*		*25-150*
Surrogate: M3PFHxS	*54.8 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*58.7 %*		*25-150*
Surrogate: M6PFDA	*60.4 %*		*25-150*
Surrogate: M7PFUdA	*50.8 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*36.6 %*		*25-150*
Surrogate: M2PFTeDA	*11.0 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*40.0 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*54.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*39.0 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*24.8 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*48.9 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*50.9 %*		*25-150*
Surrogate: M2-6:2 FTS	*192 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*98.9 %*		*25-150*
Surrogate: M9PFNA	*64.2 %*		*25-150*

Sample Information

Client Sample ID: GWDUP01_043020 **York Sample ID:** 20D0849-14

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 12:00 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/04/2020 07:55	05/05/2020 17:44	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*72.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* **Perfluorobutanesulfonic acid (PFBS)**	**0.894**	J	ng/L	0.294	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**3.18**		ng/L	0.471	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
375-85-9	* **Perfluoroheptanoic acid (PFHpA)**	**2.32**		ng/L	0.635	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
355-46-4	* **Perfluorohexanesulfonic acid (PFHxS)**	**0.681**	J	ng/L	0.281	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**27.5**		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
1763-23-1	* **Perfluorooctanesulfonic acid (PFOS)**	**12.3**		ng/L	0.292	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
375-95-1	* **Perfluorononanoic acid (PFNA)**	**0.741**	J	ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ng/L	0.524	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
2355-31-9	* N-MeFOSAA	ND		ng/L	0.529	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
2991-50-6	* N-EtFOSAA	ND		ng/L	0.557	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**2.79**		ng/L	0.452	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ng/L	0.296	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT

Sample Information

Client Sample ID: GWDUP01_043020 **York Sample ID:** 20D0849-14

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 12:00 am	04/30/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ng/L	0.415	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ng/L	0.492	5.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ng/L	0.399	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**4.94**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*52.9 %*	*25-150*
Surrogate: M5PFHxA	*52.9 %*	*25-150*
Surrogate: M4PFHpA	*65.2 %*	*25-150*
Surrogate: M3PFHxS	*56.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*59.9 %*	*25-150*
Surrogate: M6PFDA	*61.6 %*	*25-150*
Surrogate: M7PFUdA	*49.9 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*44.0 %*	*25-150*
Surrogate: M2PFTeDA	*25.4 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*62.9 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*56.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*51.0 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*33.0 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*49.4 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*47.5 %*	*25-150*
Surrogate: M2-6:2 FTS	*88.5 %*	*25-150*
Surrogate: M2-8:2 FTS	*68.5 %*	*25-150*
Surrogate: M9PFNA	*60.4 %*	*25-150*

Sample Information

Client Sample ID: GWFB01_043020 **York Sample ID:** 20D0849-15

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 2:00 pm	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/04/2020 07:55	05/05/2020 18:01	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*64.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ng/L	0.294	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ng/L	0.471	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ng/L	0.635	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ng/L	0.281	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**0.551**	J	ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ng/L	0.292	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ng/L	0.524	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
2355-31-9	* N-MeFOSAA	ND		ng/L	0.529	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
2991-50-6	* N-EtFOSAA	ND		ng/L	0.557	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**0.719**	J	ng/L	0.452	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ng/L	0.296	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT

Sample Information

Client Sample ID: GWFB01_043020 **York Sample ID:** 20D0849-15

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 2:00 pm	04/30/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ng/L	0.415	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ng/L	0.492	5.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ng/L	0.399	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**2.24**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*53.8 %*	*25-150*
Surrogate: M5PFHxA	*54.3 %*	*25-150*
Surrogate: M4PFHpA	*64.1 %*	*25-150*
Surrogate: M3PFHxS	*57.2 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*56.7 %*	*25-150*
Surrogate: M6PFDA	*58.7 %*	*25-150*
Surrogate: M7PFUdA	*53.0 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*50.2 %*	*25-150*
Surrogate: M2PFTeDA	*32.2 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*75.5 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*57.2 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*53.7 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*48.4 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*51.0 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*49.0 %*	*25-150*
Surrogate: M2-6:2 FTS	*57.6 %*	*25-150*
Surrogate: M2-8:2 FTS	*65.3 %*	*25-150*
Surrogate: M9PFNA	*58.3 %*	*25-150*

Analytical Batch Summary

Batch ID: BE00012 **Preparation Method:** % Solids Prep **Prepared By:** TJM

YORK Sample ID	Client Sample ID	Preparation Date
20D0849-01	SB16_0-2	05/01/20
20D0849-02	SB16_14-16	05/01/20
20D0849-03	SB16_18-20	05/01/20
20D0849-04	SB12_0-2	05/01/20
20D0849-05	SB12_8-10	05/01/20
20D0849-06	SB12_18-20	05/01/20
20D0849-07	SB11_0-2	05/01/20
20D0849-08	SB11_10-12	05/01/20
20D0849-09	SB11_18-20	05/01/20
BE00012-DUP1	Duplicate	05/01/20

Batch ID: BE00069 **Preparation Method:** EPA 3535A **Prepared By:** CTD

YORK Sample ID	Client Sample ID	Preparation Date
20D0849-10	SOFB02_043020	05/04/20
20D0849-11	MW06_043020	05/04/20
20D0849-12	MW08_043020	05/04/20
20D0849-13	MW05_043020	05/04/20
20D0849-14	GWDUP01_043020	05/04/20
20D0849-15	GWFB01_043020	05/04/20
BE00069-BLK1	Blank	05/04/20
BE00069-BS1	LCS	05/04/20

Batch ID: BE00118 **Preparation Method:** EPA 3550C **Prepared By:** LM

YORK Sample ID	Client Sample ID	Preparation Date
20D0849-01	SB16_0-2	05/05/20
20D0849-02	SB16_14-16	05/05/20
20D0849-03	SB16_18-20	05/05/20
20D0849-04	SB12_0-2	05/05/20
20D0849-05	SB12_8-10	05/05/20
20D0849-06	SB12_18-20	05/05/20
20D0849-07	SB11_0-2	05/05/20
20D0849-08	SB11_10-12	05/05/20
20D0849-09	SB11_18-20	05/05/20
BE00118-BLK1	Blank	05/05/20
BE00118-BS1	LCS	05/05/20
BE00118-MS1	Matrix Spike	05/05/20

Batch ID: BE00136 **Preparation Method:** SPE PFAS Extraction-Soil-EPA 537m **Prepared By:** KT

YORK Sample ID	Client Sample ID	Preparation Date
20D0849-01	SB16_0-2	05/05/20
20D0849-02	SB16_14-16	05/05/20

20D0849-03	SB16_18-20	05/05/20
20D0849-04	SB12_0-2	05/05/20
20D0849-05	SB12_8-10	05/05/20
20D0849-06	SB12_18-20	05/05/20
20D0849-07	SB11_0-2	05/05/20
20D0849-08	SB11_10-12	05/05/20
20D0849-09	SB11_18-20	05/05/20
BE00136-BLK1	Blank	05/05/20
BE00136-BS1	LCS	05/05/20
BE00136-MS1	Matrix Spike	05/05/20
BE00136-MSD1	Matrix Spike Dup	05/05/20

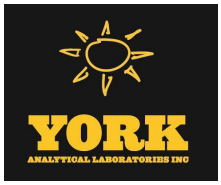
Batch ID: BE00144 **Preparation Method:** SPE Ext-PFAS-EPA 537.1M **Prepared By:** KHA

YORK Sample ID	Client Sample ID	Preparation Date
20D0849-10	SOFB02_043020	05/05/20
20D0849-11	MW06_043020	05/05/20
20D0849-12	MW08_043020	05/05/20
20D0849-13	MW05_043020	05/05/20
20D0849-14	GWDUP01_043020	05/05/20
20D0849-15	GWFB01_043020	05/05/20
BE00144-BLK1	Blank	05/05/20
BE00144-BS1	LCS	05/05/20
BE00144-BS2	LCS	05/05/20
BE00144-BS3	LCS	05/05/20
BE00144-BS4	LCS	05/05/20
BE00144-DUP1	Duplicate	05/05/20
BE00144-MS1	Matrix Spike	05/05/20

Semivolatile Organic Compounds by GC/MS/SIM - Quality Control Data

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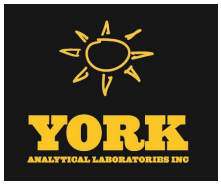
Analyte		Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00069 - EPA 3535A												
Blank (BE00069-BLK1)	Blank									Prepared: 05/04/2020 Analyzed: 05/05/2020		
1,4-Dioxane		ND	0.200	ug/L								
Surrogate: 1,4-Dioxane-d8		*3.40*		*"*	*5.00*		*68.0*	*36.6-118*				
LCS (BE00069-BS1)	LCS									Prepared: 05/04/2020 Analyzed: 05/05/2020		
1,4-Dioxane		5.58	0.200	ug/L	5.00		112	50-130				
Surrogate: 1,4-Dioxane-d8		*3.40*		*"*	*5.00*		*68.0*	*36.6-118*				
Batch BE00118 - EPA 3550C												
Blank (BE00118-BLK1)	Blank									Prepared: 05/05/2020 Analyzed: 05/06/2020		
1,4-Dioxane		ND	9.90	ug/kg								
Surrogate: 1,4-Dioxane-d8		*356*		*"*	*495*		*72.0*	*39-83.1*				
LCS (BE00118-BS1)	LCS									Prepared: 05/05/2020 Analyzed: 05/06/2020		
1,4-Dioxane		455	9.90	ug/kg	495		92.0	40-130				
Surrogate: 1,4-Dioxane-d8		*624*		*"*	*495*		*126*	*39-83.1*				
Matrix Spike (BE00118-MS1)	Matrix Spike	*Source sample: 20D0849-04 (SB12_0-2)								Prepared: 05/05/2020 Analyzed: 05/06/2020		
1,4-Dioxane		495	9.90	ug/kg	495	ND	100	40-130				
Surrogate: 1,4-Dioxane-d8		*287*		*"*	*495*		*58.0*	*40-130*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

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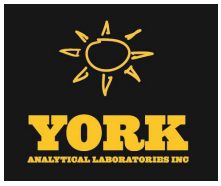
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00136 - SPE PFAS Extraction-Soil-EPA 537m											
Blank (BE00136-BLK1) Blank									Prepared: 05/05/2020 Analyzed: 05/09/2020		
Perfluorobutanesulfonic acid (PFBS)	ND	0.490	ug/kg wet								
Perfluorohexanoic acid (PFHxA)	ND	0.490	"								
Perfluoroheptanoic acid (PFHpA)	ND	0.490	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	0.490	"								
Perfluorooctanoic acid (PFOA)	ND	0.490	"								
Perfluorooctanesulfonic acid (PFOS)	ND	0.490	"								
Perfluorononanoic acid (PFNA)	ND	0.490	"								
Perfluorodecanoic acid (PFDA)	ND	0.490	"								
Perfluoroundecanoic acid (PFUnA)	ND	0.490	"								
Perfluorododecanoic acid (PFDoA)	ND	0.490	"								
Perfluorotridecanoic acid (PFTrDA)	ND	0.490	"								
Perfluorotetradecanoic acid (PFTA)	ND	0.490	"								
N-MeFOSAA	ND	0.490	"								
N-EtFOSAA	ND	0.490	"								
Perfluoropentanoic acid (PFPeA)	ND	0.490	"								
Perfluoro-1-octanesulfonamide (FOSA)	ND	0.490	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	0.490	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	0.490	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	ND	0.490	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	ND	0.490	"								
Perfluoro-n-butanoic acid (PFBA)	ND	0.490	"								
Surrogate: M3PFBS	*3.67*		"	*4.55*		*80.8*	*25-150*				
Surrogate: M5PFHxA	*3.94*		"	*4.90*		*80.6*	*25-150*				
Surrogate: M4PFHpA	*4.15*		"	*4.90*		*84.8*	*25-150*				
Surrogate: M3PFHxS	*3.81*		"	*4.63*		*82.2*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*4.22*		"	*4.90*		*86.2*	*25-150*				
Surrogate: M6PFDA	*4.06*		"	*4.90*		*83.0*	*25-150*				
Surrogate: M7PFUdA	*3.92*		"	*4.90*		*80.0*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*4.28*		"	*4.90*		*87.5*	*25-150*				
Surrogate: M2PFTeDA	*3.99*		"	*4.90*		*81.5*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*5.63*		"	*4.90*		*115*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*4.01*		"	*4.69*		*85.7*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.93*		"	*4.90*		*80.3*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.63*		"	*4.90*		*74.1*	*10-150*				
Surrogate: d3-N-MeFOSAA	*3.82*		"	*4.90*		*77.9*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.00*		"	*4.90*		*81.7*	*25-150*				
Surrogate: M2-6:2 FTS	*4.34*		"	*4.65*		*93.4*	*25-150*				
Surrogate: M2-8:2 FTS	*4.17*		"	*4.69*		*89.0*	*25-150*				
Surrogate: M9PFNA	*4.63*		"	*4.90*		*94.5*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

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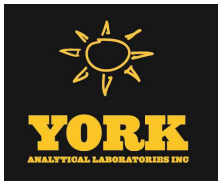
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00136 - SPE PFAS Extraction-Soil-EPA 537m											
LCS (BE00136-BS1) LCS									Prepared: 05/05/2020 Analyzed: 05/09/2020		
Perfluorobutanesulfonic acid (PFBS)	4.24	0.481	ug/kg wet	4.26		99.6	50-130				
Perfluorohexanoic acid (PFHxA)	4.52	0.481	"	4.81		93.9	50-130				
Perfluoroheptanoic acid (PFHpA)	4.23	0.481	"	4.81		87.9	50-130				
Perfluorohexanesulfonic acid (PFHxS)	3.40	0.481	"	3.56		95.6	50-130				
Perfluorooctanoic acid (PFOA)	4.25	0.481	"	4.81		88.3	50-130				
Perfluorooctanesulfonic acid (PFOS)	3.28	0.481	"	3.51		93.5	50-130				
Perfluorononanoic acid (PFNA)	4.04	0.481	"	4.62		87.5	50-130				
Perfluorodecanoic acid (PFDA)	4.48	0.481	"	4.81		93.1	50-130				
Perfluoroundecanoic acid (PFUnA)	4.40	0.481	"	4.81		91.5	50-130				
Perfluorododecanoic acid (PFDoA)	4.48	0.481	"	4.81		93.2	50-130				
Perfluorotridecanoic acid (PFTrDA)	4.38	0.481	"	4.81		91.0	50-130				
Perfluorotetradecanoic acid (PFTA)	4.51	0.481	"	4.81		93.9	50-130				
N-MeFOSAA	4.62	0.481	"	4.81		96.0	50-130				
N-EtFOSAA	4.45	0.481	"	4.81		92.5	50-130				
Perfluoropentanoic acid (PFPeA)	4.44	0.481	"	4.81		92.4	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	4.93	0.481	"	4.81		103	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	4.84	0.481	"	4.78		101	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	4.02	0.481	"	4.64		86.5	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	3.99	0.481	"	4.57		87.3	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.48	0.481	"	4.62		119	50-130				
Perfluoro-n-butanoic acid (PFBA)	4.57	0.481	"	4.81		95.1	50-130				
Surrogate: M3PFBS	*3.24*		"	*4.47*		*72.6*	*25-150*				
Surrogate: M5PFHxA	*3.47*		"	*4.81*		*72.2*	*25-150*				
Surrogate: M4PFHpA	*3.71*		"	*4.81*		*77.2*	*25-150*				
Surrogate: M3PFHxS	*3.38*		"	*4.55*		*74.2*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.74*		"	*4.81*		*77.7*	*25-150*				
Surrogate: M6PFDA	*3.61*		"	*4.81*		*75.1*	*25-150*				
Surrogate: M7PFUdA	*3.44*		"	*4.81*		*71.6*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*3.47*		"	*4.81*		*72.1*	*25-150*				
Surrogate: M2PFTeDA	*3.41*		"	*4.81*		*70.8*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*5.04*		"	*4.81*		*105*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*3.44*		"	*4.60*		*74.8*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.54*		"	*4.81*		*73.6*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.16*		"	*4.81*		*65.6*	*10-150*				
Surrogate: d3-N-MeFOSAA	*3.51*		"	*4.81*		*73.0*	*25-150*				
Surrogate: d5-N-EtFOSAA	*3.22*		"	*4.81*		*66.9*	*25-150*				
Surrogate: M2-6:2 FTS	*3.82*		"	*4.56*		*83.8*	*25-150*				
Surrogate: M2-8:2 FTS	*3.59*		"	*4.61*		*77.9*	*25-150*				
Surrogate: M9PFNA	*4.06*		"	*4.81*		*84.3*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

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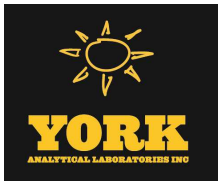
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00136 - SPE PFAS Extraction-Soil-EPA 537m											
Matrix Spike (BE00136-MS1) Matrix Spike	*Source sample: 20D0849-04 (SB12_0-2)								Prepared: 05/05/2020 Analyzed: 05/09/2020		
Perfluorobutanesulfonic acid (PFBS)	4.40	0.522	ug/kg dry	4.62	ND	95.1	25-150				
Perfluorohexanoic acid (PFHxA)	4.58	0.522	"	5.22	ND	87.7	25-150				
Perfluoroheptanoic acid (PFHpA)	4.17	0.522	"	5.22	ND	79.7	25-150				
Perfluorohexanesulfonic acid (PFHxS)	4.30	0.522	"	3.87	ND	111	25-150				
Perfluorooctanoic acid (PFOA)	4.73	0.522	"	5.22	0.166	87.3	25-150				
Perfluorooctanesulfonic acid (PFOS)	5.03	0.522	"	3.81	0.292	124	25-150				
Perfluorononanoic acid (PFNA)	4.22	0.522	"	5.01	ND	84.1	25-150				
Perfluorodecanoic acid (PFDA)	4.40	0.522	"	5.22	ND	84.2	25-150				
Perfluoroundecanoic acid (PFUnA)	4.56	0.522	"	5.22	ND	87.3	25-150				
Perfluorododecanoic acid (PFDoA)	4.30	0.522	"	5.22	ND	82.3	25-150				
Perfluorotridecanoic acid (PFTrDA)	4.16	0.522	"	5.22	ND	79.7	25-150				
Perfluorotetradecanoic acid (PFTA)	4.50	0.522	"	5.22	ND	86.2	25-150				
N-MeFOSAA	4.11	0.522	"	5.22	ND	78.7	25-150				
N-EtFOSAA	4.77	0.522	"	5.22	ND	91.3	25-150				
Perfluoropentanoic acid (PFPeA)	4.56	0.522	"	5.22	0.111	85.2	25-150				
Perfluoro-1-octanesulfonamide (FOSA)	4.59	0.522	"	5.22	ND	87.8	25-150				
Perfluoro-1-heptanesulfonic acid (PFHpS)	4.98	0.522	"	5.20	ND	95.9	25-150				
Perfluoro-1-decanesulfonic acid (PFDS)	3.55	0.522	"	5.04	ND	70.5	25-150				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	4.24	0.522	"	4.96	ND	85.4	25-150				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.50	0.522	"	5.01	ND	110	25-150				
Perfluoro-n-butanoic acid (PFBA)	4.97	0.522	"	5.22	ND	95.1	25-150				
Surrogate: M3PFBS	*3.07*		"	*4.85*		*63.3*	*25-150*				
Surrogate: M5PFHxA	*3.33*		"	*5.22*		*63.8*	*25-150*				
Surrogate: M4PFHpA	*3.90*		"	*5.22*		*74.7*	*25-150*				
Surrogate: M3PFHxS	*3.19*		"	*4.94*		*64.5*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.88*		"	*5.22*		*74.2*	*25-150*				
Surrogate: M6PFDA	*3.95*		"	*5.22*		*75.7*	*25-150*				
Surrogate: M7PFUdA	*3.65*		"	*5.22*		*69.8*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*3.79*		"	*5.22*		*72.6*	*25-150*				
Surrogate: M2PFTeDA	*3.72*		"	*5.22*		*71.2*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*4.68*		"	*5.22*		*89.7*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*3.22*		"	*5.00*		*64.5*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.32*		"	*5.22*		*63.5*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.30*		"	*5.22*		*63.1*	*10-150*				
Surrogate: d3-N-MeFOSAA	*4.45*		"	*5.22*		*85.1*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.53*		"	*5.22*		*86.8*	*25-150*				
Surrogate: M2-6:2 FTS	*7.15*		"	*4.96*		*144*	*25-150*				
Surrogate: M2-8:2 FTS	*8.75*		"	*5.00*		*175*	*25-150*				
Surrogate: M9PFNA	*4.26*		"	*5.22*		*81.6*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

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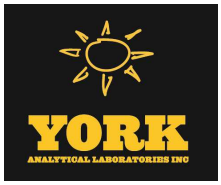
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00136 - SPE PFAS Extraction-Soil-EPA 537m											
Matrix Spike Dup (BE00136-M Matrix Spike Dup	*Source sample: 20D0849-04 (SB12_0-2)								Prepared: 05/05/2020 Analyzed: 05/09/2020		
Perfluorobutanesulfonic acid (PFBS)	4.26	0.524	ug/kg dry	4.63	ND	91.9	25-150		3.18	35	
Perfluorohexanoic acid (PFHxA)	4.15	0.524	"	5.24	ND	79.2	25-150		9.97	35	
Perfluoroheptanoic acid (PFHpA)	4.21	0.524	"	5.24	ND	80.3	25-150		0.985	35	
Perfluorohexanesulfonic acid (PFHxS)	3.98	0.524	"	3.87	ND	103	25-150		7.65	35	
Perfluorooctanoic acid (PFOA)	4.68	0.524	"	5.24	0.166	86.3	25-150		0.886	35	
Perfluorooctanesulfonic acid (PFOS)	4.87	0.524	"	3.82	0.292	120	25-150		3.08	35	
Perfluorononanoic acid (PFNA)	4.24	0.524	"	5.03	ND	84.3	25-150		0.507	35	
Perfluorodecanoic acid (PFDA)	4.31	0.524	"	5.24	ND	82.3	25-150		2.06	35	
Perfluoroundecanoic acid (PFUnA)	4.53	0.524	"	5.24	ND	86.6	25-150		0.604	35	
Perfluorododecanoic acid (PFDoA)	3.57	0.524	"	5.24	ND	68.2	25-150		18.5	35	
Perfluorotridecanoic acid (PFTrDA)	4.15	0.524	"	5.24	ND	79.3	25-150		0.267	35	
Perfluorotetradecanoic acid (PFTA)	4.48	0.524	"	5.24	ND	85.5	25-150		0.479	35	
N-MeFOSAA	4.61	0.524	"	5.24	ND	88.0	25-150		11.4	35	
N-EtFOSAA	4.31	0.524	"	5.24	ND	82.3	25-150		10.2	35	
Perfluoropentanoic acid (PFPeA)	4.59	0.524	"	5.24	0.111	85.5	25-150		0.557	35	
Perfluoro-1-octanesulfonamide (FOSA)	4.75	0.524	"	5.24	ND	90.8	25-150		3.57	35	
Perfluoro-1-heptanesulfonic acid (PFHpS)	5.07	0.524	"	5.21	ND	97.4	25-150		1.81	35	
Perfluoro-1-decanesulfonic acid (PFDS)	3.65	0.524	"	5.05	ND	72.2	25-150		2.60	35	
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	4.24	0.524	"	4.97	ND	85.2	25-150		0.0152	35	
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.21	0.524	"	5.03	ND	104	25-150		5.39	35	
Perfluoro-n-butanoic acid (PFBA)	4.83	0.524	"	5.24	ND	92.2	25-150		2.75	35	
Surrogate: M3PFBS	*3.32*		*"*	*4.86*		*68.3*	*25-150*				
Surrogate: M5PFHxA	*3.56*		*"*	*5.24*		*68.0*	*25-150*				
Surrogate: M4PFHpA	*4.21*		*"*	*5.24*		*80.4*	*25-150*				
Surrogate: M3PFHxS	*3.56*		*"*	*4.95*		*71.9*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*4.18*		*"*	*5.24*		*79.9*	*25-150*				
Surrogate: M6PFDA	*4.09*		*"*	*5.24*		*78.0*	*25-150*				
Surrogate: M7PFUdA	*3.44*		*"*	*5.24*		*65.7*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*3.57*		*"*	*5.24*		*68.1*	*25-150*				
Surrogate: M2PFTeDA	*3.44*		*"*	*5.24*		*65.8*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*5.24*		*"*	*5.24*		*100*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*3.24*		*"*	*5.01*		*64.6*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.55*		*"*	*5.24*		*67.8*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.42*		*"*	*5.24*		*65.3*	*10-150*				
Surrogate: d3-N-MeFOSAA	*4.37*		*"*	*5.24*		*83.5*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.98*		*"*	*5.24*		*95.0*	*25-150*				
Surrogate: M2-6:2 FTS	*7.87*		*"*	*4.97*		*158*	*25-150*				
Surrogate: M2-8:2 FTS	*10.0*		*"*	*5.02*		*200*	*25-150*				
Surrogate: M9PFNA	*4.41*		*"*	*5.24*		*84.1*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

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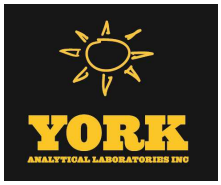
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00144 - SPE Ext-PFAS-EPA 537.1M											
Blank (BE00144-BLK1) Blank									Prepared: 05/05/2020 Analyzed: 05/08/2020		
Perfluorobutanesulfonic acid (PFBS)	ND	2.00	ng/L								
Perfluorohexanoic acid (PFHxA)	ND	2.00	"								
Perfluoroheptanoic acid (PFHpA)	ND	2.00	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	2.00	"								
Perfluorooctanoic acid (PFOA)	ND	2.00	"								
Perfluorooctanesulfonic acid (PFOS)	ND	2.00	"								
Perfluorononanoic acid (PFNA)	ND	2.00	"								
Perfluorodecanoic acid (PFDA)	ND	2.00	"								
Perfluoroundecanoic acid (PFUnA)	ND	2.00	"								
Perfluorododecanoic acid (PFDoA)	ND	2.00	"								
Perfluorotridecanoic acid (PFTrDA)	ND	2.00	"								
Perfluorotetradecanoic acid (PFTA)	ND	2.00	"								
N-MeFOSAA	ND	2.00	"								
N-EtFOSAA	ND	2.00	"								
Perfluoropentanoic acid (PFPeA)	0.883	2.00	"								
Perfluoro-1-octanesulfonamide (FOSA)	0.576	2.00	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	2.00	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	2.00	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	ND	5.00	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	ND	2.00	"								
Perfluoro-n-butanoic acid (PFBA)	2.72	2.00	"								
Surrogate: M3PFBS	*41.1*		"	*74.3*		*55.3*	*25-150*				
Surrogate: M5PFHxA	*46.2*		"	*80.0*		*57.7*	*25-150*				
Surrogate: M4PFHpA	*49.6*		"	*80.0*		*62.0*	*25-150*				
Surrogate: M3PFHxS	*44.2*		"	*75.7*		*58.4*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*48.2*		"	*80.0*		*60.3*	*25-150*				
Surrogate: M6PFDA	*53.3*		"	*80.0*		*66.7*	*25-150*				
Surrogate: M7PFUdA	*48.1*		"	*80.0*		*60.1*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*46.7*		"	*80.0*		*58.4*	*25-150*				
Surrogate: M2PFTeDA	*38.7*		"	*80.0*		*48.3*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*51.5*		"	*80.0*		*64.3*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*45.0*		"	*76.6*		*58.8*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*45.5*		"	*80.0*		*56.9*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*43.5*		"	*80.0*		*54.4*	*10-150*				
Surrogate: d3-N-MeFOSAA	*49.9*		"	*80.0*		*62.4*	*25-150*				
Surrogate: d5-N-EtFOSAA	*48.3*		"	*80.0*		*60.3*	*25-150*				
Surrogate: M2-6:2 FTS	*48.5*		"	*75.9*		*63.9*	*25-150*				
Surrogate: M2-8:2 FTS	*56.1*		"	*76.6*		*73.2*	*25-150*				
Surrogate: M9PFNA	*50.5*		"	*80.0*		*63.1*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

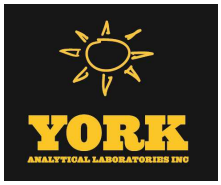
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00144 - SPE Ext-PFAS-EPA 537.1M											
LCS (BE00144-BS1) LCS									Prepared: 05/05/2020 Analyzed: 05/08/2020		
Perfluorobutanesulfonic acid (PFBS)	73.0	2.00	ng/L	70.8		103	50-130				
Perfluorohexanoic acid (PFHxA)	79.0	2.00	"	80.0		98.8	50-130				
Perfluoroheptanoic acid (PFHpA)	72.7	2.00	"	80.0		90.9	50-130				
Perfluorohexanesulfonic acid (PFHxS)	57.8	2.00	"	59.2		97.7	50-130				
Perfluorooctanoic acid (PFOA)	80.2	2.00	"	80.0		100	50-130				
Perfluorooctanesulfonic acid (PFOS)	58.8	2.00	"	58.4		101	50-130				
Perfluorononanoic acid (PFNA)	71.2	2.00	"	76.8		92.7	50-130				
Perfluorodecanoic acid (PFDA)	74.1	2.00	"	80.0		92.6	50-130				
Perfluoroundecanoic acid (PFUnA)	80.6	2.00	"	80.0		101	50-130				
Perfluorododecanoic acid (PFDoA)	77.0	2.00	"	80.0		96.3	50-130				
Perfluorotridecanoic acid (PFTrDA)	64.2	2.00	"	80.0		80.3	50-130				
Perfluorotetradecanoic acid (PFTA)	74.6	2.00	"	80.0		93.3	50-130				
N-MeFOSAA	71.7	2.00	"	80.0		89.7	50-130				
N-EtFOSAA	79.6	2.00	"	80.0		99.5	50-130				
Perfluoropentanoic acid (PFPeA)	77.2	2.00	"	80.0		96.6	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	77.8	2.00	"	80.0		97.2	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	87.9	2.00	"	79.6		110	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	64.9	2.00	"	77.2		84.1	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	65.6	5.00	"	76.0		86.3	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	84.9	2.00	"	76.8		111	50-130				
Perfluoro-n-butanoic acid (PFBA)	78.6	2.00	"	80.0		98.2	50-130				
Surrogate: M3PFBS	*45.5*		"	*74.3*		*61.2*	*25-150*				
Surrogate: M5PFHxA	*50.5*		"	*80.0*		*63.1*	*25-150*				
Surrogate: M4PFHpA	*54.9*		"	*80.0*		*68.6*	*25-150*				
Surrogate: M3PFHxS	*48.6*		"	*75.7*		*64.2*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*49.4*		"	*80.0*		*61.8*	*25-150*				
Surrogate: M6PFDA	*56.5*		"	*80.0*		*70.7*	*25-150*				
Surrogate: M7PFUdA	*47.2*		"	*80.0*		*59.0*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*45.6*		"	*80.0*		*57.0*	*25-150*				
Surrogate: M2PFTeDA	*31.0*		"	*80.0*		*38.7*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*68.6*		"	*80.0*		*85.8*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*46.0*		"	*76.6*		*60.0*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*49.5*		"	*80.0*		*61.9*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*49.4*		"	*80.0*		*61.7*	*10-150*				
Surrogate: d3-N-MeFOSAA	*53.9*		"	*80.0*		*67.3*	*25-150*				
Surrogate: d5-N-EtFOSAA	*47.4*		"	*80.0*		*59.3*	*25-150*				
Surrogate: M2-6:2 FTS	*59.8*		"	*75.9*		*78.8*	*25-150*				
Surrogate: M2-8:2 FTS	*60.8*		"	*76.6*		*79.4*	*25-150*				
Surrogate: M9PFNA	*52.5*		"	*80.0*		*65.6*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00144 - SPE Ext-PFAS-EPA 537.1M											
LCS (BE00144-BS2) LCS									Prepared: 05/05/2020 Analyzed: 05/08/2020		
Perfluorobutanesulfonic acid (PFBS)	71.0	2.00	ng/L	70.8		100	50-130				
Perfluorohexanoic acid (PFHxA)	71.9	2.00	"	80.0		89.9	50-130				
Perfluoroheptanoic acid (PFHpA)	68.8	2.00	"	80.0		85.9	50-130				
Perfluorohexanesulfonic acid (PFHxS)	57.9	2.00	"	59.2		97.8	50-130				
Perfluorooctanoic acid (PFOA)	73.5	2.00	"	80.0		91.9	50-130				
Perfluorooctanesulfonic acid (PFOS)	53.3	2.00	"	58.4		91.3	50-130				
Perfluorononanoic acid (PFNA)	69.4	2.00	"	76.8		90.4	50-130				
Perfluorodecanoic acid (PFDA)	75.0	2.00	"	80.0		93.8	50-130				
Perfluoroundecanoic acid (PFUnA)	76.6	2.00	"	80.0		95.7	50-130				
Perfluorododecanoic acid (PFDoA)	73.2	2.00	"	80.0		91.5	50-130				
Perfluorotridecanoic acid (PFTrDA)	65.2	2.00	"	80.0		81.5	50-130				
Perfluorotetradecanoic acid (PFTA)	78.0	2.00	"	80.0		97.5	50-130				
N-MeFOSAA	69.9	2.00	"	80.0		87.4	50-130				
N-EtFOSAA	73.0	2.00	"	80.0		91.3	50-130				
Perfluoropentanoic acid (PFPeA)	75.0	2.00	"	80.0		93.7	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	79.0	2.00	"	80.0		98.8	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	85.9	2.00	"	79.6		108	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	68.4	2.00	"	77.2		88.6	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	77.0	5.00	"	76.0		101	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	83.7	2.00	"	76.8		109	50-130				
Perfluoro-n-butanoic acid (PFBA)	78.1	2.00	"	80.0		97.7	50-130				
Surrogate: M3PFBS	*39.6*		"	*74.3*		*53.3*	*25-150*				
Surrogate: M5PFHxA	*44.4*		"	*80.0*		*55.5*	*25-150*				
Surrogate: M4PFHpA	*48.2*		"	*80.0*		*60.2*	*25-150*				
Surrogate: M3PFHxS	*41.9*		"	*75.7*		*55.4*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*45.7*		"	*80.0*		*57.1*	*25-150*				
Surrogate: M6PFDA	*48.6*		"	*80.0*		*60.7*	*25-150*				
Surrogate: M7PFUdA	*43.4*		"	*80.0*		*54.2*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*43.9*		"	*80.0*		*54.9*	*25-150*				
Surrogate: M2PFTeDA	*33.5*		"	*80.0*		*41.8*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*58.4*		"	*80.0*		*73.0*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*41.8*		"	*76.6*		*54.6*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*42.4*		"	*80.0*		*53.0*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*40.0*		"	*80.0*		*50.0*	*10-150*				
Surrogate: d3-N-MeFOSAA	*48.2*		"	*80.0*		*60.3*	*25-150*				
Surrogate: d5-N-EtFOSAA	*44.1*		"	*80.0*		*55.1*	*25-150*				
Surrogate: M2-6:2 FTS	*46.8*		"	*75.9*		*61.6*	*25-150*				
Surrogate: M2-8:2 FTS	*49.3*		"	*76.6*		*64.4*	*25-150*				
Surrogate: M9PFNA	*46.6*		"	*80.0*		*58.3*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00144 - SPE Ext-PFAS-EPA 537.1M											
LCS (BE00144-BS3) LCS									Prepared: 05/05/2020 Analyzed: 05/08/2020		
Perfluorobutanesulfonic acid (PFBS)	75.0	2.00	ng/L	70.8		106	50-130				
Perfluorohexanoic acid (PFHxA)	78.1	2.00	"	80.0		97.6	50-130				
Perfluoroheptanoic acid (PFHpA)	70.3	2.00	"	80.0		87.9	50-130				
Perfluorohexanesulfonic acid (PFHxS)	58.9	2.00	"	59.2		99.5	50-130				
Perfluorooctanoic acid (PFOA)	75.9	2.00	"	80.0		94.9	50-130				
Perfluorooctanesulfonic acid (PFOS)	60.4	2.00	"	58.4		104	50-130				
Perfluorononanoic acid (PFNA)	74.1	2.00	"	76.8		96.4	50-130				
Perfluorodecanoic acid (PFDA)	80.5	2.00	"	80.0		101	50-130				
Perfluoroundecanoic acid (PFUnA)	76.4	2.00	"	80.0		95.6	50-130				
Perfluorododecanoic acid (PFDoA)	75.8	2.00	"	80.0		94.8	50-130				
Perfluorotridecanoic acid (PFTrDA)	64.1	2.00	"	80.0		80.1	50-130				
Perfluorotetradecanoic acid (PFTA)	78.8	2.00	"	80.0		98.5	50-130				
N-MeFOSAA	73.5	2.00	"	80.0		91.9	50-130				
N-EtFOSAA	78.0	2.00	"	80.0		97.5	50-130				
Perfluoropentanoic acid (PFPeA)	76.3	2.00	"	80.0		95.4	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	82.9	2.00	"	80.0		104	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	88.8	2.00	"	79.6		112	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	68.6	2.00	"	77.2		88.8	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	69.4	5.00	"	76.0		91.4	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	85.4	2.00	"	76.8		111	50-130				
Perfluoro-n-butanoic acid (PFBA)	79.0	2.00	"	80.0		98.7	50-130				
Surrogate: M3PFBS	*41.0*		"	*74.3*		*55.2*	*25-150*				
Surrogate: M5PFHxA	*43.5*		"	*80.0*		*54.3*	*25-150*				
Surrogate: M4PFHpA	*48.8*		"	*80.0*		*61.0*	*25-150*				
Surrogate: M3PFHxS	*43.1*		"	*75.7*		*56.9*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*46.8*		"	*80.0*		*58.4*	*25-150*				
Surrogate: M6PFDA	*48.3*		"	*80.0*		*60.4*	*25-150*				
Surrogate: M7PFUdA	*43.9*		"	*80.0*		*54.9*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*42.8*		"	*80.0*		*53.5*	*25-150*				
Surrogate: M2PFTeDA	*29.3*		"	*80.0*		*36.6*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*51.0*		"	*80.0*		*63.8*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*41.5*		"	*76.6*		*54.2*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*42.7*		"	*80.0*		*53.3*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*39.7*		"	*80.0*		*49.6*	*10-150*				
Surrogate: d3-N-MeFOSAA	*47.1*		"	*80.0*		*58.8*	*25-150*				
Surrogate: d5-N-EtFOSAA	*41.8*		"	*80.0*		*52.2*	*25-150*				
Surrogate: M2-6:2 FTS	*52.6*		"	*75.9*		*69.2*	*25-150*				
Surrogate: M2-8:2 FTS	*55.9*		"	*76.6*		*72.9*	*25-150*				
Surrogate: M9PFNA	*45.6*		"	*80.0*		*57.0*	*25-150*				

PFAS Target compounds by LC/MS-MS - Quality Control Data

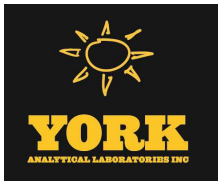
York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00144 - SPE Ext-PFAS-EPA 537.1M											
LCS (BE00144-BS4) LCS									Prepared: 05/05/2020 Analyzed: 05/08/2020		
Perfluorobutanesulfonic acid (PFBS)	75.5	2.00	ng/L	70.8		107	50-130				
Perfluorohexanoic acid (PFHxA)	78.6	2.00	"	80.0		98.3	50-130				
Perfluoroheptanoic acid (PFHpA)	69.2	2.00	"	80.0		86.5	50-130				
Perfluorohexanesulfonic acid (PFHxS)	57.4	2.00	"	59.2		97.0	50-130				
Perfluorooctanoic acid (PFOA)	74.9	2.00	"	80.0		93.6	50-130				
Perfluorooctanesulfonic acid (PFOS)	60.7	2.00	"	58.4		104	50-130				
Perfluorononanoic acid (PFNA)	74.6	2.00	"	76.8		97.1	50-130				
Perfluorodecanoic acid (PFDA)	72.5	2.00	"	80.0		90.6	50-130				
Perfluoroundecanoic acid (PFUnA)	74.2	2.00	"	80.0		92.8	50-130				
Perfluorododecanoic acid (PFDoA)	75.8	2.00	"	80.0		94.7	50-130				
Perfluorotridecanoic acid (PFTrDA)	70.2	2.00	"	80.0		87.8	50-130				
Perfluorotetradecanoic acid (PFTA)	79.7	2.00	"	80.0		99.6	50-130				
N-MeFOSAA	75.7	2.00	"	80.0		94.7	50-130				
N-EtFOSAA	76.6	2.00	"	80.0		95.7	50-130				
Perfluoropentanoic acid (PFPeA)	78.1	2.00	"	80.0		97.6	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	77.7	2.00	"	80.0		97.1	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	88.9	2.00	"	79.6		112	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	72.2	2.00	"	77.2		93.6	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	65.1	5.00	"	76.0		85.6	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	86.4	2.00	"	76.8		113	50-130				
Perfluoro-n-butanoic acid (PFBA)	79.8	2.00	"	80.0		99.7	50-130				
Surrogate: M3PFBS	*43.9*		"	*74.3*		*59.0*	*25-150*				
Surrogate: M5PFHxA	*47.2*		"	*80.0*		*59.0*	*25-150*				
Surrogate: M4PFHpA	*52.3*		"	*80.0*		*65.4*	*25-150*				
Surrogate: M3PFHxS	*47.0*		"	*75.7*		*62.1*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*48.5*		"	*80.0*		*60.7*	*25-150*				
Surrogate: M6PFDA	*53.7*		"	*80.0*		*67.1*	*25-150*				
Surrogate: M7PFUdA	*48.1*		"	*80.0*		*60.1*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*47.7*		"	*80.0*		*59.6*	*25-150*				
Surrogate: M2PFTeDA	*39.3*		"	*80.0*		*49.2*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*66.0*		"	*80.0*		*82.5*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*44.4*		"	*76.6*		*58.0*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*47.2*		"	*80.0*		*59.0*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*42.4*		"	*80.0*		*53.0*	*10-150*				
Surrogate: d3-N-MeFOSAA	*50.1*		"	*80.0*		*62.6*	*25-150*				
Surrogate: d5-N-EtFOSAA	*44.9*		"	*80.0*		*56.1*	*25-150*				
Surrogate: M2-6:2 FTS	*56.0*		"	*75.9*		*73.8*	*25-150*				
Surrogate: M2-8:2 FTS	*55.5*		"	*76.6*		*72.4*	*25-150*				
Surrogate: M9PFNA	*49.6*		"	*80.0*		*61.9*	*25-150*				

PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00144 - SPE Ext-PFAS-EPA 537.1M											
Duplicate (BE00144-DUP1) Duplicate	*Source sample: 20D0849-11 (MW06_043020)								Prepared: 05/05/2020 Analyzed: 05/08/2020		
Perfluorobutanesulfonic acid (PFBS)	9.21	2.00	ng/L		9.45				2.61	30	
Perfluorohexanoic acid (PFHxA)	18.4	2.00	"		22.3				19.1	30	
Perfluoroheptanoic acid (PFHpA)	18.3	2.00	"		20.5				11.6	30	
Perfluorohexanesulfonic acid (PFHxS)	2.49	2.00	"		2.69				7.91	30	
Perfluorooctanoic acid (PFOA)	175	2.00	"		178				1.85	30	
Perfluorooctanesulfonic acid (PFOS)	134	2.00	"		130				3.07	30	
Perfluorononanoic acid (PFNA)	9.77	2.00	"		9.87				1.00	30	
Perfluorodecanoic acid (PFDA)	2.77	2.00	"		2.52				9.52	30	
Perfluoroundecanoic acid (PFUnA)	ND	2.00	"		ND					30	
Perfluorododecanoic acid (PFDoA)	ND	2.00	"		ND					30	
Perfluorotridecanoic acid (PFTrDA)	ND	2.00	"		ND					30	
Perfluorotetradecanoic acid (PFTA)	ND	2.00	"		0.537					30	
N-MeFOSAA	ND	2.00	"		ND					30	
N-EtFOSAA	ND	2.00	"		0.726					30	
Perfluoropentanoic acid (PFPeA)	16.1	2.00	"		23.2				36.3	30	Non-dir.
Perfluoro-1-octanesulfonamide (FOSA)	0.574	2.00	"		0.700				19.7	30	
Perfluoro-1-heptanesulfonic acid (PFHpS)	1.05	2.00	"		0.894				15.6	30	
Perfluoro-1-decanesulfonic acid (PFDS)	ND	2.00	"		ND					30	
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	ND	5.00	"		ND					30	
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	ND	2.00	"		ND					30	
Perfluoro-n-butanoic acid (PFBA)	17.3	2.00	"		18.2				4.91	30	
Surrogate: M3PFBS	*34.4*		"	*74.3*		*46.3*	*25-150*				
Surrogate: M5PFHxA	*36.0*		"	*80.0*		*45.0*	*25-150*				
Surrogate: M4PFHpA	*42.8*		"	*80.0*		*53.5*	*25-150*				
Surrogate: M3PFHxS	*38.4*		"	*75.7*		*50.7*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*43.0*		"	*80.0*		*53.8*	*25-150*				
Surrogate: M6PFDA	*36.8*		"	*80.0*		*46.0*	*25-150*				
Surrogate: M7PFUdA	*21.2*		"	*80.0*		*26.5*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*8.58*		"	*80.0*		*10.7*	*25-150*				
Surrogate: M2PFTeDA	*5.47*		"	*80.0*		*6.84*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*35.4*		"	*80.0*		*44.2*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*33.5*		"	*76.6*		*43.7*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*32.7*		"	*80.0*		*40.9*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*7.69*		"	*80.0*		*9.62*	*10-150*				
Surrogate: d3-N-MeFOSAA	*27.8*		"	*80.0*		*34.8*	*25-150*				
Surrogate: d5-N-EtFOSAA	*21.6*		"	*80.0*		*27.0*	*25-150*				
Surrogate: M2-6:2 FTS	*138*		"	*75.9*		*182*	*25-150*				
Surrogate: M2-8:2 FTS	*77.3*		"	*76.6*		*101*	*25-150*				
Surrogate: M9PFNA	*45.6*		"	*80.0*		*57.0*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Batch BE00144 - SPE Ext-PFAS-EPA 537.1M

Matrix Spike (BE00144-MS1) Matrix Spike *Source sample: 20D0849-12 (MW08_043020) Prepared: 05/05/2020 Analyzed: 05/08/2020

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Perfluorobutanesulfonic acid (PFBS)	79.5	2.00	ng/L	70.8	0.933	111	25-150				
Perfluorohexanoic acid (PFHxA)	83.6	2.00	"	80.0	3.22	100	25-150				
Perfluoroheptanoic acid (PFHpA)	71.2	2.00	"	80.0	2.59	85.8	25-150				
Perfluorohexanesulfonic acid (PFHxS)	73.5	2.00	"	59.2	0.618	123	25-150				
Perfluorooctanoic acid (PFOA)	102	2.00	"	80.0	27.7	93.4	25-150				
Perfluorooctanesulfonic acid (PFOS)	92.4	2.00	"	58.4	10.9	140	25-150				
Perfluorononanoic acid (PFNA)	72.6	2.00	"	76.8	0.984	93.2	25-150				
Perfluorodecanoic acid (PFDA)	77.6	2.00	"	80.0	ND	97.0	25-150				
Perfluoroundecanoic acid (PFUnA)	78.0	2.00	"	80.0	ND	97.5	25-150				
Perfluorododecanoic acid (PFDoA)	78.4	2.00	"	80.0	ND	97.9	25-150				
Perfluorotridecanoic acid (PFTrDA)	54.5	2.00	"	80.0	ND	68.2	25-150				
Perfluorotetradecanoic acid (PFTA)	77.3	2.00	"	80.0	0.671	95.8	25-150				
N-MeFOSAA	75.7	2.00	"	80.0	0.712	93.7	25-150				
N-EtFOSAA	86.7	2.00	"	80.0	ND	108	25-150				
Perfluoropentanoic acid (PFPeA)	80.1	2.00	"	80.0	3.08	96.3	25-150				
Perfluoro-1-octanesulfonamide (FOSA)	83.9	2.00	"	80.0	0.816	104	25-150				
Perfluoro-1-heptanesulfonic acid (PFHpS)	94.1	2.00	"	79.6	ND	118	25-150				
Perfluoro-1-decanesulfonic acid (PFDS)	64.0	2.00	"	77.2	ND	82.9	25-150				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	72.5	5.00	"	76.0	ND	95.4	25-150				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	86.2	2.00	"	76.8	ND	112	25-150				
Perfluoro-n-butanoic acid (PFBA)	83.1	2.00	"	80.0	5.47	97.0	25-150				
Surrogate: M3PFBS	*37.2*		"	*74.3*		*50.0*	*25-150*				
Surrogate: M5PFHxA	*39.9*		"	*80.0*		*49.9*	*25-150*				
Surrogate: M4PFHpA	*49.6*		"	*80.0*		*62.0*	*25-150*				
Surrogate: M3PFHxS	*42.2*		"	*75.7*		*55.8*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*43.9*		"	*80.0*		*54.8*	*25-150*				
Surrogate: M6PFDA	*45.4*		"	*80.0*		*56.7*	*25-150*				
Surrogate: M7PFUdA	*36.1*		"	*80.0*		*45.1*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*30.8*		"	*80.0*		*38.5*	*25-150*				
Surrogate: M2PFTeDA	*11.5*		"	*80.0*		*14.4*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*47.5*		"	*80.0*		*59.4*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*39.2*		"	*76.6*		*51.2*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*38.1*		"	*80.0*		*47.6*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*33.6*		"	*80.0*		*42.0*	*10-150*				
Surrogate: d3-N-MeFOSAA	*38.3*		"	*80.0*		*47.8*	*25-150*				
Surrogate: d5-N-EtFOSAA	*32.7*		"	*80.0*		*40.9*	*25-150*				
Surrogate: M2-6:2 FTS	*67.4*		"	*75.9*		*88.8*	*25-150*				
Surrogate: M2-8:2 FTS	*52.2*		"	*76.6*		*68.1*	*25-150*				
Surrogate: M9PFNA	*45.7*		"	*80.0*		*57.1*	*25-150*				

Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00012 - % Solids Prep											
Duplicate (BE00012-DUP1) Duplicate	*Source sample: 20D0849-04 (SB12_0-2)							Prepared & Analyzed: 05/01/2020			
% Solids	88.9	0.100	%		90.8				2.10	20	

Sample and Data Qualifiers Relating to This Work Order

S-08	The recovery of this surrogate was outside of QC limits.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
PFSu-L	The isotopically labeled surrogate recovered below lab control limits due to a matrix effect. Isotope Dilution was applied.
PFSu-H	The isotopically labeled surrogate recovered above lab control limits due to a matrix effect. Isotope Dilution was applied.
PF-CCV-H	The CCV recovery was slightly above acceptable limits for the qualified compound. However, sample results are not biased high because results are corrected for isotope recovery.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

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Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20D0849

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company: same
Address: 360 west 31st street New York NY 10001	Address:	Address: same
Phone: 212 479 5400	Phone:	Phone: same
Contact: Kim Serven	Contact: Dina Palazzolo	Contact: same
E-mail: kserven@langan.com	E-mail: DPalazzolo@langan.com	E-mail: same

YOUR Project Number: 170610601

YOUR Project Name: 475 Bay Street

YOUR PO#:

Turn-Around Time

- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- Standard (5-7 Day) X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below)
Deirdre Casey

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil; Other

Samples From: New York X; New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections): Summary Report; QA Report; NY ASP A Package; ~~NY ASP B Package~~; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
SB16_0-2	S	4/30 0915	PFAS & 1,4 dioxane	1)8oz, 1)4oz, 4 VOAs
SB16_14-16	S	4/30 0920		1)250ml
SB16_18-20	S	4/30 0925		
SB12_0-2	S	4/30 1145		
SB12_8-10	S	4/30 1150		
SB12_18-20	S	4/30 1155		
MS-S001_043020	S	4/30 1145		
MSD-S001_043020	S	4/30 1145		
SB11_0-2	S	4/30 1440		
SB11_10-12	S	4/30 1445		

Comments:
MS/MSD-S001-043020 ~~Dup~~ Parent sample SB12_0-2

Preservation: (check all that apply)
HCl ___ MeOH X HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___
Ascorbic Acid ___ Other: ___

Special Instruction: Field Filtered ___ Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Deirdre Casey Langan	4/30/20 1740		4/30/20		4/30/20 1938
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temp. Received at Lab
				TC	4/30/20 1938 / 1.2 Degrees C

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Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20D0849

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company: same
Address: 360 west 31st Street, New York, NY 10001	Address:	Address: same
Phone: 212 479 5400	Phone:	Phone: same
Contact: K Semon	Contact: Dina Palazzolo	Contact: same
E-mail: ksemon@langan.com	E-mail: DPalazzolo@langan.com	E-mail: same

YOUR Project Number: 170610601

YOUR Project Name: 475 Bay Street

YOUR PO#:

Turn-Around Time
- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- Standard (5-7 Day) X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Deirdre Casey

Samples Collected by: (print your name above and sign below)

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil; Other

Samples From: New York X; New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections): Summary Report; QA Report; NY ASP A Package; NY ASP B Package; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
SB11_18-20	S	4/30 1450	PFAS & 1,4 dioxane	(QNE, (1)) 4oz, 3VOA, (1)250
SOFB02-043020	QA/QC	4/30 1200	PFAS & 1,4 dioxane	(6) 1L, (4) 250, 3 VOA
MW06_043020	GW	4/30 1414		
MW08_043020	GW	4/30 1055		
MW05_043020	GW	4/30		
GWDUP01_043020	GW	4/30 —		
GWFBOL_043020	QA/QC	4/30 1400		
GWTBOL_043020	QA/QC	4/30 —		

Comments:

Preservation: (check all that apply) HCl X MeOH X HNO_3 X H_2SO_4 ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other: ___

Special Instruction: Field Filtered X; Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Amelyn Langan	4/30/20 1740		4/30/20		4/30/20 1938
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temp. Received at Lab
				TC	4/30/20 1938 / 1.2 Degrees C

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Report Date: 05/06/2020
Client Project ID: 170610601
York Project (SDG) No.: 20E0004

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 05/06/2020
Client Project ID: 170610601
York Project (SDG) No.: 20E0004

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 30, 2020 and listed below. The project was identified as your project: **170610601**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20E0004-01	SV04_043020	Soil Vapor	04/30/2020	04/30/2020
20E0004-02	SV07_043020	Soil Vapor	04/30/2020	04/30/2020
20E0004-03	AA01_043020	Outdoor Ambient Ai	04/30/2020	04/30/2020
20E0004-04	SS08_043020	Soil Vapor	04/30/2020	04/30/2020
20E0004-05	SS09_043020	Soil Vapor	04/30/2020	04/30/2020
20E0004-06	IA08_043020	Indoor Ambient Air	04/30/2020	04/30/2020
20E0004-07	IA09_043020	Indoor Ambient Air	04/30/2020	04/30/2020

General Notes for York Project (SDG) No.: 20E0004

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 05/06/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: SV04_043020 **York Sample ID:** 20E0004-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:33 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.87	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	1.2	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.87	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.64	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.16	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	1.2	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	**1,2,4-Trimethylbenzene**	**20**		ug/m³	0.78	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	1.2	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	0.96	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.64	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.73	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	**1,3,5-Trimethylbenzene**	**8.0**		ug/m³	0.78	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	1,3-Butadiene	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	0.96	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.73	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	0.96	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**11**		ug/m³	0.47	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: SV04_043020 **York Sample ID:** 20E0004-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:33 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
591-78-6	*** 2-Hexanone**	**3.5**		ug/m³	1.3	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			
107-05-1	3-Chloropropene	ND		ug/m³	2.5	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	0.65	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-64-1	**Acetone**	**54**		ug/m³	0.76	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-13-1	Acrylonitrile	ND		ug/m³	0.35	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
71-43-2	**Benzene**	**2.1**		ug/m³	0.51	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
100-44-7	Benzyl chloride	ND		ug/m³	0.82	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-27-4	Bromodichloromethane	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-25-2	Bromoform	ND		ug/m³	1.6	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
74-83-9	Bromomethane	ND		ug/m³	0.62	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-15-0	**Carbon disulfide**	**4.0**		ug/m³	0.50	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
56-23-5	**Carbon tetrachloride**	**0.40**		ug/m³	0.25	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-90-7	Chlorobenzene	ND		ug/m³	0.73	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-00-3	Chloroethane	ND		ug/m³	0.42	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-66-3	**Chloroform**	**5.0**		ug/m³	0.78	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
74-87-3	**Chloromethane**	**0.79**		ug/m³	0.33	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.16	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.72	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-82-7	**Cyclohexane**	**1.5**		ug/m³	0.55	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
124-48-1	Dibromochloromethane	ND		ug/m³	1.4	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-71-8	**Dichlorodifluoromethane**	**2.5**		ug/m³	0.79	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
141-78-6	* Ethyl acetate	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			

Sample Information

Client Sample ID: SV04_043020 **York Sample ID:** 20E0004-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:33 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	**Ethyl Benzene**	**3.0**		ug/m³	0.69	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
87-68-3	Hexachlorobutadiene	ND		ug/m³	1.7	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-63-0	**Isopropanol**	**29**		ug/m³	0.78	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
80-62-6	**Methyl Methacrylate**	**15**		ug/m³	0.65	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.57	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-09-2	Methylene chloride	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
142-82-5	**n-Heptane**	**8.8**		ug/m³	0.65	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
110-54-3	**n-Hexane**	**3.5**		ug/m³	0.56	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
95-47-6	**o-Xylene**	**6.8**		ug/m³	0.69	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
179601-23-1	**p- & m- Xylenes**	**13**		ug/m³	1.4	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
622-96-8	*** p-Ethyltoluene**	**11**		ug/m³	0.78	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.27	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			
100-42-5	Styrene	ND		ug/m³	0.68	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
127-18-4	**Tetrachloroethylene**	**13**	TO-CCV, TO-LCS-L	ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.94	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			
108-88-3	**Toluene**	**8.5**		ug/m³	0.60	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.63	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.72	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
79-01-6	Trichloroethylene	ND		ug/m³	0.21	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-69-4	**Trichlorofluoromethane (Freon 11)**	**1.7**		ug/m³	0.89	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-05-4	Vinyl acetate	ND		ug/m³	0.56	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			

Sample Information

Client Sample ID: SV04_043020 **York Sample ID:** 20E0004-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:33 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
593-60-2	Vinyl bromide	ND		ug/m³	0.70	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-01-4	Vinyl Chloride	ND		ug/m³	0.20	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

	Surrogate Recoveries	Result	Acceptance Range
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*116 %*	*70-130*

Sample Information

Client Sample ID: SV07_043020 **York Sample ID:** 20E0004-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:30 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.88	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	1.2	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.88	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.65	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.16	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	1.2	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	**1,2,4-Trimethylbenzene**	**28**		ug/m³	0.79	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	1.2	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	0.97	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.65	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.74	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	**1,3,5-Trimethylbenzene**	**12**		ug/m³	0.79	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	**1,3-Butadiene**	**1.1**		ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	0.97	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.74	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	0.97	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	1.2	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**8.9**		ug/m³	0.47	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
591-78-6	*** 2-Hexanone**	**2.9**		ug/m³	1.3	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			

Sample Information

Client Sample ID: SV07_043020 **York Sample ID:** 20E0004-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:30 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	2.5	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-10-1	**4-Methyl-2-pentanone**	**0.79**		ug/m³	0.66	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-64-1	**Acetone**	**29**		ug/m³	0.76	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
107-13-1	Acrylonitrile	ND		ug/m³	0.35	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
71-43-2	**Benzene**	**9.9**		ug/m³	0.51	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
100-44-7	Benzyl chloride	ND		ug/m³	0.83	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-27-4	Bromodichloromethane	ND		ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-25-2	Bromoform	ND		ug/m³	1.7	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-83-9	Bromomethane	ND		ug/m³	0.62	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-15-0	**Carbon disulfide**	**13**		ug/m³	0.50	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
56-23-5	Carbon tetrachloride	ND		ug/m³	0.25	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-90-7	Chlorobenzene	ND		ug/m³	0.74	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-00-3	**Chloroethane**	**1.1**		ug/m³	0.42	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-66-3	**Chloroform**	**4.2**		ug/m³	0.78	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-87-3	Chloromethane	ND		ug/m³	0.33	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.16	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.73	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
110-82-7	**Cyclohexane**	**7.8**		ug/m³	0.55	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
124-48-1	Dibromochloromethane	ND		ug/m³	1.4	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-71-8	**Dichlorodifluoromethane**	**2.2**		ug/m³	0.79	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
141-78-6	* Ethyl acetate	ND		ug/m³	1.2	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			
100-41-4	**Ethyl Benzene**	**2.7**		ug/m³	0.70	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			

Sample Information

Client Sample ID: SV07_043020 **York Sample ID:** 20E0004-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:30 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m³	1.7	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-63-0	**Isopropanol**	**2.3**		ug/m³	0.79	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
80-62-6	Methyl Methacrylate	ND		ug/m³	0.66	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.58	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-09-2	Methylene chloride	ND		ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-82-5	**n-Heptane**	**11**		ug/m³	0.66	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-54-3	**n-Hexane**	**22**		ug/m³	0.57	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-47-6	**o-Xylene**	**6.8**		ug/m³	0.70	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
179601-23-1	**p- & m- Xylenes**	**12**		ug/m³	1.4	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
622-96-8	*** p-Ethyltoluene**	**14**		ug/m³	0.79	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.28	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			
100-42-5	Styrene	ND		ug/m³	0.68	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
127-18-4	**Tetrachloroethylene**	**13**	TO-CCV, TO-LCS-L	ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.95	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			
108-88-3	**Toluene**	**13**		ug/m³	0.61	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.64	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.73	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-01-6	Trichloroethylene	ND		ug/m³	0.22	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-69-4	**Trichlorofluoromethane (Freon 11)**	**2.1**		ug/m³	0.90	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-05-4	Vinyl acetate	ND		ug/m³	0.57	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
593-60-2	Vinyl bromide	ND		ug/m³	0.70	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: SV07_043020 **York Sample ID:** 20E0004-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:30 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/m³	0.21	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

	Surrogate Recoveries	Result	Acceptance Range
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*113 %*	*70-130*

Sample Information

Client Sample ID: AA01_043020 **York Sample ID:** 20E0004-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Outdoor Ambient Air	April 30, 2020 2:31 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	0.55	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.44	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	0.55	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	0.61	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.44	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.32	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.079	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	0.60	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m³	0.39	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	0.62	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	0.48	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.32	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.37	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	0.56	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m³	0.39	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	1,3-Butadiene	ND		ug/m³	0.53	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	0.48	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.37	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	0.48	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	0.58	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**1.0**		ug/m³	0.24	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
591-78-6	* 2-Hexanone	ND		ug/m³	0.66	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			

Sample Information

Client Sample ID: AA01_043020 **York Sample ID:** 20E0004-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Outdoor Ambient Air	April 30, 2020 2:31 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	1.3	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	0.33	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-64-1	**Acetone**	**6.6**		ug/m³	0.38	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-13-1	Acrylonitrile	ND		ug/m³	0.17	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
71-43-2	**Benzene**	**0.41**		ug/m³	0.26	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
100-44-7	Benzyl chloride	ND		ug/m³	0.42	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-27-4	Bromodichloromethane	ND		ug/m³	0.54	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-25-2	Bromoform	ND		ug/m³	0.83	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
74-83-9	Bromomethane	ND		ug/m³	0.31	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-15-0	Carbon disulfide	ND		ug/m³	0.25	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
56-23-5	**Carbon tetrachloride**	**0.50**		ug/m³	0.13	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-90-7	Chlorobenzene	ND		ug/m³	0.37	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-00-3	Chloroethane	ND		ug/m³	0.21	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-66-3	Chloroform	ND		ug/m³	0.39	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
74-87-3	**Chloromethane**	**1.2**		ug/m³	0.17	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.079	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.36	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-82-7	Cyclohexane	ND		ug/m³	0.28	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
124-48-1	Dibromochloromethane	ND		ug/m³	0.68	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-71-8	**Dichlorodifluoromethane**	**1.6**		ug/m³	0.40	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
141-78-6	* Ethyl acetate	ND		ug/m³	0.58	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			
100-41-4	**Ethyl Benzene**	**0.38**		ug/m³	0.35	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: AA01_043020 **York Sample ID:** 20E0004-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Outdoor Ambient Air	April 30, 2020 2:31 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m³	0.86	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-63-0	**Isopropanol**	**26**		ug/m³	0.39	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
80-62-6	**Methyl Methacrylate**	**6.1**		ug/m³	0.33	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.29	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-09-2	**Methylene chloride**	**1.5**		ug/m³	0.56	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-82-5	n-Heptane	ND		ug/m³	0.33	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-54-3	**n-Hexane**	**0.42**		ug/m³	0.28	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-47-6	**o-Xylene**	**0.38**		ug/m³	0.35	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
179601-23-1	**p- & m- Xylenes**	**1.1**		ug/m³	0.70	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
622-96-8	* p-Ethyltoluene	ND		ug/m³	0.39	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.14	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			
100-42-5	**Styrene**	**0.34**		ug/m³	0.34	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
127-18-4	Tetrachloroethylene	ND		ug/m³	0.54	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.47	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			
108-88-3	**Toluene**	**2.2**		ug/m³	0.30	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.32	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.36	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-01-6	Trichloroethylene	ND		ug/m³	0.11	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-69-4	**Trichlorofluoromethane (Freon 11)**	**1.4**		ug/m³	0.45	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-05-4	Vinyl acetate	ND		ug/m³	0.28	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
593-60-2	Vinyl bromide	ND		ug/m³	0.35	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-01-4	Vinyl Chloride	ND		ug/m³	0.10	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: AA01_043020 **York Sample ID:** 20E0004-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Outdoor Ambient Air	April 30, 2020 2:31 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**		**Acceptance Range**						
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*110 %*		*70-130*						

Sample Information

Client Sample ID: SS08_043020 **York Sample ID:** 20E0004-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:13 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.92	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	1.3	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.92	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.68	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.17	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	**1,2,4-Trimethylbenzene**	**9.9**		ug/m³	0.83	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	1.3	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	1.0	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.68	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.78	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	**1,3,5-Trimethylbenzene**	**2.6**		ug/m³	0.83	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	1,3-Butadiene	ND		ug/m³	1.1	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	1.0	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.78	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	1.0	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**1.2**		ug/m³	0.50	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
591-78-6	* 2-Hexanone	ND		ug/m³	1.4	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			

Sample Information

Client Sample ID: SS08_043020 **York Sample ID:** 20E0004-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:13 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	2.6	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	0.69	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-64-1	**Acetone**	**6.7**		ug/m³	0.80	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
107-13-1	Acrylonitrile	ND		ug/m³	0.36	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
71-43-2	**Benzene**	**3.1**		ug/m³	0.54	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
100-44-7	Benzyl chloride	ND		ug/m³	0.87	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-27-4	Bromodichloromethane	ND		ug/m³	1.1	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-25-2	Bromoform	ND		ug/m³	1.7	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-83-9	Bromomethane	ND		ug/m³	0.65	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-15-0	**Carbon disulfide**	**1.2**		ug/m³	0.52	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
56-23-5	**Carbon tetrachloride**	**0.42**		ug/m³	0.26	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-90-7	Chlorobenzene	ND		ug/m³	0.77	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-00-3	Chloroethane	ND		ug/m³	0.44	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-66-3	**Chloroform**	**9.9**		ug/m³	0.82	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-87-3	Chloromethane	ND		ug/m³	0.35	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.17	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.76	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
110-82-7	**Cyclohexane**	**1.3**		ug/m³	0.58	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
124-48-1	Dibromochloromethane	ND		ug/m³	1.4	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-71-8	**Dichlorodifluoromethane**	**2.3**		ug/m³	0.83	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
141-78-6	* Ethyl acetate	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			
100-41-4	**Ethyl Benzene**	**14**		ug/m³	0.73	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			

Sample Information

Client Sample ID: SS08_043020 **York Sample ID:** 20E0004-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:13 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m³	1.8	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-63-0	**Isopropanol**	**4.8**		ug/m³	0.83	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
80-62-6	Methyl Methacrylate	ND		ug/m³	0.69	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.61	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-09-2	Methylene chloride	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-82-5	**n-Heptane**	**6.1**		ug/m³	0.69	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-54-3	**n-Hexane**	**5.8**		ug/m³	0.59	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-47-6	**o-Xylene**	**13**		ug/m³	0.73	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
179601-23-1	**p- & m- Xylenes**	**55**		ug/m³	1.5	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
622-96-8	*** p-Ethyltoluene**	**13**		ug/m³	0.83	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.29	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			
100-42-5	**Styrene**	**1.6**		ug/m³	0.72	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
127-18-4	**Tetrachloroethylene**	**35**	TO-CCV, TO-LCS-L	ug/m³	1.1	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.99	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			
108-88-3	**Toluene**	**55**		ug/m³	0.63	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.67	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.76	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-01-6	Trichloroethylene	ND		ug/m³	0.23	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-69-4	**Trichlorofluoromethane (Freon 11)**	**1.3**		ug/m³	0.94	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-05-4	Vinyl acetate	ND		ug/m³	0.59	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
593-60-2	Vinyl bromide	ND		ug/m³	0.74	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: SS08_043020 **York Sample ID:** 20E0004-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:13 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/m³	0.21	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

	Surrogate Recoveries	Result	Acceptance Range
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*104 %*	*70-130*

Sample Information

Client Sample ID: SS09_043020 **York Sample ID:** 20E0004-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:12 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.92	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	1.3	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.92	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.68	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.17	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	**1,2,4-Trimethylbenzene**	**17**		ug/m³	0.83	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	1.3	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	1.0	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.68	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.78	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	**1,3,5-Trimethylbenzene**	**3.8**		ug/m³	0.83	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	1,3-Butadiene	ND		ug/m³	1.1	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	1.0	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.78	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	1.0	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**1.1**		ug/m³	0.50	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
591-78-6	* 2-Hexanone	ND		ug/m³	1.4	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			

Sample Information

Client Sample ID: SS09_043020 **York Sample ID:** 20E0004-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:12 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	2.6	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	0.69	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-64-1	**Acetone**	**4.8**		ug/m³	0.80	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
107-13-1	Acrylonitrile	ND		ug/m³	0.37	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
71-43-2	**Benzene**	**2.4**		ug/m³	0.54	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
100-44-7	Benzyl chloride	ND		ug/m³	0.87	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-27-4	Bromodichloromethane	ND		ug/m³	1.1	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-25-2	Bromoform	ND		ug/m³	1.7	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-83-9	Bromomethane	ND		ug/m³	0.65	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-15-0	**Carbon disulfide**	**4.2**		ug/m³	0.52	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
56-23-5	Carbon tetrachloride	ND		ug/m³	0.26	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-90-7	Chlorobenzene	ND		ug/m³	0.77	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-00-3	Chloroethane	ND		ug/m³	0.44	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-66-3	**Chloroform**	**0.99**		ug/m³	0.82	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-87-3	Chloromethane	ND		ug/m³	0.35	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.17	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.76	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
110-82-7	**Cyclohexane**	**3.2**		ug/m³	0.58	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
124-48-1	Dibromochloromethane	ND		ug/m³	1.4	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-71-8	**Dichlorodifluoromethane**	**2.6**		ug/m³	0.83	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
141-78-6	* Ethyl acetate	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			
100-41-4	**Ethyl Benzene**	**19**		ug/m³	0.73	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			

Sample Information

Client Sample ID: SS09_043020 **York Sample ID:** 20E0004-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:12 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m³	1.8	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-63-0	**Isopropanol**	**4.9**		ug/m³	0.83	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
80-62-6	Methyl Methacrylate	ND		ug/m³	0.69	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
1634-04-4	**Methyl tert-butyl ether (MTBE)**	**10**		ug/m³	0.61	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-09-2	Methylene chloride	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-82-5	**n-Heptane**	**16**		ug/m³	0.69	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-54-3	**n-Hexane**	**6.5**		ug/m³	0.59	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-47-6	**o-Xylene**	**19**		ug/m³	0.73	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
179601-23-1	**p- & m- Xylenes**	**76**		ug/m³	1.5	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
622-96-8	*** p-Ethyltoluene**	**22**		ug/m³	0.83	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.29	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			
100-42-5	**Styrene**	**2.2**		ug/m³	0.72	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
127-18-4	**Tetrachloroethylene**	**20**	TO-CCV, TO-LCS-L	ug/m³	1.1	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.99	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			
108-88-3	**Toluene**	**50**		ug/m³	0.63	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.67	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.76	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-01-6	Trichloroethylene	ND		ug/m³	0.23	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-69-4	**Trichlorofluoromethane (Freon 11)**	**1.1**		ug/m³	0.95	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-05-4	Vinyl acetate	ND		ug/m³	0.59	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
593-60-2	Vinyl bromide	ND		ug/m³	0.74	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: SS09_043020 **York Sample ID:** 20E0004-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:12 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/m³	0.22	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

	Surrogate Recoveries	Result	Acceptance Range
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*118 %*	*70-130*

Sample Information

Client Sample ID: IA08_043020 **York Sample ID:** 20E0004-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	0.55	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.44	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	0.55	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	0.62	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.44	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.33	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.080	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	0.60	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	**1,2,4-Trimethylbenzene**	**0.55**		ug/m³	0.40	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	0.62	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	0.48	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.33	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.37	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	0.56	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m³	0.40	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	1,3-Butadiene	ND		ug/m³	0.53	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	0.48	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.37	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	0.48	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	0.58	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**0.76**		ug/m³	0.24	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
591-78-6	* 2-Hexanone	ND		ug/m³	0.66	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			

Sample Information

Client Sample ID: IA08_043020 **York Sample ID:** 20E0004-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	1.3	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	0.33	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-64-1	**Acetone**	**8.4**		ug/m³	0.38	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
107-13-1	Acrylonitrile	ND		ug/m³	0.17	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
71-43-2	**Benzene**	**0.28**		ug/m³	0.26	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
100-44-7	Benzyl chloride	ND		ug/m³	0.42	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-27-4	Bromodichloromethane	ND		ug/m³	0.54	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-25-2	Bromoform	ND		ug/m³	0.83	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-83-9	Bromomethane	ND		ug/m³	0.31	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-15-0	Carbon disulfide	ND		ug/m³	0.25	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
56-23-5	**Carbon tetrachloride**	**0.51**		ug/m³	0.13	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-90-7	Chlorobenzene	ND		ug/m³	0.37	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-00-3	Chloroethane	ND		ug/m³	0.21	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-66-3	Chloroform	ND		ug/m³	0.39	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-87-3	**Chloromethane**	**1.0**		ug/m³	0.17	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.080	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.37	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
110-82-7	Cyclohexane	ND		ug/m³	0.28	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
124-48-1	Dibromochloromethane	ND		ug/m³	0.69	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-71-8	**Dichlorodifluoromethane**	**1.9**		ug/m³	0.40	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
141-78-6	* Ethyl acetate	ND		ug/m³	0.58	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			
100-41-4	**Ethyl Benzene**	**0.52**		ug/m³	0.35	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			

Sample Information

Client Sample ID: IA08_043020 **York Sample ID:** 20E0004-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m³	0.86	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-63-0	**Isopropanol**	**9.8**		ug/m³	0.40	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
80-62-6	**Methyl Methacrylate**	**0.40**		ug/m³	0.33	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.29	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-09-2	Methylene chloride	ND		ug/m³	0.56	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-82-5	**n-Heptane**	**0.36**		ug/m³	0.33	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-54-3	n-Hexane	ND		ug/m³	0.28	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-47-6	**o-Xylene**	**0.63**		ug/m³	0.35	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
179601-23-1	**p- & m- Xylenes**	**1.9**		ug/m³	0.70	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
622-96-8	* p-Ethyltoluene	ND		ug/m³	0.40	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.14	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			
100-42-5	Styrene	ND		ug/m³	0.34	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
127-18-4	Tetrachloroethylene	ND		ug/m³	0.55	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.48	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			
108-88-3	**Toluene**	**4.7**		ug/m³	0.30	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.32	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.37	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-01-6	Trichloroethylene	ND		ug/m³	0.11	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-69-4	**Trichlorofluoromethane (Freon 11)**	**1.3**		ug/m³	0.45	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-05-4	Vinyl acetate	ND		ug/m³	0.28	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
593-60-2	Vinyl bromide	ND		ug/m³	0.35	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-01-4	Vinyl Chloride	ND		ug/m³	0.10	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: IA08_043020 **York Sample ID:** 20E0004-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**		**Acceptance Range**						
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*106 %*		*70-130*						

Sample Information

Client Sample ID: IA09_043020 **York Sample ID:** 20E0004-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	0.65	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.52	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	0.65	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	0.73	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.52	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.39	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.094	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	0.71	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m³	0.47	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	0.73	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	0.57	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.39	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.44	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	0.67	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m³	0.47	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	1,3-Butadiene	ND		ug/m³	0.63	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	0.57	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.44	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	0.57	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	0.69	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**0.79**		ug/m³	0.28	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
591-78-6	* 2-Hexanone	ND		ug/m³	0.78	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			

Sample Information

Client Sample ID: IA09_043020 **York Sample ID:** 20E0004-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	1.5	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	0.39	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-64-1	**Acetone**	**4.2**		ug/m³	0.45	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
107-13-1	Acrylonitrile	ND		ug/m³	0.21	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
71-43-2	**Benzene**	**0.30**		ug/m³	0.30	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
100-44-7	Benzyl chloride	ND		ug/m³	0.49	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-27-4	Bromodichloromethane	ND		ug/m³	0.64	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-25-2	Bromoform	ND		ug/m³	0.99	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-83-9	Bromomethane	ND		ug/m³	0.37	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-15-0	Carbon disulfide	ND		ug/m³	0.30	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
56-23-5	**Carbon tetrachloride**	**0.48**		ug/m³	0.15	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-90-7	Chlorobenzene	ND		ug/m³	0.44	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-00-3	Chloroethane	ND		ug/m³	0.25	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-66-3	Chloroform	ND		ug/m³	0.47	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-87-3	**Chloromethane**	**1.1**		ug/m³	0.20	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.094	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.43	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
110-82-7	Cyclohexane	ND		ug/m³	0.33	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
124-48-1	Dibromochloromethane	ND		ug/m³	0.81	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-71-8	**Dichlorodifluoromethane**	**1.9**		ug/m³	0.47	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
141-78-6	* Ethyl acetate	ND		ug/m³	0.69	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			
100-41-4	**Ethyl Benzene**	**0.50**		ug/m³	0.41	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			

Sample Information

Client Sample ID: IA09_043020 **York Sample ID:** 20E0004-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m³	1.0	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-63-0	**Isopropanol**	**1.6**		ug/m³	0.47	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
80-62-6	Methyl Methacrylate	ND		ug/m³	0.39	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.34	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-09-2	Methylene chloride	ND		ug/m³	0.66	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-82-5	n-Heptane	ND		ug/m³	0.39	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-54-3	n-Hexane	ND		ug/m³	0.34	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-47-6	**o-Xylene**	**0.54**		ug/m³	0.41	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
179601-23-1	**p- & m- Xylenes**	**1.6**		ug/m³	0.83	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
622-96-8	* p-Ethyltoluene	ND		ug/m³	0.47	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.16	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			
100-42-5	Styrene	ND		ug/m³	0.41	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
127-18-4	Tetrachloroethylene	ND		ug/m³	0.65	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.56	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			
108-88-3	**Toluene**	**2.7**		ug/m³	0.36	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.38	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.43	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-01-6	Trichloroethylene	ND		ug/m³	0.13	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-69-4	**Trichlorofluoromethane (Freon 11)**	**1.3**		ug/m³	0.54	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-05-4	Vinyl acetate	ND		ug/m³	0.34	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
593-60-2	Vinyl bromide	ND		ug/m³	0.42	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-01-4	Vinyl Chloride	ND		ug/m³	0.12	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: IA09_043020 **York Sample ID:** 20E0004-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**		**Acceptance Range**						
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*104 %*		*70-130*						

Analytical Batch Summary

Batch ID: BE00112 **Preparation Method:** EPA TO15 PREP **Prepared By:** AS

YORK Sample ID	Client Sample ID	Preparation Date
20E0004-01	SV04_043020	05/01/20
20E0004-02	SV07_043020	05/01/20
20E0004-04	SS08_043020	05/01/20
20E0004-05	SS09_043020	05/01/20
20E0004-06	IA08_043020	05/01/20
20E0004-07	IA09_043020	05/01/20
BE00112-BLK1	Blank	05/01/20
BE00112-BS1	LCS	05/01/20
BE00112-DUP1	Duplicate	05/01/20

Batch ID: BE00113 **Preparation Method:** EPA TO15 PREP **Prepared By:** AS

YORK Sample ID	Client Sample ID	Preparation Date
20E0004-03	AA01_043020	05/05/20
BE00113-BLK1	Blank	05/05/20
BE00113-BS1	LCS	05/05/20

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00112 - EPA TO15 PREP											
Blank (BE00112-BLK1) Blank									Prepared: 05/01/2020 Analyzed: 05/02/2020		
1,1,1,2-Tetrachloroethane	ND	0.69	ug/m³								
1,1,1-Trichloroethane	ND	0.55	"								
1,1,2,2-Tetrachloroethane	ND	0.69	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.77	"								
1,1,2-Trichloroethane	ND	0.55	"								
1,1-Dichloroethane	ND	0.40	"								
1,1-Dichloroethylene	ND	0.099	"								
1,2,4-Trichlorobenzene	ND	0.74	"								
1,2,4-Trimethylbenzene	ND	0.49	"								
1,2-Dibromoethane	ND	0.77	"								
1,2-Dichlorobenzene	ND	0.60	"								
1,2-Dichloroethane	ND	0.40	"								
1,2-Dichloropropane	ND	0.46	"								
1,2-Dichlorotetrafluoroethane	ND	0.70	"								
1,3,5-Trimethylbenzene	ND	0.49	"								
1,3-Butadiene	ND	0.66	"								
1,3-Dichlorobenzene	ND	0.60	"								
1,3-Dichloropropane	ND	0.46	"								
1,4-Dichlorobenzene	ND	0.60	"								
1,4-Dioxane	ND	0.72	"								
2-Butanone	ND	0.29	"								
2-Hexanone	ND	0.82	"								
3-Chloropropene	ND	1.6	"								
4-Methyl-2-pentanone	ND	0.41	"								
Acetone	ND	0.48	"								
Acrylonitrile	ND	0.22	"								
Benzene	ND	0.32	"								
Benzyl chloride	ND	0.52	"								
Bromodichloromethane	ND	0.67	"								
Bromoform	ND	1.0	"								
Bromomethane	ND	0.39	"								
Carbon disulfide	ND	0.31	"								
Carbon tetrachloride	ND	0.16	"								
Chlorobenzene	ND	0.46	"								
Chloroethane	ND	0.26	"								
Chloroform	ND	0.49	"								
Chloromethane	ND	0.21	"								
cis-1,2-Dichloroethylene	ND	0.099	"								
cis-1,3-Dichloropropylene	ND	0.45	"								
Cyclohexane	ND	0.34	"								
Dibromochloromethane	ND	0.85	"								
Dichlorodifluoromethane	ND	0.49	"								
Ethyl acetate	ND	0.72	"								
Ethyl Benzene	ND	0.43	"								
Hexachlorobutadiene	ND	1.1	"								
Isopropanol	ND	0.49	"								
Methyl Methacrylate	ND	0.41	"								
Methyl tert-butyl ether (MTBE)	ND	0.36	"								
Methylene chloride	ND	0.69	"								
n-Heptane	ND	0.41	"								

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

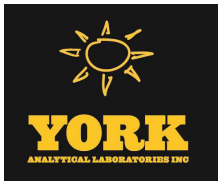
York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00112 - EPA TO15 PREP											
Blank (BE00112-BLK1) Blank								Prepared: 05/01/2020 Analyzed: 05/02/2020			
n-Hexane	ND	0.35	ug/m³								
o-Xylene	ND	0.43	"								
p- & m- Xylenes	ND	0.87	"								
p-Ethyltoluene	ND	0.49	"								
Propylene	ND	0.17	"								
Styrene	ND	0.43	"								
Tetrachloroethylene	ND	0.68	"								
Tetrahydrofuran	ND	0.59	"								
Toluene	ND	0.38	"								
trans-1,2-Dichloroethylene	ND	0.40	"								
trans-1,3-Dichloropropylene	ND	0.45	"								
Trichloroethylene	ND	0.13	"								
Trichlorofluoromethane (Freon 11)	ND	0.56	"								
Vinyl acetate	ND	0.35	"								
Vinyl bromide	ND	0.44	"								
Vinyl Chloride	ND	0.13	"								
Surrogate: SURR: p-Bromofluorobenzene	*9.39*		*ppbv*	*10.0*		*93.9*	*70-130*				
LCS (BE00112-BS1) LCS								Prepared & Analyzed: 05/01/2020			
1,1,1,2-Tetrachloroethane	9.70		ppbv	10.0		97.0	70-130				
1,1,1-Trichloroethane	9.85		"	10.0		98.5	70-130				
1,1,2,2-Tetrachloroethane	10.9		"	10.0		109	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.50		"	10.0		95.0	70-130				
1,1,2-Trichloroethane	10.4		"	10.0		104	70-130				
1,1-Dichloroethane	10.0		"	10.0		100	70-130				
1,1-Dichloroethylene	10.3		"	10.0		103	70-130				
1,2,4-Trichlorobenzene	6.99		"	10.0		69.9	70-130	Low Bias			
1,2,4-Trimethylbenzene	10.7		"	10.0		107	70-130				
1,2-Dibromoethane	10.3		"	10.0		103	70-130				
1,2-Dichlorobenzene	10.3		"	10.0		103	70-130				
1,2-Dichloroethane	10.3		"	10.0		103	70-130				
1,2-Dichloropropane	10.6		"	10.0		106	70-130				
1,2-Dichlorotetrafluoroethane	9.86		"	10.0		98.6	70-130				
1,3,5-Trimethylbenzene	10.0		"	10.0		100	70-130				
1,3-Butadiene	9.34		"	10.0		93.4	70-130				
1,3-Dichlorobenzene	10.5		"	10.0		105	70-130				
1,3-Dichloropropane	10.7		"	10.0		107	70-130				
1,4-Dichlorobenzene	10.6		"	10.0		106	70-130				
1,4-Dioxane	10.1		"	10.0		101	70-130				
2-Butanone	9.88		"	10.0		98.8	70-130				
2-Hexanone	11.5		"	10.0		115	70-130				
3-Chloropropene	9.62		"	10.0		96.2	70-130				
4-Methyl-2-pentanone	11.2		"	10.0		112	70-130				
Acetone	9.57		"	10.0		95.7	70-130				
Acrylonitrile	9.85		"	10.0		98.5	70-130				
Benzene	9.45		"	10.0		94.5	70-130				
Benzyl chloride	8.30		"	10.0		83.0	70-130				
Bromodichloromethane	11.0		"	10.0		110	70-130				
Bromoform	10.2		"	10.0		102	70-130				
Bromomethane	9.29		"	10.0		92.9	70-130				
Carbon disulfide	10.2		"	10.0		102	70-130				

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00112 - EPA TO15 PREP											
LCS (BE00112-BS1) LCS							Prepared & Analyzed: 05/01/2020				
Carbon tetrachloride	10.0		ppbv	10.0		100	70-130				
Chlorobenzene	9.68		"	10.0		96.8	70-130				
Chloroethane	10.5		"	10.0		105	70-130				
Chloroform	9.98		"	10.0		99.8	70-130				
Chloromethane	7.96		"	10.0		79.6	70-130				
cis-1,2-Dichloroethylene	9.99		"	10.0		99.9	70-130				
cis-1,3-Dichloropropylene	11.2		"	10.0		112	70-130				
Cyclohexane	9.85		"	10.0		98.5	70-130				
Dibromochloromethane	10.4		"	10.0		104	70-130				
Dichlorodifluoromethane	11.6		"	10.0		116	70-130				
Ethyl acetate	12.2		"	10.0		122	70-130				
Ethyl Benzene	10.0		"	10.0		100	70-130				
Hexachlorobutadiene	10.2		"	10.0		102	70-130				
Isopropanol	9.54		"	10.0		95.4	70-130				
Methyl Methacrylate	10.8		"	10.0		108	70-130				
Methyl tert-butyl ether (MTBE)	9.73		"	10.0		97.3	70-130				
Methylene chloride	9.09		"	10.0		90.9	70-130				
n-Heptane	9.68		"	10.0		96.8	70-130				
n-Hexane	9.83		"	10.0		98.3	70-130				
o-Xylene	10.2		"	10.0		102	70-130				
p- & m- Xylenes	20.6		"	20.0		103	70-130				
p-Ethyltoluene	10.6		"	10.0		106	70-130				
Propylene	9.19		"	10.0		91.9	70-130				
Styrene	10.4		"	10.0		104	70-130				
Tetrachloroethylene	6.99		"	10.0		69.9	70-130	Low Bias			
Tetrahydrofuran	9.95		"	10.0		99.5	70-130				
Toluene	9.96		"	10.0		99.6	70-130				
trans-1,2-Dichloroethylene	10.4		"	10.0		104	70-130				
trans-1,3-Dichloropropylene	11.1		"	10.0		111	70-130				
Trichloroethylene	10.7		"	10.0		107	70-130				
Trichlorofluoromethane (Freon 11)	9.53		"	10.0		95.3	70-130				
Vinyl acetate	8.14		"	10.0		81.4	70-130				
Vinyl bromide	8.86		"	10.0		88.6	70-130				
Vinyl Chloride	7.76		"	10.0		77.6	70-130				
Surrogate: SURR: p-Bromofluorobenzene	*10.5*		*"*	*10.0*		*105*	*70-130*				



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00112 - EPA TO15 PREP											
Duplicate (BE00112-DUP1) Duplicate	*Source sample: 20E0004-07 (IA09_043020)								Prepared: 05/01/2020 Analyzed: 05/02/2020		
1,1,1,2-Tetrachloroethane	ND	0.65	ug/m³		ND					25	
1,1,1-Trichloroethane	ND	0.52	"		ND					25	
1,1,2,2-Tetrachloroethane	ND	0.65	"		ND					25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.73	"		ND					25	
1,1,2-Trichloroethane	ND	0.52	"		ND					25	
1,1-Dichloroethane	ND	0.39	"		ND					25	
1,1-Dichloroethylene	ND	0.094	"		ND					25	
1,2,4-Trichlorobenzene	ND	0.71	"		ND					25	
1,2,4-Trimethylbenzene	0.33	0.47	"		0.33				0.00	25	
1,2-Dibromoethane	ND	0.73	"		ND					25	
1,2-Dichlorobenzene	ND	0.57	"		ND					25	
1,2-Dichloroethane	ND	0.39	"		ND					25	
1,2-Dichloropropane	ND	0.44	"		ND					25	
1,2-Dichlorotetrafluoroethane	ND	0.67	"		ND					25	
1,3,5-Trimethylbenzene	ND	0.47	"		ND					25	
1,3-Butadiene	ND	0.63	"		ND					25	
1,3-Dichlorobenzene	ND	0.57	"		ND					25	
1,3-Dichloropropane	ND	0.44	"		ND					25	
1,4-Dichlorobenzene	ND	0.57	"		ND					25	
1,4-Dioxane	ND	0.69	"		ND					25	
2-Butanone	0.76	0.28	"		0.79				3.64	25	
2-Hexanone	ND	0.78	"		ND					25	
3-Chloropropene	ND	1.5	"		ND					25	
4-Methyl-2-pentanone	ND	0.39	"		ND					25	
Acetone	4.2	0.45	"		4.2				0.00	25	
Acrylonitrile	ND	0.21	"		ND					25	
Benzene	0.37	0.30	"		0.30				18.2	25	
Benzyl chloride	ND	0.49	"		ND					25	
Bromodichloromethane	ND	0.64	"		ND					25	
Bromoform	ND	0.99	"		ND					25	
Bromomethane	ND	0.37	"		ND					25	
Carbon disulfide	ND	0.30	"		ND					25	
Carbon tetrachloride	0.48	0.15	"		0.48				0.00	25	
Chlorobenzene	ND	0.44	"		ND					25	
Chloroethane	ND	0.25	"		ND					25	
Chloroform	ND	0.47	"		ND					25	
Chloromethane	1.1	0.20	"		1.1				7.14	25	
cis-1,2-Dichloroethylene	ND	0.094	"		ND					25	
cis-1,3-Dichloropropylene	ND	0.43	"		ND					25	
Cyclohexane	ND	0.33	"		ND					25	
Dibromochloromethane	ND	0.81	"		ND					25	
Dichlorodifluoromethane	1.8	0.47	"		1.9				2.53	25	
Ethyl acetate	ND	0.69	"		ND					25	
Ethyl Benzene	0.50	0.41	"		0.50				0.00	25	
Hexachlorobutadiene	ND	1.0	"		ND					25	
Isopropanol	1.6	0.47	"		1.6				0.00	25	
Methyl Methacrylate	0.23	0.39	"		0.23				0.00	25	
Methyl tert-butyl ether (MTBE)	ND	0.34	"		ND					25	
Methylene chloride	ND	0.66	"		ND					25	
n-Heptane	0.20	0.39	"		0.20				0.00	25	
n-Hexane	ND	0.34	"		ND					25	

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00112 - EPA TO15 PREP											
Duplicate (BE00112-DUP1) Duplicate	*Source sample: 20E0004-07 (IA09_043020)								Prepared: 05/01/2020 Analyzed: 05/02/2020		
o-Xylene	0.54	0.41	ug/m³		0.54				0.00	25	
p- & m- Xylenes	1.6	0.83	"		1.6				2.60	25	
p-Ethyltoluene	ND	0.47	"		ND					25	
Propylene	ND	0.16	"		ND					25	
Styrene	ND	0.41	"		ND					25	
Tetrachloroethylene	0.39	0.65	"		0.39				0.00	25	
Tetrahydrofuran	ND	0.56	"		ND					25	
Toluene	2.7	0.36	"		2.7				1.32	25	
trans-1,2-Dichloroethylene	ND	0.38	"		ND					25	
trans-1,3-Dichloropropylene	ND	0.43	"		ND					25	
Trichloroethylene	ND	0.13	"		ND					25	
Trichlorofluoromethane (Freon 11)	1.3	0.54	"		1.3				0.00	25	
Vinyl acetate	ND	0.34	"		ND					25	
Vinyl bromide	ND	0.42	"		ND					25	
Vinyl Chloride	ND	0.12	"		ND					25	
Surrogate: SURR: p-Bromofluorobenzene	*10.6*		*ppbv*	*10.0*		*106*	*70-130*				
Batch BE00113 - EPA TO15 PREP											
Blank (BE00113-BLK1) Blank									Prepared & Analyzed: 05/05/2020		
1,1,1,2-Tetrachloroethane	ND	0.69	ug/m³								
1,1,1-Trichloroethane	ND	0.55	"								
1,1,2,2-Tetrachloroethane	ND	0.69	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.77	"								
1,1,2-Trichloroethane	ND	0.55	"								
1,1-Dichloroethane	ND	0.40	"								
1,1-Dichloroethylene	ND	0.099	"								
1,2,4-Trichlorobenzene	ND	0.74	"								
1,2,4-Trimethylbenzene	ND	0.49	"								
1,2-Dibromoethane	ND	0.77	"								
1,2-Dichlorobenzene	ND	0.60	"								
1,2-Dichloroethane	ND	0.40	"								
1,2-Dichloropropane	ND	0.46	"								
1,2-Dichlorotetrafluoroethane	ND	0.70	"								
1,3,5-Trimethylbenzene	ND	0.49	"								
1,3-Butadiene	ND	0.66	"								
1,3-Dichlorobenzene	ND	0.60	"								
1,3-Dichloropropane	ND	0.46	"								
1,4-Dichlorobenzene	ND	0.60	"								
1,4-Dioxane	ND	0.72	"								
2-Butanone	ND	0.29	"								
2-Hexanone	ND	0.82	"								
3-Chloropropene	ND	1.6	"								
4-Methyl-2-pentanone	ND	0.41	"								
Acetone	ND	0.48	"								
Acrylonitrile	ND	0.22	"								
Benzene	ND	0.32	"								
Benzyl chloride	ND	0.52	"								
Bromodichloromethane	ND	0.67	"								
Bromoform	ND	1.0	"								
Bromomethane	ND	0.39	"								

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00113 - EPA TO15 PREP											
Blank (BE00113-BLK1) Blank									Prepared & Analyzed: 05/05/2020		
Carbon disulfide	ND	0.31	ug/m³								
Carbon tetrachloride	ND	0.16	"								
Chlorobenzene	ND	0.46	"								
Chloroethane	ND	0.26	"								
Chloroform	ND	0.49	"								
Chloromethane	ND	0.21	"								
cis-1,2-Dichloroethylene	ND	0.099	"								
cis-1,3-Dichloropropylene	ND	0.45	"								
Cyclohexane	ND	0.34	"								
Dibromochloromethane	ND	0.85	"								
Dichlorodifluoromethane	ND	0.49	"								
Ethyl acetate	ND	0.72	"								
Ethyl Benzene	ND	0.43	"								
Hexachlorobutadiene	ND	1.1	"								
Isopropanol	ND	0.49	"								
Methyl Methacrylate	ND	0.41	"								
Methyl tert-butyl ether (MTBE)	ND	0.36	"								
Methylene chloride	ND	0.69	"								
n-Heptane	ND	0.41	"								
n-Hexane	ND	0.35	"								
o-Xylene	ND	0.43	"								
p- & m- Xylenes	ND	0.87	"								
p-Ethyltoluene	ND	0.49	"								
Propylene	ND	0.17	"								
Styrene	ND	0.43	"								
Tetrachloroethylene	ND	0.68	"								
Tetrahydrofuran	ND	0.59	"								
Toluene	ND	0.38	"								
trans-1,2-Dichloroethylene	ND	0.40	"								
trans-1,3-Dichloropropylene	ND	0.45	"								
Trichloroethylene	ND	0.13	"								
Trichlorofluoromethane (Freon 11)	ND	0.56	"								
Vinyl acetate	ND	0.35	"								
Vinyl bromide	ND	0.44	"								
Vinyl Chloride	ND	0.13	"								
Surrogate: SURR: p-Bromofluorobenzene	*9.74*		*ppbv*	*10.0*		*97.4*	*70-130*				

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Batch BE00113 - EPA TO15 PREP

LCS (BE00113-BS1) LCS — Prepared & Analyzed: 05/05/2020

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
1,1,1,2-Tetrachloroethane	9.75		ppbv	10.0		97.5	70-130				
1,1,1-Trichloroethane	9.97		"	10.0		99.7	70-130				
1,1,2,2-Tetrachloroethane	10.9		"	10.0		109	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.62		"	10.0		96.2	70-130				
1,1,2-Trichloroethane	10.5		"	10.0		105	70-130				
1,1-Dichloroethane	10.2		"	10.0		102	70-130				
1,1-Dichloroethylene	10.6		"	10.0		106	70-130				
1,2,4-Trichlorobenzene	7.31		"	10.0		73.1	70-130				
1,2,4-Trimethylbenzene	10.7		"	10.0		107	70-130				
1,2-Dibromoethane	10.5		"	10.0		105	70-130				
1,2-Dichlorobenzene	10.3		"	10.0		103	70-130				
1,2-Dichloroethane	10.6		"	10.0		106	70-130				
1,2-Dichloropropane	10.8		"	10.0		108	70-130				
1,2-Dichlorotetrafluoroethane	9.83		"	10.0		98.3	70-130				
1,3,5-Trimethylbenzene	10.3		"	10.0		103	70-130				
1,3-Butadiene	10.0		"	10.0		100	70-130				
1,3-Dichlorobenzene	10.5		"	10.0		105	70-130				
1,3-Dichloropropane	10.9		"	10.0		109	70-130				
1,4-Dichlorobenzene	10.6		"	10.0		106	70-130				
1,4-Dioxane	10.2		"	10.0		102	70-130				
2-Butanone	10.1		"	10.0		101	70-130				
2-Hexanone	11.7		"	10.0		117	70-130				
3-Chloropropene	9.89		"	10.0		98.9	70-130				
4-Methyl-2-pentanone	11.4		"	10.0		114	70-130				
Acetone	9.80		"	10.0		98.0	70-130				
Acrylonitrile	9.97		"	10.0		99.7	70-130				
Benzene	9.68		"	10.0		96.8	70-130				
Benzyl chloride	8.20		"	10.0		82.0	70-130				
Bromodichloromethane	11.2		"	10.0		112	70-130				
Bromoform	10.2		"	10.0		102	70-130				
Bromomethane	9.50		"	10.0		95.0	70-130				
Carbon disulfide	10.4		"	10.0		104	70-130				
Carbon tetrachloride	10.2		"	10.0		102	70-130				
Chlorobenzene	9.75		"	10.0		97.5	70-130				
Chloroethane	10.8		"	10.0		108	70-130				
Chloroform	10.2		"	10.0		102	70-130				
Chloromethane	8.45		"	10.0		84.5	70-130				
cis-1,2-Dichloroethylene	10.4		"	10.0		104	70-130				
cis-1,3-Dichloropropylene	11.4		"	10.0		114	70-130				
Cyclohexane	10.0		"	10.0		100	70-130				
Dibromochloromethane	10.6		"	10.0		106	70-130				
Dichlorodifluoromethane	11.2		"	10.0		112	70-130				
Ethyl acetate	12.6		"	10.0		126	70-130				
Ethyl Benzene	9.98		"	10.0		99.8	70-130				
Hexachlorobutadiene	10.1		"	10.0		101	70-130				
Isopropanol	9.72		"	10.0		97.2	70-130				
Methyl Methacrylate	11.1		"	10.0		111	70-130				
Methyl tert-butyl ether (MTBE)	9.88		"	10.0		98.8	70-130				
Methylene chloride	9.24		"	10.0		92.4	70-130				
n-Heptane	10.0		"	10.0		100	70-130				
n-Hexane	10.0		"	10.0		100	70-130				

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00113 - EPA TO15 PREP											
LCS (BE00113-BS1) LCS								Prepared & Analyzed: 05/05/2020			
o-Xylene	10.1		ppbv	10.0		101	70-130				
p- & m- Xylenes	20.6		"	20.0		103	70-130				
p-Ethyltoluene	10.5		"	10.0		105	70-130				
Propylene	9.40		"	10.0		94.0	70-130				
Styrene	10.5		"	10.0		105	70-130				
Tetrachloroethylene	7.04		"	10.0		70.4	70-130				
Tetrahydrofuran	10.3		"	10.0		103	70-130				
Toluene	9.98		"	10.0		99.8	70-130				
trans-1,2-Dichloroethylene	10.6		"	10.0		106	70-130				
trans-1,3-Dichloropropylene	11.2		"	10.0		112	70-130				
Trichloroethylene	10.9		"	10.0		109	70-130				
Trichlorofluoromethane (Freon 11)	9.62		"	10.0		96.2	70-130				
Vinyl acetate	8.21		"	10.0		82.1	70-130				
Vinyl bromide	9.09		"	10.0		90.9	70-130				
Vinyl Chloride	8.28		"	10.0		82.8	70-130				
Surrogate: SURR: p-Bromofluorobenzene	*10.6*		*"*	*10.0*		*106*	*70-130*				

Sample and Data Qualifiers Relating to This Work Order

TO-LCS-L	The result reported for this compound may be biased low due to its behavior in the analysis batch LCS where it recovered less 70% of the expected value.
TO-CCV	The value reported is ESTIMATED for this compound due to its behavior during continuing calibration verification (>30% Difference from initial calibration).

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

York Analytical Laboratories, Inc.
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clientservices@yorklab.com
www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20E0004

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company:
Address: 360 west 31st Street, New York NY 10001	Address:	Address:
Phone: 212 479 5400	Phone.:	Phone.:
Contact: Kime Semon	Contact: Dino Palazzolo	Contact:
E-mail: Ksemon@langan.com	E-mail: DPalazzolo@langan.com	E-mail:

YOUR Project Number: 170610601

YOUR Project Name: 475 Bay Street

YOUR PO#:

Turn-Around Time: RUSH - Next Day; RUSH - Two Day; RUSH - Three Day; RUSH - Four Day; Standard (5-7 Day) (X)

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below)
Deirdre Casey
Deirdre Casey

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil ¦ Other

Samples From: New York (X); New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections): Summary Report; QA Report; NY ASP A Package; NY ASP B Package; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
SB11_18-20	S	4/30 1450	VOC, SVOC, PCB, Pest, Herb, metals (+hex/tri/chromium & cyanide	
SOFB02_043020	S & QA/QC	4/30 1200	↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	
MW06-043020	GW	4/30 1414	VOC SVOC PCB Pest Herb metals (+hex/tri/chromium cyanide	
MW08_043020	GW	4/30 1055	(filtered & unfiltered)	
MW05_043020	GW	4/30		
MWDUP01_043020	GW	4/30 —		
MWFB01_043020	QA/QC	4/30 1400		
TBLK01_043020	QA/QC	4/30 —		
SV04_043020	Air	4/30 1433	TO-15 (can ID - Y67; start time 1233 (-30 in Hg); end time 1433 (-5 in Hg)	
SV07_043020	Air	4/30 1430	TO-15 (can ID - 2396; start time 1230 (-31.5 in Hg); end time 1430 (-7.75 in Hg)	

Comments:

Preservation: (check all that apply) HCl (X) MeOH (X) HNO3 (X) H2SO4 ( ) NaOH ___ ZnAc ___ Ascorbic Acid ___ Other: ___

Special Instruction: Field Filtered (X) Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Deirdre Casey Langan	4/30 1740	C Shafer	4/30/20	C Shafer	4/30/20
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
				PGrace 4-30-20 1938	
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Temp. Received at Lab
					1.2

York Analytical Laboratories, Inc.
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www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No.: 20E0004

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company: same
Address: 360 West 31st Street New York NY 10001	Address:	Address: same
Phone.: 212 479 5400	Phone.:	Phone.: same
Contact: Kim Semon	Contact: Dina Palazzolo	Contact: same
E-mail: KSemon@langan.com	E-mail: DPalazzolo@langan.com	E-mail: same

YOUR Project Number: 170161601

YOUR Project Name: 475 Bay Street

YOUR PO#:

Turn-Around Time

- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- Standard (5-7 Day) ✓

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below) Luke McCartney

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil ; Other

Samples From: New York ✓; New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections): Summary Report; QA Report; NY ASP A Package; NY ASP B Package; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
AA01_043020	air	4/30 1431	TO15	(Can ID 15528; Start 1235 (-28 inHg); Stop 1431 (-4.25 inHg)
SS08_043020	air	4/30 1713	TO15	(Can ID 16956; Start 0913 (-29.75"); Stop 1713 (-7.0 inHg)
SS09_043020	air	4/30 1712	TO15	(Can ID 18305; Start 0911 (-30); Stop 1712 (-6 inHg)
IA08_043020	air	4/30 1723	TO15	(Can ID 18302; Start 0923 (-31.5"); Stop 1723 (-7 inHg)
IA09_043020	air	4/30 1723	TO15	20316; Start 0923 (-29.9"); Stop 1723 (-8 inHg

Comments:

Preservation: (check all that apply) HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other: _____

Special Instruction: Field Filtered ___ Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Luke McCartney Langan	4/30 1740	LANGAN 4/30 1740			4/30/20
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
	4/30/20				
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temp. Received at Lab
					4-30-20 1738 @ 1.2 Degrees C

TABLES

Table 1
Sample Summary
Phase II Environmental Site Investigation Report

31-33 Wave Street
Staten Island, New York
Langan Project No. 170610601

No.	Sample Location	Sample ID	Sample Date/Time	Sample Collection Depth (feet bgs)	Sampling Rationale	Sample Analyses
SOIL						
1	SB04	SB04_0-2	4/29/2020	0 to 2	Upper 2 feet of historic fill	TCL / Part 375-list of VOCs & SVOCs, Part 375 PCBs, Pesticides, and Herbicides, TAL / Part 375 Metals including cyanide and hexavalent and trivalent chromium
2		SB04_10-12	4/29/2020	10 to 12	Five feet below the groundwater table	
3		SB04_14-16	4/29/2020	14 to 16	Evidence of greatest impacts - mild petroleum like odor	
4	SB05	SB05_0-2	4/28/2020	0 to 2	Upper 2 feet of historic fill	
5		SB05_6-8	4/28/2020	6 to 8	Groundwater interface	
6		SB05_18-20	4/28/2020	18 to 20	Boring termination depth	
7	SB06	SB06_0-2	4/29/2020	0 to 2	Upper 2 feet of historic fill	
8		SB06_5-7	4/29/2020	5 to 7	Evidence of greatest impacts	
9		SB06_12-14	4/29/2020	12 to 14	Clean interval below impacts	
10	SB07	SB07_0-2	4/29/2020	0 to 2	Upper 2 feet of historic fill	
11		SB07_8-10	4/29/2020	8 to 10	Five feet below the groundwater table	
12		SB07_18-20	4/29/2020	18 to 20	Boring termination depth	
13	SB08	SB08_0-2	4/28/2020	0 to 2	Upper 2 feet of historic fill	
14		SB08_4-6	4/28/2020	4 to 6	Groundwater interface	
15		SB08_13-15	7/28/2020	13 to 15	Boring termination depth	
16	SB09	SB09_0-2	4/28/2020	0 to 2	Upper 2 feet of historic fill	
17		SB09_4-6	4/28/2020	4 to 6	Groundwater interface	
18		SB09_13-15	4/28/2020	13 to 15	Boring termination depth	
Soil QA/QC						
N/A	SB04	SODUP01_042920	4/29/2020	0 to 2	Duplicate	TCL / Part 375-list of VOCs & SVOCs, Part 375 PCBs, Pesticides, and Herbicides, TAL / Part 375 Metals including cyanide and hexavalent and trivalent chromium
	N/A	SOFB01_042820	4/28/2020	N/A	Field Blank	
		SOFB02_043020	4/30/2020			
GROUNDWATER						
1	MW05	MW05_043020	4/30/2020	Center of water column	Groundwater	TCL VOCs, SVOCs, PCBs, Pesticides, and TAL Metals (total and dissolved [field filtered])
2	MW06	MW06_043020	4/30/2020			
3	MW08	MW08_043020	4/30/2020			

Table 1
Sample Summary
Phase II Environmental Site Investigation Report

31-33 Wave Street
Staten Island, New York
Langan Project No. 170610601

No.	Sample Location	Sample ID	Sample Date/Time	Sample Collection Depth (feet bgs)	Sampling Rationale	Sample Analyses
AIR						
1	SV04	SV04_043020	4/30/2020	3	Soil Vapor	TO-15 VOCs
2	SV07	SV07_043020	4/30/2020	2		
3	SS08	SS08_043020	4/30/2020	14 inches	Sub-slab	
4	SS09	SS09_043020	4/30/2020			
5	IA08	IA08_043020	4/30/2020	Breathing Height	Indoor Air (co-located with sub-slab)	
6	IA09	IA09_043020	4/30/2020			
GW and Air QA/QC						
NA	MW08	GWDUP01_043020	4/30/2020	N/A	Duplicate	TCL VOCs, SVOCs, PCBs, Pesticides, and TAL Metals (total and dissolved [field filtered])
	N/A	GWFB01_043020	4/30/2020		Field Blank	
		GWTB01_043020	4/30/2020		Trip Blank	Part 375 VOCs
		AA01_043020	4/30/2020		Ambient Air	TO-15 VOCs

Notes:
1. Sample depth intervals were determined in the field
2. Soil samples to be analyzed for New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Code Rules and Regulations (6 NYCRR) Part 375-list compounds
3. TBD = to be determined (in the field)
4. VOC = volatile organic compounc
5. SVOC = semivolatile organic compounc
6. PCB = polychlorinated biphenyl
7. N/A = Not Applicable
8. TCL = Target Compound List
9. TAL = Target Analyte List
10. QA/QC = quality assurance/quality contro
11. TO-15 = United States Environmental Protection Agency (USEPA) Method TO-15

Table 2
Soil Sample Analytical Results Summary
Phase II Environmental Site Investigation

31-33 Wave Street
Staten Island, New York
Langan Project No.: 170610601

Location Sample ID Laboratory ID Sample Date Sample Depth (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Restricted-Residential SCOs	SB04 SB04_0-2 20D0818-01 4/29/2020 0-2		SB04 SODUP01_042920 20D0818-12 4/29/2020 0-2		SB04 SB04_14-16 20D0818-03 4/29/2020 14-16		SB04 SB04_18-20 20D0818-04 4/29/2020 18-20		SB05 SB05_0-2 20D0776-04 4/28/2020 0-2		SB05 SB05_6-8 20D0776-05 4/28/2020 6-8		SB05 SB05_18-20 20D0776-06 4/28/2020 18-20		SB06 SB06_0-2 20D0818-05 4/29/2020 0-2		SB06 SB06_5-7 20D0818-06 4/29/2020 5-7		SB06 SB06_12-14 20D0818-07 4/29/2020 12-14	
Volatile Organic Compounds (mg/kg)																						
Acetone	0.05	100	0.0051	U	0.0046	U	0.0057	J	0.033		0.0051	U	0.0067	J	0.009		0.0044	U	0.02		0.0039	U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0026	U	0.0023	U	0.0018	U	0.0043	U	0.0025	U	0.0024	U	0.0022	U	0.0022	U	0.0037	U	0.0019	U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	~	~	0.0026	U	0.0023	U	0.0018	U	0.0043	U	0.0025	U	0.0024	U	0.0022	U	0.0022	U	0.0037	U	0.0019	U
Semivolatile Organic Compounds (mg/kg)																						
Acenaphthene	20	100	0.0451	U	0.0458	U	0.0465	U	0.0712	U	0.0443	U	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Acenaphthylene	100	100	0.0451	U	0.0458	U	0.0465	U	0.0712	U	0.0834	JD	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Anthracene	100	100	0.0451	U	0.0458	U	0.0465	U	0.0712	U	0.077	JD	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Benzo(a)Anthracene	1	1	0.152	D	0.113	D	0.0465	U	0.0712	U	0.55	D	0.0471	U	0.0472	U	0.112	D	0.0518	U	0.0482	U
Benzo(a)Pyrene	1	1	0.172	D	0.12	D	0.0465	U	0.0712	U	0.637	D	0.0471	U	0.0472	U	0.104	D	0.0518	U	0.0482	U
Benzo(b)Fluoranthene	1	1	0.166	D	0.134	D	0.0465	U	0.0712	U	0.635	D	0.0471	U	0.0472	U	0.0791	JD	0.0518	U	0.0482	U
Benzo(g,h,i)Perylene	100	100	0.147	D	0.105	D	0.0465	U	0.0712	U	0.512	D	0.0471	U	0.0472	U	0.0589	JD	0.0518	U	0.0482	U
Benzo(k)Fluoranthene	0.8	3.9	0.134	D	0.118	D	0.0465	U	0.0712	U	0.553	D	0.0471	U	0.0472	U	0.0843	JD	0.0518	U	0.0482	U
Benzyl Butyl Phthalate	~	~	0.161	D	0.0789	JD	0.0465	U	0.0712	U	0.142	D	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Bis(2-Ethylhexyl) Phthalate	~	~	0.0841	JD	0.0458	U	0.0465	U	0.0712	U	0.0445	JD	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Carbazole	~	~	0.0451	U	0.0458	U	0.0465	U	0.0712	U	0.0443	U	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Chrysene	1	3.9	0.16	D	0.132	D	0.0465	U	0.0712	U	0.765	D	0.0471	U	0.0472	U	0.0984	D	0.0518	U	0.0482	U
Dibenz(a,h)Anthracene	0.33	0.33	0.0451	U	0.0458	U	0.0465	U	0.0712	U	0.121	D	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Fluoranthene	100	100	0.298	D	0.257	D	0.0465	U	0.0712	U	0.974	D	0.0471	U	0.0472	U	0.166	D	0.0518	U	0.0482	U
Fluorene	30	100	0.0451	U	0.0458	U	0.0465	U	0.0712	U	0.0443	U	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.139	D	0.101	D	0.0465	U	0.0712	U	**0.559**	D	0.0471	U	0.0472	U	0.0679	JD	0.0518	U	0.0482	U
Phenanthrene	100	100	0.119	D	0.138	D	0.0465	U	0.0712	U	0.278	D	0.0471	U	0.0472	U	0.0468	U	0.0518	U	0.0482	U
Pyrene	100	100	0.248	D	0.205	D	0.0465	U	0.0712	U	1.03	D	0.0471	U	0.0472	U	0.151	D	0.0518	U	0.0482	U
Pesticides (mg/kg)																						
4,4'-DDE	0.0033	8.9	0.00179	U	0.00178	U	0.00182	U	0.00281	U	0.00175	U	0.00189	U	0.00186	U	0.00183	U	0.00204	U	0.00186	U
4,4'-DDT	0.0033	7.9	**0.0073**	D	**0.0099**	D	0.00182	U	0.00281	U	**0.00426**	DP	0.00189	U	0.00186	U	0.00183	U	0.00204	U	0.00186	U
Alpha Chlordane	0.094	4.2	0.00179	U	0.00178	U	0.00182	U	0.00281	U	0.00175	U	0.00189	U	0.00186	U	0.00183	U	0.00204	U	0.00186	U
Chlordane (alpha and gamma)	~	~	0.0358	U	0.0356	U	0.0363	U	0.0562	U	0.035	U	0.0377	U	0.0371	U	0.0366	U	0.0408	U	0.0372	U
Gamma-Chlordane	~	~	0.00179	U	0.00178	U	0.00182	U	0.00281	U	0.00175	U	0.00189	U	0.00186	U	0.00183	U	0.00204	U	0.00186	U
Herbicides (mg/kg)	~	~	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Polychlorinated Biphenyls (mg/kg)																						
PCB-1260 (Aroclor 1260)	~	~	0.0181	U	0.018	U	0.0183	U	0.0284	U	0.0177	U	0.019	U	0.0187	U	0.0185	U	0.0206	U	0.0188	U
Total PCBs	0.1	1	0.0181	U	0.018	U	0.0183	U	0.0284	U	0.0177	U	0.019	U	0.0187	U	0.0185	U	0.0206	U	0.0188	U
Inorganics (mg/kg)																						
Aluminum	~	~	2,370		2,580		4,900		13,800		4,430		3,670		5,060		5,720		7,940		6,560	
Arsenic	13	16	2.97		3.28		1.68	U	6.15		6.02		1.73	U	1.7	U	1.68	U	7.02		1.74	U
Barium	350	400	124		33.6		30.4		37.8		207		33.8		32		46		69.1		39	
Cadmium	2.5	4.3	0.713		0.774		0.336	U	0.514	U	0.705		0.345	U	0.34	U	0.337	U	0.373	U	0.348	U
Calcium	~	~	40,100		40,100		945		2,290		15,100		1,230		1,190		25,900		4,820		1,030	
Chromium, Hexavalent	1	110	0.545	U	0.555	U	0.56	U	0.857	U	0.535	U	0.575	U	0.566	U	0.561	U	0.622	U	0.581	U
Chromium, Total	~	~	7.43		6.35		18.4		36.6		21.7		17.5		22		11.7		27.1		24.2	
Chromium, Trivalent	30	180	7.43		6.35		18.4		**36.6**		21.7		17.5		22		11.7		27.1		24.2	
Cobalt	~	~	2.71		2.93		8.3		13.9		7.71		8.57		8.63		5.13		17.7		12.9	
Copper	50	270	21.1		28.2		20		12.8		**60**		18.3		18.5		13.4		31.9		22.4	
Iron	~	~	5,860		7,350		11,000		23,200		15,600		11,400		12,300		8,810		24,100		13,400	
Lead	63	400	**234**		**238**		6.55		17.8		**387**		60.2		7.04		**89.9**		**274**		7.43	
Magnesium	~	~	21,800		21,700		2,850		6,460		8,280		2,750		3,700		9,190		6,660		3,240	
Manganese	1,600	2,000	100		97.9		121		255		153		120		210		101		202		231	
Mercury	0.18	0.81	**0.268**		**0.264**		0.0336	U	0.0514	U	**1.33**		**0.653**		0.034	U	0.0337	U	0.0479		0.0348	U
Nickel	30	310	23.9		24.7		**94.6**		**86.2**		**74.5**		**84.3**		**109**		29.4		**133**		**128**	
Potassium	~	~	308		279		928		1,790		686		709		887		848		747		882	
Selenium	3.9	180	**12.6**		**10.2**		2.8	U	*4.28*	U	2.68	U	2.88	U	2.83	U	2.81	U	3.11	U	2.9	U
Silver	2	180	0.545	U	0.555	U	0.56	U	0.857	U	0.535	U	0.575	U	0.566	U	1.72		0.622	U	0.581	U
Sodium	~	~	93.4		146		88.7		171		279		109		86.7		95.9		127		127	
Vanadium	~	~	13.7		15.6		17.1		36		23.6		19.1		18.4		15.1		29.2		20.5	
Zinc	109	10,000	**136**		100		22.9		51.2		**274**		84.4		21.4		50.2		62.8		23.8	
General Chemistry (%)																						
Solids, Percent	~	~	91.8		90.1		89.3		58.3		93.4		86.9		88.4		89.1		80.4		86.1	

Notes provided on Page 3.
Concentrations above Unrestricted Use SCOs are bolded.
Concentrations above Restricted Use Restricted-Residential SCOs are shaded.

Table 2
Soil Sample Analytical Results Summary
Phase II Environmental Site Investigation

31-33 Wave Street
Staten Island, New York
Langan Project No.: 170610601

Location	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Restricted-Residential SCOs	SB07		SB07		SB07		SB08		SB08		SB08		SB09		SB09		SB09	
Sample ID			SB07_0-2		SB07_8-10		SB07_18-20		SB08_0-2		SB08_4-6		SB08_13-15		SB09_0-2		SB09_4-6		SB09_13-15	
Laboratory ID			20D0818-09		20D0818-10		20D0818-11		20D0776-07		20D0776-08		20D0776-09		20D0776-01		20D0776-02		20D0776-03	
Sample Date			4/29/2020		4/29/2020		4/29/2020		4/28/2020		4/28/2020		4/28/2020		4/28/2020		4/28/2020		4/28/2020	
Sample Depth (feet bgs)			0-2		8-10		18-20		0-2		4-6		13-15		0-2		4-6		13-15	
Volatile Organic Compounds (mg/kg)																				
Acetone	0.05	100	0.0044	U	0.0047	J	0.0067	J	0.01	J	0.005	U	0.0054	U	0.0046	U	0.0037	U	0.03	
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0022	U	0.0021	U	0.0024	U	0.0027	U	0.0025	U	0.0027	U	0.0023	U	0.0018	U	0.0086	
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	~	~	0.0022	U	0.0021	U	0.0024	U	0.0027	U	0.0025	U	0.0027	U	0.0023	U	0.0018	U	0.0024	U
Semivolatile Organic Compounds (mg/kg)																				
Acenaphthene	20	100	0.0459	U	0.0477	U	0.0535	U	0.0439	U	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Acenaphthylene	100	100	0.0459	U	0.0477	U	0.0535	U	0.0439	U	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Anthracene	100	100	0.0459	U	0.0477	U	0.0535	U	0.0701	JD	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Benzo(a)Anthracene	1	1	0.0459	U	0.0477	U	0.0535	U	0.249	D	0.0537	JD	0.321	D	0.0773	JD	0.0441	U	0.0469	U
Benzo(a)Pyrene	1	1	0.0549	JD	0.0477	U	0.0535	U	0.264	D	0.0581	JD	0.322	D	0.0906	D	0.0441	U	0.0469	U
Benzo(b)Fluoranthene	1	1	0.0459	U	0.0477	U	0.0535	U	0.201	D	0.0478	JD	0.326	D	0.0794	JD	0.0441	U	0.0469	U
Benzo(g,h,i)Perylene	100	100	0.0475	JD	0.0477	U	0.0535	U	0.162	D	0.0461	U	0.226	D	0.0604	JD	0.0441	U	0.0469	U
Benzo(k)Fluoranthene	0.8	3.9	0.0483	JD	0.0477	U	0.0535	U	0.186	D	0.0461	U	0.257	D	0.0625	JD	0.0441	U	0.0469	U
Benzyl Butyl Phthalate	~	~	0.169	D	0.0477	U	0.0535	U	0.0439	U	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Bis(2-Ethylhexyl) Phthalate	~	~	0.0658	JD	0.0477	U	0.0535	U	0.24	D	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Carbazole	~	~	0.0459	U	0.0477	U	0.0535	U	0.0439	U	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Chrysene	1	3.9	0.0483	JD	0.0477	U	0.0535	U	0.222	D	0.05	JD	0.305	D	0.0843	JD	0.0441	U	0.0469	U
Dibenz(a,h)Anthracene	0.33	0.33	0.0459	U	0.0477	U	0.0535	U	0.0439	U	0.0461	U	0.0662	JD	0.044	U	0.0441	U	0.0469	U
Fluoranthene	100	100	0.0614	JD	0.0477	U	0.0535	U	0.522	D	0.0758	JD	0.585	D	0.162	D	0.0457	JD	0.0469	U
Fluorene	30	100	0.0459	U	0.0477	U	0.0535	U	0.0439	U	0.0461	U	0.0601	U	0.044	U	0.0441	U	0.0469	U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.0459	U	0.0477	U	0.0535	U	0.189	D	0.0461	U	0.202	D	0.0667	JD	0.0441	U	0.0469	U
Phenanthrene	100	100	0.0459	U	0.0477	U	0.0535	U	0.283	D	0.0461	U	0.244	D	0.0878	JD	0.0441	U	0.0469	U
Pyrene	100	100	0.0556	JD	0.0477	U	0.0535	U	0.457	D	0.0728	JD	0.494	D	0.139	D	0.0441	U	0.0469	U
Pesticides (mg/kg)																				
4,4'-DDE	0.0033	8.9	0.0018	U	0.00185	U	0.00211	U	0.00172	U	0.00183	U	0.00236	U	0.00173	U	0.00175	U	0.00187	U
4,4'-DDT	0.0033	7.9	0.0018	U	0.00185	U	0.00211	U	0.00172	U	0.00183	U	0.00236	U	0.00173	U	0.00175	U	0.00187	U
Alpha Chlordane	0.094	4.2	0.0018	U	0.00185	U	0.00211	U	0.00172	U	0.00183	U	0.00236	U	0.00173	U	0.00175	U	0.00187	U
Chlordane (alpha and gamma)	~	~	0.036	U	0.0369	U	0.0421	U	0.0343	U	0.0365	U	0.0471	U	0.0347	U	0.0351	U	0.0374	U
Gamma-Chlordane	~	~	0.0018	U	0.00185	U	0.00211	U	0.00172	U	0.00183	U	0.00236	U	0.00173	U	0.00175	U	0.00187	U
Herbicides (mg/kg)	~	~	ND		ND		ND		ND		ND		ND		ND		ND		ND	
Polychlorinated Biphenyls (mg/kg)																				
PCB-1260 (Aroclor 1260)	~	~	0.0182	U	0.0186	U	0.0213	U	0.0173	U	0.0184	U	0.0238	U	0.0175	U	0.0177	U	0.0189	U
Total PCBs	0.1	1	0.0182	U	0.0186	U	0.0213	U	0.0173	U	0.0184	U	0.0238	U	0.0175	U	0.0177	U	0.0189	U
Inorganics (mg/kg)																				
Aluminum	~	~	3,740		5,660		10,000		7,770		4,070		3,910		6,170		4,400		6,110	
Arsenic	13	16	2.83		2.11		2.13		2.99		4.44		4.9		1.59	U	1.6	U	1.72	U
Barium	350	400	32.7		34.2		24.6		90.2		106		**442**		35.7		33.6		37.7	
Cadmium	2.5	4.3	0.348		0.346	U	0.388	U	0.316	U	0.334	U	0.433	U	0.317	U	0.321	U	0.345	U
Calcium	~	~	26,100		924		584		19,600		33,600		29,400		1,830		2,060		2,040	
Chromium, Hexavalent	1	110	0.55	U	0.576	U	0.647	U	0.527	U	0.557	U	0.722	U	0.529	U	0.535	U	0.574	U
Chromium, Total	~	~	7.68		24.2		24.2		31		33.6		20		17.4		15.2		39.5	
Chromium, Trivalent	30	180	7.68		24.2		24.2		**31**		**33.6**		20		17.4		15.2		**39.5**	
Cobalt	~	~	4.95		10.5		12.8		12.8		16.6		8.18		8.92		7.21		14.7	
Copper	50	270	20.6		26.3		16.5		48.1		28.8		26.5		20		21.9		19.4	
Iron	~	~	9,200		14,300		15,100		14,900		14,200		10,700		12,600		11,600		15,000	
Lead	63	400	**100**		6.88		8.63		**296**		**441**		**2,080**		13.8		29.1		**66**	
Magnesium	~	~	13,900		6,640		5,150		11,300		22,100		8,090		3,760		3,930		6,890	
Manganese	1,600	2,000	126		269		125		245		247		217		265		200		286	
Mercury	0.18	0.81	0.143		0.0346	U	0.0388	U	**0.771**		**1.28**		**0.54**		0.032		**0.226**		0.0827	
Nickel	30	310	17.7		**155**		**86.2**		**154**		**325**		**114**		**71.3**		**69.9**		**209**	
Potassium	~	~	393		829		916		1,020		856		765		907		872		745	
Selenium	3.9	180	**5.01**		2.88	U	3.23	U	2.64	U	**4.08**		3.61	U	2.64	U	2.67	U	2.87	U
Silver	2	180	0.55	U	0.576	U	0.647	U	0.527	U	0.557	U	0.722	U	0.529	U	0.535	U	0.574	U
Sodium	~	~	222		72		92.8		768		205		205		175		169		139	
Vanadium	~	~	20.3		18.6		22.1		26		14.5		18.1		17.6		17.9		22.1	
Zinc	109	10,000	**283**		24.8		39.9		**123**		**226**		**291**		28.4		30.1		24.2	
General Chemistry (%)																				
Solids, Percent	~	~	90.8		86.8		77.3		94.8		89.7		69.3		94.6		93.5		87	

Notes provided on Page 3.
Concentrations above Unrestricted Use SCOs are bolded.
Concentrations above Restricted Use Restricted-Residential SCOs are shaded.

Table 2
Soil Sample Analytical Results Summary
Phase II Environmental Site Investigation

31-33 Wave Street
Staten Island, New York
Langan Project No.: 170610601

Notes:

1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use and Restricted Use Restricted-Residential Soil Cleanup Objectives (SCO).
2. Only detected analytes are shown in the table.
3. Detected analytical results above Unrestricted Use SCOs are bolded.
4. Detected analytical results above Restricted Use Restricted-Residential SCOs are shaded.
5. Analytical results with reporting limits (RL) above the lowest applicable criteria are italicized.
6. Sample SODUP01_042920 is a duplicate sample of SB04_0-2.
7. ~ = Regulatory limit for this analyte does not exist
8. bgs = below grade surface
9. mg/kg = milligrams per kilogram
10. % = percent
11. ND = Not detected

Qualifiers:

D = The concentration reported is a result of a diluted sample.
J = The analyte was detected above the Method Detection Limit (MDL), but below the RL; therefore, the result is an estimated concentration.
P = The relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.
B = The analyte was found in the associated analysis batch blank.

Table 3
Groundwater Sample Analytical Results Summary
Phase II Environmental Site Investigation

31-33 Wave Street
Staten Island, New York
Langan Project No.: 170610601

Location Sample ID Laboratory ID Sample Date	NYSDEC SGVs	MW05 MW05_043020 20D0850-13 4/30/2020		MW06 MW06_043020 20D0850-11 4/30/2020		MW08 MW08_043020 20D0850-12 4/30/2020		MW08 GWDUP01_043020 20D0850-14 4/30/2020	
Volatile Organic Compounds (µg/L)									
Acetone	50	1.01	J	3.86		1	U	1	U
Chloroform	7	0.2	U	0.2	U	0.57		0.58	
Methyl Ethyl Ketone (2-Butanone)	50	0.2	U	1.63		0.2	U	0.2	U
Tert-Butyl Methyl Ether	10	1.23		1.24		0.2	U	0.2	U
Tetrachloroethene (PCE)	5	0.2	U	0.2	U	0.51		0.46	J
Semivolatile Organic Compounds (µg/L)									
Bis(2-Ethylhexyl) Phthalate	5	0.541	U	1.27		0.541	U	0.541	U
Pesticides (µg/L)	~	ND		ND		ND		ND	
Herbicides (µg/L)	~	ND		ND		ND		ND	
Polychlorinated Biphenyls (µg/L)	~	ND		ND		ND		ND	
Inorganics (µg/L)									
Aluminum	~	270		55.6	U	3,250		99.6	
Antimony	3	1.11	U	1.11	U	1.63		1.66	
Antimony (Dissolved)	3	1.11	U	1.11	U	1.57		1.51	
Arsenic	25	12.5		1.68		22.2		21.1	
Arsenic (Dissolved)	25	11.7		1.71		20.7		20.2	
Barium	1,000	343		198		136		87.9	
Barium (Dissolved)	1,000	307		194		83.6		82.6	
Calcium	~	146,000		102,000		76,600		68,600	
Calcium (Dissolved)	~	138,000		99,100		65,100		64,400	
Chromium, Total	50	5.56	U	5.56	U	13.6		5.56	U
Chromium, Trivalent	~	10	U	10	U	13.6		10	U
Cobalt	~	4.73		4.44	U	4.44	U	4.44	U
Iron	300	**6,770**		**11,400**		**4,940**		278	U
Iron (Dissolved)	300	**5,510**		**11,000**		278	U	278	U
Lead	25	5.56	U	5.56	U	**184**		19.1	
Lead (Dissolved)	25	5.56	U	5.56	U	6.88		5.56	U
Magnesium	35,000	34,500		19,200		15,500		12,900	
Magnesium (Dissolved)	35,000	31,700		18,500		12,500		12,300	
Manganese	300	**2,900**		**1,730**		151		5.63	
Manganese (Dissolved)	300	**2,700**		**1,700**		36.3		40.9	
Mercury (Dissolved)	0.7	0.2	U	0.2	U	0.2844		0.2	U
Nickel	100	11.1	U	11.1	U	69.7		11.1	U
Nickel (Dissolved)	100	11.1	U	11.1	U	12.1		12.3	
Potassium	~	14,700		9,530		12,300		11,500	
Potassium (Dissolved)	~	14,400	B	9,480	B	11,800	B	11,800	B
Selenium	10	1.11	U	1.11	U	2.72		1.77	
Selenium (Dissolved)	10	1.12		1.11	U	2.6		2.48	
Sodium	20,000	**96,000**		**48,400**		**55,800**		**55,800**	
Sodium (Dissolved)	20,000	**90,900**		**47,800**		**54,200**		**54,600**	
Zinc	2,000	29.3		27.8	U	144		93.8	
Zinc (Dissolved)	2,000	27.8	U	27.8	U	50		52.1	

Notes:
1. Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 703.5 and the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA Water (herein collectively referenced as "NYSDEC SGVs").
2. Only detected analytes are shown in the table.
3. Detected analytical results above NYSDEC SGVs are bolded and shaded.
4. Analytical results with reporting limits (RL) above NYSDEC SGVs are italicized.
5. Sample GWDUP01_043020 is a duplicate sample of MW08_043020.
6. ~ = Regulatory limit for this analyte does not exist
7. ug/l = micrograms per liter
8. ND = Not detected

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

Table 4
Soil Vapor Sample Analytical Results Summary
Phase II Environmental Site Investigation

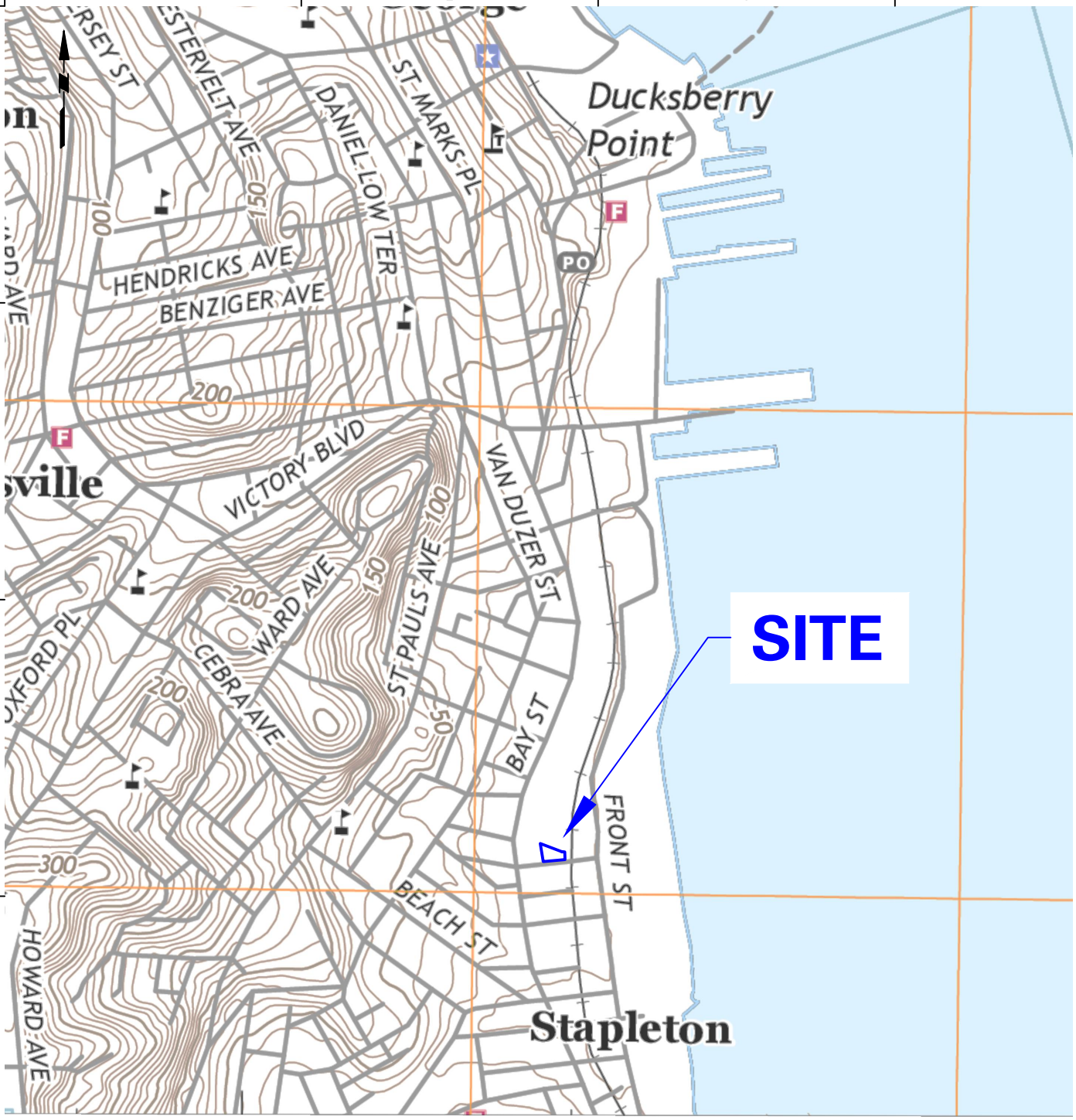
31-33 Wave Street
Staten Island, New York
Langan Project No.: 170610601

Location		AA01		IA08		SS08		IA09		SS09		SV04		SV07	
Sample ID	NYSDOH Decision	AA01_043020		IA08_043020		SS08_043020		IA09_043020		SS09_043020		SV04_043020		SV07_043020	
Laboratory ID	Matrices Minimum	20E0004-03		20E0004-06		20E0004-04		20E0004-07		20E0004-05		20E0004-01		20E0004-02	
Sample Date	Concentrations	4/30/2020		4/30/2020		4/30/2020		4/30/2020		4/30/2020		4/30/2020		4/30/2020	
Sample Type		AA		IA		SSV		IA		SSV		SV		SV	
Volatile Organic Compounds (µg/m³)															
1,2,4-Trimethylbenzene	~	0.39	U	0.55	D	9.9	D	0.47	U	17	D	20	D	28	D
1,3,5-Trimethylbenzene (Mesitylene)	~	0.39	U	0.4	U	2.6	D	0.47	U	3.8	D	8	D	12	D
1,3-Butadiene	~	0.53	U	0.53	U	1.1	U	0.63	U	1.1	U	1.1	U	1.1	D
2-Hexanone	~	0.66	U	0.66	U	1.4	U	0.78	U	1.4	U	3.5	D	2.9	D
4-Ethyltoluene	~	0.39	U	0.4	U	13	D	0.47	U	22	D	11	D	14	D
Acetone	~	6.6	D	8.4	D	6.7	D	4.2	D	4.8	D	54	D	29	D
Benzene	~	0.41	D	0.28	D	3.1	D	0.3	D	2.4	D	2.1	D	9.9	D
Carbon Disulfide	~	0.25	U	0.25	U	1.2	D	0.3	U	4.2	D	4	D	13	D
Carbon Tetrachloride	6	0.5	D	0.51	D	0.42	D	0.48	D	0.26	U	0.4	D	0.25	U
Chloroethane	~	0.21	U	0.21	U	0.44	U	0.25	U	0.44	U	0.42	U	1.1	D
Chloroform	~	0.39	U	0.39	U	9.9	D	0.47	U	0.99	D	5	D	4.2	D
Chloromethane	~	1.2	D	1	D	0.35	U	1.1	D	0.35	U	0.79	D	0.33	U
Cyclohexane	~	0.28	U	0.28	U	1.3	D	0.33	U	3.2	D	1.5	D	7.8	D
Dichlorodifluoromethane	~	1.6	D	1.9	D	2.3	D	1.9	D	2.6	D	2.5	D	2.2	D
Ethylbenzene	~	0.38	D	0.52	D	14	D	0.5	D	19	D	3	D	2.7	D
Isopropanol	~	26	D	9.8	D	4.8	D	1.6	D	4.9	D	29	D	2.3	D
M,P-Xylene	~	1.1	D	1.9	D	55	D	1.6	D	76	D	13	D	12	D
Methyl Ethyl Ketone (2-Butanone)	~	1	D	0.76	D	1.2	D	0.79	D	1.1	D	11	D	8.9	D
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	~	0.33	U	0.33	U	0.69	U	0.39	U	0.69	U	0.65	U	0.79	D
Methyl Methacrylate	~	6.1	D	0.4	D	0.69	U	0.39	U	0.69	U	15	D	0.66	U
Methylene Chloride	100	1.5	D	0.56	U	1.2	U	0.66	U	1.2	U	1.1	U	1.1	U
n-Heptane	~	0.33	U	0.36	D	6.1	D	0.39	U	16	D	8.8	D	11	D
n-Hexane	~	0.42	D	0.28	U	5.8	D	0.34	U	6.5	D	3.5	D	22	D
o-Xylene (1,2-Dimethylbenzene)	~	0.38	D	0.63	D	13	D	0.54	D	19	D	6.8	D	6.8	D
Styrene	~	0.34	D	0.34	U	1.6	D	0.41	U	2.2	D	0.68	U	0.68	U
Tert-Butyl Methyl Ether	~	0.29	U	0.29	U	0.61	U	0.34	U	10	D	0.57	U	0.58	U
Tetrachloroethene (PCE)	100	0.54	U	0.55	U	35	D	0.65	U	20	D	13	D	13	D
Toluene	~	2.2	D	4.7	D	55	D	2.7	D	50	D	8.5	D	13	D
Trichlorofluoromethane	~	1.4	D	1.3	D	1.3	D	1.3	D	1.1	D	1.7	D	2.1	D
Total VOCs	~	51.1		33		243		17		287		226		220	

Notes:
1. Co-located sub-slab vapor and indoor air sample analytical results are evaluated using the New York State Department of Health (NYSDOH) October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York Decision Matrices for Sub-Slab Vapor and Indoor Air and subsequent updates (2017) and soil vapor sample analytical results are compared to the minimum soil vapor concentrations recommending mitigation as set forth in the NYSDOH Decision Matrices.
2. Ambient air sample analytical results are shown for reference only.
3. Only detected analytes are shown in the table.
4. No analytical results are detected above the NYSDOH Decision Matrices.
5. No analytical results are detected above the minimum soil vapor concentrations recommending mitigation.
6. ~ = Regulatory limit for this analyte does not exist
7.ug/m3 = Micrograms per cubic meter
8. AA = Ambient air
9. IA = Indoor air
10. SSV = Sub-slab vapor
11. SV = Soil Vapor
12. VOCs = Volatile Organic Compounds

Qualifiers:
D = The concentration reported is a result of a diluted sample.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL (Reporting Limit); the value shown in the table is the RL.

FIGURES



NOTES:

1. BASE MAP IS REFERENCED FROM UNITED STATES GEOLOGICAL SURVEY (USGS) 7.5-MINUTE SERIES TOPOGRAPHICAL MAPS, JERSEY CITY QUADRANGLE, DATED 2016.

1000 0 500 1000
SCALE IN FEET

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

Project
31-33 WAVE STREET
BLOCK No. 488, LOT Nos. 157, 162, & 164
STATEN ISLAND
RICHMOND COUNTY NEW YORK

Figure Title
SITE LOCATION MAP

Project No. 170610601	Figure No. 1
Date 02/03/2020	
Scale 1" = 1000'	
Drawn By KG / Checked By	
Submission Date	Sheet 1 of 2

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Filename: \\langan.com\data\NYC\data6\170610601\Project Data\CAD\01\SheetFiles\Environmental\Phase II\Figure 1 - Site Location Map.dwg Date: 5/5/2020 Time: 15:07 User: dpalazzolo Style Table: Langan.stb Layout: Site Location Map



LEGEND:

- APPROXIMATE SITE BOUNDARY
- SB01/MW01 — APPROXIMATE SOIL BORING AND MONITORING WELL LOCATION
- SB01/SV01 — APPROXIMATE SOIL BORING AND SOIL VAPOR SAMPLE LOCATION
- SB01/SS01/IA01 — APPROXIMATE SOIL BORING, SUB-SLAB, AND INDOOR AIR SAMPLE LOCATION
- AA01 — APPROXIMATE AMBIENT AIR SAMPLE LOCATION
- SB01/MW01/SS01/IA01 — APPROXIMATE SOIL BORING, MONITORING WELL, SUB-SLAB, AND INDOOR AIR SAMPLE LOCATION

GENERAL NOTES:

1. BASEMAP TAKEN FROM LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE & GEOLOGY, D.P.C. NEARMAP WEB PORTAL, ACCESSED ON JANUARY 29, 2020.
2. BORING LOCATIONS ARE APPROXIMATE AND ARE MEASURED OFF OF EXISTING STRUCTURES

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

50 0 25 50
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Project	31-33 WAVE STREET BLOCK No. 488, LOTS No. 157, 162, 164 STATEN ISLAND RICHMOND COUNTY NEW YORK
Figure Title	BORING LOCATION MAP
Project No.	170610601
Date	05/12/2020
Drawn By	EMS
Checked By	DP
Figure	2
Sheet	2 of 2

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Filename: \\langan.com\data\NYC\data6\170610601\Project Data\CAD\01\SheetFiles\Environmental\Phase II\Figure 2 - Boring Location Plan_as built.dwg Date: 5/15/2020 Time: 10:41 User: eburgess Style Table: Langan.stb Layout: ANSIB-BL (1)

APPENDIX A
SITE PHOTOGRAPHS

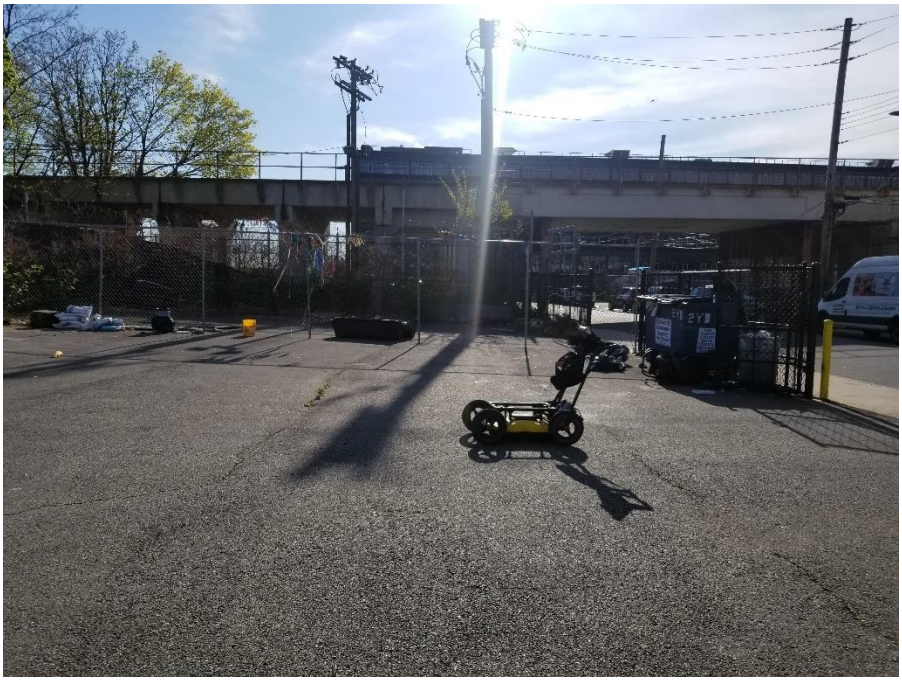


Photo 1: View of NOVA Geophysical surveying the site with ground penetrating radar (GPR). (facing east)

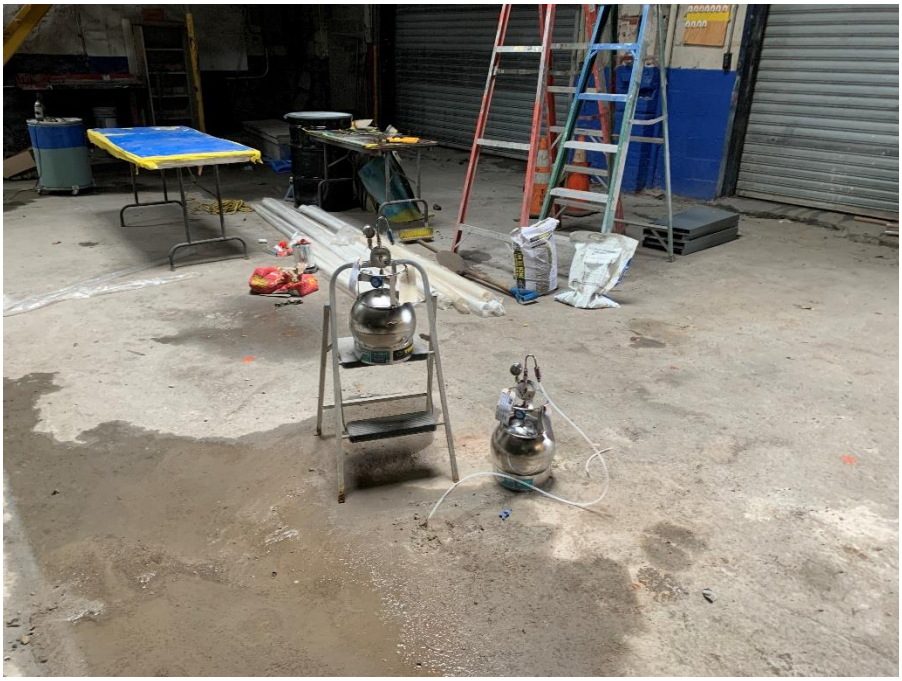


Photo 2: View of sub-slab vapor sample collection in the vacant repair shop.



Photo 3: View of soil from soil boring SB05.



Photo 4: View of soil from soil boring SB07.



Photo 4: View of Langan collecting a groundwater sample from monitoring well MW05.



Photo 5: View of AARCO drilling soil boring SB11 (facing southwest)



Photo 6: View of AARCO installing a soil vapor point SV11.

APPENDIX B
GEOPHYSICAL SURVEY REPORT

GEOPHYSICAL ENGINEERING SURVEY REPORT

Commercial Property
475 Bay Street,
Staten Island, New York 10304

NOVA PROJECT NUMBER:
20-1735

DATED:
May 6, 2020

PREPARED FOR:

LANGAN

21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001-2727

PREPARED BY:

NOVA
GEOPHYSICAL
ENGINEERING
Subsurface Mapping Solutions
56-01 Marathon Parkway # 765
Douglaston, New York 11362
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NOVA GEOPHYSICAL SERVICES

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May 6, 2020

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P: 212.479.5499 x5618 | E: dapalazzolo@langan.com

Re: Geophysical Engineering Survey (GES) Report
Commercial Property
475 Bay Street,
Staten Island, New York 10304

Dear Ms. Palazzolo,

Nova Geophysical Services (NOVA) is pleased to provide the findings of the geophysical engineering survey (GES) at the above referenced project site: 475 Bay Street, Staten Island, New York 10304 (the "Site").

INTRODUCTION TO GEOPHYSICAL ENGINEERING SURVEY (GES)

NOVA performed a geophysical engineering survey (GES) consisting of a Ground Penetrating Radar (GPR) and Electromagnetic (EM) survey at the site. The purpose of this survey is to locate and identify utilities, underground storage tanks and other substructures on April 28th, 2020.

The equipment selected for this investigation was a Sensors and Software Noggin 250 MHz ground penetrating radar (GPR) with a shielded antenna and a Radio Detection RD7100 Electromagnetic utility locator.

A GPR system consists of a radar control unit, control cable, and transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 250 MHz. The trigger pulse is sent to the transmitter electronics in the transduce via the control cable. The transmitter electronics amplify the trigger pulse into bipolar pulses that are radiated to the surface. The transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit and are represented as color graphic images for interpolation.

A typical electromagnetic (EM) utility locating system consists of a transmitter unit and a receiver unit. The receiver unit can be used independently of the transmitter unit in order to detect utility lines with an inherent EM signature (electric utility lines, water lines, etc.). If needed a current at a specific frequency can also be placed on a utility that is being located. This can be done via the transmitter unit by either direct connection or induction via an EM field varying at specific frequency. The receiver unit is then set to the selected frequency and the electromagnetic field created by the current running through the utility can be located allowing the utility to be marked.

GEOPHYSICAL METHODS

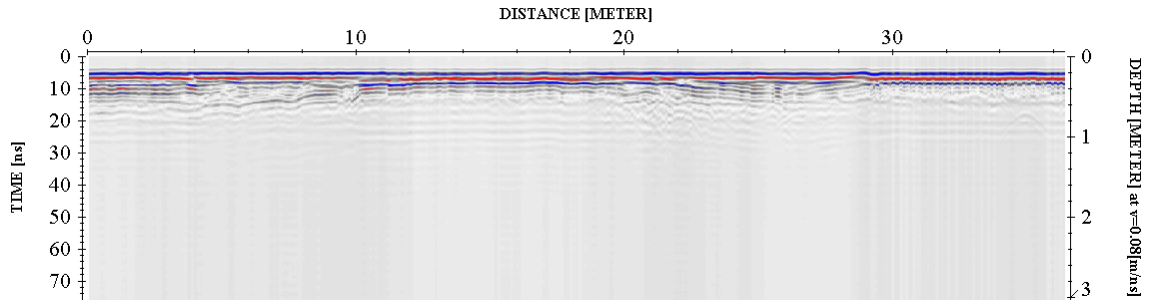
The project site was screened using GPR to search the specified area and inspected for reflections, which could be indicative of substructures and utilities within the subsurface. An EM utility locator was used to help determine the locations of utilities within the survey area.

EM data was collected and interpreted on site and suspected utilities marked as needed. GPR data profiles were collected for the areas of the Site specified by the client and processed as specified below.

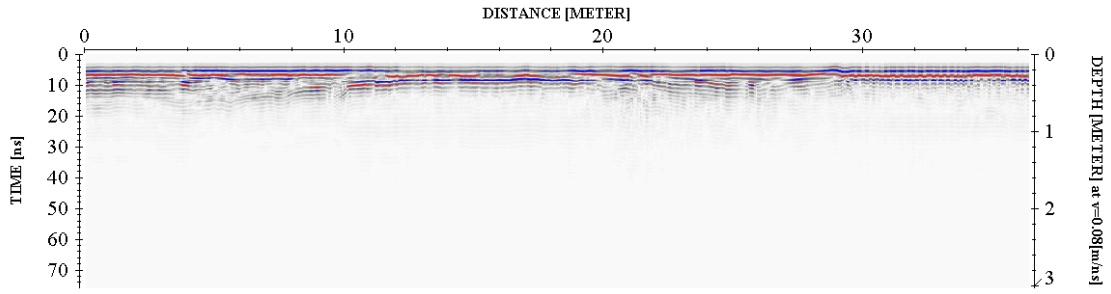
DATA PROCESSING

In order to improve the quality of the results and to better identify anomalies NOVA processed the collected data. The processing work flow is briefly described in this section.

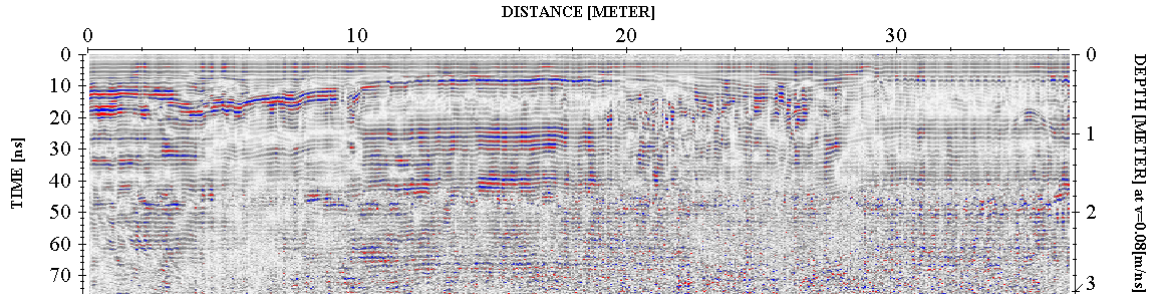
Step 1. Import Raw RAMAC data to standard processing format



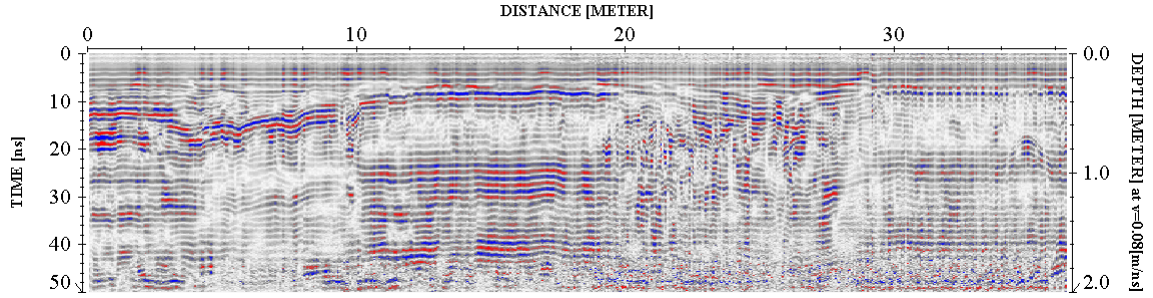
Step 2. Remove instrument noise *(dewow)*



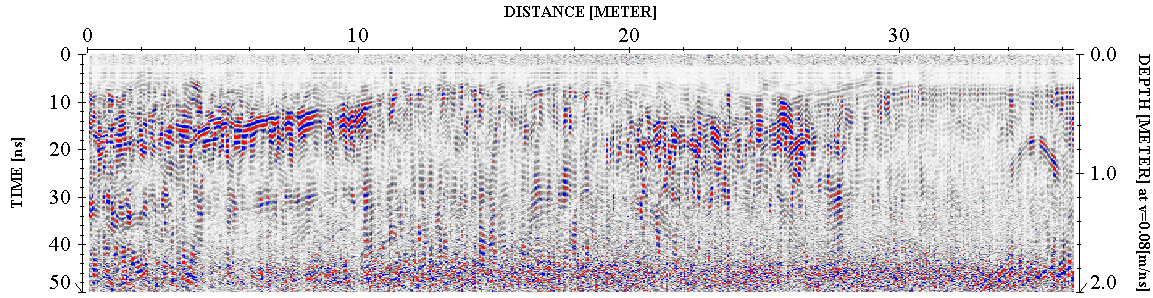
Step 3. Correct for attenuation losses *(energy decay function)*



Step 4. Remove static from bottom of profile *(time cut)*



Step 5. Mute horizontal ringing/noise *(subtracting average)*



The above example shows the significance of data processing. The last image (step 5) has higher resolution than the starting image (raw data – step 1) and represents the subsurface anomalies much more accurately.

PHYSICAL SETTINGS

NOVA observed the following physical conditions at the time of the survey.

Weather: Clear

Temperature: 50° F

Surface: Concrete, Asphalt, Pea Stone

Limitations: The geophysical noise level at the site was high due to being located in an urban environment and reinforced concrete slabs. Additionally, large portions of the site were covered with large, immobile objects. Limiting the coverage of the GPR survey.

RESULTS

The results of the geophysical engineering survey (GES) identified the following at the project site:

- Anomalies resembling potential subsurface utilities (such as sewer, water, gas and electric) were identified within the survey area. Their approximate locations are shown in the survey plan.
- No large geophysical anomalies resembling a potential underground storage tank were identified during the GES.
- All detected subsurface anomalies were marked in the onsite mark out.
- All cleared boring locations were marked in the onsite mark out.

If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

NOVA Geophysical Services



Levent Eskicakit, P.G., E.P.

Project Engineer

Attachments:

Location Map

Survey Plan

Geophysical Images



NOVA Geophysical Services

Subsurface Mapping Solutions
56-01 Marathon Parkway, # 765
Douglaston, New York 11362
Phone (347) 556-7787 * Fax (718) 261-1527
www.novagsi.com

Location Map

SITE:	**Commercial Site** 475 Bay Street, Staten Island, New York 10304
CLIENT:	Langan
DATE:	April 28th, 2020
AUTH:	Chris Steinley

LEGEND



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SURVEY PLAN

SITE:	**Commercial Site** 475 Bay Street, Staten Island, New York 10304
CLIENT:	Langan
DATE:	April 28th, 2020
AUTH:	Chris Steinley

LEGEND

- Survey Area
- Electric
- Sewer
- Water
- Gas

GEOPHYSICAL IMAGES

Commercial Site
475 Bay Street,
Staten Island, New York 10304
April 28th, 2020



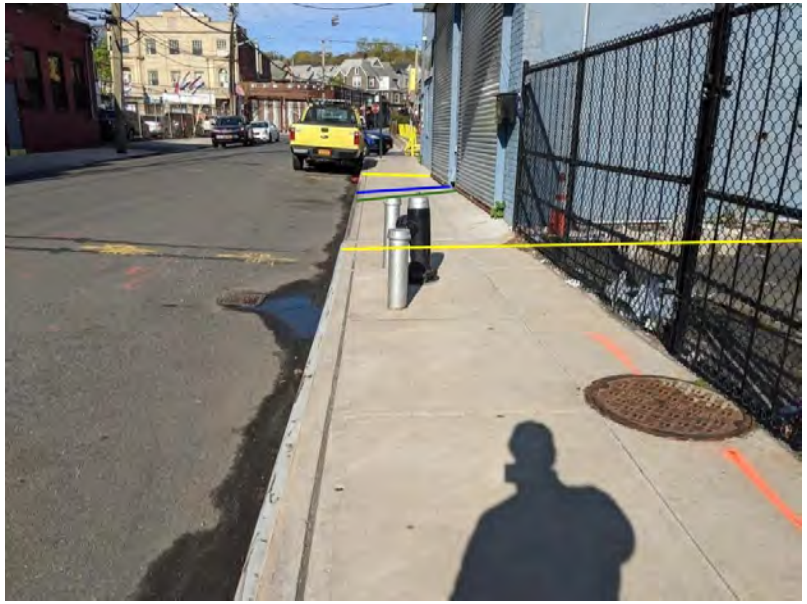






GEOPHYSICAL IMAGES

Commercial Site
475 Bay Street,
Staten Island, New York 10304
April 28th, 2020









GEOPHYSICAL IMAGES

Commercial Site
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April 28th, 2020







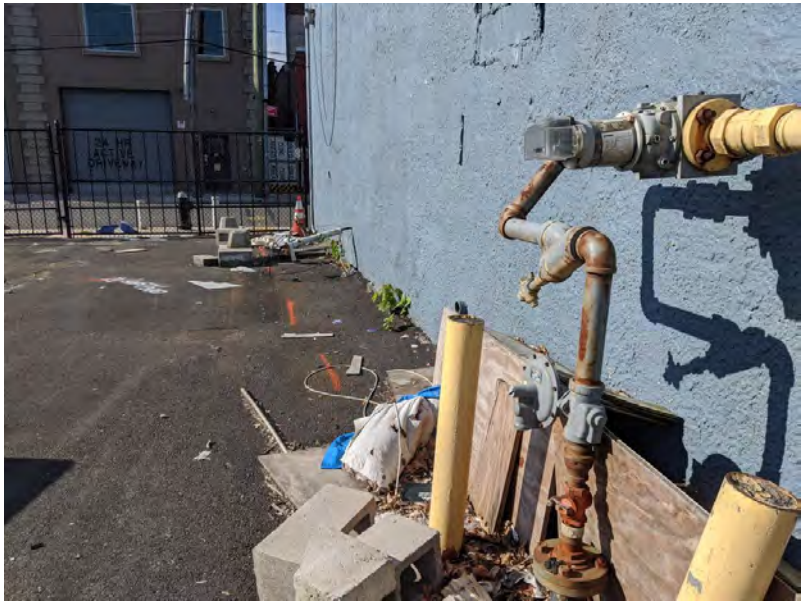


GEOPHYSICAL IMAGES

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April 28th, 2020









GEOPHYSICAL IMAGES

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April 28th, 2020





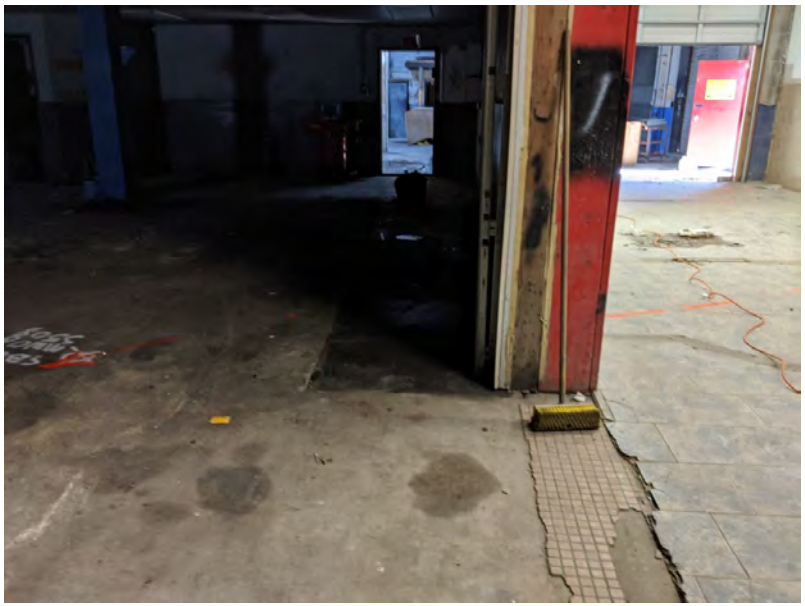


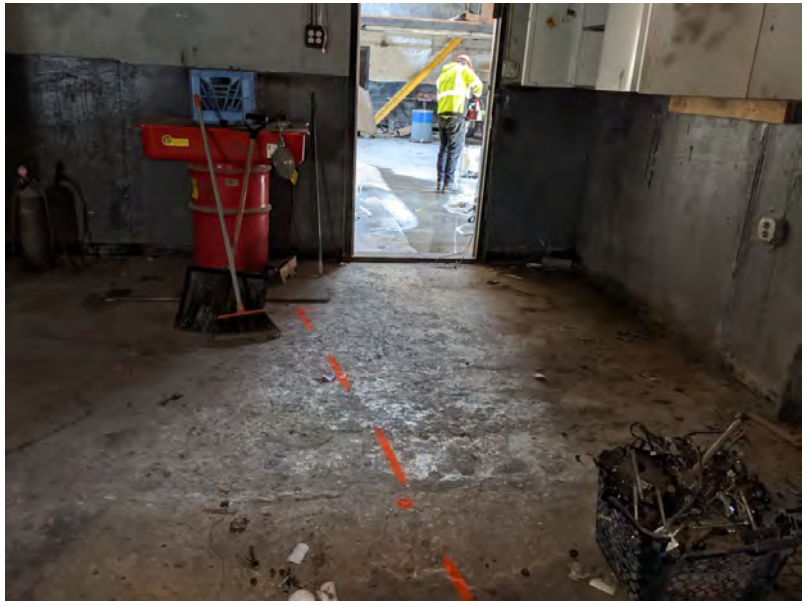


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April 28th, 2020









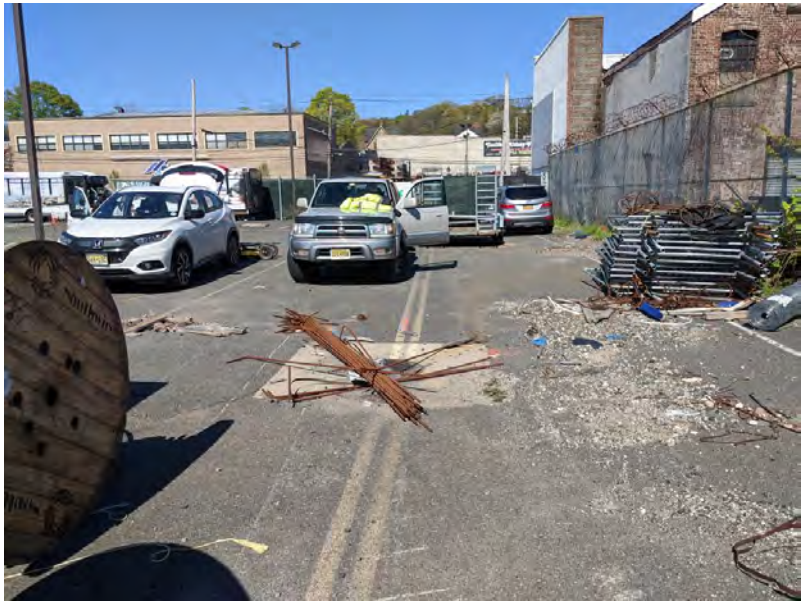
GEOPHYSICAL IMAGES

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April 28th, 2020









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April 28th, 2020









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April 28th, 2020









GEOPHYSICAL IMAGES

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Staten Island, New York 10304
April 28th, 2020









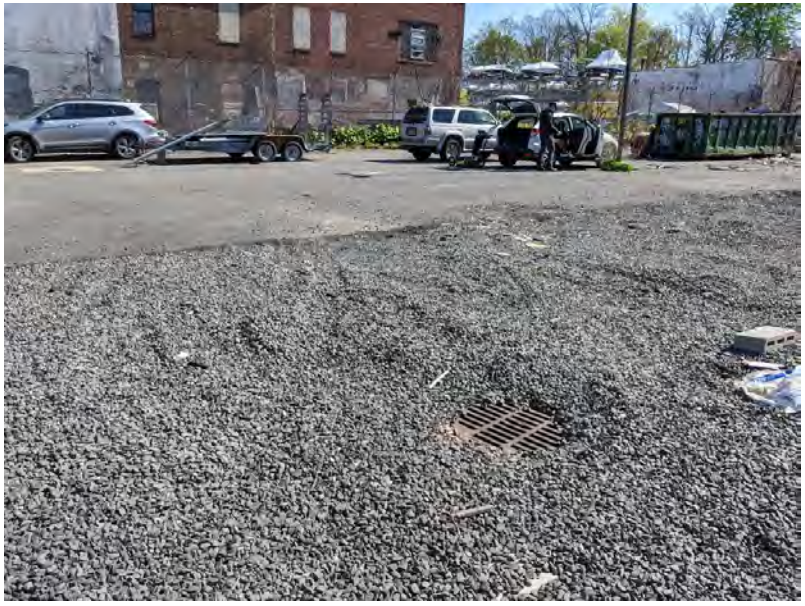
GEOPHYSICAL IMAGES

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475 Bay Street,
Staten Island, New York 10304
April 28th, 2020









GEOPHYSICAL IMAGES

Commercial Site

475 Bay Street,
Staten Island, New York 10304
April 28th, 2020



APPENDIX C
SOIL BORING LOGS

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Log of Boring **SB-04** Sheet 1 of 1

Project: 31-33 Wave Street	Project No.: 170610601
Location: Staten Island, NY	Elevation and Datum: NA
Drilling Company: AARCO Environmental Services, Corp.	Date Started: 4/29/20 — Date Finished: 4/29/20
Drilling Equipment: Geoprobe 7822 DT	Completion Depth: 20 ft — Rock Depth: NA
Size and Type of Bit: 4' Macrocore 2 1/4" diameter	Number of Samples: Disturbed 5 — Undisturbed NA — Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ 5.5 — Completion ▼ NA — 24 HR. ▼ NA
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Thomas Harer
Sampler: 2-inch-diameter acetate liner	Field Engineer: Deirdre Casey
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		R1a (0-2"): Black coarse angular GRAVEL (dry)[ASPHALT]	0					0.0	
		R1b (2-7"): Dark brownish black fine to coarse SAND, some silt, trace coal ash, trace coal (moist)[FILL]	1					0.0	
		R1c (7-12"): Orangish brown fine SAND, trace silt, trace fine gravel (moist) [FILL]						0.0	SB04_0-2 and SODUP01_042920 at 1410
		R1d (12-26"): Brown to black fine to coarse SAND, trace coal, trace coal ash (moist)[FILL]	2	R1	MACROCORE	32		0.0	
		R1e (26-32"): Brown fine SAND, some silt, trace fine gravel (moist)[FILL]	3						
			4						
			5 ▽						
		R2a (0-6"): Brown fine SAND, some silt, trace fine gravel (moist)[FILL]	6					0.0	
		R2b (6-15"): Dark reddish brown fine SAND, some silt, some gravel (wet)[FILL]						0.0	
		R2c (15-27"): Dark gray to black fine SAND, some coal ash, trace coarse sand (wet)[FILL]	7	R2	MACROCORE	27		0.0	
			8					0.0	
			9						
		R3a (0-5"): Dark grayish brown sandy SILT (wet)[FILL]	10					0.0	
		R3b (5-15"): Dark grayish brown gravelly SILT, trace fine sand (wet)[FILL]						0.0	
			11	R3	MACROCORE	17		0.0	SB04_10-12 at 1415
		R3c (15-17"): Dark grayish brown sandy SILT, trace fine sand (wet)[FILL]	12					0.0	
		R4 (0-30"): Dark reddish brown fine SAND, some silt, trace fine gravel (wet)[SP-SC]	13						
								0.0	
			14	R4	MACROCORE	30		0.0	Petroleum-like odor
								0.0	
			15					0.0	SB04_14-16 at 1420
								0.0	
		R5a (0-12"): Dark grayish reddish brown SILT, trace fine sand, trace fine gravel (wet)[SP-SC]	16					0.0	
		R5b (12-22"): Dark grayish reddish brown SILT, some fine sand, trace fine gravel (wet)[SP-SC]						0.0	
			17					0.0	SB04_18-20 at 1425
		R5c (22-44"): Dark grayish reddish brown SILT, trace fine sand, trace fine gravel (wet)[SP-SC]						0.0	End of boring at 20 feet, below grade surface (bgs). Borehole was backfilled with soil cuttings to surface grade and patched with asphalt. Installed SV04 at 3.5 feet bgs. See soil vapor logs for details.
			18	R5	MACROCORE	44		0.0	
								0.0	
			19					0.0	
			20					0.0	

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Log of Boring **SB-05** Sheet 1 of 1

Project: 31-33 Wave Street	Project No.: 170610601
Location: Staten Island, NY	Elevation and Datum: NA
Drilling Company: AARCO Environmental Services, Corp.	Date Started: 4/28/20 — Date Finished: 4/28/20
Drilling Equipment: Geoprobe 7822 DT	Completion Depth: 20 ft — Rock Depth: NA
Size and Type of Bit: 4' Macrocore 2 1/4" diameter	Number of Samples: Disturbed 5 — Undisturbed NA — Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ 7 — Completion ▼ NA — 24 HR. ▼ NA
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Thomas Harer
Sampler: 2-inch-diameter acetate liner	Field Engineer: Deirdre Casey
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		R1a (0-3"): Black coarse angular GRAVEL (dry)[ASPHALT]	0						
		R1b (3-13"): Dark brown to black coarse SAND, some fine angular gravel, trace coal/slag (dry)[FILL]	1					0.0	SB05_0-2 at 1310
		R1c (13-18"): Dark reddish brown fine SAND, some silt, trace fine angular gravel (moist)[FILL]	2	R1	MACROCORE	18		0.0	
			3					0.0	
			4						
		R2a (0-17"): Orange brown to brown fine SAND, some silt, trace angular coarse gravel (moist)	5						
			6					0.0	SB05_6-8 at 1325
		R2b (17-21"): Dark brown to black fine SAND, some silt, trace angular coarse gravel (moist) ▽	7	R2	MACROCORE	33		0.0	
		R2c (21-33"): Dark reddish brown fine sand, some silt (wet)	8					0.0	
		R3 (0-48"): Dark brown fine SAND, some silt (wet)	9					0.0	
			10	R3	MACROCORE	48		0.0	
			11					0.0	
			12					0.0	
		R4 (0-31"): Dark brown fine SAND, some silt (wet)	13						
			14	R4	MACROCORE	31		0.0	
			15					0.0	
		R5a (0-41"): Dark brown fine SAND, some silt (wet)	16					0.0	
			17					0.0	
			18	R5	MACROCORE	48		0.0	SB05_18-20 at 1345
		R5b (41-48"): Black SILT, some fine sand, trace clay (wet)	19					0.0	End of boring at 20 feet, below grade surface (bgs). Installed MW-05 screened from 4 to 14 feet bgs. See construction logs for details.
			20					0.0	

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Log of Boring **SB-06** Sheet 1 of 1

Project: 31-33 Wave Street	Project No.: 170610601
Location: Staten Island, NY	Elevation and Datum: NA
Drilling Company: AARCO Environmental Services, Corp.	Date Started: 4/29/20 — Date Finished: 4/29/20
Drilling Equipment: Geoprobe 7822 DT	Completion Depth: 20 ft — Rock Depth: NA
Size and Type of Bit: 4' Macrocore 2 1/4" diameter	Number of Samples: Disturbed 5, Undisturbed NA, Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ 4, Completion ▼ NA, 24 HR. ▼ NA
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Thomas Harer
Sampler: 2-inch-diameter acetate liner	Field Engineer: Deirdre Casey
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		R1a (0-2"): Black coarse angular GRAVEL (dry)[ASPHALT]	0					0.0	
		R1b (2-8"): Light gray medium angular GRAVEL (dry)[CONCRETE]						0.0	
		R1c (8-15"): Dark reddish brown fine SAND, trace silt (moist)[FILL]	1	R1	MACROCORE	25		0.0	SB06_0-2 at 0900
		R1d (15-25"): Gray to black fine SAND, trace coal ash, trace wood, trace coal, Trace tile (moist)[FILL]	2					0.0	
			3						
		▽	4						
		R2a (0-6"): Grayish reddish brown fine SAND, trace wood, trace coarse sand (wet)[FILL]	5						
		R2b (6-15"): Tannish brown to mottled gray SILT, trace wood, trace glass, trace coal, trace coal ash, trace clay, trace fine sand (wet)[FILL]						0.0	
		R2c (15-20"): Dark brown SILT, trace wood, trace glass, trace fine gravel (wet)[FILL]	6	R2	MACROCORE	23		8.0	SB06_5-7 at 0905
		R2d (20-23"): Dark reddish brown fine SAND, trace wood, trace silt (wet)[FILL]	7					1.7	
								0.0	
								0.0	
		R3a (0-12"): Grayish brown fine SAND, trace silt, trace fine gravel (wet)[FILL]	8						
		R3b (12-35"): Reddish brown fine SAND, some silt, trace wood (wet)[FILL]	9						
			10	R3	MACROCORE	35		0.0	
								0.0	
			11					0.0	
								0.0	
			12					0.0	
		R4 (0-28"): Reddish brown fine SAND, some silt (wet)[SP-SM]						0.0	
			13						SB06_12-14 at 0910
								0.0	
			14	R4	MACROCORE	28		0.0	
								0.0	
			15					0.0	
								0.0	
			16						
		R5a (0-28"): Reddish brown fine SAND, some silt (wet)[SP-SM]							
			17					0.0	SB06_18-20 at 0915
								0.0	Mild organic odor 19-20 ft bgs.
			18	R5	MACROCORE	33		0.0	End of boring at 20 feet,
		R5b (28-33"): Grayish black SILT, trace clay, trace fine sand (wet)[GW-GM]						0.0	below grade surface (bgs).Installed MW-06
			19					0.0	screened from 2 to 12 feet
								1.6	bgs. See construction logs for details.
			20						

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Log of Boring **SB-07** Sheet 1 of 1

Project: 31-33 Wave Street	Project No.: 170610601
Location: Staten Island, NY	Elevation and Datum: NA
Drilling Company: AARCO Environmental Services, Corp.	Date Started: 4/29/20 — Date Finished: 4/29/20
Drilling Equipment: Geoprobe 420M	Completion Depth: 20 ft — Rock Depth: NA
Size and Type of Bit: 4' Macrocore 2 1/4" diameter	Number of Samples: Disturbed 5 — Undisturbed NA — Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ 4 — Completion ▼ NA — 24 HR. ▼ NA
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Thomas Harer
Sampler: 2-inch-diameter acetate liner	Field Engineer: Deirdre Casey
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		R1a (0-2"): Black coarse angular GRAVEL (dry)[ASPHALT]	0					0.0	
		R1b (2-6"): Dark brown fine SAND, some fine gravel, trace silt (moist)[FILL]	1					0.0	
		R1c (6-14"): Dark reddish brown fine SAND, some silt (moist)[FILL]						0.0	SB07_0-2 at 1145
		R1d (14-32"): Brown fine SAND, trace fine gravel, Coal and coal ash lens 19-20 and 24-25 (moist)	2	R1	MACROCORE	32		0.0	
			3					0.0	
			4 ▽						
		R2 (0-12"): Dark reddish brown fine SAND, trace wood, trace coal, trace coal ash, trace silt, trace fine gravel (wet)[FILL]	5						
			6	R2	MACROCORE	12		0.0	
			7					0.0	
			8					0.0	
		R3 (0-17"): Reddish brown fine SAND, trace silt, trace fine gravel [SP-SC]	9						SB07_8-10 at 1150.
			10	R3	MACROCORE	17		0.0	
			11					0.0	
			12					0.0	
		R4 (0-22"): Reddish brown fine SAND, trace silt, trace fine gravel [SP-SC]	13						
			14	R4	MACROCORE	22		0.0	
			15					0.0	
			16					0.0	
		R5a (0-10"): Reddish brown fine SAND, trace silt, trace fine gravel							
		R5b (10-20"): Dark gray SILT, some clay, trace fine sand (wet)[SP-SC]	17					0.0	SB07_18-20 at 1200
		R5c (20-32"): Grayish tan fine SAND, trace silt, trace fine gravel (wet)[SP-SC]	18	R5	MACROCORE	32		0.0	End of boring at 20 feet, below grade surface (bgs). Borehole was backfilled with soil cuttings to surface grade and patched with asphalt. Installed SV04 at 2 feet bgs. See soil vapor logs for details.
			19					0.0	
			20					0.0	

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Log of Boring **SB-08** Sheet 1 of 1

Project: 31-33 Wave Street	Project No.: 170610601
Location: Staten Island, NY	Elevation and Datum: NA
Drilling Company: AARCO Environmental Services, Corp.	Date Started: 4/28/20 — Date Finished: 4/28/20
Drilling Equipment: Geoprobe 420M	Completion Depth: 15 ft — Rock Depth: NA
Size and Type of Bit: 4' Macrocore 2 1/4" diameter	Number of Samples: Disturbed 5 — Undisturbed NA — Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ 5 — Completion ▼ NA — 24 HR. ▼ NA
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Julio Galaraza
Sampler: 2-inch-diameter acetate liner	Field Engineer: Deirdre Casey
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		R1a (0-12") Gray medium SAND (dry)[CONCRETE]	0					0.0	
								0.0	
		R1b (12-24"): Grayish brown fine SAND, trace gravel (dry)[FILL]	1	R1	MACROCORE	24		0.0	
			2						SB08_0-2 at 1450
			3						
			4	R2	MACROCORE	12			
			▽ 5					0.0	
		R2a (0-6"): Light reddish brown fine SAND, trace fine gravel (wet)[FILL]						0.0	SB08_4-6 at 1455
		R2b (6-12"): Reddish brown SAND, trace fine gravel (wet)[FILL]	6					0.0	
		R3a (0-24"): Brown fine SAND, trace fine gravel (wet)[FILL]	7	R3	MACROCORE	30			
			8					0.0	
		R3b (24-30"): Light brownish olive fine SAND, trace medium sand, trace fine gravel (wet)						0.0	
			9					0.0	
		R4 (0-18"): Brownish olive fine SAND, some medium sand, trace fine gravel (wet)	10	R4	MACROCORE	18			
			11					0.0	
								0.0	
								0.0	
			12					0.0	
			13	R5	MACROCORE	30			SB08_13-15 at 1500
		R5 (0-30"): Brown fine SAND, trace fine gravel (wet)						0.0	
			14					0.0	
								0.0	
			15					0.0	End of boring at 15 feet, below grade surface (bgs). Installed MW-08 screened from 1 to 11 feet bgs. See construction logs for details.
			16						
			17						
			18						
			19						
			20						

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Log of Boring **SB-09** Sheet 1 of 1

Project: 31-33 Wave Street	Project No.: 170610601
Location: Staten Island, NY	Elevation and Datum: NA
Drilling Company: AARCO Environmental Services, Corp.	Date Started: 4/28/20 — Date Finished: 4/28/20
Drilling Equipment: Geoprobe 420M	Completion Depth: 15 ft — Rock Depth: NA
Size and Type of Bit: 3' Macrocore 2 1/4" diameter	Number of Samples: Disturbed 5 — Undisturbed NA — Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ 6 — Completion ▼ NA — 24 HR. ▼ NA
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Julio Galaraza
Sampler: 2-inch-diameter acetate liner	Field Engineer: Deirdre Casey
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
		R1a (0-12"): Gray medium SAND (dry)[CONCRETE]	0	R1	MACROCORE	29		0.0	
		R1b (12-23"): Reddish brown fine SAND, trace fine gravel [CH]	1					0.0	SB09_0-2 at 1330
		R1c (23-27"): Reddish brown clayey SILT, some fine sand, trace fine gravel (moist)[FILL]	2					0.0	
		R1d (27-29"): Black coarse angular GRAVEL (dry)[ASPHALT]	3						
		R2a (0-18"): Reddish brown fine SAND, trace fine gravel (moist)[FILL]	4	R2	MACROCORE	24		0.0	SB09_4-6 at 1335
			5					0.1	
		R2b (18-20"): Grayish olive CLAY, trace fine gravel (moist)						0.0	
		R2c (20-24"): Light gray coarse SAND, trace coal, trace gravel (moist)	6					0.2	
		R3a (0-18"): Brownish olive fine SAND, trace gravel (wet)[FILL]	7	R3	MACROCORE	36			
		R3b (18-36"): Black clayey SAND, trace wood, trace fine gravel (wet)	8					0.0	
								0.0	
		R4 (0-6"): Brownish gray medium SAND, trace fine gravel (wet)	9					0.0	
			10	R4	MACROCORE	6			
			11					0.0	
								0.0	
		R5a (0-12"): Brown silty fine SAND (wet)[NATIVE]	12						
			13	R5	MACROCORE	18			SB09_13-15 at 1340
								0.0	
			14					0.0	
		R5b (12-18"): Gray CLAY, trace fine gravel (wet)[CL]						0.0	
			15					0.0	End of boring at 15 feet, below grade surface (bgs). Borehole was backfilled with soil cuttings to surface grade and patched with asphalt.
			16						
			17						
			18						
			19						
			20						

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APPENDIX D
WELL CONSTRUCTION AND GROUNDWATER SAMPLING LOGS

WELL CONSTRUCTION AND DEVELOPMENT SUMMARY

Well No. **MW-05**

PROJECT		PROJECT NO.	
31-33 Wave Street		170610601	
LOCATION		**ELEVATION AND DATUM**	
Staten Island, New York		el.	NAVD88
DRILLING AGENCY		**DATE STARTED**	**DATE FINISHED**
AARCO Environmental Services, Corp.		4/28/2020	4/28/2020
DRILLING EQUIPMENT		**DRILLER**	
Geoprobe® 7822 DT		Thomas Harer	
SIZE AND TYPE OF BIT		**INSPECTOR**	
4-inch Direct Push		Deirdre Casey	
BOREHOLE DIAMETER		**TYPE OF WELL (OVERBURDEN / BEDROCK)**	
2-1/4 inch		Overburden	
RISER MATERIAL	**DIAMETER**	**TYPE OF BACKFILL MATERIAL**	
PVC	2-Inch	Sand	
TYPE OF SCREEN	**DIAMETER**	**TYPE OF WELL PACK**	**TYPE OF SEAL MATERIAL**
PVC No. 10 Slot	2-Inch	No. 2 Sand	Bentonite

METHOD OF INSTALLATION

A Geoprobe 7822DT was used to advance the boring to approximately 20 feet below grade surface (bgs). A permanent 2-inch PVC monitoring well was installed, which consisted of 10' of 10-slot (0.010-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 4 to 14 feet bgs with riser from about grade surface to about 3 feet bgs. The annulus was filled with sand to 4 feet bgs, sealed with hydrated bentonite, and completed to surface grade with clean sand.

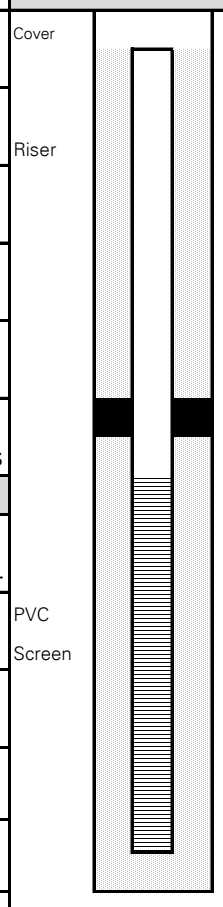
WELL DEVELOPMENT DATA

SURGE BLOCK DIAMETER	N/A	**TYPE PUMP**		Submersible	**DEVELOPMENT CONFIRMATION**
DRILLER OR LANGAN	Driller	**MAX PUMP RATE**		1 LPM	Well Developed on 4/29/2020 until groundwater was no longer turbid
NUMBER OF SURGE CYCLES	N/A	**TOTAL VOLUME**		~10 Gal	

TOP OF CASING	**ELEVATION** N/A	**DEPTH (ft)** N/A
TOP OF SEAL	**ELEVATION** N/A	**DEPTH (ft)** 0.5
TOP OF FILTER	**ELEVATION** N/A	**DEPTH (ft)** 3
TOP OF SCREEN	**ELEVATION** N/A	**DEPTH (ft)** 4.0
BOTTOM OF BORING	**ELEVATION** N/A	**DEPTH (ft)** 14
SCREEN LENGTH		10 ft
SLOT SIZE		No. 10 Slot; 0.010 Inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER (ft bgs)
N/A	4/30/2020	10.24



WELL DETAILS	SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
		0
		3
		4.00
		14.00

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WELL CONSTRUCTION AND DEVELOPMENT SUMMARY

Well No. **MW-06**

PROJECT		PROJECT NO.	
31-33 Wave Street		170610601	
LOCATION		**ELEVATION AND DATUM**	
Staten Island, New York		el.	NAVD88
DRILLING AGENCY		**DATE STARTED**	**DATE FINISHED**
AARCO Environmental Services, Corp.		4/29/2020	4/29/2020
DRILLING EQUIPMENT		**DRILLER**	
Geoprobe® 7822 DT		Thomas Harer	
SIZE AND TYPE OF BIT		**INSPECTOR**	
4-inch Direct Push		Deirdre Casey	
BOREHOLE DIAMETER		**TYPE OF WELL (OVERBURDEN / BEDROCK)**	
2-1/4 inch		Overburden	
RISER MATERIAL	**DIAMETER**	**TYPE OF BACKFILL MATERIAL**	
PVC	2-Inch	Sand	
TYPE OF SCREEN	**DIAMETER**	**TYPE OF WELL PACK**	**TYPE OF SEAL MATERIAL**
PVC No. 10 Slot	2-Inch	No. 2 Sand	Bentonite

METHOD OF INSTALLATION

A Geoprobe 7822DT was used to advance the boring to approximately 12 feet below grade surface (bgs). A permanent 2-inch PVC monitoring well was installed, which consisted of 10' of 10-slot (0.010-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 2 to 12 feet bgs with riser from grade surface to about 2 feet bgs. The annulus was filled with sand to 1 foot bgs and sealed with hydrated bentonite to surface grade.

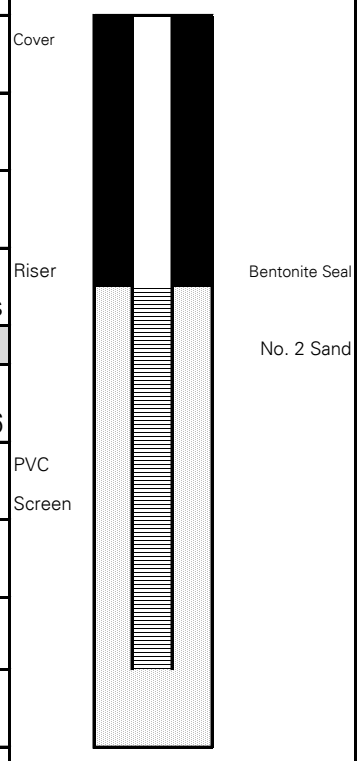
WELL DEVELOPMENT DATA

SURGE BLOCK DIAMETER	N/A	**TYPE PUMP**	Submersible	**DEVELOPMENT CONFIRMATION**
DRILLER OR LANGAN	Driller	**MAX PUMP RATE**	1 LPM	Well Developed on 4/29/2020 until groundwater was no longer turbid
NUMBER OF SURGE CYCLES	N/A	**TOTAL VOLUME**	~10 Gal	

TOP OF CASING	**ELEVATION** N/A	**DEPTH (ft)** N/A
TOP OF SEAL	**ELEVATION** N/A	**DEPTH (ft)** 0.5
TOP OF FILTER	**ELEVATION** N/A	**DEPTH (ft)** 1
TOP OF SCREEN	**ELEVATION** N/A	**DEPTH (ft)** 2.0
BOTTOM OF BORING	**ELEVATION** N/A	**DEPTH (ft)** 12
SCREEN LENGTH		10 ft
SLOT SIZE		No. 10 Slot; 0.010 Inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER (ft bgs)
N/A	4/30/2020	3.56



WELL DETAILS	SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
		0
		1
		11.00
		EOB

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WELL CONSTRUCTION AND DEVELOPMENT SUMMARY

Well No. **MW-08**

PROJECT		PROJECT NO.	
31-33 Wave Street		170610601	
LOCATION		**ELEVATION AND DATUM**	
Staten Island, New York		el. N/A	NAVD88
DRILLING AGENCY		**DATE STARTED**	**DATE FINISHED**
AARCO Environmental Services, Corp.		4/28/2020	4/29/2020
DRILLING EQUIPMENT		**DRILLER**	
Geoprobe® 420 M		Julio Yolozo	
SIZE AND TYPE OF BIT		**INSPECTOR**	
2-inch Direct Push		Deirdre Casey	
BOREHOLE DIAMETER		**TYPE OF WELL (OVERBURDEN / BEDROCK)**	
1-1/4 inch		Overburden	
RISER MATERIAL	**DIAMETER**	**TYPE OF BACKFILL MATERIAL**	
PVC	1-Inch	Sand	
TYPE OF SCREEN	**DIAMETER**	**TYPE OF WELL PACK**	**TYPE OF SEAL MATERIAL**
PVC No. 10 Slot	1-Inch	No. 2 Sand	Bentonite

METHOD OF INSTALLATION

A Geoprobe 420M was used to advance the boring to approximately 15 feet below grade surface (bgs). A permanent 1-inch PVC monitoring well was installed, which consisted of 10' of 10-slot (0.010-inch) well screen, and a solid 1" PVC riser. Well screen was installed from approximately 1 to 11 feet bgs with riser from about grade surface to about 1 foot bgs. The annulus was filled with sand to 1 foot bgs and sealed with hydrated bentonite to surface grade.

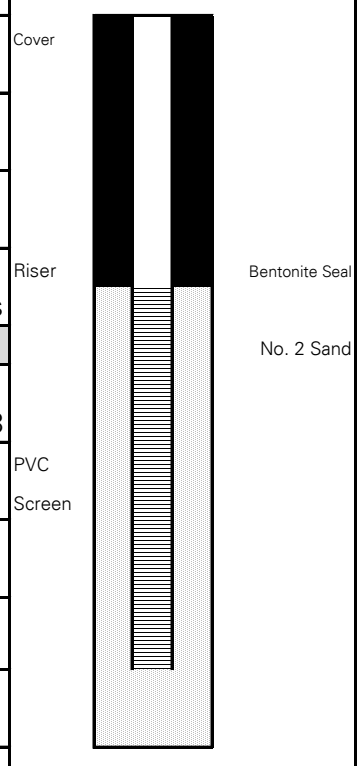
WELL DEVELOPMENT DATA

SURGE BLOCK DIAMETER	N/A	**TYPE PUMP**	Peristaltic	**DEVELOPMENT CONFIRMATION**
DRILLER OR LANGAN	Driller	**MAX PUMP RATE**	0.4 LPM	Well Developed on 4/29/2020 until groundwater was no longer turbid
NUMBER OF SURGE CYCLES	N/A	**TOTAL VOLUME**	~5 Gal	

TOP OF CASING	**ELEVATION** N/A	**DEPTH (ft)** N/A
TOP OF SEAL	**ELEVATION** N/A	**DEPTH (ft)** 0
TOP OF FILTER	**ELEVATION** N/A	**DEPTH (ft)** 1
TOP OF SCREEN	**ELEVATION** N/A	**DEPTH (ft)** 1.0
BOTTOM OF BORING	**ELEVATION** N/A	**DEPTH (ft)** 11
SCREEN LENGTH		10 ft
SLOT SIZE		No. 10 Slot; 0.010 Inches

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER (ft bgs)
N/A	4/30/2020	3.73



WELL DETAILS	SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
		0
		1
		11.00
		EOB

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Groundwater Sampling Logs

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	**31-33 Wave Street**	**Well No:**	MW05	**Water Quality Device Model:**	**Horiba U52**	**Weather:**	55-58F Rain		MW05_043020
Project Number:	**170610601**	**Well Depth:**	14'	**Pine Number:**	**51666**	**Background PID (ppm):**	0	**Sample(s):**	
Site Location:	**Staten Island**	**Well Diameter:**	2"	**Pump Make and Model:**	**Peristaltic Pump**	**PID Beneath Inner Cap (ppm):**	0		
Sampling Personnel:	**Luke McCartney**	**Well Screen Interval:**	4' 14'	**Pine Number:** **Tubing Diameter:**	**51860** **3/16 ID x 3/8 OD**	**Pump Intake Depth:** **Depth to Water Before Purge:**	12.50 10.24	**Sample Date:** **Sample Time:**	4/30/2020 16:40

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
15:23	14.78	7.38	61	0.638	271	1.76					**N/A**
15:28	14.23	7.43	22	0.589	459	0.69		0.6	3		**N/A**
15:33	14.23	7.36	-23	0.582	993	1.08		0.4	5		**N**
15:38	14.21	7.33	-60	0.628	623	0.50		0.3	6.5		**N**
15:43	14.15	7.39	-83	0.619	557	2.36		0.3	8	Slight brown, no odor	**N**
15:48	14.08	7.41	-104	0.652	524	1.59		0.4	10		**N**
15:53	14.10	7.43	-98	0.657	338	3.29		0.3	11.5		**N**
15:58								0.1	12		**N**
16:03	14.27	7.53	-95	0.658	125	3.79		0.2	13		**N**
16:08	14.12	7.49	-96	0.666	129	0.63		0.3	14.5	Clear, no odor	**N**
16:13	14.07	7.49	-101	0.660	129	2.61		0.2	15.5		**N**
16:18	14.07	7.49	-102	0.661	129	2.95		0.3	17		**N**
16:23	Well pumped dry - allow recharge and sample										**N**
16:40	Well Sampled										**N**
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N

Notes:

1. Well depths and groundwater depths were measured in feet below the top of well casing.
2. Well and tubing diameters are measured in inches.
3. PID = Photoionization Detector
4. PPM = Parts per million
5. pH = Hydrogen ion concentration
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
8. DTW = Depth to water
9. mS/cm = milli-Siemans per centimeter
10. NTU = Nephelometric Turbidity Unit

Groundwater Sampling Logs

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	**31-33 Wave Street**	**Well No:**	MW06	**Water Quality Device Model:**	**Horiba U52**	**Weather:**	55-58F Rain		MW06_043020
Project Number:	**170610601**	**Well Depth:**	11'	**Pine Number:**	**51666**	**Background PID (ppm):**	0	**Sample(s):**	
Site Location:	**Staten Island**	**Well Diameter:**	2"	**Pump Make and Model:**	**Peristaltic Pump**	**PID Beneath Inner Cap (ppm):**	0		
Sampling		**Well Screen**	1'	**Pine Number:**	**51860**	**Pump Intake Depth:**	5.00	**Sample Date:**	4/30/2020
Personnel:	**Luke McCartney**	**Interval:**	11'	**Tubing Diameter:**	**3/16 ID x 3/8 OD**	**Depth to Water Before Purge:**	3.56	**Sample Time:**	14:14

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
13:14	13.67	7.91	-93	0.367	78.4	1.57			0		**N/A**
13:19	14.05	7.56	-137	0.383	40.10	0.00		0.2	1		**N/A**
13:24	14.07	7.41	-147	0.397	26.40	0.00		0.3	2.5		**N**
13:29	14.07	7.35	-150	0.406	14.80	0.00		0.3	4		**N**
13:34	14.08	7.33	-152	0.406	11.60	0.00		0.2	5		**N**
13:39	14.09	7.31	-154	0.416	8.70	0.00		0.5	7.5		**N**
13:44	14.12	7.30	-154	0.419	8.60	0.00		0.2	8.5	Clear, no odor	**N**
13:49	14.18	7.29	-155	0.418	5.0	0.00		0.3	10		**N**
13:54	14.24	7.29	-155	0.417	6.5	0.00		0.4	12		**N**
13:59	14.24	7.28	-155	0.420	2.2	0.00		0.4	14		**N**
14:04	14.22	7.28	-154	0.422	2.3	0.00		0.4	16		**N**
14:09	14.24	7.27	-154	0.426	0.0	0.00		0.4	18		**Y**
14:14	14.19	7.28	-154	0.424	0.7	0.00		0.4	20		**Y**

Notes:
1. Well depths and groundwater depths were measured in feet below the top of well casing.
2. Well and tubing diameters are measured in inches.
3. PID = Photoionization Detector
4. PPM = Parts per million
5. pH = Hydrogen ion concentration
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
8. DTW = Depth to water
9. mS/cm = milli-Siemans per centimeter
10. NTU = Nephelometric Turbidity Unit

Groundwater Sampling Logs

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	**31-33 Wave Street**	**Well No:**	MW08	**Water Quality Device Model:**	**Horiba U52**	**Weather:**	55-58F Rain		MW08_043020
Project Number:	**170610601**	**Well Depth:**	11'	**Pine Number:**	**51666**	**Background PID (ppm):**	0	**Sample(s):**	GWDUP01_043020
Site Location:	**Staten Island**	**Well Diameter:**	1"	**Pump Make and Model:**	**Peristaltic Pump**	**PID Beneath Inner Cap (ppm):**	0		
Sampling		**Well Screen**	1'	**Pine Number:**	**51860**	**Pump Intake Depth:**	4.50	**Sample Date:**	4/30/2020
Personnel:	**Luke McCartney**	**Interval:**	11'	**Tubing Diameter:**	**3/16 ID x 3/8 OD**	**Depth to Water Before Purge:**	3.73	**Sample Time:**	10:55

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
9:55	12.92	6.29	212	0.349	1000	5.69			0		**N/A**
10:00	12.89	7.03	187	0.326	1000	5.40		0.5	2.5	Brown, no odor	**N/A**
10:05	12.87	7.30	185	0.325	846	5.6		0.25	3.75		**N**
10:10	12.86	7.47	187	0.329	284	5.60		0.2	4.75		**N**
10:15	12.85	7.53	189	0.329	224	5.56		0.2	5.75		**N**
10:20	12.82	7.58	192	0.332	68.3	5.64		0.25	7		**N**
10:25	12.80	7.61	195	0.334	45.5	5.71		0.35	8.75		**N**
10:30	12.79	7.66	197	0.336	38.2	5.77		0.25	10	Clear, no odor	**N**
10:35	12.78	7.67	198	0.337	39.4	5.90		0.25	11.25		**N**
10:40	12.78	7.68	199	0.338	62.9	5.62		0.35	13		**N**
10:45	12.77	7.69	202	0.339	51.3	5.64		0.3	14.5		**N**
10:50	12.77	7.70	203	0.340	20.7	5.60		0.5	17		**N**
10:55	12.76	7.71	205	0.340	15.9	5.57					**N**

Notes:
1. Well depths and groundwater depths were measured in feet below the top of well casing.
2. Well and tubing diameters are measured in inches.
3. PID = Photoionization Detector
4. PPM = Parts per million
5. pH = Hydrogen ion concentration
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
8. DTW = Depth to water
9. mS/cm = milli-Siemans per centimeter
10. NTU = Nephelometric Turbidity Unit

APPENDIX E
SOIL VAPOR CONSTRUCTION AND SAMPLING LOGS

SUB-SLAB SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SS08

PROJECT: 31-33 Wave Street		**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York		**SURFACE ELEVATION AND DATUM:** n/a	
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services Corp.		**INSTALLATION DATE STARTED:** 4/28/2020	**DATE FINISHED:** 4/28/2020
INSTALLATION FOREMAN: Ron Dixon		**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSTALLATION EQUIPMENT: Geoprobe® 420 M		**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
INSPECTOR: Deirdre Casey		**SAMPLER:** Luke McCartney	
POTENTIAL SAMPLE INTERFERENCES: None observed		**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 54-58°F Wind: 16-24 mph SE Precipitation: Rain/cloudy Pressure: 1015-1019 MB	

METHOD OF INSTALLATION AND PURGING:
AARCO advanced subslab vapor point to 14-inches below the top of the slab. A small amount of No. 2 sand was backfilled into the borehole to set the vapor tubing. No. 2 sand was backfilled around the tubing to 3 inches bgs, and the remainder of the borehole was sealed with bentonite.

TUBING TYPE/DIAMETER: 1/4-Inch Teflon-lined Polyethylene Tubing		**TYPE OF MATERIAL ABOVE SEAL:** Hydrated bentonite	
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe		**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite	
BOREHOLE DIAMETER: 2-inch		**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand	
PURGE VOLUME (L):	0.067		
PURGE FLOW RATE (ML/MIN):	200		
PID AFTER PURGE (PPM):	0		
HELIUM TESTS	Pre-sampling / Post-sampling		
HELIUM TEST IN BUCKET(%):	21.2% / 19.7%		
HELIUM TEST IN TUBE (PPM):	0.0% / 0.0%		
SAMPLE START TIME:	9:13		
SAMPLE STOP TIME:	17:13		
TOTAL SAMPLE TIME (MIN):	480		
REGULATOR FLOW RATE (L/MIN):	0.009673		
VOLUME OF SAMPLE (LITERS):	6		
PID AFTER SAMPLE (PPM):	0		
SAMPLE MOISTURE CONTENT:	n/a		
CAN SERIAL NUMBER:	16956		
REGULATOR SERIAL NUMBER:	5610		
CAN START VACUUM PRESS. (" HG):	-29.75		
CAN STOP VACUUM PRESS. (" HG):	-7		

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	**DEPTH (INCHES FROM SURFACE)**	**NOTES**
Top of Seal	0.00	
Top of Pack	3 inches	
Probe Depth	14 inches	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

Sample Name: SS08_043020

Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

SUB-SLAB SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SS09

PROJECT: 31-33 Wave Street		**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York		**SURFACE ELEVATION AND DATUM:** n/a	
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services Corp.		**INSTALLATION DATE STARTED:** 4/28/2020	**DATE FINISHED:** 4/28/2020
INSTALLATION FOREMAN: Ron Dixon		**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSTALLATION EQUIPMENT: Geoprobe® 420 M		**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
INSPECTOR: Deirdre Casey		**SAMPLER:** Luke McCartney	
POTENTIAL SAMPLE INTERFERENCES: None observed		**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 54-58°F Wind: 16-24 mph SE Precipitation: Rain/cloudy Pressure: 1015-1019 MB	

METHOD OF INSTALLATION AND PURGING:
AARCO advanced subslab vapor point to 14-inches below the top of the slab. A small amount of No. 2 sand was backfilled into the borehole to set the vapor tubing. No. 2 sand was backfilled around the tubing to 2 inches bgs, and the remainder of the borehole was sealed with bentonite.

TUBING TYPE/DIAMETER: 1/4-Inch Teflon-lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** Hydrated bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2-inch	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.067	
PURGE FLOW RATE (ML/MIN):	200	
PID AFTER PURGE (PPM):	0.4	
HELIUM TESTS	Pre-sampling	Post-sampling
HELIUM TEST IN BUCKET(%):	18.5%	23.4%
HELIUM TEST IN TUBE (PPM):	0.0%	0.0%
SAMPLE START TIME:	9:12	
SAMPLE STOP TIME:	17:12	
TOTAL SAMPLE TIME (MIN):	480	
REGULATOR FLOW RATE (L/MIN):	0.01151	
VOLUME OF SAMPLE (LITERS):	6	
PID AFTER SAMPLE (PPM):	0.2	
SAMPLE MOISTURE CONTENT:	n/a	
CAN SERIAL NUMBER:	18302	
REGULATOR SERIAL NUMBER:	Y15	
CAN START VACUUM PRESS. (" HG):	-31.5	
CAN STOP VACUUM PRESS. (" HG):	-7	

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	**DEPTH (INCHES FROM SURFACE)**	**NOTES**
Top of Seal	0.00	
Top of Pack	3.00	
Probe Depth	14.00	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

Sample Name: SS09_043020

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV04

PROJECT: 31-33 Wave Street	**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York	**SURFACE ELEVATION AND DATUM:** n/a	
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services Corp.	**INSTALLATION DATE STARTED:** 4/29/2020	**DATE FINISHED:** 4/29/2020
INSTALLATION FOREMAN: Ron Dixon	**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT	**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
INSPECTOR: Deirdre Casey	**SAMPLER:** Luke McCartney	
POTENTIAL SAMPLE INTERFERENCES: None Observed	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 54-58°F Wind: 16-24 mph SE Precipitation: Rain/cloudy Pressure: 1015-1019 MB	

METHOD OF INSTALLATION AND PURGING:
Advance Geoprobe 7822DT to 3 feet below grade surface (bgs), install 2-inch polyethylene probe, backfill with No. 2 sand to 2 feet bgs, and sealed with hydrated bentonite to surface with hydrated bentonite.

TUBING TYPE/DIAMETER: 1/4-Inch Teflon-lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** Hydrated bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: None	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2-inch	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.067	
PURGE FLOW RATE (ML/MIN):	200	
PID AFTER PURGE (PPM):	0.1	
HELIUM TESTS	Pre-sampling	Post-sampling
HELIUM TEST IN BUCKET(%):	14.3%	17.1%
HELIUM TEST IN TUBE (PPM):	0.0%	0.0%
SAMPLE START TIME:	12:33	
SAMPLE STOP TIME:	14:33	
TOTAL SAMPLE TIME (MIN):	120	
REGULATOR FLOW RATE (L/MIN):	0.004556	
VOLUME OF SAMPLE (LITERS):	6	
PID AFTER SAMPLE (PPM):	0.1	
SAMPLE MOISTURE CONTENT:	n/a	
CAN SERIAL NUMBER:	467	
REGULATOR SERIAL NUMBER:	Y12	
CAN START VACUUM PRESS. (" HG):	-30	
CAN STOP VACUUM PRESS. (" HG):	-5.5	

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	**DEPTH (FEET FROM SURFACE)**	**NOTES**
SURFACE		
Top of Seal	0	
Top of Pack	2	
Tube Depth	3	
SURFACE		

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

Sample Name: SV04__043020

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV07

PROJECT: 31-33 Wave Street	**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York	**SURFACE ELEVATION AND DATUM:** n/a	
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services Corp.	**INSTALLATION DATE STARTED:** 4/29/2020	**DATE FINISHED:** 4/29/2020
INSTALLATION FOREMAN: Ron Dixon	**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT	**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
INSPECTOR: Deirdre Casey	**SAMPLER:** Luke McCartney	
POTENTIAL SAMPLE INTERFERENCES: None Observed	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 54-58°F Wind: 16-24 mph SE Precipitation: Rain/cloudy Pressure: 1015-1019 MB	

METHOD OF INSTALLATION AND PURGING:
Advance Geoprobe 7822DT to 2 feet below grade surface (bgs), install 2-inch polyethylene probe, backfill with No. 2 sand to 1 feet bgs, and sealed with hydrated bentonite to surface with hydrated bentonite.

TUBING TYPE/DIAMETER: 1/4-Inch Teflon-lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** Hydrated bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: None	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2-inch	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.067	
PURGE FLOW RATE (ML/MIN):	200	
PID AFTER PURGE (PPM):	0	
HELIUM TESTS	Pre-sampling	Post-sampling
HELIUM TEST IN BUCKET(%):	25.1%	15.5%
HELIUM TEST IN TUBE (PPM):	0.0%	0.0%
SAMPLE START TIME:	12:30	
SAMPLE STOP TIME:	14:30	
TOTAL SAMPLE TIME (MIN):	120	
REGULATOR FLOW RATE (L/MIN):	0.004435	
VOLUME OF SAMPLE (LITERS):	6	
PID AFTER SAMPLE (PPM):	0	
SAMPLE MOISTURE CONTENT:	n/a	
CAN SERIAL NUMBER:	23996	
REGULATOR SERIAL NUMBER:	6878	
CAN START VACUUM PRESS. (" HG):	-31.5	
CAN STOP VACUUM PRESS. (" HG):	-7.75	

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	**DEPTH (FEET FROM SURFACE)**	**NOTES**
SURFACE		
SURFACE		
Top of Seal	0	
Top of Pack	1	
Tube Depth	2	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

Sample Name: SV07__043020

INDOOR AIR SAMPLING LOG SHEET

Sample Number: IA09

PROJECT: 31-33 Wave Street	**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York	**SURFACE ELEVATION AND DATUM:** N/A	
SAMPLER: Luke McCartney	**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSPECTOR: Luke McCartney	**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
POTENTIAL SAMPLE INTERFERENCES: None Observed	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):**	
	Temp:	54-58°F
	Wind:	16-24 mph SE
	Precipitation:	Rain/cloudy
	Pressure:	1015-1019 MB

METHOD OF INSTALLATION AND SAMPLING:

Langan field screened the sample location with a MiniRAE 3000 photoionization detector prior to sampling. Sample consisted of 6L Summa canister fitted with an 8-hour flow control valve. The flow controller was zeroed and valve opened to initiate the 8-hour sample collection. The sample and flow controller were checked each hour during sampling to ensure proper operation.

SAMPLE DETAILS

HEIGHT ABOVE GROUND (FT):	3.5
PID BEFORE SAMPLE (PPM):	0.0
SAMPLE START TIME:	9:23
SAMPLE STOP TIME:	17:23
TOTAL SAMPLE TIME (MIN):	480
REGULATOR FLOW RATE (L/MIN):	0.00977
VOLUME OF SAMPLE (LITERS):	6
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	n/a
CAN SERIAL NUMBER:	Y3
REGULATOR SERIAL NUMBER:	28316
CAN START VACUUM PRESS. (" HG):	-29.9
CAN STOP VACUUM PRESS. (" HG):	-8

SAMPLE LOCATION SKETCH

See Sample Location Plan

Paired with SS09_043020

NOTES

Sample Name: IA09__043020

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INDOOR AIR SAMPLING LOG SHEET

Sample Number: IA08

PROJECT: 31-33 Wave Street	**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York	**SURFACE ELEVATION AND DATUM:** N/A	
SAMPLER: Luke McCartney	**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSPECTOR: Luke McCartney	**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
POTENTIAL SAMPLE INTERFERENCES: None Observed	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):**	
	Temp:	54-58°F
	Wind:	16-24 mph SE
	Precipitation:	Rain/cloudy
	Pressure:	1015-1019 MB

METHOD OF INSTALLATION AND SAMPLING:

Langan field screened the sample location with a MiniRAE 3000 photoionization detector prior to sampling. Sample consisted of 6L Summa canister fitted with an 8-hour flow control valve. The flow controller was zeroed and valve opened to initiate the 8-hour sample collection. The sample and flow controller were checked each hour during sampling to ensure proper operation.

SAMPLE DETAILS

HEIGHT ABOVE GROUND (FT):	3.5
PID BEFORE SAMPLE (PPM):	0.0
SAMPLE START TIME:	9:12
SAMPLE STOP TIME:	17:12
TOTAL SAMPLE TIME (MIN):	480
REGULATOR FLOW RATE (L/MIN):	0.01105
VOLUME OF SAMPLE (LITERS):	6
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	n/a
CAN SERIAL NUMBER:	18295
REGULATOR SERIAL NUMBER:	Y34
CAN START VACUUM PRESS. (" HG):	-30
CAN STOP VACUUM PRESS. (" HG):	-6

SAMPLE LOCATION SKETCH

See Sample Location Plan

Paired with SS08_043020

NOTES

Sample Name: IA08_042030

Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

AMBIENT AIR SAMPLING LOG SHEET

Sample Number: AA01

PROJECT: 31-33 Wave Street	**PROJECT NO.:** 170610601	
LOCATION: Staten Island, New York	**SURFACE ELEVATION AND DATUM:** N/A	
SAMPLER: Luke McCartney	**SAMPLE DATE STARTED:** 4/30/2020	**DATE FINISHED:** 4/30/2020
INSPECTOR: Luke McCartney	**TYPE OF SAMPLING DEVICE:** 6-Liter Summa Canister	
POTENTIAL SAMPLE INTERFERENCES: None Observed	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):**	
	Temp:	54-58°F
	Wind:	16-24 mph SE
	Precipitation:	Rain/cloudy
	Pressure:	1015-1019 MB

METHOD OF INSTALLATION AND SAMPLING:

Langan field screened the sample location with a MiniRAE 3000 photoionization detector prior to sampling. Sample consisted of 6L Summa canister fitted with a 2-hour flow control valve. The flow controller was zeroed and valve opened to initiate the 2-hour sample collection. The sample and flow controller were checked each hour during sampling to ensure proper operation.

SAMPLE DETAILS

HEIGHT ABOVE GROUND (FT):	3.5
PID BEFORE SAMPLE (PPM):	0.0
SAMPLE START TIME:	12:35
SAMPLE STOP TIME:	14:31
TOTAL SAMPLE TIME (MIN):	116
REGULATOR FLOW RATE (L/MIN):	0.04393
VOLUME OF SAMPLE (LITERS):	6
PID AFTER SAMPLE (PPM):	0.0
SAMPLE MOISTURE CONTENT:	n/a
CAN SERIAL NUMBER:	15529
REGULATOR SERIAL NUMBER:	7361
CAN START VACUUM PRESS. (" HG):	-28
CAN STOP VACUUM PRESS. (" HG):	-4.25

SAMPLE LOCATION SKETCH

See Sample Location Plan

Ambient air sample was centrally located in parking area between SV04 and SV07

NOTES

Sample Name: AA01_043020

Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

APPENDIX F
LABORATORY ANALYTICAL REPORTS

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Report Date: 05/11/2020
Client Project ID: 170610601
York Project (SDG) No.: 20D0776

Report Date: 05/11/2020
Client Project ID: 170610601
York Project (SDG) No.: 20D0776

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 28, 2020 and listed below. The project was identified as your project: **170610601**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20D0776-01	SB09_0-2	Soil	04/28/2020	04/28/2020
20D0776-02	SB09_4-6	Soil	04/28/2020	04/28/2020
20D0776-03	SB09_13-15	Soil	04/28/2020	04/28/2020
20D0776-04	SB05_0-2	Soil	04/28/2020	04/28/2020
20D0776-05	SB05_6-8	Soil	04/28/2020	04/28/2020
20D0776-06	SB05_18-20	Soil	04/28/2020	04/28/2020
20D0776-07	SB08_0-2	Soil	04/28/2020	04/28/2020
20D0776-08	SB08_4-6	Soil	04/28/2020	04/28/2020
20D0776-09	SB08_13-15	Soil	04/28/2020	04/28/2020
20D0776-10	SOFB_042820	Water	04/28/2020	04/28/2020

General Notes for York Project (SDG) No.: 20D0776

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 05/11/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: SB09_0-2 **York Sample ID:** 20D0776-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:30 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 16:55	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*48.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.358	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0674	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0465	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0317	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**0.131**	J	ug/kg dry	0.0789	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0448	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0611	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0524	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.119	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0767	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0445	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0764	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.107	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.107	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**0.211**	J	ug/kg dry	0.0940	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0478	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT

Sample Information

Client Sample ID: SB09_0-2 **York Sample ID:** 20D0776-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:30 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0504	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0524	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0675	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0262	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.187	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:10	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*62.8 %*		*25-150*
Surrogate: M5PFHxA	*65.3 %*		*25-150*
Surrogate: M4PFHpA	*73.4 %*		*25-150*
Surrogate: M3PFHxS	*66.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*76.2 %*		*25-150*
Surrogate: M6PFDA	*80.0 %*		*25-150*
Surrogate: M7PFUdA	*67.0 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*63.0 %*		*25-150*
Surrogate: M2PFTeDA	*59.8 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*93.8 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*67.3 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*66.6 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*59.0 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*74.3 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*81.2 %*		*25-150*
Surrogate: M2-6:2 FTS	*170 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*206 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*80.3 %*		*25-150*

Sample Information

Client Sample ID: SB09_4-6 **York Sample ID:** 20D0776-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:35 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.52	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 14:20	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.344	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0647	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0447	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0304	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.140**	J	ug/kg dry	0.0758	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0430	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0587	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0503	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.114	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0736	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0427	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0733	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.102	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.102	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0902	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0458	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT

Sample Information

Client Sample ID: SB09_4-6 **York Sample ID:** 20D0776-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:35 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0484	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0503	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0648	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0251	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.179	0.491	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:34	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*69.1 %*	*25-150*
Surrogate: M5PFHxA	*71.9 %*	*25-150*
Surrogate: M4PFHpA	*78.2 %*	*25-150*
Surrogate: M3PFHxS	*72.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*79.1 %*	*25-150*
Surrogate: M6PFDA	*82.6 %*	*25-150*
Surrogate: M7PFUdA	*71.5 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*70.1 %*	*25-150*
Surrogate: M2PFTeDA	*67.9 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*102 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*72.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*71.3 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*57.6 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*72.3 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*72.8 %*	*25-150*
Surrogate: M2-6:2 FTS	*99.7 %*	*25-150*
Surrogate: M2-8:2 FTS	*122 %*	*25-150*
Surrogate: M9PFNA	*84.9 %*	*25-150*

Sample Information

Client Sample ID: SB09_13-15 **York Sample ID:** 20D0776-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:40 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.35	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 14:38	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*46.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.383	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0720	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0497	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0339	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.401**	J	ug/kg dry	0.0844	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0479	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0654	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0560	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.127	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0820	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0475	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0817	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.114	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.114	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.100	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0510	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT

Sample Information

Client Sample ID: SB09_13-15 **York Sample ID:** 20D0776-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:40 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0539	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0560	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0721	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0280	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.200	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 04:59	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*61.8 %*		*25-150*
Surrogate: M5PFHxA	*62.8 %*		*25-150*
Surrogate: M4PFHpA	*68.2 %*		*25-150*
Surrogate: M3PFHxS	*63.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*70.2 %*		*25-150*
Surrogate: M6PFDA	*75.3 %*		*25-150*
Surrogate: M7PFUdA	*65.0 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*61.5 %*		*25-150*
Surrogate: M2PFTeDA	*66.1 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*90.5 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*62.7 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*61.8 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*60.2 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*73.8 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*90.6 %*		*25-150*
Surrogate: M2-6:2 FTS	*139 %*		*25-150*
Surrogate: M2-8:2 FTS	*259 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*76.6 %*		*25-150*

Sample Information

Client Sample ID: SB05_0-2 **York Sample ID:** 20D0776-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:10 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.80	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 14:55	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.366	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.165**	J	ug/kg dry	0.0690	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.0863**	J	ug/kg dry	0.0476	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
355-46-4	*** Perfluorohexanesulfonic acid (PFHxS)**	**0.0411**	J	ug/kg dry	0.0325	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.372**	J	ug/kg dry	0.0808	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**5.30**		ug/kg dry	0.0459	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
375-95-1	*** Perfluorononanoic acid (PFNA)**	**0.0952**	J	ug/kg dry	0.0626	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
335-76-2	*** Perfluorodecanoic acid (PFDA)**	**0.179**	J	ug/kg dry	0.0536	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
2058-94-8	*** Perfluoroundecanoic acid (PFUnA)**	**0.126**	J	ug/kg dry	0.122	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
307-55-1	*** Perfluorododecanoic acid (PFDoA)**	**0.0873**	J	ug/kg dry	0.0785	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
72629-94-8	*** Perfluorotridecanoic acid (PFTrDA)**	**0.0689**	J	ug/kg dry	0.0455	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0782	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.109	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.109	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
2706-90-3	*** Perfluoropentanoic acid (PFPeA)**	**0.369**	J	ug/kg dry	0.0962	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
754-91-6	*** Perfluoro-1-octanesulfonamide (FOSA)**	**0.0541**	J	ug/kg dry	0.0489	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT

Sample Information

Client Sample ID: SB05_0-2 **York Sample ID:** 20D0776-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:10 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0516	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
335-77-3	*** Perfluoro-1-decanesulfonic acid (PFDS)**	**0.0556**	J	ug/kg dry	0.0536	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0691	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0268	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.191	0.523	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 05:24	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*71.6 %*		*25-150*
Surrogate: M5PFHxA	*74.7 %*		*25-150*
Surrogate: M4PFHpA	*77.1 %*		*25-150*
Surrogate: M3PFHxS	*74.7 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*84.4 %*		*25-150*
Surrogate: M6PFDA	*85.3 %*		*25-150*
Surrogate: M7PFUdA	*71.8 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*68.9 %*		*25-150*
Surrogate: M2PFTeDA	*66.6 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*108 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*67.2 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*73.5 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*61.5 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*93.4 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*94.2 %*		*25-150*
Surrogate: M2-6:2 FTS	*309 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*300 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*84.9 %*		*25-150*

Sample Information

Client Sample ID: SB05_6-8 **York Sample ID:** 20D0776-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:25 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.62	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 15:29	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*46.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.381	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0717	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0495	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0337	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.136**	J	ug/kg dry	0.0840	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.213**	J	ug/kg dry	0.0477	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0651	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0557	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.127	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0816	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0473	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0813	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.114	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.113	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.100	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0508	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT

Sample Information

Client Sample ID: SB05_6-8 **York Sample ID:** 20D0776-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:25 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0536	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0557	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0718	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0279	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.199	0.544	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:14	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*71.3 %*	*25-150*
Surrogate: M5PFHxA	*75.2 %*	*25-150*
Surrogate: M4PFHpA	*79.6 %*	*25-150*
Surrogate: M3PFHxS	*75.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*79.2 %*	*25-150*
Surrogate: M6PFDA	*83.7 %*	*25-150*
Surrogate: M7PFUdA	*76.3 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*74.5 %*	*25-150*
Surrogate: M2PFTeDA	*66.0 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*108 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*73.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*72.2 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*61.4 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*73.1 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*73.1 %*	*25-150*
Surrogate: M2-6:2 FTS	*90.0 %*	*25-150*
Surrogate: M2-8:2 FTS	*102 %*	*25-150*
Surrogate: M9PFNA	*84.6 %*	*25-150*

Sample Information

Client Sample ID: **SB05_18-20** **York Sample ID:** **20D0776-06**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:45 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 15:47	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*46.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.358	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0674	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0465	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0317	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.0871**	J	ug/kg dry	0.0789	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0448	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0611	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0524	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.119	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0767	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0445	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0764	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.107	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.107	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0940	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0477	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT

Sample Information

Client Sample ID: SB05_18-20 **York Sample ID:** 20D0776-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 1:45 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0504	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0524	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0675	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0262	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.187	0.511	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 06:38	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*74.3 %*	*25-150*
Surrogate: M5PFHxA	*74.6 %*	*25-150*
Surrogate: M4PFHpA	*84.1 %*	*25-150*
Surrogate: M3PFHxS	*76.3 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*79.7 %*	*25-150*
Surrogate: M6PFDA	*79.9 %*	*25-150*
Surrogate: M7PFUdA	*74.9 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*75.8 %*	*25-150*
Surrogate: M2PFTeDA	*71.7 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*114 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*75.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*77.7 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*65.7 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*68.9 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*70.7 %*	*25-150*
Surrogate: M2-6:2 FTS	*84.6 %*	*25-150*
Surrogate: M2-8:2 FTS	*84.0 %*	*25-150*
Surrogate: M9PFNA	*87.7 %*	*25-150*

Sample Information

Client Sample ID: SB08_0-2 **York Sample ID:** 20D0776-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 2:50 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.90	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 16:04	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.360	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0679	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0468	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0319	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.100**	J	ug/kg dry	0.0795	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.0563**	J	ug/kg dry	0.0451	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0616	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0527	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.120	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0772	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0448	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0769	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.107	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.107	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0946	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0481	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT

Sample Information

Client Sample ID: SB08_0-2 **York Sample ID:** 20D0776-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 2:50 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0508	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0527	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0680	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0264	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.188	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:03	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*69.1 %*	*25-150*
Surrogate: M5PFHxA	*70.1 %*	*25-150*
Surrogate: M4PFHpA	*78.9 %*	*25-150*
Surrogate: M3PFHxS	*72.0 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*80.0 %*	*25-150*
Surrogate: M6PFDA	*83.6 %*	*25-150*
Surrogate: M7PFUdA	*76.0 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*72.3 %*	*25-150*
Surrogate: M2PFTeDA	*62.5 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*107 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*73.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*69.9 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*64.8 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*78.0 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*77.4 %*	*25-150*
Surrogate: M2-6:2 FTS	*112 %*	*25-150*
Surrogate: M2-8:2 FTS	*128 %*	*25-150*
Surrogate: M9PFNA	*88.8 %*	*25-150*

Sample Information

Client Sample ID: **SB08_4-6** **York Sample ID:** **20D0776-08**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 2:55 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.90	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 16:21	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.353	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0665	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0459	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0313	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.0779	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.193**	J	ug/kg dry	0.0442	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0604	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0517	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.117	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0757	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0439	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0754	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.105	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.105	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0928	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0471	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT

Sample Information

Client Sample ID: SB08_4-6 **York Sample ID:** 20D0776-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 2:55 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0498	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0517	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0666	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0258	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.184	0.505	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:28	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*68.5 %*	*25-150*
Surrogate: M5PFHxA	*72.1 %*	*25-150*
Surrogate: M4PFHpA	*81.7 %*	*25-150*
Surrogate: M3PFHxS	*72.9 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*79.3 %*	*25-150*
Surrogate: M6PFDA	*78.1 %*	*25-150*
Surrogate: M7PFUdA	*74.9 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*67.9 %*	*25-150*
Surrogate: M2PFTeDA	*61.6 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*105 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*73.5 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*72.6 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*66.4 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*74.5 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*73.5 %*	*25-150*
Surrogate: M2-6:2 FTS	*103 %*	*25-150*
Surrogate: M2-8:2 FTS	*76.6 %*	*25-150*
Surrogate: M9PFNA	*84.7 %*	*25-150*

Sample Information

Client Sample ID: SB08_13-15 **York Sample ID:** 20D0776-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 3:00 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.52	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 16:37	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.493	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0928	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0641	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0436	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.109	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.162**	J	ug/kg dry	0.0617	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0842	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0721	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.164	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.106	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0612	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.105	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.147	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.147	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.129	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0657	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT

Sample Information

Client Sample ID: SB08_13-15 **York Sample ID:** 20D0776-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Soil	April 28, 2020 3:00 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0694	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0721	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0929	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0360	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.257	0.704	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 07:53	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*78.1 %*	*25-150*
Surrogate: M5PFHxA	*78.7 %*	*25-150*
Surrogate: M4PFHpA	*86.8 %*	*25-150*
Surrogate: M3PFHxS	*79.7 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*82.4 %*	*25-150*
Surrogate: M6PFDA	*75.6 %*	*25-150*
Surrogate: M7PFUdA	*65.6 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*62.3 %*	*25-150*
Surrogate: M2PFTeDA	*52.2 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*116 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*76.0 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*78.3 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*59.2 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*64.0 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*61.0 %*	*25-150*
Surrogate: M2-6:2 FTS	*89.8 %*	*25-150*
Surrogate: M2-8:2 FTS	*79.7 %*	*25-150*
Surrogate: M9PFNA	*87.9 %*	*25-150*

Sample Information

Client Sample ID: SOFB_042820 **York Sample ID:** 20D0776-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Water	April 28, 2020 3:10 pm	04/28/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/01/2020 07:31	05/05/2020 14:46	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*60.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ng/L	0.294	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**0.647**	J	ng/L	0.471	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ng/L	0.635	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ng/L	0.281	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ng/L	0.531	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ng/L	0.292	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ng/L	0.524	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ng/L	0.531	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
2355-31-9	* N-MeFOSAA	ND		ng/L	0.529	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
2991-50-6	* N-EtFOSAA	ND		ng/L	0.557	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**0.842**	J	ng/L	0.452	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ng/L	0.296	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT

Sample Information

Client Sample ID: SOFB_042820 **York Sample ID:** 20D0776-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0776	170610601	Water	April 28, 2020 3:10 pm	04/28/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ng/L	0.415	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND	PF-CCV-L	ng/L	0.492	5.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND	PF-CCV-L	ng/L	0.399	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**2.48**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	04/30/2020 15:31	05/06/2020 06:20	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*69.0 %*	*25-150*
Surrogate: M5PFHxA	*62.1 %*	*25-150*
Surrogate: M4PFHpA	*65.6 %*	*25-150*
Surrogate: M3PFHxS	*66.1 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*59.7 %*	*25-150*
Surrogate: M6PFDA	*60.0 %*	*25-150*
Surrogate: M7PFUdA	*45.5 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*36.4 %*	*25-150*
Surrogate: M2PFTeDA	*17.8 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*98.6 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*63.3 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*65.0 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*68.0 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*47.8 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*44.0 %*	*25-150*
Surrogate: M2-6:2 FTS	*49.4 %*	*25-150*
Surrogate: M2-8:2 FTS	*54.7 %*	*25-150*
Surrogate: M9PFNA	*60.2 %*	*25-150*

Analytical Batch Summary

Batch ID: BD01331 **Preparation Method:** SPE Ext-PFAS-EPA 537.1M **Prepared By:** KT

YORK Sample ID	Client Sample ID	Preparation Date
20D0776-10	SOFB_042820	04/30/20
BD01331-BLK1	Blank	04/30/20
BD01331-BS1	LCS	04/30/20

Batch ID: BE00002 **Preparation Method:** EPA 3550C **Prepared By:** LM

YORK Sample ID	Client Sample ID	Preparation Date
20D0776-01	SB09_0-2	05/01/20
20D0776-02	SB09_4-6	05/01/20
20D0776-03	SB09_13-15	05/01/20
20D0776-04	SB05_0-2	05/01/20
20D0776-05	SB05_6-8	05/01/20
20D0776-06	SB05_18-20	05/01/20
20D0776-07	SB08_0-2	05/01/20
20D0776-08	SB08_4-6	05/01/20
20D0776-09	SB08_13-15	05/01/20
BE00002-BLK1	Blank	05/01/20
BE00002-BS1	LCS	05/01/20
BE00002-MS1	Matrix Spike	05/01/20
BE00002-MSD1	Matrix Spike Dup	05/01/20

Batch ID: BE00004 **Preparation Method:** EPA 3535A **Prepared By:** CTD

YORK Sample ID	Client Sample ID	Preparation Date
20D0776-10	SOFB_042820	05/01/20
BE00004-BLK1	Blank	05/01/20
BE00004-BS1	LCS	05/01/20

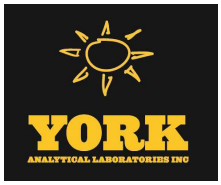
Batch ID: BE00136 **Preparation Method:** SPE PFAS Extraction-Soil-EPA 537m **Prepared By:** KT

YORK Sample ID	Client Sample ID	Preparation Date
20D0776-01	SB09_0-2	05/05/20
20D0776-02	SB09_4-6	05/05/20
20D0776-03	SB09_13-15	05/05/20
20D0776-04	SB05_0-2	05/05/20
20D0776-05	SB05_6-8	05/05/20
20D0776-06	SB05_18-20	05/05/20
20D0776-07	SB08_0-2	05/05/20
20D0776-08	SB08_4-6	05/05/20
20D0776-09	SB08_13-15	05/05/20
BE00136-BLK1	Blank	05/05/20
BE00136-BS1	LCS	05/05/20

Semivolatile Organic Compounds by GC/MS/SIM - Quality Control Data

York Analytical Laboratories, Inc.

Analyte		Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00002 - EPA 3550C												
Blank (BE00002-BLK1)	Blank								Prepared: 05/01/2020 Analyzed: 05/04/2020			
1,4-Dioxane		ND	9.90	ug/kg								
Surrogate: 1,4-Dioxane-d8		*248*		*"*	*495*		*50.0*	*39-83.1*				
LCS (BE00002-BS1)	LCS								Prepared: 05/01/2020 Analyzed: 05/04/2020			
1,4-Dioxane		425	9.90	ug/kg	495		85.8	40-130				
Surrogate: 1,4-Dioxane-d8		*277*		*"*	*495*		*56.0*	*39-83.1*				
Matrix Spike (BE00002-MS1)	Matrix Spike	*Source sample: 20D0776-09 (SB08_13-15)							Prepared: 05/01/2020 Analyzed: 05/04/2020			
1,4-Dioxane		218	9.90	ug/kg	495	ND	44.0	40-130				
Surrogate: 1,4-Dioxane-d8		*228*		*"*	*495*		*46.0*	*40-130*				
Matrix Spike Dup (BE00002-M	Matrix Spike Dup	*Source sample: 20D0776-09 (SB08_13-15)							Prepared: 05/01/2020 Analyzed: 05/04/2020			
1,4-Dioxane		218	9.90	ug/kg	495	ND	44.0	40-130		0.00	30	
Surrogate: 1,4-Dioxane-d8		*228*		*"*	*495*		*46.0*	*40-130*				
Batch BE00004 - EPA 3535A												
Blank (BE00004-BLK1)	Blank								Prepared: 05/01/2020 Analyzed: 05/05/2020			
1,4-Dioxane		ND	0.200	ug/L								
Surrogate: 1,4-Dioxane-d8		*3.80*		*"*	*5.00*		*76.0*	*36.6-118*				
LCS (BE00004-BS1)	LCS								Prepared: 05/01/2020 Analyzed: 05/05/2020			
1,4-Dioxane		5.00	0.200	ug/L	5.00		100	50-130				
Surrogate: 1,4-Dioxane-d8		*3.40*		*"*	*5.00*		*68.0*	*36.6-118*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

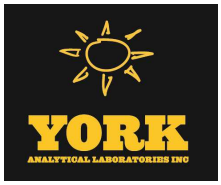
York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD01331 - SPE Ext-PFAS-EPA 537.1M											
Blank (BD01331-BLK1) Blank									Prepared: 04/30/2020 Analyzed: 05/06/2020		
Perfluorobutanesulfonic acid (PFBS)	ND	2.00	ng/L								
Perfluorohexanoic acid (PFHxA)	ND	2.00	"								
Perfluoroheptanoic acid (PFHpA)	ND	2.00	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	2.00	"								
Perfluorooctanoic acid (PFOA)	ND	2.00	"								
Perfluorooctanesulfonic acid (PFOS)	ND	2.00	"								
Perfluorononanoic acid (PFNA)	ND	2.00	"								
Perfluorodecanoic acid (PFDA)	ND	2.00	"								
Perfluoroundecanoic acid (PFUnA)	ND	2.00	"								
Perfluorododecanoic acid (PFDoA)	ND	2.00	"								
Perfluorotridecanoic acid (PFTrDA)	ND	2.00	"								
Perfluorotetradecanoic acid (PFTA)	ND	2.00	"								
N-MeFOSAA	ND	2.00	"								
N-EtFOSAA	ND	2.00	"								
Perfluoropentanoic acid (PFPeA)	0.862	2.00	"								
Perfluoro-1-octanesulfonamide (FOSA)	0.352	2.00	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	2.00	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	2.00	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	ND	5.00	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	ND	2.00	"								
Perfluoro-n-butanoic acid (PFBA)	3.30	2.00	"								
Surrogate: M3PFBS	*51.1*		"	*74.3*		*68.8*	*25-150*				
Surrogate: M5PFHxA	*50.4*		"	*80.0*		*63.0*	*25-150*				
Surrogate: M4PFHpA	*54.1*		"	*80.0*		*67.6*	*25-150*				
Surrogate: M3PFHxS	*52.1*		"	*75.7*		*68.9*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*52.3*		"	*80.0*		*65.4*	*25-150*				
Surrogate: M6PFDA	*51.2*		"	*80.0*		*64.0*	*25-150*				
Surrogate: M7PFUdA	*41.8*		"	*80.0*		*52.2*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*40.2*		"	*80.0*		*50.3*	*25-150*				
Surrogate: M2PFTeDA	*34.1*		"	*80.0*		*42.6*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*58.2*		"	*80.0*		*72.7*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*51.7*		"	*76.6*		*67.6*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*46.9*		"	*80.0*		*58.6*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*57.0*		"	*80.0*		*71.2*	*10-150*				
Surrogate: d3-N-MeFOSAA	*41.7*		"	*80.0*		*52.1*	*25-150*				
Surrogate: d5-N-EtFOSAA	*36.5*		"	*80.0*		*45.6*	*25-150*				
Surrogate: M2-6:2 FTS	*41.2*		"	*75.9*		*54.3*	*25-150*				
Surrogate: M2-8:2 FTS	*44.9*		"	*76.6*		*58.6*	*25-150*				
Surrogate: M9PFNA	*53.8*		"	*80.0*		*67.3*	*25-150*				

PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD01331 - SPE Ext-PFAS-EPA 537.1M											
LCS (BD01331-BS1) LCS									Prepared: 04/30/2020 Analyzed: 05/06/2020		
Perfluorobutanesulfonic acid (PFBS)	60.7	2.00	ng/L	70.8		85.7	50-130				
Perfluorohexanoic acid (PFHxA)	71.4	2.00	"	80.0		89.2	50-130				
Perfluoroheptanoic acid (PFHpA)	68.3	2.00	"	80.0		85.4	50-130				
Perfluorohexanesulfonic acid (PFHxS)	51.6	2.00	"	59.2		87.2	50-130				
Perfluorooctanoic acid (PFOA)	70.4	2.00	"	80.0		88.0	50-130				
Perfluorooctanesulfonic acid (PFOS)	52.6	2.00	"	58.4		90.1	50-130				
Perfluorononanoic acid (PFNA)	61.4	2.00	"	76.8		80.0	50-130				
Perfluorodecanoic acid (PFDA)	69.4	2.00	"	80.0		86.7	50-130				
Perfluoroundecanoic acid (PFUnA)	68.1	2.00	"	80.0		85.2	50-130				
Perfluorododecanoic acid (PFDoA)	60.6	2.00	"	80.0		75.7	50-130				
Perfluorotridecanoic acid (PFTrDA)	65.1	2.00	"	80.0		81.3	50-130				
Perfluorotetradecanoic acid (PFTA)	69.1	2.00	"	80.0		86.4	50-130				
N-MeFOSAA	62.6	2.00	"	80.0		78.3	50-130				
N-EtFOSAA	67.7	2.00	"	80.0		84.6	50-130				
Perfluoropentanoic acid (PFPeA)	68.8	2.00	"	80.0		86.0	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	66.6	2.00	"	80.0		83.2	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	71.2	2.00	"	79.6		89.4	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	63.3	2.00	"	77.2		82.0	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	71.5	5.00	"	76.0		94.1	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	48.2	2.00	"	76.8		62.8	50-130				
Perfluoro-n-butanoic acid (PFBA)	74.4	2.00	"	80.0		92.9	50-130				
Surrogate: M3PFBS	*56.2*		"	*74.3*		*75.6*	*25-150*				
Surrogate: M5PFHxA	*55.2*		"	*80.0*		*69.0*	*25-150*				
Surrogate: M4PFHpA	*56.0*		"	*80.0*		*70.0*	*25-150*				
Surrogate: M3PFHxS	*55.0*		"	*75.7*		*72.7*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*52.8*		"	*80.0*		*66.1*	*25-150*				
Surrogate: M6PFDA	*54.0*		"	*80.0*		*67.4*	*25-150*				
Surrogate: M7PFUdA	*42.1*		"	*80.0*		*52.6*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*40.7*		"	*80.0*		*50.8*	*25-150*				
Surrogate: M2PFTeDA	*33.6*		"	*80.0*		*42.0*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*86.9*		"	*80.0*		*109*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*53.7*		"	*76.6*		*70.1*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*57.8*		"	*80.0*		*72.3*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*62.1*		"	*80.0*		*77.6*	*10-150*				
Surrogate: d3-N-MeFOSAA	*44.5*		"	*80.0*		*55.6*	*25-150*				
Surrogate: d5-N-EtFOSAA	*39.6*		"	*80.0*		*49.5*	*25-150*				
Surrogate: M2-6:2 FTS	*45.3*		"	*75.9*		*59.7*	*25-150*				
Surrogate: M2-8:2 FTS	*46.5*		"	*76.6*		*60.7*	*25-150*				
Surrogate: M9PFNA	*54.8*		"	*80.0*		*68.4*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00136 - SPE PFAS Extraction-Soil-EPA 537m											
Blank (BE00136-BLK1) Blank									Prepared: 05/05/2020 Analyzed: 05/09/2020		
Perfluorobutanesulfonic acid (PFBS)	ND	0.490	ug/kg wet								
Perfluorohexanoic acid (PFHxA)	ND	0.490	"								
Perfluoroheptanoic acid (PFHpA)	ND	0.490	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	0.490	"								
Perfluorooctanoic acid (PFOA)	ND	0.490	"								
Perfluorooctanesulfonic acid (PFOS)	ND	0.490	"								
Perfluorononanoic acid (PFNA)	ND	0.490	"								
Perfluorodecanoic acid (PFDA)	ND	0.490	"								
Perfluoroundecanoic acid (PFUnA)	ND	0.490	"								
Perfluorododecanoic acid (PFDoA)	ND	0.490	"								
Perfluorotridecanoic acid (PFTrDA)	ND	0.490	"								
Perfluorotetradecanoic acid (PFTA)	ND	0.490	"								
N-MeFOSAA	ND	0.490	"								
N-EtFOSAA	ND	0.490	"								
Perfluoropentanoic acid (PFPeA)	ND	0.490	"								
Perfluoro-1-octanesulfonamide (FOSA)	ND	0.490	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	0.490	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	0.490	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	ND	0.490	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	ND	0.490	"								
Perfluoro-n-butanoic acid (PFBA)	ND	0.490	"								
Surrogate: M3PFBS	*3.67*		"	*4.55*		*80.8*	*25-150*				
Surrogate: M5PFHxA	*3.94*		"	*4.90*		*80.6*	*25-150*				
Surrogate: M4PFHpA	*4.15*		"	*4.90*		*84.8*	*25-150*				
Surrogate: M3PFHxS	*3.81*		"	*4.63*		*82.2*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*4.22*		"	*4.90*		*86.2*	*25-150*				
Surrogate: M6PFDA	*4.06*		"	*4.90*		*83.0*	*25-150*				
Surrogate: M7PFUdA	*3.92*		"	*4.90*		*80.0*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*4.28*		"	*4.90*		*87.5*	*25-150*				
Surrogate: M2PFTeDA	*3.99*		"	*4.90*		*81.5*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*5.63*		"	*4.90*		*115*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*4.01*		"	*4.69*		*85.7*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.93*		"	*4.90*		*80.3*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.63*		"	*4.90*		*74.1*	*10-150*				
Surrogate: d3-N-MeFOSAA	*3.82*		"	*4.90*		*77.9*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.00*		"	*4.90*		*81.7*	*25-150*				
Surrogate: M2-6:2 FTS	*4.34*		"	*4.65*		*93.4*	*25-150*				
Surrogate: M2-8:2 FTS	*4.17*		"	*4.69*		*89.0*	*25-150*				
Surrogate: M9PFNA	*4.63*		"	*4.90*		*94.5*	*25-150*				

PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00136 - SPE PFAS Extraction-Soil-EPA 537m											
LCS (BE00136-BS1) LCS									Prepared: 05/05/2020 Analyzed: 05/09/2020		
Perfluorobutanesulfonic acid (PFBS)	4.24	0.481	ug/kg wet	4.26		99.6	50-130				
Perfluorohexanoic acid (PFHxA)	4.52	0.481	"	4.81		93.9	50-130				
Perfluoroheptanoic acid (PFHpA)	4.23	0.481	"	4.81		87.9	50-130				
Perfluorohexanesulfonic acid (PFHxS)	3.40	0.481	"	3.56		95.6	50-130				
Perfluorooctanoic acid (PFOA)	4.25	0.481	"	4.81		88.3	50-130				
Perfluorooctanesulfonic acid (PFOS)	3.28	0.481	"	3.51		93.5	50-130				
Perfluorononanoic acid (PFNA)	4.04	0.481	"	4.62		87.5	50-130				
Perfluorodecanoic acid (PFDA)	4.48	0.481	"	4.81		93.1	50-130				
Perfluoroundecanoic acid (PFUnA)	4.40	0.481	"	4.81		91.5	50-130				
Perfluorododecanoic acid (PFDoA)	4.48	0.481	"	4.81		93.2	50-130				
Perfluorotridecanoic acid (PFTrDA)	4.38	0.481	"	4.81		91.0	50-130				
Perfluorotetradecanoic acid (PFTA)	4.51	0.481	"	4.81		93.9	50-130				
N-MeFOSAA	4.62	0.481	"	4.81		96.0	50-130				
N-EtFOSAA	4.45	0.481	"	4.81		92.5	50-130				
Perfluoropentanoic acid (PFPeA)	4.44	0.481	"	4.81		92.4	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	4.93	0.481	"	4.81		103	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	4.84	0.481	"	4.78		101	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	4.02	0.481	"	4.64		86.5	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	3.99	0.481	"	4.57		87.3	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.48	0.481	"	4.62		119	50-130				
Perfluoro-n-butanoic acid (PFBA)	4.57	0.481	"	4.81		95.1	50-130				
Surrogate: M3PFBS	*3.24*		"	*4.47*		*72.6*	*25-150*				
Surrogate: M5PFHxA	*3.47*		"	*4.81*		*72.2*	*25-150*				
Surrogate: M4PFHpA	*3.71*		"	*4.81*		*77.2*	*25-150*				
Surrogate: M3PFHxS	*3.38*		"	*4.55*		*74.2*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.74*		"	*4.81*		*77.7*	*25-150*				
Surrogate: M6PFDA	*3.61*		"	*4.81*		*75.1*	*25-150*				
Surrogate: M7PFUdA	*3.44*		"	*4.81*		*71.6*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*3.47*		"	*4.81*		*72.1*	*25-150*				
Surrogate: M2PFTeDA	*3.41*		"	*4.81*		*70.8*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*5.04*		"	*4.81*		*105*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*3.44*		"	*4.60*		*74.8*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.54*		"	*4.81*		*73.6*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.16*		"	*4.81*		*65.6*	*10-150*				
Surrogate: d3-N-MeFOSAA	*3.51*		"	*4.81*		*73.0*	*25-150*				
Surrogate: d5-N-EtFOSAA	*3.22*		"	*4.81*		*66.9*	*25-150*				
Surrogate: M2-6:2 FTS	*3.82*		"	*4.56*		*83.8*	*25-150*				
Surrogate: M2-8:2 FTS	*3.59*		"	*4.61*		*77.9*	*25-150*				
Surrogate: M9PFNA	*4.06*		"	*4.81*		*84.3*	*25-150*				

Sample and Data Qualifiers Relating to This Work Order

PFSu-L	The isotopically labeled surrogate recovered below lab control limits due to a matrix effect. Isotope Dilution was applied.
PFSu-H	The isotopically labeled surrogate recovered above lab control limits due to a matrix effect. Isotope Dilution was applied.
PF-CCV-L	The CCV recovery was slightly below acceptable limits for the qualified compound. However, sample results are not biased low because results are corrected for isotope recovery.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

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Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20D0776

Page 1 of ____

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company: Same
Address: 360 West 31st Street New York NY 10001	Address:	Address: Same
Phone: 212 479 5400	Phone:	Phone: same
Contact: Kim Semon	Contact: Dina Palazzolo	Contact: same
E-mail: KSemon@langan.com	E-mail: DPalazzolo@langan.com	E-mail: Same

YOUR Project Number: 170610601

YOUR Project Name: 475 Bay Street

YOUR PO#:

Turn-Around Time

RUSH - Next Day	
RUSH - Two Day	
RUSH - Three Day	
RUSH - Four Day	
Standard (5-7 Day)	X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below)
Deirdre Casey

Matrix Codes
S - soil / solid
GW - groundwater
DW - drinking water
WW - wastewater
O - Oil ; Other

Samples From
New York X
New Jersey
Connecticut
Pennsylvania
Other

Report / EDD Type (circle selections)
Summary Report; QA Report; NY ASP A Package; NY ASP B Package; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.
Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
SB09_0-2	S	4/28/20 1330	VOC, SVOC, PCB, Pest, Herb, TAL Metals (cyanide, hexavalent chromium) PFAS & 1,4-dioxane	4 VOCs, 1 SOC 1 407
SB09_4-6	S	4/28/20 1335		
SB09_13-15	S	4/28/20 1340		
SB05_0-2	S	4/28/20 1310		
SB05_6-8	S	4/28/20 1325		
SB05_18-20	S	4/28/20 1345		
SB08_0-2	S	4/28/20 1450		
~~SB08_6-8~~ SB08_4-6	S	4/28/20 1455		
SB08_13-15	S	4/28/20 1500		
SOFB01_042820	QA/QC	4/28/20 1510		4 (L), 3 VOA, 1 1000, 4 202

Comments:
Low volume SB08 (0-2, 6-4, 13-15)

Preservation: (check all that apply)
HCl X MeOH X HNO3 X H2SO4 ___ NaOH X ZnAc ___
Ascorbic Acid ___ Other: ___

Special Instruction
Field Filtered ____
Lab to Filter ____

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Deirdre Casey Langan	4/28/20 1520	E Sylvia	4/28/20	E Sylvia	4/28/20 1900
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temp. Received at Lab
				TC Mahler	4/28/20 1900 / 2.6 Degrees C

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Report Date: 05/12/2020
Client Project ID: 170610601
York Project (SDG) No.: 20D0818

Report Date: 05/12/2020
Client Project ID: 170610601
York Project (SDG) No.: 20D0818

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 29, 2020 and listed below. The project was identified as your project: **170610601**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20D0818-01	SB04_0-2	Soil	04/29/2020	04/29/2020
20D0818-03	SB04_14-16	Soil	04/29/2020	04/29/2020
20D0818-04	SB04_18-20	Soil	04/29/2020	04/29/2020
20D0818-05	SB06_0-2	Soil	04/29/2020	04/29/2020
20D0818-06	SB06_5-7	Soil	04/29/2020	04/29/2020
20D0818-07	SB06_12-14	Soil	04/29/2020	04/29/2020
20D0818-09	SB07_0-2	Soil	04/29/2020	04/29/2020
20D0818-10	SB07_8-10	Soil	04/29/2020	04/29/2020
20D0818-11	SB07_18-20	Soil	04/29/2020	04/29/2020
20D0818-12	SODUP01_042920	Soil	04/29/2020	04/29/2020

General Notes for York Project (SDG) No.: 20D0818

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 05/12/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: SB04_0-2 **York Sample ID:** 20D0818-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 2:10 pm	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 17:12	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*40.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.365	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.148**	J	ug/kg dry	0.0687	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.200**	J	ug/kg dry	0.0474	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0323	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.311**	J	ug/kg dry	0.0804	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**2.48**		ug/kg dry	0.0456	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
375-95-1	*** Perfluorononanoic acid (PFNA)**	**0.145**	J	ug/kg dry	0.0623	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
335-76-2	*** Perfluorodecanoic acid (PFDA)**	**0.153**	J	ug/kg dry	0.0533	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
2058-94-8	*** Perfluoroundecanoic acid (PFUnA)**	**0.183**	J	ug/kg dry	0.121	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
307-55-1	*** Perfluorododecanoic acid (PFDoA)**	**0.125**	J	ug/kg dry	0.0781	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
72629-94-8	*** Perfluorotridecanoic acid (PFTrDA)**	**0.0869**	J	ug/kg dry	0.0453	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
376-06-7	*** Perfluorotetradecanoic acid (PFTA)**	**0.0856**	J	ug/kg dry	0.0778	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.109	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
2991-50-6	*** N-EtFOSAA**	**0.114**	J	ug/kg dry	0.109	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
2706-90-3	*** Perfluoropentanoic acid (PFPeA)**	**0.118**	J	ug/kg dry	0.0958	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0487	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT

Sample Information

Client Sample ID: SB04_0-2 **York Sample ID:** 20D0818-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 2:10 pm	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0514	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
335-77-3	*** Perfluoro-1-decanesulfonic acid (PFDS)**	**0.0745**	J	ug/kg dry	0.0533	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0688	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
39108-34-4	*** 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)**	**0.0308**	J	ug/kg dry	0.0267	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**1.28**		ug/kg dry	0.190	0.521	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 14:23	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*58.5 %*		*25-150*
Surrogate: M5PFHxA	*55.8 %*		*25-150*
Surrogate: M4PFHpA	*73.3 %*		*25-150*
Surrogate: M3PFHxS	*61.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*66.2 %*		*25-150*
Surrogate: M6PFDA	*66.6 %*		*25-150*
Surrogate: M7PFUdA	*62.4 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*52.5 %*		*25-150*
Surrogate: M2PFTeDA	*49.0 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*76.1 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*61.0 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*53.8 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*40.9 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*85.7 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*87.4 %*		*25-150*
Surrogate: M2-6:2 FTS	*279 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*304 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*68.6 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**91.8**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 08:57	04/30/2020 13:00	STN

Sample Information

Client Sample ID: SB04_14-16 **York Sample ID:** 20D0818-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 2:20 pm	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.52	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 17:29	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*46.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.369	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**0.0849**	J	ug/kg dry	0.0695	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
375-85-9	* **Perfluoroheptanoic acid (PFHpA)**	**0.119**	J	ug/kg dry	0.0480	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0327	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**0.104**	J	ug/kg dry	0.0814	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0462	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0631	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0540	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.123	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0791	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0459	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0788	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.110	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.110	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0969	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0492	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT

Sample Information

Client Sample ID: SB04_14-16 **York Sample ID:** 20D0818-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 2:20 pm	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0520	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0540	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0696	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0270	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**0.214**	J	ug/kg dry	0.193	0.527	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:02	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*68.9 %*	*25-150*
Surrogate: M5PFHxA	*66.6 %*	*25-150*
Surrogate: M4PFHpA	*94.0 %*	*25-150*
Surrogate: M3PFHxS	*72.7 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*73.9 %*	*25-150*
Surrogate: M6PFDA	*76.0 %*	*25-150*
Surrogate: M7PFUdA	*78.0 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*74.4 %*	*25-150*
Surrogate: M2PFTeDA	*75.2 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*91.7 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*74.0 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*66.1 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*70.0 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*79.9 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*87.5 %*	*25-150*
Surrogate: M2-6:2 FTS	*77.4 %*	*25-150*
Surrogate: M2-8:2 FTS	*92.9 %*	*25-150*
Surrogate: M9PFNA	*81.3 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**89.3**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 08:57	04/30/2020 13:00	STN

Sample Information

Client Sample ID: SB04_18-20 **York Sample ID:** 20D0818-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 2:25 pm	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.80	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 17:46	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*40.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.590	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.197**	J	ug/kg dry	0.111	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.232**	J	ug/kg dry	0.0767	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0523	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.340**	J	ug/kg dry	0.130	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0739	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.101	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0864	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.196	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.126	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0734	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.126	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.176	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.176	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.155	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0788	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT

Sample Information

Client Sample ID: SB04_18-20 **York Sample ID:** 20D0818-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 2:25 pm	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0831	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0864	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.111	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0432	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**0.591**	J	ug/kg dry	0.308	0.843	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:27	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*57.5 %*		*25-150*
Surrogate: M5PFHxA	*54.1 %*		*25-150*
Surrogate: M4PFHpA	*75.5 %*		*25-150*
Surrogate: M3PFHxS	*61.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*62.4 %*		*25-150*
Surrogate: M6PFDA	*69.9 %*		*25-150*
Surrogate: M7PFUdA	*64.0 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*61.1 %*		*25-150*
Surrogate: M2PFTeDA	*60.7 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*75.3 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*61.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*52.5 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*58.4 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*83.4 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*91.8 %*		*25-150*
Surrogate: M2-6:2 FTS	*145 %*		*25-150*
Surrogate: M2-8:2 FTS	*297 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*68.5 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**58.3**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 10:41	04/30/2020 13:03	STN

Sample Information

Client Sample ID: SB06_0-2 **York Sample ID:** 20D0818-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 9:00 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.90	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 18:04	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.377	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.108**	J	ug/kg dry	0.0709	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.0962**	J	ug/kg dry	0.0489	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0334	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.0935**	J	ug/kg dry	0.0831	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.468**	J	ug/kg dry	0.0471	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0643	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
335-76-2	*** Perfluorodecanoic acid (PFDA)**	**0.434**	J	ug/kg dry	0.0551	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
2058-94-8	*** Perfluoroundecanoic acid (PFUnA)**	**0.381**	J	ug/kg dry	0.125	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
307-55-1	*** Perfluorododecanoic acid (PFDoA)**	**0.111**	J	ug/kg dry	0.0807	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0468	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0804	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.112	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.112	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0989	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
754-91-6	*** Perfluoro-1-octanesulfonamide (FOSA)**	**0.125**	J	ug/kg dry	0.0502	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT

Sample Information

Client Sample ID: SB06_0-2 **York Sample ID:** 20D0818-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 9:00 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0530	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
335-77-3	*** Perfluoro-1-decanesulfonic acid (PFDS)**	**0.101**	J	ug/kg dry	0.0551	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0710	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
39108-34-4	* **1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)**	**0.0629**	J	ug/kg dry	0.0275	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**0.197**	J	ug/kg dry	0.197	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 16:56	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*60.1 %*	*25-150*
Surrogate: M5PFHxA	*58.2 %*	*25-150*
Surrogate: M4PFHpA	*83.2 %*	*25-150*
Surrogate: M3PFHxS	*63.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*64.7 %*	*25-150*
Surrogate: M6PFDA	*60.4 %*	*25-150*
Surrogate: M7PFUdA	*59.0 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*56.4 %*	*25-150*
Surrogate: M2PFTeDA	*56.9 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*83.4 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*58.3 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*58.9 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*56.9 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*58.6 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*66.9 %*	*25-150*
Surrogate: M2-6:2 FTS	*72.4 %*	*25-150*
Surrogate: M2-8:2 FTS	*74.9 %*	*25-150*
Surrogate: M9PFNA	*69.2 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**89.1**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 08:57	04/30/2020 13:00	STN

Sample Information

Client Sample ID: SB06_5-7 **York Sample ID:** 20D0818-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 9:05 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 18:38	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*42.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.412	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.0845**	J	ug/kg dry	0.0776	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.101**	J	ug/kg dry	0.0536	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0365	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.118**	J	ug/kg dry	0.0909	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.207**	J	ug/kg dry	0.0516	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0704	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0603	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.137	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0883	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0512	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0879	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.123	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.123	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.108	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0550	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT

Sample Information

Client Sample ID: SB06_5-7 **York Sample ID:** 20D0818-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 9:05 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0580	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0603	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0777	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0301	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.215	0.589	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 17:21	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*56.9 %*	*25-150*
Surrogate: M5PFHxA	*56.4 %*	*25-150*
Surrogate: M4PFHpA	*79.8 %*	*25-150*
Surrogate: M3PFHxS	*60.8 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*63.9 %*	*25-150*
Surrogate: M6PFDA	*66.1 %*	*25-150*
Surrogate: M7PFUdA	*61.2 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*62.7 %*	*25-150*
Surrogate: M2PFTeDA	*63.0 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*78.0 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*59.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*56.2 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*57.5 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*71.1 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*77.7 %*	*25-150*
Surrogate: M2-6:2 FTS	*76.3 %*	*25-150*
Surrogate: M2-8:2 FTS	*101 %*	*25-150*
Surrogate: M9PFNA	*70.9 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**80.4**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 08:57	04/30/2020 13:00	STN

Sample Information

Client Sample ID: **SB06_12-14** **York Sample ID:** **20D0818-07**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 9:10 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.35	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 18:55	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*48.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.370	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.0864**	J	ug/kg dry	0.0697	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.0682**	J	ug/kg dry	0.0481	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0328	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.181**	J	ug/kg dry	0.0816	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0463	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0632	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0541	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.123	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0793	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0460	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0790	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.110	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.110	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0972	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0494	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT

Sample Information

Client Sample ID: SB06_12-14 **York Sample ID:** 20D0818-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 9:10 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0521	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0541	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0698	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0271	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.193	0.529	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 18:11	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*66.8 %*	*25-150*
Surrogate: M5PFHxA	*62.7 %*	*25-150*
Surrogate: M4PFHpA	*88.5 %*	*25-150*
Surrogate: M3PFHxS	*70.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*68.2 %*	*25-150*
Surrogate: M6PFDA	*77.6 %*	*25-150*
Surrogate: M7PFUdA	*67.0 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*62.9 %*	*25-150*
Surrogate: M2PFTeDA	*60.0 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*89.6 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*69.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*63.2 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*67.7 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*68.9 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*74.3 %*	*25-150*
Surrogate: M2-6:2 FTS	*69.2 %*	*25-150*
Surrogate: M2-8:2 FTS	*85.8 %*	*25-150*
Surrogate: M9PFNA	*73.3 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**86.1**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 08:57	04/30/2020 13:00	STN

Sample Information

Client Sample ID: SB07_0-2 **York Sample ID:** 20D0818-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 11:45 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 19:12	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.377	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.268**	J	ug/kg dry	0.0709	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.157**	J	ug/kg dry	0.0490	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0334	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.148**	J	ug/kg dry	0.0831	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**1.68**		ug/kg dry	0.0472	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0644	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
335-76-2	*** Perfluorodecanoic acid (PFDA)**	**0.172**	J	ug/kg dry	0.0551	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.125	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
307-55-1	*** Perfluorododecanoic acid (PFDoA)**	**0.0903**	J	ug/kg dry	0.0807	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0468	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0804	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.112	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.112	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
2706-90-3	*** Perfluoropentanoic acid (PFPeA)**	**0.155**	J	ug/kg dry	0.0989	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0503	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT

Sample Information

Client Sample ID: **SB07_0-2** **York Sample ID:** **20D0818-09**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 11:45 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0531	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
335-77-3	*** Perfluoro-1-decanesulfonic acid (PFDS)**	**0.0652**	J	ug/kg dry	0.0551	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0711	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0276	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**0.264**	J	ug/kg dry	0.197	0.538	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 22:43	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*57.0 %*		*25-150*
Surrogate: M5PFHxA	*54.1 %*		*25-150*
Surrogate: M4PFHpA	*73.6 %*		*25-150*
Surrogate: M3PFHxS	*58.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*63.8 %*		*25-150*
Surrogate: M6PFDA	*60.0 %*		*25-150*
Surrogate: M7PFUdA	*46.3 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*31.2 %*		*25-150*
Surrogate: M2PFTeDA	*23.1 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*78.6 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*56.1 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*52.4 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*15.4 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*59.5 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*54.0 %*		*25-150*
Surrogate: M2-6:2 FTS	*151 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*145 %*		*25-150*
Surrogate: M9PFNA	*67.2 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**90.8**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 10:41	04/30/2020 13:03	STN

Sample Information

Client Sample ID: SB07_8-10 **York Sample ID:** 20D0818-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 11:50 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.90	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 19:29	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.386	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.0994**	J	ug/kg dry	0.0727	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.136**	J	ug/kg dry	0.0502	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0342	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.0851	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0483	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0660	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0565	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.128	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0827	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0480	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0824	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.115	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.115	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.101	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0515	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT

Sample Information

Client Sample ID: SB07_8-10 **York Sample ID:** 20D0818-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 11:50 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0544	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0565	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0728	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0282	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.202	0.551	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:08	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*63.6 %*	*25-150*
Surrogate: M5PFHxA	*60.9 %*	*25-150*
Surrogate: M4PFHpA	*80.0 %*	*25-150*
Surrogate: M3PFHxS	*67.7 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*65.0 %*	*25-150*
Surrogate: M6PFDA	*69.5 %*	*25-150*
Surrogate: M7PFUdA	*65.6 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*60.5 %*	*25-150*
Surrogate: M2PFTeDA	*59.7 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*87.9 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*68.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*60.4 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*52.3 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*72.0 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*68.0 %*	*25-150*
Surrogate: M2-6:2 FTS	*75.1 %*	*25-150*
Surrogate: M2-8:2 FTS	*69.1 %*	*25-150*
Surrogate: M9PFNA	*72.8 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**86.8**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 10:41	04/30/2020 13:03	STN

Sample Information

Client Sample ID: **SB07_18-20** **York Sample ID:** **20D0818-11**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 11:55 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.35	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/01/2020 07:24	05/04/2020 19:46	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*42.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.441	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.123**	J	ug/kg dry	0.0830	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.138**	J	ug/kg dry	0.0573	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0390	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.152**	J	ug/kg dry	0.0972	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0552	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0753	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0645	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.146	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0945	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0548	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0941	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.131	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.131	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.116	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0588	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT

Sample Information

Client Sample ID: SB07_18-20 **York Sample ID:** 20D0818-11

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 11:55 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0621	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0645	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0831	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0322	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.230	0.630	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:33	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*67.5 %*		*25-150*
Surrogate: M5PFHxA	*62.4 %*		*25-150*
Surrogate: M4PFHpA	*86.1 %*		*25-150*
Surrogate: M3PFHxS	*70.1 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*68.2 %*		*25-150*
Surrogate: M6PFDA	*81.9 %*		*25-150*
Surrogate: M7PFUdA	*75.4 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*64.9 %*		*25-150*
Surrogate: M2PFTeDA	*67.9 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*89.9 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*72.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*61.5 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*54.5 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*72.3 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*90.3 %*		*25-150*
Surrogate: M2-6:2 FTS	*82.2 %*		*25-150*
Surrogate: M2-8:2 FTS	*203 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*75.9 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**77.3**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 10:41	04/30/2020 13:03	STN

Sample Information

Client Sample ID: SODUP01_042920 **York Sample ID:** 20D0818-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 12:00 am	04/29/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.43	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 12:12	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*54.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.384	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.427**	J	ug/kg dry	0.0724	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
375-85-9	*** Perfluoroheptanoic acid (PFHpA)**	**0.181**	J	ug/kg dry	0.0500	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0341	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.274**	J	ug/kg dry	0.0848	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**2.15**		ug/kg dry	0.0481	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
375-95-1	*** Perfluorononanoic acid (PFNA)**	**0.115**	J	ug/kg dry	0.0657	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
335-76-2	*** Perfluorodecanoic acid (PFDA)**	**0.182**	J	ug/kg dry	0.0562	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
2058-94-8	*** Perfluoroundecanoic acid (PFUnA)**	**0.149**	J	ug/kg dry	0.128	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0824	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0478	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
376-06-7	*** Perfluorotetradecanoic acid (PFTA)**	**0.111**	J	ug/kg dry	0.0821	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.115	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.114	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
2706-90-3	*** Perfluoropentanoic acid (PFPeA)**	**0.198**	J	ug/kg dry	0.101	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
754-91-6	*** Perfluoro-1-octanesulfonamide (FOSA)**	**0.0845**	J	ug/kg dry	0.0513	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT

Sample Information

Client Sample ID: SODUP01_042920 **York Sample ID:** 20D0818-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0818	170610601	Soil	April 29, 2020 12:00 am	04/29/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0542	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0562	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0725	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0281	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**1.12**		ug/kg dry	0.201	0.549	1	EPA 537m Certifications:	05/07/2020 11:24	05/11/2020 23:58	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*59.3 %*		*25-150*
Surrogate: M5PFHxA	*51.7 %*		*25-150*
Surrogate: M4PFHpA	*73.0 %*		*25-150*
Surrogate: M3PFHxS	*61.5 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*66.9 %*		*25-150*
Surrogate: M6PFDA	*49.8 %*		*25-150*
Surrogate: M7PFUdA	*32.5 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*15.0 %*	PFSu-L	*25-150*
Surrogate: M2PFTeDA	*3.63 %*	PFSu-L	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*84.2 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*49.3 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*57.0 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*0.361 %*	PFSu-L	*10-150*
Surrogate: d3-N-MeFOSAA	*41.4 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*32.4 %*		*25-150*
Surrogate: M2-6:2 FTS	*249 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*151 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*67.0 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**90.1**		%	0.100	1	SM 2540G Certifications: CTDOH	04/30/2020 10:41	04/30/2020 13:03	STN

Analytical Batch Summary

Batch ID: BD01298 **Preparation Method:** % Solids Prep **Prepared By:** TJM

YORK Sample ID	Client Sample ID	Preparation Date
20D0818-01	SB04_0-2	04/30/20
20D0818-03	SB04_14-16	04/30/20
20D0818-05	SB06_0-2	04/30/20
20D0818-06	SB06_5-7	04/30/20
20D0818-07	SB06_12-14	04/30/20
BD01298-DUP1	Duplicate	04/30/20

Batch ID: BD01313 **Preparation Method:** % Solids Prep **Prepared By:** TJM

YORK Sample ID	Client Sample ID	Preparation Date
20D0818-04	SB04_18-20	04/30/20
20D0818-09	SB07_0-2	04/30/20
20D0818-10	SB07_8-10	04/30/20
20D0818-11	SB07_18-20	04/30/20
20D0818-12	SODUP01_042920	04/30/20
BD01313-DUP1	Duplicate	04/30/20

Batch ID: BE00002 **Preparation Method:** EPA 3550C **Prepared By:** LM

YORK Sample ID	Client Sample ID	Preparation Date
20D0818-01	SB04_0-2	05/01/20
20D0818-03	SB04_14-16	05/01/20
20D0818-04	SB04_18-20	05/01/20
20D0818-05	SB06_0-2	05/01/20
20D0818-06	SB06_5-7	05/01/20
20D0818-07	SB06_12-14	05/01/20
20D0818-09	SB07_0-2	05/01/20
20D0818-10	SB07_8-10	05/01/20
20D0818-11	SB07_18-20	05/01/20
BE00002-BLK1	Blank	05/01/20
BE00002-BS1	LCS	05/01/20

Batch ID: BE00118 **Preparation Method:** EPA 3550C **Prepared By:** LM

YORK Sample ID	Client Sample ID	Preparation Date
20D0818-12	SODUP01_042920	05/05/20
BE00118-BLK1	Blank	05/05/20
BE00118-BS1	LCS	05/05/20

Batch ID: BE00266 **Preparation Method:** SPE PFAS Extraction-Soil-EPA 537m **Prepared By:** KHA

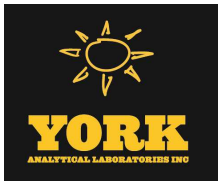
YORK Sample ID	Client Sample ID	Preparation Date
20D0818-01	SB04_0-2	05/07/20

20D0818-03	SB04_14-16	05/07/20
20D0818-04	SB04_18-20	05/07/20
20D0818-05	SB06_0-2	05/07/20
20D0818-06	SB06_5-7	05/07/20
20D0818-07	SB06_12-14	05/07/20
20D0818-09	SB07_0-2	05/07/20
20D0818-10	SB07_8-10	05/07/20
20D0818-11	SB07_18-20	05/07/20
20D0818-12	SODUP01_042920	05/07/20
BE00266-BLK1	Blank	05/07/20
BE00266-BS1	LCS	05/07/20
BE00266-MS1	Matrix Spike	05/07/20
BE00266-MSD1	Matrix Spike Dup	05/07/20

Semivolatile Organic Compounds by GC/MS/SIM - Quality Control Data

York Analytical Laboratories, Inc.

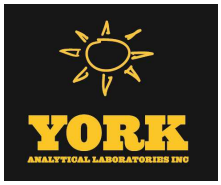
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00002 - EPA 3550C											
Blank (BE00002-BLK1) Blank									Prepared: 05/01/2020 Analyzed: 05/04/2020		
1,4-Dioxane	ND	9.90	ug/kg								
Surrogate: 1,4-Dioxane-d8	*248*		*"*	*495*		*50.0*	*39-83.1*				
LCS (BE00002-BS1) LCS									Prepared: 05/01/2020 Analyzed: 05/04/2020		
1,4-Dioxane	425	9.90	ug/kg	495		85.8	40-130				
Surrogate: 1,4-Dioxane-d8	*277*		*"*	*495*		*56.0*	*39-83.1*				
Batch BE00118 - EPA 3550C											
Blank (BE00118-BLK1) Blank									Prepared: 05/05/2020 Analyzed: 05/06/2020		
1,4-Dioxane	ND	9.90	ug/kg								
Surrogate: 1,4-Dioxane-d8	*356*		*"*	*495*		*72.0*	*39-83.1*				
LCS (BE00118-BS1) LCS									Prepared: 05/05/2020 Analyzed: 05/06/2020		
1,4-Dioxane	455	9.90	ug/kg	495		92.0	40-130				
Surrogate: 1,4-Dioxane-d8	*624*		*"*	*495*		*126*	*39-83.1*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

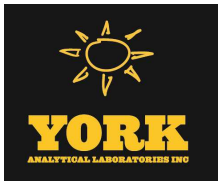
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00266 - SPE PFAS Extraction-Soil-EPA 537m											
Blank (BE00266-BLK1) Blank									Prepared: 05/07/2020 Analyzed: 05/11/2020		
Perfluorobutanesulfonic acid (PFBS)	ND	0.478	ug/kg wet								
Perfluorohexanoic acid (PFHxA)	0.0901	0.478	"								
Perfluoroheptanoic acid (PFHpA)	0.102	0.478	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	0.478	"								
Perfluorooctanoic acid (PFOA)	ND	0.478	"								
Perfluorooctanesulfonic acid (PFOS)	ND	0.478	"								
Perfluorononanoic acid (PFNA)	ND	0.478	"								
Perfluorodecanoic acid (PFDA)	ND	0.478	"								
Perfluoroundecanoic acid (PFUnA)	ND	0.478	"								
Perfluorododecanoic acid (PFDoA)	ND	0.478	"								
Perfluorotridecanoic acid (PFTrDA)	ND	0.478	"								
Perfluorotetradecanoic acid (PFTA)	ND	0.478	"								
N-MeFOSAA	ND	0.478	"								
N-EtFOSAA	ND	0.478	"								
Perfluoropentanoic acid (PFPeA)	ND	0.478	"								
Perfluoro-1-octanesulfonamide (FOSA)	ND	0.478	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	0.478	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	0.478	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	ND	0.478	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	0.0363	0.478	"								
Perfluoro-n-butanoic acid (PFBA)	ND	0.478	"								
Surrogate: M3PFBS	*3.28*		"	*4.44*		*74.0*	*25-150*				
Surrogate: M5PFHxA	*3.42*		"	*4.78*		*71.5*	*25-150*				
Surrogate: M4PFHpA	*4.74*		"	*4.78*		*99.3*	*25-150*				
Surrogate: M3PFHxS	*3.69*		"	*4.52*		*81.5*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.84*		"	*4.78*		*80.3*	*25-150*				
Surrogate: M6PFDA	*3.92*		"	*4.78*		*82.0*	*25-150*				
Surrogate: M7PFUdA	*3.55*		"	*4.78*		*74.2*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*2.94*		"	*4.78*		*61.5*	*25-150*				
Surrogate: M2PFTeDA	*3.42*		"	*4.78*		*71.7*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*4.60*		"	*4.78*		*96.3*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*3.74*		"	*4.57*		*81.9*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.37*		"	*4.78*		*70.5*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.53*		"	*4.78*		*73.9*	*10-150*				
Surrogate: d3-N-MeFOSAA	*3.58*		"	*4.78*		*74.9*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.01*		"	*4.78*		*84.0*	*25-150*				
Surrogate: M2-6:2 FTS	*5.61*		"	*4.53*		*124*	*25-150*				
Surrogate: M2-8:2 FTS	*5.09*		"	*4.58*		*111*	*25-150*				
Surrogate: M9PFNA	*4.06*		"	*4.78*		*85.0*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

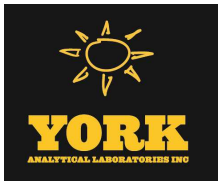
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00266 - SPE PFAS Extraction-Soil-EPA 537m											
LCS (BE00266-BS1) LCS								Prepared: 05/07/2020 Analyzed: 05/11/2020			
Perfluorobutanesulfonic acid (PFBS)	4.55	0.478	ug/kg wet	4.23		108	50-130				
Perfluorohexanoic acid (PFHxA)	4.76	0.478	"	4.78		99.6	50-130				
Perfluoroheptanoic acid (PFHpA)	3.74	0.478	"	4.78		78.2	50-130				
Perfluorohexanesulfonic acid (PFHxS)	3.69	0.478	"	3.53		104	50-130				
Perfluorooctanoic acid (PFOA)	5.02	0.478	"	4.78		105	50-130				
Perfluorooctanesulfonic acid (PFOS)	3.74	0.478	"	3.49		107	50-130				
Perfluorononanoic acid (PFNA)	4.62	0.478	"	4.59		101	50-130				
Perfluorodecanoic acid (PFDA)	4.82	0.478	"	4.78		101	50-130				
Perfluoroundecanoic acid (PFUnA)	5.09	0.478	"	4.78		107	50-130				
Perfluorododecanoic acid (PFDoA)	4.99	0.478	"	4.78		104	50-130				
Perfluorotridecanoic acid (PFTrDA)	4.67	0.478	"	4.78		97.7	50-130				
Perfluorotetradecanoic acid (PFTA)	4.97	0.478	"	4.78		104	50-130				
N-MeFOSAA	4.47	0.478	"	4.78		93.7	50-130				
N-EtFOSAA	4.56	0.478	"	4.78		95.4	50-130				
Perfluoropentanoic acid (PFPeA)	4.79	0.478	"	4.78		100	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	5.13	0.478	"	4.78		107	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	5.27	0.478	"	4.75		111	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	4.14	0.478	"	4.61		89.9	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	4.66	0.478	"	4.54		103	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.27	0.478	"	4.59		115	50-130				
Perfluoro-n-butanoic acid (PFBA)	5.03	0.478	"	4.78		105	50-130				
Surrogate: M3PFBS	*3.19*		*"*	*4.44*		*71.9*	*25-150*				
Surrogate: M5PFHxA	*3.27*		*"*	*4.78*		*68.5*	*25-150*				
Surrogate: M4PFHpA	*4.49*		*"*	*4.78*		*94.0*	*25-150*				
Surrogate: M3PFHxS	*3.49*		*"*	*4.52*		*77.3*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.42*		*"*	*4.78*		*71.6*	*25-150*				
Surrogate: M6PFDA	*3.45*		*"*	*4.78*		*72.2*	*25-150*				
Surrogate: M7PFUdA	*3.37*		*"*	*4.78*		*70.6*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*3.44*		*"*	*4.78*		*72.0*	*25-150*				
Surrogate: M2PFTeDA	*3.32*		*"*	*4.78*		*69.5*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*4.39*		*"*	*4.78*		*92.0*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*3.47*		*"*	*4.57*		*75.9*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.06*		*"*	*4.78*		*64.0*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.65*		*"*	*4.78*		*76.3*	*10-150*				
Surrogate: d3-N-MeFOSAA	*3.95*		*"*	*4.78*		*82.7*	*25-150*				
Surrogate: d5-N-EtFOSAA	*3.81*		*"*	*4.78*		*79.8*	*25-150*				
Surrogate: M2-6:2 FTS	*4.13*		*"*	*4.53*		*91.1*	*25-150*				
Surrogate: M2-8:2 FTS	*3.84*		*"*	*4.58*		*84.0*	*25-150*				
Surrogate: M9PFNA	*3.62*		*"*	*4.78*		*75.9*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00266 - SPE PFAS Extraction-Soil-EPA 537m											
Matrix Spike (BE00266-MS1) Matrix Spike	*Source sample: 20D0818-01 (SB04_0-2)								Prepared: 05/07/2020 Analyzed: 05/11/2020		
Perfluorobutanesulfonic acid (PFBS)	4.74	0.525	ug/kg dry	4.65	ND	102	25-150				
Perfluorohexanoic acid (PFHxA)	4.97	0.525	"	5.25	0.148	91.7	25-150				
Perfluoroheptanoic acid (PFHpA)	4.22	0.525	"	5.25	0.200	76.5	25-150				
Perfluorohexanesulfonic acid (PFHxS)	4.39	0.525	"	3.89	ND	113	25-150				
Perfluorooctanoic acid (PFOA)	4.99	0.525	"	5.25	0.311	89.1	25-150				
Perfluorooctanesulfonic acid (PFOS)	8.21	0.525	"	3.84	2.48	149	25-150				
Perfluorononanoic acid (PFNA)	4.84	0.525	"	5.04	0.145	93.1	25-150				
Perfluorodecanoic acid (PFDA)	4.69	0.525	"	5.25	0.153	86.4	25-150				
Perfluoroundecanoic acid (PFUnA)	5.02	0.525	"	5.25	0.183	92.0	25-150				
Perfluorododecanoic acid (PFDoA)	4.92	0.525	"	5.25	0.125	91.2	25-150				
Perfluorotridecanoic acid (PFTrDA)	4.51	0.525	"	5.25	0.0869	84.2	25-150				
Perfluorotetradecanoic acid (PFTA)	4.94	0.525	"	5.25	0.0856	92.5	25-150				
N-MeFOSAA	4.53	0.525	"	5.25	ND	86.3	25-150				
N-EtFOSAA	5.33	0.525	"	5.25	0.114	99.3	25-150				
Perfluoropentanoic acid (PFPeA)	4.81	0.525	"	5.25	0.118	89.3	25-150				
Perfluoro-1-octanesulfonamide (FOSA)	5.15	0.525	"	5.25	ND	98.1	25-150				
Perfluoro-1-heptanesulfonic acid (PFHpS)	5.85	0.525	"	5.23	ND	112	25-150				
Perfluoro-1-decanesulfonic acid (PFDS)	4.25	0.525	"	5.07	0.0745	82.4	25-150				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	4.35	0.525	"	4.99	ND	87.1	25-150				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.86	0.525	"	5.04	0.0308	116	25-150				
Perfluoro-n-butanoic acid (PFBA)	6.37	0.525	"	5.25	1.28	97.0	25-150				
Surrogate: M3PFBS	*2.94*		"	*4.88*		*60.1*	*25-150*				
Surrogate: M5PFHxA	*3.01*		"	*5.25*		*57.2*	*25-150*				
Surrogate: M4PFHpA	*3.92*		"	*5.25*		*74.7*	*25-150*				
Surrogate: M3PFHxS	*3.18*		"	*4.97*		*63.9*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.60*		"	*5.25*		*68.6*	*25-150*				
Surrogate: M6PFDA	*3.62*		"	*5.25*		*69.0*	*25-150*				
Surrogate: M7PFUdA	*3.22*		"	*5.25*		*61.2*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*2.85*		"	*5.25*		*54.2*	*25-150*				
Surrogate: M2PFTeDA	*2.68*		"	*5.25*		*51.0*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*4.05*		"	*5.25*		*77.1*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*2.82*		"	*5.03*		*56.1*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.00*		"	*5.25*		*57.2*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*2.60*		"	*5.25*		*49.5*	*10-150*				
Surrogate: d3-N-MeFOSAA	*4.76*		"	*5.25*		*90.7*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.73*		"	*5.25*		*89.9*	*25-150*				
Surrogate: M2-6:2 FTS	*15.1*		"	*4.99*		*302*	*25-150*				
Surrogate: M2-8:2 FTS	*15.3*		"	*5.03*		*303*	*25-150*				
Surrogate: M9PFNA	*3.64*		"	*5.25*		*69.3*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00266 - SPE PFAS Extraction-Soil-EPA 537m											
Matrix Spike Dup (BE00266-M Matrix Spike Dup	*Source sample: 20D0818-01 (SB04_0-2)								Prepared: 05/07/2020 Analyzed: 05/11/2020		
Perfluorobutanesulfonic acid (PFBS)	4.79	0.507	ug/kg dry	4.48	ND	107	25-150		1.14	35	
Perfluorohexanoic acid (PFHxA)	5.08	0.507	"	5.07	0.148	97.4	25-150		2.22	35	
Perfluoroheptanoic acid (PFHpA)	4.28	0.507	"	5.07	0.200	80.6	25-150		1.53	35	
Perfluorohexanesulfonic acid (PFHxS)	4.38	0.507	"	3.75	ND	117	25-150		0.243	35	
Perfluorooctanoic acid (PFOA)	5.10	0.507	"	5.07	0.311	94.6	25-150		2.18	35	
Perfluorooctanesulfonic acid (PFOS)	7.81	0.507	"	3.70	2.48	144	25-150		4.96	35	
Perfluorononanoic acid (PFNA)	4.65	0.507	"	4.86	0.145	92.7	25-150		4.03	35	
Perfluorodecanoic acid (PFDA)	4.71	0.507	"	5.07	0.153	90.0	25-150		0.350	35	
Perfluoroundecanoic acid (PFUnA)	5.26	0.507	"	5.07	0.183	100	25-150		4.68	35	
Perfluorododecanoic acid (PFDoA)	4.92	0.507	"	5.07	0.125	94.7	25-150		0.0959	35	
Perfluorotridecanoic acid (PFTrDA)	4.54	0.507	"	5.07	0.0869	87.9	25-150		0.600	35	
Perfluorotetradecanoic acid (PFTA)	4.91	0.507	"	5.07	0.0856	95.3	25-150		0.662	35	
N-MeFOSAA	4.81	0.507	"	5.07	ND	94.9	25-150		5.92	35	
N-EtFOSAA	4.90	0.507	"	5.07	0.114	94.6	25-150		8.40	35	
Perfluoropentanoic acid (PFPeA)	4.98	0.507	"	5.07	0.118	95.9	25-150		3.40	35	
Perfluoro-1-octanesulfonamide (FOSA)	5.09	0.507	"	5.07	ND	101	25-150		1.15	35	
Perfluoro-1-heptanesulfonic acid (PFHpS)	5.53	0.507	"	5.04	ND	110	25-150		5.58	35	
Perfluoro-1-decanesulfonic acid (PFDS)	3.77	0.507	"	4.89	0.0745	75.6	25-150		12.0	35	
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	4.53	0.507	"	4.81	ND	94.2	25-150		4.10	35	
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.98	0.507	"	4.86	0.0308	122	25-150		1.96	35	
Perfluoro-n-butanoic acid (PFBA)	6.66	0.507	"	5.07	1.28	106	25-150		4.46	35	
Surrogate: M3PFBS	*2.77*		"	*4.71*		*58.9*	*25-150*				
Surrogate: M5PFHxA	*2.85*		"	*5.07*		*56.2*	*25-150*				
Surrogate: M4PFHpA	*3.65*		"	*5.07*		*72.1*	*25-150*				
Surrogate: M3PFHxS	*2.94*		"	*4.79*		*61.4*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.37*		"	*5.07*		*66.5*	*25-150*				
Surrogate: M6PFDA	*3.38*		"	*5.07*		*66.8*	*25-150*				
Surrogate: M7PFUdA	*2.88*		"	*5.07*		*56.8*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*2.59*		"	*5.07*		*51.1*	*25-150*				
Surrogate: M2PFTeDA	*2.47*		"	*5.07*		*48.7*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*3.93*		"	*5.07*		*77.5*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*2.92*		"	*4.85*		*60.2*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*2.81*		"	*5.07*		*55.5*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*2.45*		"	*5.07*		*48.4*	*10-150*				
Surrogate: d3-N-MeFOSAA	*4.31*		"	*5.07*		*85.0*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.19*		"	*5.07*		*82.8*	*25-150*				
Surrogate: M2-6:2 FTS	*14.3*		"	*4.81*		*296*	*25-150*				
Surrogate: M2-8:2 FTS	*14.6*		"	*4.85*		*301*	*25-150*				
Surrogate: M9PFNA	*3.53*		"	*5.07*		*69.6*	*25-150*				

Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD01298 - % Solids Prep											
Duplicate (BD01298-DUP1) Duplicate	*Source sample: 20D0818-07 (SB06_12-14)							Prepared & Analyzed: 04/30/2020			
% Solids	85.9	0.100	%		86.1				0.295	20	
Batch BD01313 - % Solids Prep											
Duplicate (BD01313-DUP1) Duplicate	*Source sample: 20D0818-12 (SODUP01_042920)							Prepared & Analyzed: 04/30/2020			
% Solids	91.8	0.100	%		90.1				1.88	20	

Sample and Data Qualifiers Relating to This Work Order

PFSu-L	The isotopically labeled surrogate recovered below lab control limits due to a matrix effect. Isotope Dilution was applied.
PFSu-H	The isotopically labeled surrogate recovered above lab control limits due to a matrix effect. Isotope Dilution was applied.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

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Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No.: 20D0818

Page ____ of ____

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company: Same
Address: 360 west 31st Street New York, NY	Address:	Address: Same
Phone.: 2124795400	Phone.:	Phone.: Same
Contact: Kim Semon	Contact: Dina Palazzolo	Contact: Same
E-mail: KSemon@langan.com	E-mail: DPalazzolo@langan.com	E-mail: Same

YOUR Project Number: 170610601

YOUR Project Name: 475 Bay Street

YOUR PO#:

Turn-Around Time

- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- Standard (5-7 Day): X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below)
Deirdre Casey

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil; Other

Samples From: New York X; New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections): Summary Report; QA Report; NY ASP A Package; NY ASP B Package; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
SB04_0-2	S	4/29 1410	VOC, SVOC, PCB, Pest, Herb, Metals (hex/tri chromium & cyanide), PFAS, 1,4 dioxane	4oz(1) 8oz(1) 4oz, (1) 16oz
SB04_10-12	S	4/29 1415	↓	
SB04_14-16	S	4/29 1420	↓	
SB04_18-20	S	4/29 1425	HOLD	
SB06_0-2	S	4/29 0900	VOC SVOC PCB PEST herb inorganics (hex tri chrom cyanide) PFAS, 14dioxane	
SB06_5-7	S	4/29 0905	↓	
SB06_12-14	S	4/29 0910	↓	
SB06_18-20	S	4/29 0915	HOLD	
SB07_0-2	S	4/29 1145	VOC SVOC PCB Pest herb inorganics (hex tri chrom cyanide) PFAS, 14dioxane	
SB07_8-10	S	4/29 1150	↓	

Comments:
Part375/TCL VOCs & SVOC
TAL Metals (including hex/trichromd cyanide)

Preservation: (check all that apply)
HCl ___ MeOH X HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___
Ascorbic Acid ___ Other: ___

Special Instruction: Field Filtered ____ Lab to Filter ____

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Langan 1511	4/29/20 1511		4/28/20		4/28/20 1750
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time
				TC Mahl	4/29/20 1750

Temp. Received at Lab: 3.5 Degrees C

York Analytical Laboratories, Inc.
120 Research Drive, Stratford, CT 06615
132-02 89th Ave, Queens, NY 11418
clientservices@yorklab.com
www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20D0818

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company: same
Address: 360 west 31st Street NewYorkNY 10001	Address:	Address: same
Phone.: 212 479 5400	Phone.:	Phone.: same
Contact: Kim Semon	Contact: Dina Palazzolo	Contact: same
E-mail: KSemon@langan.com	E-mail: DPalazzolo@langan.com	E-mail: same

YOUR Project Number: 170161601

YOUR Project Name: 475 Bay street

YOUR PO#:

Turn-Around Time

- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- Standard (5-7 Day) X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below)
Deirdre Casey

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil; Other

Samples From: New York X; New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections)

Summary Report	CT RCP	Standard Excel EDD
QA Report	CT RCP DQA/DUE	EQuIS (Standard)
NY ASP A Package	NJDEP Reduced Deliverables	NYSDEC EQuIS
NY ASP B Package	NJDKQP	NJDEP SRP HazSite
		Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
SB07-18-20	S	4/29 1155	VOC, SVOC, PCB, Pest, Herb, Metals (hex chromium & cyanide), PFAS & 1,4 dioxane	9 vials, (1) 8oz, (1) 4oz, (1) 8oz
SODUP01-042920	S	4/29 —	↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	

Comments:

Preservation: (check all that apply)
HCl ___ MeOH X HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___
Ascorbic Acid ___ Other: ___

Special Instruction: Field Filtered ___ Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Deirdre Casey Langan	4/29 1511	E Shafer	4/29/20	E Shafer	4/29/20 1750
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temp. Received at Lab
				TC Mahler	4/29/20 1750 / 3.5 Degrees C

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Report Date: 05/11/2020
Client Project ID: 170610601
York Project (SDG) No.: 20D0849

Report Date: 05/11/2020
Client Project ID: 170610601
York Project (SDG) No.: 20D0849

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 30, 2020 and listed below. The project was identified as your project: **170610601**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20D0849-01	SB16_0-2	Soil	04/30/2020	04/30/2020
20D0849-02	SB16_14-16	Soil	04/30/2020	04/30/2020
20D0849-03	SB16_18-20	Soil	04/30/2020	04/30/2020
20D0849-04	SB12_0-2	Soil	04/30/2020	04/30/2020
20D0849-05	SB12_8-10	Soil	04/30/2020	04/30/2020
20D0849-06	SB12_18-20	Soil	04/30/2020	04/30/2020
20D0849-07	SB11_0-2	Soil	04/30/2020	04/30/2020
20D0849-08	SB11_10-12	Soil	04/30/2020	04/30/2020
20D0849-09	SB11_18-20	Soil	04/30/2020	04/30/2020
20D0849-10	SOFB02_043020	Water	04/30/2020	04/30/2020
20D0849-11	MW06_043020	Water	04/30/2020	04/30/2020
20D0849-12	MW08_043020	Water	04/30/2020	04/30/2020
20D0849-13	MW05_043020	Water	04/30/2020	04/30/2020
20D0849-14	GWDUP01_043020	Water	04/30/2020	04/30/2020
20D0849-15	GWFB01_043020	Water	04/30/2020	04/30/2020

General Notes for York Project (SDG) No.: 20D0849

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 05/11/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: SB16_0-2 **York Sample ID:** 20D0849-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 9:15 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 17:20	KH

Surrogate Recoveries	Result		Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*38.0 %*	S-08	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.350	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0660	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0456	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0310	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.313**	J	ug/kg dry	0.0773	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.393**	J	ug/kg dry	0.0438	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0599	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
335-76-2	*** Perfluorodecanoic acid (PFDA)**	**0.0606**	J	ug/kg dry	0.0513	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.116	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0751	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0435	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0748	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.105	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.104	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0920	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
754-91-6	*** Perfluoro-1-octanesulfonamide (FOSA)**	**0.0522**	J	ug/kg dry	0.0468	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT

Sample Information

Client Sample ID: SB16_0-2 **York Sample ID:** 20D0849-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 9:15 am	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0494	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0513	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0661	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0256	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**0.185**	J	ug/kg dry	0.183	0.501	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:17	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*61.9 %*		*25-150*
Surrogate: M5PFHxA	*60.5 %*		*25-150*
Surrogate: M4PFHpA	*72.0 %*		*25-150*
Surrogate: M3PFHxS	*63.4 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*70.4 %*		*25-150*
Surrogate: M6PFDA	*70.2 %*		*25-150*
Surrogate: M7PFUdA	*57.7 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*55.2 %*		*25-150*
Surrogate: M2PFTeDA	*58.8 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*88.4 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*59.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*61.5 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*51.8 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*64.4 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*74.2 %*		*25-150*
Surrogate: M2-6:2 FTS	*117 %*		*25-150*
Surrogate: M2-8:2 FTS	*174 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*77.7 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**87.1**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SB16_14-16 **York Sample ID:** 20D0849-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 9:20 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.90	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 12:46	KH

Surrogate Recoveries	Result		Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*50.0 %*	S-08	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.372	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0700	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0484	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0329	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.0820	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0465	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0635	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0544	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.124	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0797	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0462	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0794	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.111	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.111	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0977	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0496	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT

Sample Information

Client Sample ID: SB16_14-16 **York Sample ID:** 20D0849-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 9:20 am	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0524	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0544	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0701	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0272	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.194	0.531	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 08:42	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*70.6 %*	*25-150*
Surrogate: M5PFHxA	*71.5 %*	*25-150*
Surrogate: M4PFHpA	*81.1 %*	*25-150*
Surrogate: M3PFHxS	*73.8 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*79.7 %*	*25-150*
Surrogate: M6PFDA	*82.0 %*	*25-150*
Surrogate: M7PFUdA	*76.8 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*70.0 %*	*25-150*
Surrogate: M2PFTeDA	*66.3 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*105 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*76.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*74.0 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*59.8 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*76.4 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*67.4 %*	*25-150*
Surrogate: M2-6:2 FTS	*77.7 %*	*25-150*
Surrogate: M2-8:2 FTS	*86.9 %*	*25-150*
Surrogate: M9PFNA	*83.5 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**84.3**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: **SB16_18-20** **York Sample ID:** **20D0849-03**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 9:25 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.52	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 13:03	KH

Surrogate Recoveries	Result		Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*28.0 %*	S-08	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.446	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0841	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0580	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0395	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.165**	J	ug/kg dry	0.0985	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0559	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0763	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0653	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.148	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0957	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0555	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0953	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.133	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.133	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.117	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0596	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT

Sample Information

Client Sample ID: SB16_18-20 **York Sample ID:** 20D0849-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 9:25 am	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0629	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0653	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0842	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0327	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.233	0.638	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:07	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*74.8 %*	*25-150*
Surrogate: M5PFHxA	*75.3 %*	*25-150*
Surrogate: M4PFHpA	*83.1 %*	*25-150*
Surrogate: M3PFHxS	*75.5 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*72.9 %*	*25-150*
Surrogate: M6PFDA	*56.1 %*	*25-150*
Surrogate: M7PFUdA	*50.5 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*43.4 %*	*25-150*
Surrogate: M2PFTeDA	*37.1 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*110 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*56.1 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*76.6 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*45.9 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*48.3 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*47.2 %*	*25-150*
Surrogate: M2-6:2 FTS	*73.8 %*	*25-150*
Surrogate: M2-8:2 FTS	*53.3 %*	*25-150*
Surrogate: M9PFNA	*66.9 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**77.9**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SB12_0-2 **York Sample ID:** 20D0849-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 11:45 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.62	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 13:20	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.355	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0668	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0461	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0314	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.166**	J	ug/kg dry	0.0783	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.292**	J	ug/kg dry	0.0444	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0606	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0519	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.118	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0760	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0441	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0757	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.106	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.106	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
2706-90-3	*** Perfluoropentanoic acid (PFPeA)**	**0.111**	J	ug/kg dry	0.0932	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0473	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT

Sample Information

Client Sample ID: SB12_0-2 **York Sample ID:** 20D0849-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 11:45 am	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0500	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0519	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0669	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0260	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.185	0.507	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:32	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*67.8 %*		*25-150*
Surrogate: M5PFHxA	*70.5 %*		*25-150*
Surrogate: M4PFHpA	*79.2 %*		*25-150*
Surrogate: M3PFHxS	*69.0 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*78.6 %*		*25-150*
Surrogate: M6PFDA	*74.8 %*		*25-150*
Surrogate: M7PFUdA	*63.8 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*64.8 %*		*25-150*
Surrogate: M2PFTeDA	*63.6 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*100 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*62.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*69.6 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*62.6 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*84.5 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*86.7 %*		*25-150*
Surrogate: M2-6:2 FTS	*154 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*186 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*83.2 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**90.8**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SB12_8-10 **York Sample ID:** 20D0849-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 11:50 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.43	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 13:37	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*42.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.385	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0725	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0500	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0341	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.0849	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0482	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0658	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0563	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.128	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0825	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0478	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0822	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.115	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.115	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.101	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0514	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT

Sample Information

Client Sample ID: SB12_8-10 **York Sample ID:** 20D0849-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 11:50 am	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0542	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0563	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0726	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0282	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.201	0.550	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 09:57	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*68.3 %*	*25-150*
Surrogate: M5PFHxA	*70.7 %*	*25-150*
Surrogate: M4PFHpA	*79.9 %*	*25-150*
Surrogate: M3PFHxS	*71.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*79.4 %*	*25-150*
Surrogate: M6PFDA	*83.6 %*	*25-150*
Surrogate: M7PFUdA	*75.1 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*71.4 %*	*25-150*
Surrogate: M2PFTeDA	*71.1 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*100 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*76.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*71.1 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*66.1 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*78.3 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*84.1 %*	*25-150*
Surrogate: M2-6:2 FTS	*91.9 %*	*25-150*
Surrogate: M2-8:2 FTS	*128 %*	*25-150*
Surrogate: M9PFNA	*84.6 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**81.5**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: **SB12_18-20** **York Sample ID:** **20D0849-06**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 11:55 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.71	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 14:11	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*48.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.370	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0698	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0482	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0328	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.0894**	J	ug/kg dry	0.0817	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0464	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0633	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0542	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.123	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0794	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0460	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0791	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.111	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.110	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0973	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0494	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT

Sample Information

Client Sample ID: SB12_18-20 **York Sample ID:** 20D0849-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 11:55 am	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0522	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0542	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0699	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0271	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.193	0.529	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 11:36	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*66.5 %*	*25-150*
Surrogate: M5PFHxA	*68.3 %*	*25-150*
Surrogate: M4PFHpA	*77.3 %*	*25-150*
Surrogate: M3PFHxS	*70.2 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*73.2 %*	*25-150*
Surrogate: M6PFDA	*72.2 %*	*25-150*
Surrogate: M7PFUdA	*68.8 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*67.8 %*	*25-150*
Surrogate: M2PFTeDA	*71.1 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*99.3 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*72.0 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*69.1 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*57.6 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*67.2 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*72.5 %*	*25-150*
Surrogate: M2-6:2 FTS	*76.5 %*	*25-150*
Surrogate: M2-8:2 FTS	*72.1 %*	*25-150*
Surrogate: M9PFNA	*78.3 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**84.5**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SB11_0-2 **York Sample ID:** 20D0849-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 2:40 pm	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.52	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 14:28	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.360	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0678	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0468	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0319	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.0795	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0451	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0615	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0527	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.120	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0772	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0448	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0769	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.107	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.107	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.0946	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0481	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT

Sample Information

Client Sample ID: SB11_0-2 **York Sample ID:** 20D0849-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 2:40 pm	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0507	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0527	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0679	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0263	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.188	0.515	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:01	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*64.0 %*		*25-150*
Surrogate: M5PFHxA	*64.9 %*		*25-150*
Surrogate: M4PFHpA	*75.8 %*		*25-150*
Surrogate: M3PFHxS	*67.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*74.4 %*		*25-150*
Surrogate: M6PFDA	*72.5 %*		*25-150*
Surrogate: M7PFUdA	*67.5 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*61.7 %*		*25-150*
Surrogate: M2PFTeDA	*57.2 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*93.3 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*63.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*65.1 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*51.4 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*75.6 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*80.5 %*		*25-150*
Surrogate: M2-6:2 FTS	*128 %*		*25-150*
Surrogate: M2-8:2 FTS	*190 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*83.4 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**89.6**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SB11_10-12 **York Sample ID:** 20D0849-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 2:45 pm	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.62	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 14:46	KH

Surrogate Recoveries	Result	Acceptance Range
17647-74-4 *Surrogate: 1,4-Dioxane-d8*	*42.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.467	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0880	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0608	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0414	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.113**	J	ug/kg dry	0.103	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0585	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0798	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0684	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.155	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.100	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0581	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0997	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.139	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.139	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.123	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0624	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT

Sample Information

Client Sample ID: SB11_10-12 **York Sample ID:** 20D0849-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 2:45 pm	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0658	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0684	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0881	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0342	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.244	0.668	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:25	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*71.4 %*		*25-150*
Surrogate: M5PFHxA	*72.5 %*		*25-150*
Surrogate: M4PFHpA	*82.0 %*		*25-150*
Surrogate: M3PFHxS	*73.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*84.3 %*		*25-150*
Surrogate: M6PFDA	*90.1 %*		*25-150*
Surrogate: M7PFUdA	*66.7 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*67.7 %*		*25-150*
Surrogate: M2PFTeDA	*73.5 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*108 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*73.6 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*73.5 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*63.1 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*101 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*100 %*		*25-150*
Surrogate: M2-6:2 FTS	*228 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*365 %*	PFSu-H	*25-150*
Surrogate: M9PFNA	*90.6 %*		*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**71.1**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SB11_18-20 **York Sample ID:** 20D0849-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 2:50 pm	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg	9.80	1	EPA 8270D SIM Certifications: NELAC-NY10854	05/05/2020 07:40	05/06/2020 15:03	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*44.0 %*	*39-83.1*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	0.383	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	0.0720	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0497	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0339	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
335-67-1	* Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	0.0844	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	0.0479	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0654	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0560	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.127	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0820	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0476	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0817	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.114	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.114	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.100	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0511	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT

Sample Information

Client Sample ID: SB11_18-20 **York Sample ID:** 20D0849-09

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Soil	April 30, 2020 2:50 pm	04/30/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0539	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0560	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0722	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0280	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	0.200	0.547	1	EPA 537m Certifications:	05/05/2020 10:08	05/09/2020 12:50	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*61.9 %*	*25-150*
Surrogate: M5PFHxA	*69.3 %*	*25-150*
Surrogate: M4PFHpA	*78.0 %*	*25-150*
Surrogate: M3PFHxS	*63.4 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*72.7 %*	*25-150*
Surrogate: M6PFDA	*70.2 %*	*25-150*
Surrogate: M7PFUdA	*63.5 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*64.8 %*	*25-150*
Surrogate: M2PFTeDA	*65.1 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*102 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*62.8 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*69.0 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*58.7 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*67.5 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*67.4 %*	*25-150*
Surrogate: M2-6:2 FTS	*70.9 %*	*25-150*
Surrogate: M2-8:2 FTS	*77.3 %*	*25-150*
Surrogate: M9PFNA	*79.8 %*	*25-150*

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**84.2**		%	0.100	1	SM 2540G Certifications: CTDOH	05/01/2020 08:37	05/01/2020 12:19	TJM

Sample Information

Client Sample ID: SOFB02_043020 **York Sample ID:** 20D0849-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 12:00 pm	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/04/2020 07:55	05/05/2020 16:32	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*68.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ng/L	0.294	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**0.936**	J	ng/L	0.471	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ng/L	0.635	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ng/L	0.281	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**0.669**	J	ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ng/L	0.292	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ng/L	0.524	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
2355-31-9	* N-MeFOSAA	ND		ng/L	0.529	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
2991-50-6	* N-EtFOSAA	ND		ng/L	0.557	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**1.94**	J	ng/L	0.452	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ng/L	0.296	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT

Sample Information

Client Sample ID: SOFB02_043020 **York Sample ID:** 20D0849-10

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 12:00 pm	04/30/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ng/L	0.415	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ng/L	0.492	5.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ng/L	0.399	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**2.78**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:03	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*57.0 %*	*25-150*
Surrogate: M5PFHxA	*58.4 %*	*25-150*
Surrogate: M4PFHpA	*67.7 %*	*25-150*
Surrogate: M3PFHxS	*59.8 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*60.6 %*	*25-150*
Surrogate: M6PFDA	*59.7 %*	*25-150*
Surrogate: M7PFUdA	*53.3 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*46.2 %*	*25-150*
Surrogate: M2PFTeDA	*28.8 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*78.1 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*58.9 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*57.1 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*52.3 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*52.2 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*48.8 %*	*25-150*
Surrogate: M2-6:2 FTS	*64.8 %*	*25-150*
Surrogate: M2-8:2 FTS	*68.5 %*	*25-150*
Surrogate: M9PFNA	*59.3 %*	*25-150*

Sample Information

Client Sample ID: MW06_043020 **York Sample ID:** 20D0849-11

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 2:14 pm	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/04/2020 07:55	05/05/2020 16:50	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*72.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* **Perfluorobutanesulfonic acid (PFBS)**	**9.45**		ng/L	0.294	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**22.3**		ng/L	0.471	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
375-85-9	* **Perfluoroheptanoic acid (PFHpA)**	**20.5**		ng/L	0.635	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
355-46-4	* **Perfluorohexanesulfonic acid (PFHxS)**	**2.69**		ng/L	0.281	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**178**		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
1763-23-1	* **Perfluorooctanesulfonic acid (PFOS)**	**130**		ng/L	0.292	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
375-95-1	* **Perfluorononanoic acid (PFNA)**	**9.87**		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
335-76-2	* **Perfluorodecanoic acid (PFDA)**	**2.52**		ng/L	0.524	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
376-06-7	* **Perfluorotetradecanoic acid (PFTA)**	**0.537**	J	ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
2355-31-9	* N-MeFOSAA	ND		ng/L	0.529	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
2991-50-6	* **N-EtFOSAA**	**0.726**	J	ng/L	0.557	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**23.2**		ng/L	0.452	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
754-91-6	* **Perfluoro-1-octanesulfonamide (FOSA)**	**0.700**	J	ng/L	0.296	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT

Sample Information

Client Sample ID: MW06_043020 **York Sample ID:** 20D0849-11

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 2:14 pm	04/30/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	*** Perfluoro-1-heptanesulfonic acid (PFHpS)**	**0.894**	J	ng/L	0.415	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ng/L	0.492	5.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ng/L	0.399	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**18.2**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 15:28	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*50.4 %*		*25-150*
Surrogate: M5PFHxA	*48.9 %*		*25-150*
Surrogate: M4PFHpA	*58.2 %*		*25-150*
Surrogate: M3PFHxS	*57.7 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*58.9 %*		*25-150*
Surrogate: M6PFDA	*64.4 %*		*25-150*
Surrogate: M7PFUdA	*49.7 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*35.3 %*		*25-150*
Surrogate: M2PFTeDA	*8.07 %*	PFSu-L	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*49.1 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*56.3 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*45.2 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*24.7 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*56.8 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*55.5 %*		*25-150*
Surrogate: M2-6:2 FTS	*208 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*140 %*		*25-150*
Surrogate: M9PFNA	*67.6 %*		*25-150*

Sample Information

Client Sample ID: MW08_043020 **York Sample ID:** 20D0849-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 10:55 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/04/2020 07:55	05/05/2020 17:08	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*68.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* **Perfluorobutanesulfonic acid (PFBS)**	**0.933**	J	ng/L	0.294	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**3.22**		ng/L	0.471	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
375-85-9	* **Perfluoroheptanoic acid (PFHpA)**	**2.59**		ng/L	0.635	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
355-46-4	* **Perfluorohexanesulfonic acid (PFHxS)**	**0.618**	J	ng/L	0.281	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**27.7**		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
1763-23-1	* **Perfluorooctanesulfonic acid (PFOS)**	**10.9**		ng/L	0.292	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
375-95-1	* **Perfluorononanoic acid (PFNA)**	**0.984**	J	ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ng/L	0.524	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
376-06-7	* **Perfluorotetradecanoic acid (PFTA)**	**0.671**	J	ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
2355-31-9	* **N-MeFOSAA**	**0.712**	J	ng/L	0.529	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
2991-50-6	* N-EtFOSAA	ND		ng/L	0.557	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**3.08**		ng/L	0.452	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
754-91-6	* **Perfluoro-1-octanesulfonamide (FOSA)**	**0.816**	J	ng/L	0.296	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT

Sample Information

Client Sample ID: MW08_043020 **York Sample ID:** 20D0849-12

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 10:55 am	04/30/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ng/L	0.415	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ng/L	0.492	5.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ng/L	0.399	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**5.47**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 16:18	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*50.5 %*		*25-150*
Surrogate: M5PFHxA	*49.1 %*		*25-150*
Surrogate: M4PFHpA	*62.0 %*		*25-150*
Surrogate: M3PFHxS	*54.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*53.5 %*		*25-150*
Surrogate: M6PFDA	*51.5 %*		*25-150*
Surrogate: M7PFUdA	*36.9 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*26.1 %*		*25-150*
Surrogate: M2PFTeDA	*5.21 %*	PFSu-L	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*48.8 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*49.3 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*46.8 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*31.6 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*43.0 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*38.9 %*		*25-150*
Surrogate: M2-6:2 FTS	*71.5 %*		*25-150*
Surrogate: M2-8:2 FTS	*63.9 %*		*25-150*
Surrogate: M9PFNA	*56.8 %*		*25-150*

Sample Information

Client Sample ID: MW05_043020 **York Sample ID:** 20D0849-13

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 12:00 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/04/2020 07:55	05/05/2020 17:26	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*68.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* **Perfluorobutanesulfonic acid (PFBS)**	**14.9**		ng/L	0.294	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**17.7**		ng/L	0.471	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
375-85-9	* **Perfluoroheptanoic acid (PFHpA)**	**17.2**		ng/L	0.635	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
355-46-4	* **Perfluorohexanesulfonic acid (PFHxS)**	**3.87**		ng/L	0.281	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**143**		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
1763-23-1	* **Perfluorooctanesulfonic acid (PFOS)**	**84.3**		ng/L	0.292	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
375-95-1	* **Perfluorononanoic acid (PFNA)**	**8.35**		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
335-76-2	* **Perfluorodecanoic acid (PFDA)**	**1.28**	J	ng/L	0.524	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
2355-31-9	* N-MeFOSAA	ND		ng/L	0.529	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
2991-50-6	* N-EtFOSAA	ND		ng/L	0.557	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**16.9**		ng/L	0.452	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ng/L	0.296	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT

Sample Information

Client Sample ID: MW05_043020 **York Sample ID:** 20D0849-13

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 12:00 am	04/30/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	*** Perfluoro-1-heptanesulfonic acid (PFHpS)**	**2.42**		ng/L	0.415	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ng/L	0.492	5.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ng/L	0.399	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**17.4**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:07	KT

Surrogate Recoveries	Result		Acceptance Range
Surrogate: M3PFBS	*48.0 %*		*25-150*
Surrogate: M5PFHxA	*46.8 %*		*25-150*
Surrogate: M4PFHpA	*55.7 %*		*25-150*
Surrogate: M3PFHxS	*54.8 %*		*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*58.7 %*		*25-150*
Surrogate: M6PFDA	*60.4 %*		*25-150*
Surrogate: M7PFUdA	*50.8 %*		*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*36.6 %*		*25-150*
Surrogate: M2PFTeDA	*11.0 %*		*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*40.0 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*54.9 %*		*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*39.0 %*		*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*24.8 %*		*10-150*
Surrogate: d3-N-MeFOSAA	*48.9 %*		*25-150*
Surrogate: d5-N-EtFOSAA	*50.9 %*		*25-150*
Surrogate: M2-6:2 FTS	*192 %*	PFSu-H	*25-150*
Surrogate: M2-8:2 FTS	*98.9 %*		*25-150*
Surrogate: M9PFNA	*64.2 %*		*25-150*

Sample Information

Client Sample ID: GWDUP01_043020 **York Sample ID:** 20D0849-14

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 12:00 am	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/04/2020 07:55	05/05/2020 17:44	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*72.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* **Perfluorobutanesulfonic acid (PFBS)**	**0.894**	J	ng/L	0.294	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
307-24-4	* **Perfluorohexanoic acid (PFHxA)**	**3.18**		ng/L	0.471	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
375-85-9	* **Perfluoroheptanoic acid (PFHpA)**	**2.32**		ng/L	0.635	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
355-46-4	* **Perfluorohexanesulfonic acid (PFHxS)**	**0.681**	J	ng/L	0.281	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**27.5**		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
1763-23-1	* **Perfluorooctanesulfonic acid (PFOS)**	**12.3**		ng/L	0.292	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
375-95-1	* **Perfluorononanoic acid (PFNA)**	**0.741**	J	ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ng/L	0.524	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
2355-31-9	* N-MeFOSAA	ND		ng/L	0.529	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
2991-50-6	* N-EtFOSAA	ND		ng/L	0.557	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**2.79**		ng/L	0.452	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ng/L	0.296	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT

Sample Information

Client Sample ID: GWDUP01_043020 **York Sample ID:** 20D0849-14

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 12:00 am	04/30/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ng/L	0.415	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ng/L	0.492	5.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ng/L	0.399	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**4.94**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:32	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*52.9 %*	*25-150*
Surrogate: M5PFHxA	*52.9 %*	*25-150*
Surrogate: M4PFHpA	*65.2 %*	*25-150*
Surrogate: M3PFHxS	*56.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*59.9 %*	*25-150*
Surrogate: M6PFDA	*61.6 %*	*25-150*
Surrogate: M7PFUdA	*49.9 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*44.0 %*	*25-150*
Surrogate: M2PFTeDA	*25.4 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*62.9 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*56.6 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*51.0 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*33.0 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*49.4 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*47.5 %*	*25-150*
Surrogate: M2-6:2 FTS	*88.5 %*	*25-150*
Surrogate: M2-8:2 FTS	*68.5 %*	*25-150*
Surrogate: M9PFNA	*60.4 %*	*25-150*

Sample Information

Client Sample ID: GWFB01_043020 **York Sample ID:** 20D0849-15

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 2:00 pm	04/30/2020

Semi-Volatiles, 1,4-Dioxane by 8270-SIM

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3535A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	0.200	1	EPA 8270D SIM Certifications: NJDEP,NELAC-NY10854	05/04/2020 07:55	05/05/2020 18:01	KH

	Surrogate Recoveries	Result	Acceptance Range
17647-74-4	*Surrogate: 1,4-Dioxane-d8*	*64.0 %*	*36.6-118*

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ng/L	0.294	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
307-24-4	* Perfluorohexanoic acid (PFHxA)	ND		ng/L	0.471	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ng/L	0.635	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ng/L	0.281	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
335-67-1	* **Perfluorooctanoic acid (PFOA)**	**0.551**	J	ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	ND		ng/L	0.292	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ng/L	0.524	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ng/L	0.657	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ng/L	0.777	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ng/L	1.37	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ng/L	0.531	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
2355-31-9	* N-MeFOSAA	ND		ng/L	0.529	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
2991-50-6	* N-EtFOSAA	ND		ng/L	0.557	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
2706-90-3	* **Perfluoropentanoic acid (PFPeA)**	**0.719**	J	ng/L	0.452	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ng/L	0.296	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT

Sample Information

Client Sample ID: GWFB01_043020 **York Sample ID:** 20D0849-15

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0849	170610601	Water	April 30, 2020 2:00 pm	04/30/2020

PFAS, NYSDEC Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ng/L	0.415	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ng/L	0.574	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ng/L	0.492	5.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ng/L	0.399	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**2.24**	B	ng/L	1.63	2.00	1	EPA 537m Certifications:	05/05/2020 11:58	05/08/2020 17:57	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*53.8 %*	*25-150*
Surrogate: M5PFHxA	*54.3 %*	*25-150*
Surrogate: M4PFHpA	*64.1 %*	*25-150*
Surrogate: M3PFHxS	*57.2 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic aci	*56.7 %*	*25-150*
Surrogate: M6PFDA	*58.7 %*	*25-150*
Surrogate: M7PFUdA	*53.0 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecan	*50.2 %*	*25-150*
Surrogate: M2PFTeDA	*32.2 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic aci	*75.5 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*57.2 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic ac	*53.7 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfor	*48.4 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*51.0 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*49.0 %*	*25-150*
Surrogate: M2-6:2 FTS	*57.6 %*	*25-150*
Surrogate: M2-8:2 FTS	*65.3 %*	*25-150*
Surrogate: M9PFNA	*58.3 %*	*25-150*

Analytical Batch Summary

Batch ID: BE00012 **Preparation Method:** % Solids Prep **Prepared By:** TJM

YORK Sample ID	Client Sample ID	Preparation Date
20D0849-01	SB16_0-2	05/01/20
20D0849-02	SB16_14-16	05/01/20
20D0849-03	SB16_18-20	05/01/20
20D0849-04	SB12_0-2	05/01/20
20D0849-05	SB12_8-10	05/01/20
20D0849-06	SB12_18-20	05/01/20
20D0849-07	SB11_0-2	05/01/20
20D0849-08	SB11_10-12	05/01/20
20D0849-09	SB11_18-20	05/01/20
BE00012-DUP1	Duplicate	05/01/20

Batch ID: BE00069 **Preparation Method:** EPA 3535A **Prepared By:** CTD

YORK Sample ID	Client Sample ID	Preparation Date
20D0849-10	SOFB02_043020	05/04/20
20D0849-11	MW06_043020	05/04/20
20D0849-12	MW08_043020	05/04/20
20D0849-13	MW05_043020	05/04/20
20D0849-14	GWDUP01_043020	05/04/20
20D0849-15	GWFB01_043020	05/04/20
BE00069-BLK1	Blank	05/04/20
BE00069-BS1	LCS	05/04/20

Batch ID: BE00118 **Preparation Method:** EPA 3550C **Prepared By:** LM

YORK Sample ID	Client Sample ID	Preparation Date
20D0849-01	SB16_0-2	05/05/20
20D0849-02	SB16_14-16	05/05/20
20D0849-03	SB16_18-20	05/05/20
20D0849-04	SB12_0-2	05/05/20
20D0849-05	SB12_8-10	05/05/20
20D0849-06	SB12_18-20	05/05/20
20D0849-07	SB11_0-2	05/05/20
20D0849-08	SB11_10-12	05/05/20
20D0849-09	SB11_18-20	05/05/20
BE00118-BLK1	Blank	05/05/20
BE00118-BS1	LCS	05/05/20
BE00118-MS1	Matrix Spike	05/05/20

Batch ID: BE00136 **Preparation Method:** SPE PFAS Extraction-Soil-EPA 537m **Prepared By:** KT

YORK Sample ID	Client Sample ID	Preparation Date
20D0849-01	SB16_0-2	05/05/20
20D0849-02	SB16_14-16	05/05/20

20D0849-03	SB16_18-20	05/05/20
20D0849-04	SB12_0-2	05/05/20
20D0849-05	SB12_8-10	05/05/20
20D0849-06	SB12_18-20	05/05/20
20D0849-07	SB11_0-2	05/05/20
20D0849-08	SB11_10-12	05/05/20
20D0849-09	SB11_18-20	05/05/20
BE00136-BLK1	Blank	05/05/20
BE00136-BS1	LCS	05/05/20
BE00136-MS1	Matrix Spike	05/05/20
BE00136-MSD1	Matrix Spike Dup	05/05/20

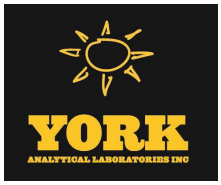
Batch ID: BE00144 **Preparation Method:** SPE Ext-PFAS-EPA 537.1M **Prepared By:** KHA

YORK Sample ID	Client Sample ID	Preparation Date
20D0849-10	SOFB02_043020	05/05/20
20D0849-11	MW06_043020	05/05/20
20D0849-12	MW08_043020	05/05/20
20D0849-13	MW05_043020	05/05/20
20D0849-14	GWDUP01_043020	05/05/20
20D0849-15	GWFB01_043020	05/05/20
BE00144-BLK1	Blank	05/05/20
BE00144-BS1	LCS	05/05/20
BE00144-BS2	LCS	05/05/20
BE00144-BS3	LCS	05/05/20
BE00144-BS4	LCS	05/05/20
BE00144-DUP1	Duplicate	05/05/20
BE00144-MS1	Matrix Spike	05/05/20

Semivolatile Organic Compounds by GC/MS/SIM - Quality Control Data

York Analytical Laboratories, Inc.

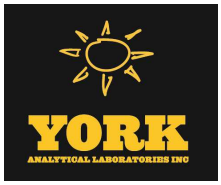
Analyte		Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00069 - EPA 3535A												
Blank (BE00069-BLK1)	Blank									Prepared: 05/04/2020 Analyzed: 05/05/2020		
1,4-Dioxane		ND	0.200	ug/L								
Surrogate: 1,4-Dioxane-d8		*3.40*		*"*	*5.00*		*68.0*	*36.6-118*				
LCS (BE00069-BS1)	LCS									Prepared: 05/04/2020 Analyzed: 05/05/2020		
1,4-Dioxane		5.58	0.200	ug/L	5.00		112	50-130				
Surrogate: 1,4-Dioxane-d8		*3.40*		*"*	*5.00*		*68.0*	*36.6-118*				
Batch BE00118 - EPA 3550C												
Blank (BE00118-BLK1)	Blank									Prepared: 05/05/2020 Analyzed: 05/06/2020		
1,4-Dioxane		ND	9.90	ug/kg								
Surrogate: 1,4-Dioxane-d8		*356*		*"*	*495*		*72.0*	*39-83.1*				
LCS (BE00118-BS1)	LCS									Prepared: 05/05/2020 Analyzed: 05/06/2020		
1,4-Dioxane		455	9.90	ug/kg	495		92.0	40-130				
Surrogate: 1,4-Dioxane-d8		*624*		*"*	*495*		*126*	*39-83.1*				
Matrix Spike (BE00118-MS1)	Matrix Spike	*Source sample: 20D0849-04 (SB12_0-2)								Prepared: 05/05/2020 Analyzed: 05/06/2020		
1,4-Dioxane		495	9.90	ug/kg	495	ND	100	40-130				
Surrogate: 1,4-Dioxane-d8		*287*		*"*	*495*		*58.0*	*40-130*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

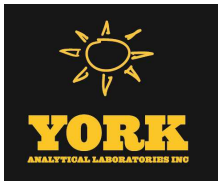
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00136 - SPE PFAS Extraction-Soil-EPA 537m											
Blank (BE00136-BLK1) Blank									Prepared: 05/05/2020 Analyzed: 05/09/2020		
Perfluorobutanesulfonic acid (PFBS)	ND	0.490	ug/kg wet								
Perfluorohexanoic acid (PFHxA)	ND	0.490	"								
Perfluoroheptanoic acid (PFHpA)	ND	0.490	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	0.490	"								
Perfluorooctanoic acid (PFOA)	ND	0.490	"								
Perfluorooctanesulfonic acid (PFOS)	ND	0.490	"								
Perfluorononanoic acid (PFNA)	ND	0.490	"								
Perfluorodecanoic acid (PFDA)	ND	0.490	"								
Perfluoroundecanoic acid (PFUnA)	ND	0.490	"								
Perfluorododecanoic acid (PFDoA)	ND	0.490	"								
Perfluorotridecanoic acid (PFTrDA)	ND	0.490	"								
Perfluorotetradecanoic acid (PFTA)	ND	0.490	"								
N-MeFOSAA	ND	0.490	"								
N-EtFOSAA	ND	0.490	"								
Perfluoropentanoic acid (PFPeA)	ND	0.490	"								
Perfluoro-1-octanesulfonamide (FOSA)	ND	0.490	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	0.490	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	0.490	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	ND	0.490	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	ND	0.490	"								
Perfluoro-n-butanoic acid (PFBA)	ND	0.490	"								
Surrogate: M3PFBS	*3.67*		"	*4.55*		*80.8*	*25-150*				
Surrogate: M5PFHxA	*3.94*		"	*4.90*		*80.6*	*25-150*				
Surrogate: M4PFHpA	*4.15*		"	*4.90*		*84.8*	*25-150*				
Surrogate: M3PFHxS	*3.81*		"	*4.63*		*82.2*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*4.22*		"	*4.90*		*86.2*	*25-150*				
Surrogate: M6PFDA	*4.06*		"	*4.90*		*83.0*	*25-150*				
Surrogate: M7PFUdA	*3.92*		"	*4.90*		*80.0*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*4.28*		"	*4.90*		*87.5*	*25-150*				
Surrogate: M2PFTeDA	*3.99*		"	*4.90*		*81.5*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*5.63*		"	*4.90*		*115*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*4.01*		"	*4.69*		*85.7*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.93*		"	*4.90*		*80.3*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.63*		"	*4.90*		*74.1*	*10-150*				
Surrogate: d3-N-MeFOSAA	*3.82*		"	*4.90*		*77.9*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.00*		"	*4.90*		*81.7*	*25-150*				
Surrogate: M2-6:2 FTS	*4.34*		"	*4.65*		*93.4*	*25-150*				
Surrogate: M2-8:2 FTS	*4.17*		"	*4.69*		*89.0*	*25-150*				
Surrogate: M9PFNA	*4.63*		"	*4.90*		*94.5*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

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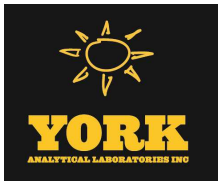
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00136 - SPE PFAS Extraction-Soil-EPA 537m											
LCS (BE00136-BS1) LCS									Prepared: 05/05/2020 Analyzed: 05/09/2020		
Perfluorobutanesulfonic acid (PFBS)	4.24	0.481	ug/kg wet	4.26		99.6	50-130				
Perfluorohexanoic acid (PFHxA)	4.52	0.481	"	4.81		93.9	50-130				
Perfluoroheptanoic acid (PFHpA)	4.23	0.481	"	4.81		87.9	50-130				
Perfluorohexanesulfonic acid (PFHxS)	3.40	0.481	"	3.56		95.6	50-130				
Perfluorooctanoic acid (PFOA)	4.25	0.481	"	4.81		88.3	50-130				
Perfluorooctanesulfonic acid (PFOS)	3.28	0.481	"	3.51		93.5	50-130				
Perfluorononanoic acid (PFNA)	4.04	0.481	"	4.62		87.5	50-130				
Perfluorodecanoic acid (PFDA)	4.48	0.481	"	4.81		93.1	50-130				
Perfluoroundecanoic acid (PFUnA)	4.40	0.481	"	4.81		91.5	50-130				
Perfluorododecanoic acid (PFDoA)	4.48	0.481	"	4.81		93.2	50-130				
Perfluorotridecanoic acid (PFTrDA)	4.38	0.481	"	4.81		91.0	50-130				
Perfluorotetradecanoic acid (PFTA)	4.51	0.481	"	4.81		93.9	50-130				
N-MeFOSAA	4.62	0.481	"	4.81		96.0	50-130				
N-EtFOSAA	4.45	0.481	"	4.81		92.5	50-130				
Perfluoropentanoic acid (PFPeA)	4.44	0.481	"	4.81		92.4	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	4.93	0.481	"	4.81		103	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	4.84	0.481	"	4.78		101	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	4.02	0.481	"	4.64		86.5	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	3.99	0.481	"	4.57		87.3	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.48	0.481	"	4.62		119	50-130				
Perfluoro-n-butanoic acid (PFBA)	4.57	0.481	"	4.81		95.1	50-130				
Surrogate: M3PFBS	*3.24*		"	*4.47*		*72.6*	*25-150*				
Surrogate: M5PFHxA	*3.47*		"	*4.81*		*72.2*	*25-150*				
Surrogate: M4PFHpA	*3.71*		"	*4.81*		*77.2*	*25-150*				
Surrogate: M3PFHxS	*3.38*		"	*4.55*		*74.2*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.74*		"	*4.81*		*77.7*	*25-150*				
Surrogate: M6PFDA	*3.61*		"	*4.81*		*75.1*	*25-150*				
Surrogate: M7PFUdA	*3.44*		"	*4.81*		*71.6*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*3.47*		"	*4.81*		*72.1*	*25-150*				
Surrogate: M2PFTeDA	*3.41*		"	*4.81*		*70.8*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*5.04*		"	*4.81*		*105*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*3.44*		"	*4.60*		*74.8*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.54*		"	*4.81*		*73.6*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.16*		"	*4.81*		*65.6*	*10-150*				
Surrogate: d3-N-MeFOSAA	*3.51*		"	*4.81*		*73.0*	*25-150*				
Surrogate: d5-N-EtFOSAA	*3.22*		"	*4.81*		*66.9*	*25-150*				
Surrogate: M2-6:2 FTS	*3.82*		"	*4.56*		*83.8*	*25-150*				
Surrogate: M2-8:2 FTS	*3.59*		"	*4.61*		*77.9*	*25-150*				
Surrogate: M9PFNA	*4.06*		"	*4.81*		*84.3*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

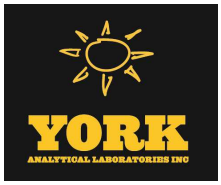
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00136 - SPE PFAS Extraction-Soil-EPA 537m											
Matrix Spike (BE00136-MS1) Matrix Spike	*Source sample: 20D0849-04 (SB12_0-2)								Prepared: 05/05/2020 Analyzed: 05/09/2020		
Perfluorobutanesulfonic acid (PFBS)	4.40	0.522	ug/kg dry	4.62	ND	95.1	25-150				
Perfluorohexanoic acid (PFHxA)	4.58	0.522	"	5.22	ND	87.7	25-150				
Perfluoroheptanoic acid (PFHpA)	4.17	0.522	"	5.22	ND	79.7	25-150				
Perfluorohexanesulfonic acid (PFHxS)	4.30	0.522	"	3.87	ND	111	25-150				
Perfluorooctanoic acid (PFOA)	4.73	0.522	"	5.22	0.166	87.3	25-150				
Perfluorooctanesulfonic acid (PFOS)	5.03	0.522	"	3.81	0.292	124	25-150				
Perfluorononanoic acid (PFNA)	4.22	0.522	"	5.01	ND	84.1	25-150				
Perfluorodecanoic acid (PFDA)	4.40	0.522	"	5.22	ND	84.2	25-150				
Perfluoroundecanoic acid (PFUnA)	4.56	0.522	"	5.22	ND	87.3	25-150				
Perfluorododecanoic acid (PFDoA)	4.30	0.522	"	5.22	ND	82.3	25-150				
Perfluorotridecanoic acid (PFTrDA)	4.16	0.522	"	5.22	ND	79.7	25-150				
Perfluorotetradecanoic acid (PFTA)	4.50	0.522	"	5.22	ND	86.2	25-150				
N-MeFOSAA	4.11	0.522	"	5.22	ND	78.7	25-150				
N-EtFOSAA	4.77	0.522	"	5.22	ND	91.3	25-150				
Perfluoropentanoic acid (PFPeA)	4.56	0.522	"	5.22	0.111	85.2	25-150				
Perfluoro-1-octanesulfonamide (FOSA)	4.59	0.522	"	5.22	ND	87.8	25-150				
Perfluoro-1-heptanesulfonic acid (PFHpS)	4.98	0.522	"	5.20	ND	95.9	25-150				
Perfluoro-1-decanesulfonic acid (PFDS)	3.55	0.522	"	5.04	ND	70.5	25-150				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	4.24	0.522	"	4.96	ND	85.4	25-150				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.50	0.522	"	5.01	ND	110	25-150				
Perfluoro-n-butanoic acid (PFBA)	4.97	0.522	"	5.22	ND	95.1	25-150				
Surrogate: M3PFBS	*3.07*		"	*4.85*		*63.3*	*25-150*				
Surrogate: M5PFHxA	*3.33*		"	*5.22*		*63.8*	*25-150*				
Surrogate: M4PFHpA	*3.90*		"	*5.22*		*74.7*	*25-150*				
Surrogate: M3PFHxS	*3.19*		"	*4.94*		*64.5*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.88*		"	*5.22*		*74.2*	*25-150*				
Surrogate: M6PFDA	*3.95*		"	*5.22*		*75.7*	*25-150*				
Surrogate: M7PFUdA	*3.65*		"	*5.22*		*69.8*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*3.79*		"	*5.22*		*72.6*	*25-150*				
Surrogate: M2PFTeDA	*3.72*		"	*5.22*		*71.2*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*4.68*		"	*5.22*		*89.7*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*3.22*		"	*5.00*		*64.5*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.32*		"	*5.22*		*63.5*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.30*		"	*5.22*		*63.1*	*10-150*				
Surrogate: d3-N-MeFOSAA	*4.45*		"	*5.22*		*85.1*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.53*		"	*5.22*		*86.8*	*25-150*				
Surrogate: M2-6:2 FTS	*7.15*		"	*4.96*		*144*	*25-150*				
Surrogate: M2-8:2 FTS	*8.75*		"	*5.00*		*175*	*25-150*				
Surrogate: M9PFNA	*4.26*		"	*5.22*		*81.6*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

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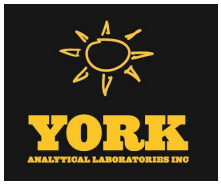
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00136 - SPE PFAS Extraction-Soil-EPA 537m											
Matrix Spike Dup (BE00136-M Matrix Spike Dup	*Source sample: 20D0849-04 (SB12_0-2)								Prepared: 05/05/2020 Analyzed: 05/09/2020		
Perfluorobutanesulfonic acid (PFBS)	4.26	0.524	ug/kg dry	4.63	ND	91.9	25-150		3.18	35	
Perfluorohexanoic acid (PFHxA)	4.15	0.524	"	5.24	ND	79.2	25-150		9.97	35	
Perfluoroheptanoic acid (PFHpA)	4.21	0.524	"	5.24	ND	80.3	25-150		0.985	35	
Perfluorohexanesulfonic acid (PFHxS)	3.98	0.524	"	3.87	ND	103	25-150		7.65	35	
Perfluorooctanoic acid (PFOA)	4.68	0.524	"	5.24	0.166	86.3	25-150		0.886	35	
Perfluorooctanesulfonic acid (PFOS)	4.87	0.524	"	3.82	0.292	120	25-150		3.08	35	
Perfluorononanoic acid (PFNA)	4.24	0.524	"	5.03	ND	84.3	25-150		0.507	35	
Perfluorodecanoic acid (PFDA)	4.31	0.524	"	5.24	ND	82.3	25-150		2.06	35	
Perfluoroundecanoic acid (PFUnA)	4.53	0.524	"	5.24	ND	86.6	25-150		0.604	35	
Perfluorododecanoic acid (PFDoA)	3.57	0.524	"	5.24	ND	68.2	25-150		18.5	35	
Perfluorotridecanoic acid (PFTrDA)	4.15	0.524	"	5.24	ND	79.3	25-150		0.267	35	
Perfluorotetradecanoic acid (PFTA)	4.48	0.524	"	5.24	ND	85.5	25-150		0.479	35	
N-MeFOSAA	4.61	0.524	"	5.24	ND	88.0	25-150		11.4	35	
N-EtFOSAA	4.31	0.524	"	5.24	ND	82.3	25-150		10.2	35	
Perfluoropentanoic acid (PFPeA)	4.59	0.524	"	5.24	0.111	85.5	25-150		0.557	35	
Perfluoro-1-octanesulfonamide (FOSA)	4.75	0.524	"	5.24	ND	90.8	25-150		3.57	35	
Perfluoro-1-heptanesulfonic acid (PFHpS)	5.07	0.524	"	5.21	ND	97.4	25-150		1.81	35	
Perfluoro-1-decanesulfonic acid (PFDS)	3.65	0.524	"	5.05	ND	72.2	25-150		2.60	35	
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	4.24	0.524	"	4.97	ND	85.2	25-150		0.0152	35	
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	5.21	0.524	"	5.03	ND	104	25-150		5.39	35	
Perfluoro-n-butanoic acid (PFBA)	4.83	0.524	"	5.24	ND	92.2	25-150		2.75	35	
Surrogate: M3PFBS	*3.32*		*"*	*4.86*		*68.3*	*25-150*				
Surrogate: M5PFHxA	*3.56*		*"*	*5.24*		*68.0*	*25-150*				
Surrogate: M4PFHpA	*4.21*		*"*	*5.24*		*80.4*	*25-150*				
Surrogate: M3PFHxS	*3.56*		*"*	*4.95*		*71.9*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*4.18*		*"*	*5.24*		*79.9*	*25-150*				
Surrogate: M6PFDA	*4.09*		*"*	*5.24*		*78.0*	*25-150*				
Surrogate: M7PFUdA	*3.44*		*"*	*5.24*		*65.7*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*3.57*		*"*	*5.24*		*68.1*	*25-150*				
Surrogate: M2PFTeDA	*3.44*		*"*	*5.24*		*65.8*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*5.24*		*"*	*5.24*		*100*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*3.24*		*"*	*5.01*		*64.6*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.55*		*"*	*5.24*		*67.8*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*3.42*		*"*	*5.24*		*65.3*	*10-150*				
Surrogate: d3-N-MeFOSAA	*4.37*		*"*	*5.24*		*83.5*	*25-150*				
Surrogate: d5-N-EtFOSAA	*4.98*		*"*	*5.24*		*95.0*	*25-150*				
Surrogate: M2-6:2 FTS	*7.87*		*"*	*4.97*		*158*	*25-150*				
Surrogate: M2-8:2 FTS	*10.0*		*"*	*5.02*		*200*	*25-150*				
Surrogate: M9PFNA	*4.41*		*"*	*5.24*		*84.1*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

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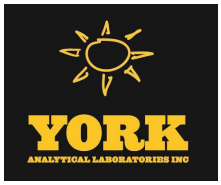
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00144 - SPE Ext-PFAS-EPA 537.1M											
Blank (BE00144-BLK1) Blank									Prepared: 05/05/2020 Analyzed: 05/08/2020		
Perfluorobutanesulfonic acid (PFBS)	ND	2.00	ng/L								
Perfluorohexanoic acid (PFHxA)	ND	2.00	"								
Perfluoroheptanoic acid (PFHpA)	ND	2.00	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	2.00	"								
Perfluorooctanoic acid (PFOA)	ND	2.00	"								
Perfluorooctanesulfonic acid (PFOS)	ND	2.00	"								
Perfluorononanoic acid (PFNA)	ND	2.00	"								
Perfluorodecanoic acid (PFDA)	ND	2.00	"								
Perfluoroundecanoic acid (PFUnA)	ND	2.00	"								
Perfluorododecanoic acid (PFDoA)	ND	2.00	"								
Perfluorotridecanoic acid (PFTrDA)	ND	2.00	"								
Perfluorotetradecanoic acid (PFTA)	ND	2.00	"								
N-MeFOSAA	ND	2.00	"								
N-EtFOSAA	ND	2.00	"								
Perfluoropentanoic acid (PFPeA)	0.883	2.00	"								
Perfluoro-1-octanesulfonamide (FOSA)	0.576	2.00	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	2.00	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	2.00	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	ND	5.00	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	ND	2.00	"								
Perfluoro-n-butanoic acid (PFBA)	2.72	2.00	"								
Surrogate: M3PFBS	*41.1*		"	*74.3*		*55.3*	*25-150*				
Surrogate: M5PFHxA	*46.2*		"	*80.0*		*57.7*	*25-150*				
Surrogate: M4PFHpA	*49.6*		"	*80.0*		*62.0*	*25-150*				
Surrogate: M3PFHxS	*44.2*		"	*75.7*		*58.4*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*48.2*		"	*80.0*		*60.3*	*25-150*				
Surrogate: M6PFDA	*53.3*		"	*80.0*		*66.7*	*25-150*				
Surrogate: M7PFUdA	*48.1*		"	*80.0*		*60.1*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*46.7*		"	*80.0*		*58.4*	*25-150*				
Surrogate: M2PFTeDA	*38.7*		"	*80.0*		*48.3*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*51.5*		"	*80.0*		*64.3*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*45.0*		"	*76.6*		*58.8*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*45.5*		"	*80.0*		*56.9*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*43.5*		"	*80.0*		*54.4*	*10-150*				
Surrogate: d3-N-MeFOSAA	*49.9*		"	*80.0*		*62.4*	*25-150*				
Surrogate: d5-N-EtFOSAA	*48.3*		"	*80.0*		*60.3*	*25-150*				
Surrogate: M2-6:2 FTS	*48.5*		"	*75.9*		*63.9*	*25-150*				
Surrogate: M2-8:2 FTS	*56.1*		"	*76.6*		*73.2*	*25-150*				
Surrogate: M9PFNA	*50.5*		"	*80.0*		*63.1*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

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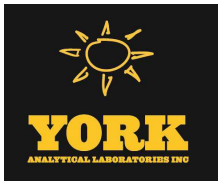
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00144 - SPE Ext-PFAS-EPA 537.1M											
LCS (BE00144-BS1) LCS									Prepared: 05/05/2020 Analyzed: 05/08/2020		
Perfluorobutanesulfonic acid (PFBS)	73.0	2.00	ng/L	70.8		103	50-130				
Perfluorohexanoic acid (PFHxA)	79.0	2.00	"	80.0		98.8	50-130				
Perfluoroheptanoic acid (PFHpA)	72.7	2.00	"	80.0		90.9	50-130				
Perfluorohexanesulfonic acid (PFHxS)	57.8	2.00	"	59.2		97.7	50-130				
Perfluorooctanoic acid (PFOA)	80.2	2.00	"	80.0		100	50-130				
Perfluorooctanesulfonic acid (PFOS)	58.8	2.00	"	58.4		101	50-130				
Perfluorononanoic acid (PFNA)	71.2	2.00	"	76.8		92.7	50-130				
Perfluorodecanoic acid (PFDA)	74.1	2.00	"	80.0		92.6	50-130				
Perfluoroundecanoic acid (PFUnA)	80.6	2.00	"	80.0		101	50-130				
Perfluorododecanoic acid (PFDoA)	77.0	2.00	"	80.0		96.3	50-130				
Perfluorotridecanoic acid (PFTrDA)	64.2	2.00	"	80.0		80.3	50-130				
Perfluorotetradecanoic acid (PFTA)	74.6	2.00	"	80.0		93.3	50-130				
N-MeFOSAA	71.7	2.00	"	80.0		89.7	50-130				
N-EtFOSAA	79.6	2.00	"	80.0		99.5	50-130				
Perfluoropentanoic acid (PFPeA)	77.2	2.00	"	80.0		96.6	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	77.8	2.00	"	80.0		97.2	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	87.9	2.00	"	79.6		110	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	64.9	2.00	"	77.2		84.1	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	65.6	5.00	"	76.0		86.3	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	84.9	2.00	"	76.8		111	50-130				
Perfluoro-n-butanoic acid (PFBA)	78.6	2.00	"	80.0		98.2	50-130				
Surrogate: M3PFBS	*45.5*		"	*74.3*		*61.2*	*25-150*				
Surrogate: M5PFHxA	*50.5*		"	*80.0*		*63.1*	*25-150*				
Surrogate: M4PFHpA	*54.9*		"	*80.0*		*68.6*	*25-150*				
Surrogate: M3PFHxS	*48.6*		"	*75.7*		*64.2*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*49.4*		"	*80.0*		*61.8*	*25-150*				
Surrogate: M6PFDA	*56.5*		"	*80.0*		*70.7*	*25-150*				
Surrogate: M7PFUdA	*47.2*		"	*80.0*		*59.0*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*45.6*		"	*80.0*		*57.0*	*25-150*				
Surrogate: M2PFTeDA	*31.0*		"	*80.0*		*38.7*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*68.6*		"	*80.0*		*85.8*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*46.0*		"	*76.6*		*60.0*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*49.5*		"	*80.0*		*61.9*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*49.4*		"	*80.0*		*61.7*	*10-150*				
Surrogate: d3-N-MeFOSAA	*53.9*		"	*80.0*		*67.3*	*25-150*				
Surrogate: d5-N-EtFOSAA	*47.4*		"	*80.0*		*59.3*	*25-150*				
Surrogate: M2-6:2 FTS	*59.8*		"	*75.9*		*78.8*	*25-150*				
Surrogate: M2-8:2 FTS	*60.8*		"	*76.6*		*79.4*	*25-150*				
Surrogate: M9PFNA	*52.5*		"	*80.0*		*65.6*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00144 - SPE Ext-PFAS-EPA 537.1M											
LCS (BE00144-BS2) LCS									Prepared: 05/05/2020 Analyzed: 05/08/2020		
Perfluorobutanesulfonic acid (PFBS)	71.0	2.00	ng/L	70.8		100	50-130				
Perfluorohexanoic acid (PFHxA)	71.9	2.00	"	80.0		89.9	50-130				
Perfluoroheptanoic acid (PFHpA)	68.8	2.00	"	80.0		85.9	50-130				
Perfluorohexanesulfonic acid (PFHxS)	57.9	2.00	"	59.2		97.8	50-130				
Perfluorooctanoic acid (PFOA)	73.5	2.00	"	80.0		91.9	50-130				
Perfluorooctanesulfonic acid (PFOS)	53.3	2.00	"	58.4		91.3	50-130				
Perfluorononanoic acid (PFNA)	69.4	2.00	"	76.8		90.4	50-130				
Perfluorodecanoic acid (PFDA)	75.0	2.00	"	80.0		93.8	50-130				
Perfluoroundecanoic acid (PFUnA)	76.6	2.00	"	80.0		95.7	50-130				
Perfluorododecanoic acid (PFDoA)	73.2	2.00	"	80.0		91.5	50-130				
Perfluorotridecanoic acid (PFTrDA)	65.2	2.00	"	80.0		81.5	50-130				
Perfluorotetradecanoic acid (PFTA)	78.0	2.00	"	80.0		97.5	50-130				
N-MeFOSAA	69.9	2.00	"	80.0		87.4	50-130				
N-EtFOSAA	73.0	2.00	"	80.0		91.3	50-130				
Perfluoropentanoic acid (PFPeA)	75.0	2.00	"	80.0		93.7	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	79.0	2.00	"	80.0		98.8	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	85.9	2.00	"	79.6		108	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	68.4	2.00	"	77.2		88.6	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	77.0	5.00	"	76.0		101	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	83.7	2.00	"	76.8		109	50-130				
Perfluoro-n-butanoic acid (PFBA)	78.1	2.00	"	80.0		97.7	50-130				
Surrogate: M3PFBS	*39.6*		"	*74.3*		*53.3*	*25-150*				
Surrogate: M5PFHxA	*44.4*		"	*80.0*		*55.5*	*25-150*				
Surrogate: M4PFHpA	*48.2*		"	*80.0*		*60.2*	*25-150*				
Surrogate: M3PFHxS	*41.9*		"	*75.7*		*55.4*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*45.7*		"	*80.0*		*57.1*	*25-150*				
Surrogate: M6PFDA	*48.6*		"	*80.0*		*60.7*	*25-150*				
Surrogate: M7PFUdA	*43.4*		"	*80.0*		*54.2*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*43.9*		"	*80.0*		*54.9*	*25-150*				
Surrogate: M2PFTeDA	*33.5*		"	*80.0*		*41.8*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*58.4*		"	*80.0*		*73.0*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*41.8*		"	*76.6*		*54.6*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*42.4*		"	*80.0*		*53.0*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*40.0*		"	*80.0*		*50.0*	*10-150*				
Surrogate: d3-N-MeFOSAA	*48.2*		"	*80.0*		*60.3*	*25-150*				
Surrogate: d5-N-EtFOSAA	*44.1*		"	*80.0*		*55.1*	*25-150*				
Surrogate: M2-6:2 FTS	*46.8*		"	*75.9*		*61.6*	*25-150*				
Surrogate: M2-8:2 FTS	*49.3*		"	*76.6*		*64.4*	*25-150*				
Surrogate: M9PFNA	*46.6*		"	*80.0*		*58.3*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00144 - SPE Ext-PFAS-EPA 537.1M											
LCS (BE00144-BS3) LCS									Prepared: 05/05/2020 Analyzed: 05/08/2020		
Perfluorobutanesulfonic acid (PFBS)	75.0	2.00	ng/L	70.8		106	50-130				
Perfluorohexanoic acid (PFHxA)	78.1	2.00	"	80.0		97.6	50-130				
Perfluoroheptanoic acid (PFHpA)	70.3	2.00	"	80.0		87.9	50-130				
Perfluorohexanesulfonic acid (PFHxS)	58.9	2.00	"	59.2		99.5	50-130				
Perfluorooctanoic acid (PFOA)	75.9	2.00	"	80.0		94.9	50-130				
Perfluorooctanesulfonic acid (PFOS)	60.4	2.00	"	58.4		104	50-130				
Perfluorononanoic acid (PFNA)	74.1	2.00	"	76.8		96.4	50-130				
Perfluorodecanoic acid (PFDA)	80.5	2.00	"	80.0		101	50-130				
Perfluoroundecanoic acid (PFUnA)	76.4	2.00	"	80.0		95.6	50-130				
Perfluorododecanoic acid (PFDoA)	75.8	2.00	"	80.0		94.8	50-130				
Perfluorotridecanoic acid (PFTrDA)	64.1	2.00	"	80.0		80.1	50-130				
Perfluorotetradecanoic acid (PFTA)	78.8	2.00	"	80.0		98.5	50-130				
N-MeFOSAA	73.5	2.00	"	80.0		91.9	50-130				
N-EtFOSAA	78.0	2.00	"	80.0		97.5	50-130				
Perfluoropentanoic acid (PFPeA)	76.3	2.00	"	80.0		95.4	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	82.9	2.00	"	80.0		104	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	88.8	2.00	"	79.6		112	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	68.6	2.00	"	77.2		88.8	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	69.4	5.00	"	76.0		91.4	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	85.4	2.00	"	76.8		111	50-130				
Perfluoro-n-butanoic acid (PFBA)	79.0	2.00	"	80.0		98.7	50-130				
Surrogate: M3PFBS	*41.0*		"	*74.3*		*55.2*	*25-150*				
Surrogate: M5PFHxA	*43.5*		"	*80.0*		*54.3*	*25-150*				
Surrogate: M4PFHpA	*48.8*		"	*80.0*		*61.0*	*25-150*				
Surrogate: M3PFHxS	*43.1*		"	*75.7*		*56.9*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*46.8*		"	*80.0*		*58.4*	*25-150*				
Surrogate: M6PFDA	*48.3*		"	*80.0*		*60.4*	*25-150*				
Surrogate: M7PFUdA	*43.9*		"	*80.0*		*54.9*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*42.8*		"	*80.0*		*53.5*	*25-150*				
Surrogate: M2PFTeDA	*29.3*		"	*80.0*		*36.6*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*51.0*		"	*80.0*		*63.8*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*41.5*		"	*76.6*		*54.2*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*42.7*		"	*80.0*		*53.3*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*39.7*		"	*80.0*		*49.6*	*10-150*				
Surrogate: d3-N-MeFOSAA	*47.1*		"	*80.0*		*58.8*	*25-150*				
Surrogate: d5-N-EtFOSAA	*41.8*		"	*80.0*		*52.2*	*25-150*				
Surrogate: M2-6:2 FTS	*52.6*		"	*75.9*		*69.2*	*25-150*				
Surrogate: M2-8:2 FTS	*55.9*		"	*76.6*		*72.9*	*25-150*				
Surrogate: M9PFNA	*45.6*		"	*80.0*		*57.0*	*25-150*				

PFAS Target compounds by LC/MS-MS - Quality Control Data

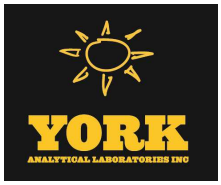
York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00144 - SPE Ext-PFAS-EPA 537.1M											
LCS (BE00144-BS4) LCS									Prepared: 05/05/2020 Analyzed: 05/08/2020		
Perfluorobutanesulfonic acid (PFBS)	75.5	2.00	ng/L	70.8		107	50-130				
Perfluorohexanoic acid (PFHxA)	78.6	2.00	"	80.0		98.3	50-130				
Perfluoroheptanoic acid (PFHpA)	69.2	2.00	"	80.0		86.5	50-130				
Perfluorohexanesulfonic acid (PFHxS)	57.4	2.00	"	59.2		97.0	50-130				
Perfluorooctanoic acid (PFOA)	74.9	2.00	"	80.0		93.6	50-130				
Perfluorooctanesulfonic acid (PFOS)	60.7	2.00	"	58.4		104	50-130				
Perfluorononanoic acid (PFNA)	74.6	2.00	"	76.8		97.1	50-130				
Perfluorodecanoic acid (PFDA)	72.5	2.00	"	80.0		90.6	50-130				
Perfluoroundecanoic acid (PFUnA)	74.2	2.00	"	80.0		92.8	50-130				
Perfluorododecanoic acid (PFDoA)	75.8	2.00	"	80.0		94.7	50-130				
Perfluorotridecanoic acid (PFTrDA)	70.2	2.00	"	80.0		87.8	50-130				
Perfluorotetradecanoic acid (PFTA)	79.7	2.00	"	80.0		99.6	50-130				
N-MeFOSAA	75.7	2.00	"	80.0		94.7	50-130				
N-EtFOSAA	76.6	2.00	"	80.0		95.7	50-130				
Perfluoropentanoic acid (PFPeA)	78.1	2.00	"	80.0		97.6	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	77.7	2.00	"	80.0		97.1	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	88.9	2.00	"	79.6		112	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	72.2	2.00	"	77.2		93.6	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	65.1	5.00	"	76.0		85.6	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	86.4	2.00	"	76.8		113	50-130				
Perfluoro-n-butanoic acid (PFBA)	79.8	2.00	"	80.0		99.7	50-130				
Surrogate: M3PFBS	*43.9*		"	*74.3*		*59.0*	*25-150*				
Surrogate: M5PFHxA	*47.2*		"	*80.0*		*59.0*	*25-150*				
Surrogate: M4PFHpA	*52.3*		"	*80.0*		*65.4*	*25-150*				
Surrogate: M3PFHxS	*47.0*		"	*75.7*		*62.1*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*48.5*		"	*80.0*		*60.7*	*25-150*				
Surrogate: M6PFDA	*53.7*		"	*80.0*		*67.1*	*25-150*				
Surrogate: M7PFUdA	*48.1*		"	*80.0*		*60.1*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*47.7*		"	*80.0*		*59.6*	*25-150*				
Surrogate: M2PFTeDA	*39.3*		"	*80.0*		*49.2*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*66.0*		"	*80.0*		*82.5*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*44.4*		"	*76.6*		*58.0*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*47.2*		"	*80.0*		*59.0*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*42.4*		"	*80.0*		*53.0*	*10-150*				
Surrogate: d3-N-MeFOSAA	*50.1*		"	*80.0*		*62.6*	*25-150*				
Surrogate: d5-N-EtFOSAA	*44.9*		"	*80.0*		*56.1*	*25-150*				
Surrogate: M2-6:2 FTS	*56.0*		"	*75.9*		*73.8*	*25-150*				
Surrogate: M2-8:2 FTS	*55.5*		"	*76.6*		*72.4*	*25-150*				
Surrogate: M9PFNA	*49.6*		"	*80.0*		*61.9*	*25-150*				

PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00144 - SPE Ext-PFAS-EPA 537.1M											
Duplicate (BE00144-DUP1) Duplicate	*Source sample: 20D0849-11 (MW06_043020)								Prepared: 05/05/2020 Analyzed: 05/08/2020		
Perfluorobutanesulfonic acid (PFBS)	9.21	2.00	ng/L		9.45				2.61	30	
Perfluorohexanoic acid (PFHxA)	18.4	2.00	"		22.3				19.1	30	
Perfluoroheptanoic acid (PFHpA)	18.3	2.00	"		20.5				11.6	30	
Perfluorohexanesulfonic acid (PFHxS)	2.49	2.00	"		2.69				7.91	30	
Perfluorooctanoic acid (PFOA)	175	2.00	"		178				1.85	30	
Perfluorooctanesulfonic acid (PFOS)	134	2.00	"		130				3.07	30	
Perfluorononanoic acid (PFNA)	9.77	2.00	"		9.87				1.00	30	
Perfluorodecanoic acid (PFDA)	2.77	2.00	"		2.52				9.52	30	
Perfluoroundecanoic acid (PFUnA)	ND	2.00	"		ND					30	
Perfluorododecanoic acid (PFDoA)	ND	2.00	"		ND					30	
Perfluorotridecanoic acid (PFTrDA)	ND	2.00	"		ND					30	
Perfluorotetradecanoic acid (PFTA)	ND	2.00	"		0.537					30	
N-MeFOSAA	ND	2.00	"		ND					30	
N-EtFOSAA	ND	2.00	"		0.726					30	
Perfluoropentanoic acid (PFPeA)	16.1	2.00	"		23.2				36.3	30	Non-dir.
Perfluoro-1-octanesulfonamide (FOSA)	0.574	2.00	"		0.700				19.7	30	
Perfluoro-1-heptanesulfonic acid (PFHpS)	1.05	2.00	"		0.894				15.6	30	
Perfluoro-1-decanesulfonic acid (PFDS)	ND	2.00	"		ND					30	
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	ND	5.00	"		ND					30	
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	ND	2.00	"		ND					30	
Perfluoro-n-butanoic acid (PFBA)	17.3	2.00	"		18.2				4.91	30	
Surrogate: M3PFBS	*34.4*		"	*74.3*		*46.3*	*25-150*				
Surrogate: M5PFHxA	*36.0*		"	*80.0*		*45.0*	*25-150*				
Surrogate: M4PFHpA	*42.8*		"	*80.0*		*53.5*	*25-150*				
Surrogate: M3PFHxS	*38.4*		"	*75.7*		*50.7*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*43.0*		"	*80.0*		*53.8*	*25-150*				
Surrogate: M6PFDA	*36.8*		"	*80.0*		*46.0*	*25-150*				
Surrogate: M7PFUdA	*21.2*		"	*80.0*		*26.5*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*8.58*		"	*80.0*		*10.7*	*25-150*				
Surrogate: M2PFTeDA	*5.47*		"	*80.0*		*6.84*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*35.4*		"	*80.0*		*44.2*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*33.5*		"	*76.6*		*43.7*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*32.7*		"	*80.0*		*40.9*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*7.69*		"	*80.0*		*9.62*	*10-150*				
Surrogate: d3-N-MeFOSAA	*27.8*		"	*80.0*		*34.8*	*25-150*				
Surrogate: d5-N-EtFOSAA	*21.6*		"	*80.0*		*27.0*	*25-150*				
Surrogate: M2-6:2 FTS	*138*		"	*75.9*		*182*	*25-150*				
Surrogate: M2-8:2 FTS	*77.3*		"	*76.6*		*101*	*25-150*				
Surrogate: M9PFNA	*45.6*		"	*80.0*		*57.0*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Batch BE00144 - SPE Ext-PFAS-EPA 537.1M

Matrix Spike (BE00144-MS1) Matrix Spike *Source sample: 20D0849-12 (MW08_043020) Prepared: 05/05/2020 Analyzed: 05/08/2020

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Perfluorobutanesulfonic acid (PFBS)	79.5	2.00	ng/L	70.8	0.933	111	25-150				
Perfluorohexanoic acid (PFHxA)	83.6	2.00	"	80.0	3.22	100	25-150				
Perfluoroheptanoic acid (PFHpA)	71.2	2.00	"	80.0	2.59	85.8	25-150				
Perfluorohexanesulfonic acid (PFHxS)	73.5	2.00	"	59.2	0.618	123	25-150				
Perfluorooctanoic acid (PFOA)	102	2.00	"	80.0	27.7	93.4	25-150				
Perfluorooctanesulfonic acid (PFOS)	92.4	2.00	"	58.4	10.9	140	25-150				
Perfluorononanoic acid (PFNA)	72.6	2.00	"	76.8	0.984	93.2	25-150				
Perfluorodecanoic acid (PFDA)	77.6	2.00	"	80.0	ND	97.0	25-150				
Perfluoroundecanoic acid (PFUnA)	78.0	2.00	"	80.0	ND	97.5	25-150				
Perfluorododecanoic acid (PFDoA)	78.4	2.00	"	80.0	ND	97.9	25-150				
Perfluorotridecanoic acid (PFTrDA)	54.5	2.00	"	80.0	ND	68.2	25-150				
Perfluorotetradecanoic acid (PFTA)	77.3	2.00	"	80.0	0.671	95.8	25-150				
N-MeFOSAA	75.7	2.00	"	80.0	0.712	93.7	25-150				
N-EtFOSAA	86.7	2.00	"	80.0	ND	108	25-150				
Perfluoropentanoic acid (PFPeA)	80.1	2.00	"	80.0	3.08	96.3	25-150				
Perfluoro-1-octanesulfonamide (FOSA)	83.9	2.00	"	80.0	0.816	104	25-150				
Perfluoro-1-heptanesulfonic acid (PFHpS)	94.1	2.00	"	79.6	ND	118	25-150				
Perfluoro-1-decanesulfonic acid (PFDS)	64.0	2.00	"	77.2	ND	82.9	25-150				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 F	72.5	5.00	"	76.0	ND	95.4	25-150				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 F	86.2	2.00	"	76.8	ND	112	25-150				
Perfluoro-n-butanoic acid (PFBA)	83.1	2.00	"	80.0	5.47	97.0	25-150				
Surrogate: M3PFBS	*37.2*		"	*74.3*		*50.0*	*25-150*				
Surrogate: M5PFHxA	*39.9*		"	*80.0*		*49.9*	*25-150*				
Surrogate: M4PFHpA	*49.6*		"	*80.0*		*62.0*	*25-150*				
Surrogate: M3PFHxS	*42.2*		"	*75.7*		*55.8*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*43.9*		"	*80.0*		*54.8*	*25-150*				
Surrogate: M6PFDA	*45.4*		"	*80.0*		*56.7*	*25-150*				
Surrogate: M7PFUdA	*36.1*		"	*80.0*		*45.1*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*30.8*		"	*80.0*		*38.5*	*25-150*				
Surrogate: M2PFTeDA	*11.5*		"	*80.0*		*14.4*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*47.5*		"	*80.0*		*59.4*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*39.2*		"	*76.6*		*51.2*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*38.1*		"	*80.0*		*47.6*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*33.6*		"	*80.0*		*42.0*	*10-150*				
Surrogate: d3-N-MeFOSAA	*38.3*		"	*80.0*		*47.8*	*25-150*				
Surrogate: d5-N-EtFOSAA	*32.7*		"	*80.0*		*40.9*	*25-150*				
Surrogate: M2-6:2 FTS	*67.4*		"	*75.9*		*88.8*	*25-150*				
Surrogate: M2-8:2 FTS	*52.2*		"	*76.6*		*68.1*	*25-150*				
Surrogate: M9PFNA	*45.7*		"	*80.0*		*57.1*	*25-150*				

Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00012 - % Solids Prep											
Duplicate (BE00012-DUP1) Duplicate	*Source sample: 20D0849-04 (SB12_0-2)							Prepared & Analyzed: 05/01/2020			
% Solids	88.9	0.100	%		90.8				2.10	20	

Sample and Data Qualifiers Relating to This Work Order

S-08	The recovery of this surrogate was outside of QC limits.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
PFSu-L	The isotopically labeled surrogate recovered below lab control limits due to a matrix effect. Isotope Dilution was applied.
PFSu-H	The isotopically labeled surrogate recovered above lab control limits due to a matrix effect. Isotope Dilution was applied.
PF-CCV-H	The CCV recovery was slightly above acceptable limits for the qualified compound. However, sample results are not biased high because results are corrected for isotope recovery.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

York Analytical Laboratories, Inc.
120 Research Drive, Stratford, CT 06615
132-02 89th Ave, Queens, NY 11418
clientservices@yorklab.com
www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20D0849

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company: same
Address: 360 west 31st street New York NY 10001	Address:	Address: same
Phone: 212 479 5400	Phone:	Phone: same
Contact: Kim Serven	Contact: Dina Palazzolo	Contact: same
E-mail: kserven@langan.com	E-mail: DPalazzolo@langan.com	E-mail: same

YOUR Project Number: 170610601

YOUR Project Name: 475 Bay Street

YOUR PO#:

Turn-Around Time

- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- Standard (5-7 Day) X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below)
Deirdre Casey

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil; Other

Samples From: New York X; New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections): Summary Report; QA Report; NY ASP A Package; ~~NY ASP B Package~~; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
SB16_0-2	S	4/30 0915	PFAS & 1,4 dioxane	1)8oz, 1)4oz, 4 VOAs
SB16_14-16	S	4/30 0920		1)250ml
SB16_18-20	S	4/30 0925		
SB12_0-2	S	4/30 1145		
SB12_8-10	S	4/30 1150		
SB12_18-20	S	4/30 1155		
MS-S001_043020	S	4/30 1145		
MSD-S001_043020	S	4/30 1145		
SB11_0-2	S	4/30 1440		
SB11_10-12	S	4/30 1445		

Comments:
MS/MSD-S001-043020 ~~Dup~~ Parent sample SB12_0-2

Preservation: (check all that apply)
HCl ___ MeOH X HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___
Ascorbic Acid ___ Other: ___

Special Instruction: Field Filtered ___ Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Deirdre Casey Langan	4/30/20 1740		4/30/20		4/30/20 1938
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temp. Received at Lab
				TC	4/30/20 1938 / 1.2 Degrees C

York Analytical Laboratories, Inc.
120 Research Drive, Stratford, CT 06615 | 132-02 89th Ave, Queens, NY 11418
clientservices@yorklab.com
www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20D0849

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company: same
Address: 360 west 31st Street, New York, NY 10001	Address:	Address: same
Phone: 212 479 5400	Phone:	Phone: same
Contact: K Semon	Contact: Dina Palazzolo	Contact: same
E-mail: ksemon@langan.com	E-mail: DPalazzolo@langan.com	E-mail: same

YOUR Project Number: 170610601

YOUR Project Name: 475 Bay Street

YOUR PO#:

Turn-Around Time
- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- Standard (5-7 Day) X

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Deirdre Casey

Samples Collected by: (print your name above and sign below)

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil; Other

Samples From: New York X; New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections): Summary Report; QA Report; NY ASP A Package; NY ASP B Package; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
SB11_18-20	S	4/30 1450	PFAS & 1,4 dioxane	(QNE, (1)) 4oz, 3VOA, (1)250
SOFB02-043020	QA/QC	4/30 1200	PFAS & 1,4 dioxane	(6) 1L, (4) 250, 3 VOA
MW06_043020	GW	4/30 1414		
MW08_043020	GW	4/30 1055		
MW05_043020	GW	4/30		
GWDUP01_043020	GW	4/30 —		
GWFBOL_043020	QA/QC	4/30 1400		
GWTBOL_043020	QA/QC	4/30 —		

Comments:

Preservation: (check all that apply) HCl X MeOH X HNO_3 X H_2SO_4 ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other: ___

Special Instruction: Field Filtered X; Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Amelyn Langan	4/30/20 1740		4/30/20		4/30/20 1938
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temp. Received at Lab
				TC	4/30/20 1938 / 1.2 Degrees C

Technical Report

prepared for:

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Report Date: 05/06/2020
Client Project ID: 170610601
York Project (SDG) No.: 20E0004

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 05/06/2020
Client Project ID: 170610601
York Project (SDG) No.: 20E0004

Langan Engineering & Environmental Services (NYC)
21 Penn Plaza, 360 West 31st Street
New York NY, 10001
Attention: Dina Palazzolo, Ms.

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 30, 2020 and listed below. The project was identified as your project: **170610601**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20E0004-01	SV04_043020	Soil Vapor	04/30/2020	04/30/2020
20E0004-02	SV07_043020	Soil Vapor	04/30/2020	04/30/2020
20E0004-03	AA01_043020	Outdoor Ambient Ai	04/30/2020	04/30/2020
20E0004-04	SS08_043020	Soil Vapor	04/30/2020	04/30/2020
20E0004-05	SS09_043020	Soil Vapor	04/30/2020	04/30/2020
20E0004-06	IA08_043020	Indoor Ambient Air	04/30/2020	04/30/2020
20E0004-07	IA09_043020	Indoor Ambient Air	04/30/2020	04/30/2020

General Notes for York Project (SDG) No.: 20E0004

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 05/06/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: SV04_043020 **York Sample ID:** 20E0004-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:33 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.87	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	1.2	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.87	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.64	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.16	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	1.2	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	**1,2,4-Trimethylbenzene**	**20**		ug/m³	0.78	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	1.2	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	0.96	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.64	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.73	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	**1,3,5-Trimethylbenzene**	**8.0**		ug/m³	0.78	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	1,3-Butadiene	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	0.96	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.73	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	0.96	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**11**		ug/m³	0.47	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: SV04_043020 **York Sample ID:** 20E0004-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:33 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
591-78-6	*** 2-Hexanone**	**3.5**		ug/m³	1.3	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			
107-05-1	3-Chloropropene	ND		ug/m³	2.5	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	0.65	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-64-1	**Acetone**	**54**		ug/m³	0.76	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-13-1	Acrylonitrile	ND		ug/m³	0.35	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
71-43-2	**Benzene**	**2.1**		ug/m³	0.51	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
100-44-7	Benzyl chloride	ND		ug/m³	0.82	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-27-4	Bromodichloromethane	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-25-2	Bromoform	ND		ug/m³	1.6	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
74-83-9	Bromomethane	ND		ug/m³	0.62	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-15-0	**Carbon disulfide**	**4.0**		ug/m³	0.50	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
56-23-5	**Carbon tetrachloride**	**0.40**		ug/m³	0.25	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-90-7	Chlorobenzene	ND		ug/m³	0.73	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-00-3	Chloroethane	ND		ug/m³	0.42	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-66-3	**Chloroform**	**5.0**		ug/m³	0.78	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
74-87-3	**Chloromethane**	**0.79**		ug/m³	0.33	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.16	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.72	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-82-7	**Cyclohexane**	**1.5**		ug/m³	0.55	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
124-48-1	Dibromochloromethane	ND		ug/m³	1.4	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-71-8	**Dichlorodifluoromethane**	**2.5**		ug/m³	0.79	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
141-78-6	* Ethyl acetate	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			

Sample Information

Client Sample ID: SV04_043020 **York Sample ID:** 20E0004-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:33 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	**Ethyl Benzene**	**3.0**		ug/m³	0.69	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
87-68-3	Hexachlorobutadiene	ND		ug/m³	1.7	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-63-0	**Isopropanol**	**29**		ug/m³	0.78	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
80-62-6	**Methyl Methacrylate**	**15**		ug/m³	0.65	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.57	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-09-2	Methylene chloride	ND		ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
142-82-5	**n-Heptane**	**8.8**		ug/m³	0.65	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
110-54-3	**n-Hexane**	**3.5**		ug/m³	0.56	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
95-47-6	**o-Xylene**	**6.8**		ug/m³	0.69	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
179601-23-1	**p- & m- Xylenes**	**13**		ug/m³	1.4	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
622-96-8	*** p-Ethyltoluene**	**11**		ug/m³	0.78	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.27	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			
100-42-5	Styrene	ND		ug/m³	0.68	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
127-18-4	**Tetrachloroethylene**	**13**	TO-CCV, TO-LCS-L	ug/m³	1.1	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.94	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:			
108-88-3	**Toluene**	**8.5**		ug/m³	0.60	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.63	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.72	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
79-01-6	Trichloroethylene	ND		ug/m³	0.21	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-69-4	**Trichlorofluoromethane (Freon 11)**	**1.7**		ug/m³	0.89	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-05-4	Vinyl acetate	ND		ug/m³	0.56	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			

Sample Information

Client Sample ID: SV04_043020 **York Sample ID:** 20E0004-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:33 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
593-60-2	Vinyl bromide	ND		ug/m³	0.70	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-01-4	Vinyl Chloride	ND		ug/m³	0.20	1.59	EPA TO-15	05/01/2020 09:00	05/02/2020 01:03	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

	Surrogate Recoveries	Result	Acceptance Range
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*116 %*	*70-130*

Sample Information

Client Sample ID: SV07_043020 **York Sample ID:** 20E0004-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:30 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.88	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	1.2	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.88	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.65	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.16	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	1.2	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	**1,2,4-Trimethylbenzene**	**28**		ug/m³	0.79	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	1.2	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	0.97	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.65	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.74	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	**1,3,5-Trimethylbenzene**	**12**		ug/m³	0.79	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	**1,3-Butadiene**	**1.1**		ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	0.97	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.74	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	0.97	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	1.2	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**8.9**		ug/m³	0.47	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
591-78-6	*** 2-Hexanone**	**2.9**		ug/m³	1.3	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			

Sample Information

Client Sample ID: SV07_043020 **York Sample ID:** 20E0004-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:30 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	2.5	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-10-1	**4-Methyl-2-pentanone**	**0.79**		ug/m³	0.66	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-64-1	**Acetone**	**29**		ug/m³	0.76	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
107-13-1	Acrylonitrile	ND		ug/m³	0.35	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
71-43-2	**Benzene**	**9.9**		ug/m³	0.51	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
100-44-7	Benzyl chloride	ND		ug/m³	0.83	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-27-4	Bromodichloromethane	ND		ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-25-2	Bromoform	ND		ug/m³	1.7	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-83-9	Bromomethane	ND		ug/m³	0.62	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-15-0	**Carbon disulfide**	**13**		ug/m³	0.50	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
56-23-5	Carbon tetrachloride	ND		ug/m³	0.25	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-90-7	Chlorobenzene	ND		ug/m³	0.74	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-00-3	**Chloroethane**	**1.1**		ug/m³	0.42	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-66-3	**Chloroform**	**4.2**		ug/m³	0.78	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-87-3	Chloromethane	ND		ug/m³	0.33	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.16	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.73	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
110-82-7	**Cyclohexane**	**7.8**		ug/m³	0.55	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
124-48-1	Dibromochloromethane	ND		ug/m³	1.4	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-71-8	**Dichlorodifluoromethane**	**2.2**		ug/m³	0.79	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
141-78-6	* Ethyl acetate	ND		ug/m³	1.2	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			
100-41-4	**Ethyl Benzene**	**2.7**		ug/m³	0.70	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			

Sample Information

Client Sample ID: SV07_043020 **York Sample ID:** 20E0004-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:30 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m³	1.7	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-63-0	**Isopropanol**	**2.3**		ug/m³	0.79	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
80-62-6	Methyl Methacrylate	ND		ug/m³	0.66	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.58	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-09-2	Methylene chloride	ND		ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-82-5	**n-Heptane**	**11**		ug/m³	0.66	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-54-3	**n-Hexane**	**22**		ug/m³	0.57	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-47-6	**o-Xylene**	**6.8**		ug/m³	0.70	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
179601-23-1	**p- & m- Xylenes**	**12**		ug/m³	1.4	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
622-96-8	*** p-Ethyltoluene**	**14**		ug/m³	0.79	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.28	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			
100-42-5	Styrene	ND		ug/m³	0.68	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
127-18-4	**Tetrachloroethylene**	**13**	TO-CCV, TO-LCS-L	ug/m³	1.1	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.95	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:			
108-88-3	**Toluene**	**13**		ug/m³	0.61	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.64	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.73	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-01-6	Trichloroethylene	ND		ug/m³	0.22	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-69-4	**Trichlorofluoromethane (Freon 11)**	**2.1**		ug/m³	0.90	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-05-4	Vinyl acetate	ND		ug/m³	0.57	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
593-60-2	Vinyl bromide	ND		ug/m³	0.70	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: SV07_043020 **York Sample ID:** 20E0004-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 2:30 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/m³	0.21	1.607	EPA TO-15	05/01/2020 09:00	05/02/2020 01:55	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

	Surrogate Recoveries	Result	Acceptance Range
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*113 %*	*70-130*

Sample Information

Client Sample ID: AA01_043020 **York Sample ID:** 20E0004-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Outdoor Ambient Air	April 30, 2020 2:31 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	0.55	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.44	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	0.55	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	0.61	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.44	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.32	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.079	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	0.60	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m³	0.39	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	0.62	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	0.48	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.32	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.37	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	0.56	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m³	0.39	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	1,3-Butadiene	ND		ug/m³	0.53	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	0.48	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.37	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	0.48	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	0.58	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**1.0**		ug/m³	0.24	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
591-78-6	* 2-Hexanone	ND		ug/m³	0.66	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			

Sample Information

Client Sample ID: AA01_043020 **York Sample ID:** 20E0004-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Outdoor Ambient Air	April 30, 2020 2:31 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	1.3	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	0.33	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-64-1	**Acetone**	**6.6**		ug/m³	0.38	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-13-1	Acrylonitrile	ND		ug/m³	0.17	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
71-43-2	**Benzene**	**0.41**		ug/m³	0.26	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
100-44-7	Benzyl chloride	ND		ug/m³	0.42	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-27-4	Bromodichloromethane	ND		ug/m³	0.54	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-25-2	Bromoform	ND		ug/m³	0.83	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
74-83-9	Bromomethane	ND		ug/m³	0.31	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-15-0	Carbon disulfide	ND		ug/m³	0.25	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
56-23-5	**Carbon tetrachloride**	**0.50**		ug/m³	0.13	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-90-7	Chlorobenzene	ND		ug/m³	0.37	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-00-3	Chloroethane	ND		ug/m³	0.21	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-66-3	Chloroform	ND		ug/m³	0.39	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
74-87-3	**Chloromethane**	**1.2**		ug/m³	0.17	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.079	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.36	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-82-7	Cyclohexane	ND		ug/m³	0.28	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
124-48-1	Dibromochloromethane	ND		ug/m³	0.68	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-71-8	**Dichlorodifluoromethane**	**1.6**		ug/m³	0.40	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
141-78-6	* Ethyl acetate	ND		ug/m³	0.58	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			
100-41-4	**Ethyl Benzene**	**0.38**		ug/m³	0.35	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: AA01_043020 **York Sample ID:** 20E0004-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Outdoor Ambient Air	April 30, 2020 2:31 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m³	0.86	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-63-0	**Isopropanol**	**26**		ug/m³	0.39	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
80-62-6	**Methyl Methacrylate**	**6.1**		ug/m³	0.33	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.29	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-09-2	**Methylene chloride**	**1.5**		ug/m³	0.56	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-82-5	n-Heptane	ND		ug/m³	0.33	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-54-3	**n-Hexane**	**0.42**		ug/m³	0.28	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-47-6	**o-Xylene**	**0.38**		ug/m³	0.35	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
179601-23-1	**p- & m- Xylenes**	**1.1**		ug/m³	0.70	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
622-96-8	* p-Ethyltoluene	ND		ug/m³	0.39	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.14	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			
100-42-5	**Styrene**	**0.34**		ug/m³	0.34	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
127-18-4	Tetrachloroethylene	ND		ug/m³	0.54	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.47	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:			
108-88-3	**Toluene**	**2.2**		ug/m³	0.30	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.32	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.36	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-01-6	Trichloroethylene	ND		ug/m³	0.11	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-69-4	**Trichlorofluoromethane (Freon 11)**	**1.4**		ug/m³	0.45	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-05-4	Vinyl acetate	ND		ug/m³	0.28	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
593-60-2	Vinyl bromide	ND		ug/m³	0.35	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-01-4	Vinyl Chloride	ND		ug/m³	0.10	0.802	EPA TO-15	05/05/2020 09:00	05/05/2020 23:36	AS
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: AA01_043020 **York Sample ID:** 20E0004-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Outdoor Ambient Air	April 30, 2020 2:31 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**		**Acceptance Range**						
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*110 %*		*70-130*						

Sample Information

Client Sample ID: SS08_043020 **York Sample ID:** 20E0004-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:13 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.92	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	1.3	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.92	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.68	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.17	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	**1,2,4-Trimethylbenzene**	**9.9**		ug/m³	0.83	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	1.3	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	1.0	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.68	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.78	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	**1,3,5-Trimethylbenzene**	**2.6**		ug/m³	0.83	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	1,3-Butadiene	ND		ug/m³	1.1	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	1.0	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.78	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	1.0	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**1.2**		ug/m³	0.50	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
591-78-6	* 2-Hexanone	ND		ug/m³	1.4	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			

Sample Information

Client Sample ID: SS08_043020 **York Sample ID:** 20E0004-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:13 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	2.6	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	0.69	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-64-1	**Acetone**	**6.7**		ug/m³	0.80	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
107-13-1	Acrylonitrile	ND		ug/m³	0.36	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
71-43-2	**Benzene**	**3.1**		ug/m³	0.54	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
100-44-7	Benzyl chloride	ND		ug/m³	0.87	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-27-4	Bromodichloromethane	ND		ug/m³	1.1	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-25-2	Bromoform	ND		ug/m³	1.7	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-83-9	Bromomethane	ND		ug/m³	0.65	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-15-0	**Carbon disulfide**	**1.2**		ug/m³	0.52	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
56-23-5	**Carbon tetrachloride**	**0.42**		ug/m³	0.26	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-90-7	Chlorobenzene	ND		ug/m³	0.77	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-00-3	Chloroethane	ND		ug/m³	0.44	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-66-3	**Chloroform**	**9.9**		ug/m³	0.82	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-87-3	Chloromethane	ND		ug/m³	0.35	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.17	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.76	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
110-82-7	**Cyclohexane**	**1.3**		ug/m³	0.58	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
124-48-1	Dibromochloromethane	ND		ug/m³	1.4	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-71-8	**Dichlorodifluoromethane**	**2.3**		ug/m³	0.83	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
141-78-6	* Ethyl acetate	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			
100-41-4	**Ethyl Benzene**	**14**		ug/m³	0.73	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			

Sample Information

Client Sample ID: SS08_043020 **York Sample ID:** 20E0004-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:13 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m³	1.8	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-63-0	**Isopropanol**	**4.8**		ug/m³	0.83	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
80-62-6	Methyl Methacrylate	ND		ug/m³	0.69	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.61	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-09-2	Methylene chloride	ND		ug/m³	1.2	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-82-5	**n-Heptane**	**6.1**		ug/m³	0.69	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-54-3	**n-Hexane**	**5.8**		ug/m³	0.59	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-47-6	**o-Xylene**	**13**		ug/m³	0.73	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
179601-23-1	**p- & m- Xylenes**	**55**		ug/m³	1.5	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
622-96-8	*** p-Ethyltoluene**	**13**		ug/m³	0.83	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.29	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			
100-42-5	**Styrene**	**1.6**		ug/m³	0.72	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
127-18-4	**Tetrachloroethylene**	**35**	TO-CCV, TO-LCS-L	ug/m³	1.1	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.99	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:			
108-88-3	**Toluene**	**55**		ug/m³	0.63	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.67	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.76	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-01-6	Trichloroethylene	ND		ug/m³	0.23	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-69-4	**Trichlorofluoromethane (Freon 11)**	**1.3**		ug/m³	0.94	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-05-4	Vinyl acetate	ND		ug/m³	0.59	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
593-60-2	Vinyl bromide	ND		ug/m³	0.74	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: SS08_043020 **York Sample ID:** 20E0004-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:13 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/m³	0.21	1.681	EPA TO-15	05/01/2020 09:00	05/02/2020 03:40	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

	Surrogate Recoveries	Result	Acceptance Range
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*104 %*	*70-130*

Sample Information

Client Sample ID: SS09_043020 **York Sample ID:** 20E0004-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:12 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.92	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	1.3	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.92	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.68	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.17	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	**1,2,4-Trimethylbenzene**	**17**		ug/m³	0.83	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	1.3	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	1.0	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.68	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.78	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	**1,3,5-Trimethylbenzene**	**3.8**		ug/m³	0.83	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	1,3-Butadiene	ND		ug/m³	1.1	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	1.0	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.78	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	1.0	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**1.1**		ug/m³	0.50	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
591-78-6	* 2-Hexanone	ND		ug/m³	1.4	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			

Sample Information

Client Sample ID: SS09_043020 **York Sample ID:** 20E0004-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:12 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	2.6	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	0.69	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-64-1	**Acetone**	**4.8**		ug/m³	0.80	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
107-13-1	Acrylonitrile	ND		ug/m³	0.37	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
71-43-2	**Benzene**	**2.4**		ug/m³	0.54	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
100-44-7	Benzyl chloride	ND		ug/m³	0.87	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-27-4	Bromodichloromethane	ND		ug/m³	1.1	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-25-2	Bromoform	ND		ug/m³	1.7	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-83-9	Bromomethane	ND		ug/m³	0.65	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-15-0	**Carbon disulfide**	**4.2**		ug/m³	0.52	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
56-23-5	Carbon tetrachloride	ND		ug/m³	0.26	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-90-7	Chlorobenzene	ND		ug/m³	0.77	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-00-3	Chloroethane	ND		ug/m³	0.44	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-66-3	**Chloroform**	**0.99**		ug/m³	0.82	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-87-3	Chloromethane	ND		ug/m³	0.35	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.17	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.76	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
110-82-7	**Cyclohexane**	**3.2**		ug/m³	0.58	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
124-48-1	Dibromochloromethane	ND		ug/m³	1.4	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-71-8	**Dichlorodifluoromethane**	**2.6**		ug/m³	0.83	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
141-78-6	* Ethyl acetate	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			
100-41-4	**Ethyl Benzene**	**19**		ug/m³	0.73	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			

Sample Information

Client Sample ID: SS09_043020 **York Sample ID:** 20E0004-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:12 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m³	1.8	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-63-0	**Isopropanol**	**4.9**		ug/m³	0.83	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
80-62-6	Methyl Methacrylate	ND		ug/m³	0.69	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
1634-04-4	**Methyl tert-butyl ether (MTBE)**	**10**		ug/m³	0.61	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-09-2	Methylene chloride	ND		ug/m³	1.2	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-82-5	**n-Heptane**	**16**		ug/m³	0.69	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-54-3	**n-Hexane**	**6.5**		ug/m³	0.59	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-47-6	**o-Xylene**	**19**		ug/m³	0.73	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
179601-23-1	**p- & m- Xylenes**	**76**		ug/m³	1.5	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
622-96-8	*** p-Ethyltoluene**	**22**		ug/m³	0.83	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.29	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			
100-42-5	**Styrene**	**2.2**		ug/m³	0.72	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
127-18-4	**Tetrachloroethylene**	**20**	TO-CCV, TO-LCS-L	ug/m³	1.1	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.99	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:			
108-88-3	**Toluene**	**50**		ug/m³	0.63	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.67	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.76	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-01-6	Trichloroethylene	ND		ug/m³	0.23	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-69-4	**Trichlorofluoromethane (Freon 11)**	**1.1**		ug/m³	0.95	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-05-4	Vinyl acetate	ND		ug/m³	0.59	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
593-60-2	Vinyl bromide	ND		ug/m³	0.74	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: SS09_043020 **York Sample ID:** 20E0004-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Soil Vapor	April 30, 2020 5:12 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/m³	0.22	1.683	EPA TO-15	05/01/2020 09:00	05/02/2020 04:32	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

	Surrogate Recoveries	Result	Acceptance Range
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*118 %*	*70-130*

Sample Information

Client Sample ID: IA08_043020 **York Sample ID:** 20E0004-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	0.55	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.44	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	0.55	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	0.62	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.44	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.33	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.080	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	0.60	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	**1,2,4-Trimethylbenzene**	**0.55**		ug/m³	0.40	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	0.62	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	0.48	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.33	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.37	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	0.56	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m³	0.40	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	1,3-Butadiene	ND		ug/m³	0.53	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	0.48	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.37	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	0.48	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	0.58	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**0.76**		ug/m³	0.24	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
591-78-6	* 2-Hexanone	ND		ug/m³	0.66	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			

Sample Information

Client Sample ID: IA08_043020 **York Sample ID:** 20E0004-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	1.3	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	0.33	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-64-1	**Acetone**	**8.4**		ug/m³	0.38	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
107-13-1	Acrylonitrile	ND		ug/m³	0.17	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
71-43-2	**Benzene**	**0.28**		ug/m³	0.26	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
100-44-7	Benzyl chloride	ND		ug/m³	0.42	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-27-4	Bromodichloromethane	ND		ug/m³	0.54	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-25-2	Bromoform	ND		ug/m³	0.83	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-83-9	Bromomethane	ND		ug/m³	0.31	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-15-0	Carbon disulfide	ND		ug/m³	0.25	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
56-23-5	**Carbon tetrachloride**	**0.51**		ug/m³	0.13	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-90-7	Chlorobenzene	ND		ug/m³	0.37	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-00-3	Chloroethane	ND		ug/m³	0.21	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-66-3	Chloroform	ND		ug/m³	0.39	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-87-3	**Chloromethane**	**1.0**		ug/m³	0.17	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.080	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.37	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
110-82-7	Cyclohexane	ND		ug/m³	0.28	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
124-48-1	Dibromochloromethane	ND		ug/m³	0.69	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-71-8	**Dichlorodifluoromethane**	**1.9**		ug/m³	0.40	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
141-78-6	* Ethyl acetate	ND		ug/m³	0.58	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			
100-41-4	**Ethyl Benzene**	**0.52**		ug/m³	0.35	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			

Sample Information

Client Sample ID: IA08_043020 **York Sample ID:** 20E0004-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m³	0.86	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-63-0	**Isopropanol**	**9.8**		ug/m³	0.40	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
80-62-6	**Methyl Methacrylate**	**0.40**		ug/m³	0.33	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.29	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-09-2	Methylene chloride	ND		ug/m³	0.56	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-82-5	**n-Heptane**	**0.36**		ug/m³	0.33	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-54-3	n-Hexane	ND		ug/m³	0.28	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-47-6	**o-Xylene**	**0.63**		ug/m³	0.35	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
179601-23-1	**p- & m- Xylenes**	**1.9**		ug/m³	0.70	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
622-96-8	* p-Ethyltoluene	ND		ug/m³	0.40	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.14	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			
100-42-5	Styrene	ND		ug/m³	0.34	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
127-18-4	Tetrachloroethylene	ND		ug/m³	0.55	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.48	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:			
108-88-3	**Toluene**	**4.7**		ug/m³	0.30	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.32	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.37	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-01-6	Trichloroethylene	ND		ug/m³	0.11	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-69-4	**Trichlorofluoromethane (Freon 11)**	**1.3**		ug/m³	0.45	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-05-4	Vinyl acetate	ND		ug/m³	0.28	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
593-60-2	Vinyl bromide	ND		ug/m³	0.35	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-01-4	Vinyl Chloride	ND		ug/m³	0.10	0.806	EPA TO-15	05/01/2020 09:00	05/02/2020 05:31	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: IA08_043020 **York Sample ID:** 20E0004-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**		**Acceptance Range**						
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*106 %*		*70-130*						

Sample Information

Client Sample ID: IA09_043020 **York Sample ID:** 20E0004-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	0.65	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			
71-55-6	1,1,1-Trichloroethane	ND		ug/m³	0.52	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	0.65	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	0.73	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	0.52	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-34-3	1,1-Dichloroethane	ND		ug/m³	0.39	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-35-4	1,1-Dichloroethylene	ND		ug/m³	0.094	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	0.71	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m³	0.47	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-93-4	1,2-Dibromoethane	ND		ug/m³	0.73	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	0.57	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
107-06-2	1,2-Dichloroethane	ND		ug/m³	0.39	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-87-5	1,2-Dichloropropane	ND		ug/m³	0.44	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	0.67	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m³	0.47	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
106-99-0	1,3-Butadiene	ND		ug/m³	0.63	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	0.57	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	0.44	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	0.57	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
123-91-1	1,4-Dioxane	ND		ug/m³	0.69	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
78-93-3	**2-Butanone**	**0.79**		ug/m³	0.28	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
591-78-6	* 2-Hexanone	ND		ug/m³	0.78	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			

Sample Information

Client Sample ID: IA09_043020 **York Sample ID:** 20E0004-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	1.5	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	0.39	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-64-1	**Acetone**	**4.2**		ug/m³	0.45	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
107-13-1	Acrylonitrile	ND		ug/m³	0.21	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
71-43-2	**Benzene**	**0.30**		ug/m³	0.30	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
100-44-7	Benzyl chloride	ND		ug/m³	0.49	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-27-4	Bromodichloromethane	ND		ug/m³	0.64	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-25-2	Bromoform	ND		ug/m³	0.99	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-83-9	Bromomethane	ND		ug/m³	0.37	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-15-0	Carbon disulfide	ND		ug/m³	0.30	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
56-23-5	**Carbon tetrachloride**	**0.48**		ug/m³	0.15	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
108-90-7	Chlorobenzene	ND		ug/m³	0.44	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-00-3	Chloroethane	ND		ug/m³	0.25	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
67-66-3	Chloroform	ND		ug/m³	0.47	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
74-87-3	**Chloromethane**	**1.1**		ug/m³	0.20	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	0.094	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	0.43	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
110-82-7	Cyclohexane	ND		ug/m³	0.33	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
124-48-1	Dibromochloromethane	ND		ug/m³	0.81	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
75-71-8	**Dichlorodifluoromethane**	**1.9**		ug/m³	0.47	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			
141-78-6	* Ethyl acetate	ND		ug/m³	0.69	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			
100-41-4	**Ethyl Benzene**	**0.50**		ug/m³	0.41	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications: NELAC-NY12058,NJDEP-Queens			

Sample Information

Client Sample ID: IA09_043020 **York Sample ID:** 20E0004-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m³	1.0	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
67-63-0	**Isopropanol**	**1.6**		ug/m³	0.47	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
80-62-6	Methyl Methacrylate	ND		ug/m³	0.39	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.34	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-09-2	Methylene chloride	ND		ug/m³	0.66	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
142-82-5	n-Heptane	ND		ug/m³	0.39	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
110-54-3	n-Hexane	ND		ug/m³	0.34	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
95-47-6	**o-Xylene**	**0.54**		ug/m³	0.41	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
179601-23-1	**p- & m- Xylenes**	**1.6**		ug/m³	0.83	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
622-96-8	* p-Ethyltoluene	ND		ug/m³	0.47	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			
115-07-1	* Propylene	ND		ug/m³	0.16	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			
100-42-5	Styrene	ND		ug/m³	0.41	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
127-18-4	Tetrachloroethylene	ND		ug/m³	0.65	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
109-99-9	* Tetrahydrofuran	ND		ug/m³	0.56	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:			
108-88-3	**Toluene**	**2.7**		ug/m³	0.36	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	0.38	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	0.43	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
79-01-6	Trichloroethylene	ND		ug/m³	0.13	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-69-4	**Trichlorofluoromethane (Freon 11)**	**1.3**		ug/m³	0.54	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
108-05-4	Vinyl acetate	ND		ug/m³	0.34	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
593-60-2	Vinyl bromide	ND		ug/m³	0.42	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		
75-01-4	Vinyl Chloride	ND		ug/m³	0.12	0.953	EPA TO-15	05/01/2020 09:00	05/02/2020 06:30	LLJ
							Certifications:	NELAC-NY12058,NJDEP-Queens		

Sample Information

Client Sample ID: IA09_043020 **York Sample ID:** 20E0004-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20E0004	170610601	Indoor Ambient Air	April 30, 2020 5:23 pm	04/30/2020

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**		**Acceptance Range**						
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*104 %*		*70-130*						

Analytical Batch Summary

Batch ID: BE00112 **Preparation Method:** EPA TO15 PREP **Prepared By:** AS

YORK Sample ID	Client Sample ID	Preparation Date
20E0004-01	SV04_043020	05/01/20
20E0004-02	SV07_043020	05/01/20
20E0004-04	SS08_043020	05/01/20
20E0004-05	SS09_043020	05/01/20
20E0004-06	IA08_043020	05/01/20
20E0004-07	IA09_043020	05/01/20
BE00112-BLK1	Blank	05/01/20
BE00112-BS1	LCS	05/01/20
BE00112-DUP1	Duplicate	05/01/20

Batch ID: BE00113 **Preparation Method:** EPA TO15 PREP **Prepared By:** AS

YORK Sample ID	Client Sample ID	Preparation Date
20E0004-03	AA01_043020	05/05/20
BE00113-BLK1	Blank	05/05/20
BE00113-BS1	LCS	05/05/20

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00112 - EPA TO15 PREP											
Blank (BE00112-BLK1) Blank									Prepared: 05/01/2020 Analyzed: 05/02/2020		
1,1,1,2-Tetrachloroethane	ND	0.69	ug/m³								
1,1,1-Trichloroethane	ND	0.55	"								
1,1,2,2-Tetrachloroethane	ND	0.69	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.77	"								
1,1,2-Trichloroethane	ND	0.55	"								
1,1-Dichloroethane	ND	0.40	"								
1,1-Dichloroethylene	ND	0.099	"								
1,2,4-Trichlorobenzene	ND	0.74	"								
1,2,4-Trimethylbenzene	ND	0.49	"								
1,2-Dibromoethane	ND	0.77	"								
1,2-Dichlorobenzene	ND	0.60	"								
1,2-Dichloroethane	ND	0.40	"								
1,2-Dichloropropane	ND	0.46	"								
1,2-Dichlorotetrafluoroethane	ND	0.70	"								
1,3,5-Trimethylbenzene	ND	0.49	"								
1,3-Butadiene	ND	0.66	"								
1,3-Dichlorobenzene	ND	0.60	"								
1,3-Dichloropropane	ND	0.46	"								
1,4-Dichlorobenzene	ND	0.60	"								
1,4-Dioxane	ND	0.72	"								
2-Butanone	ND	0.29	"								
2-Hexanone	ND	0.82	"								
3-Chloropropene	ND	1.6	"								
4-Methyl-2-pentanone	ND	0.41	"								
Acetone	ND	0.48	"								
Acrylonitrile	ND	0.22	"								
Benzene	ND	0.32	"								
Benzyl chloride	ND	0.52	"								
Bromodichloromethane	ND	0.67	"								
Bromoform	ND	1.0	"								
Bromomethane	ND	0.39	"								
Carbon disulfide	ND	0.31	"								
Carbon tetrachloride	ND	0.16	"								
Chlorobenzene	ND	0.46	"								
Chloroethane	ND	0.26	"								
Chloroform	ND	0.49	"								
Chloromethane	ND	0.21	"								
cis-1,2-Dichloroethylene	ND	0.099	"								
cis-1,3-Dichloropropylene	ND	0.45	"								
Cyclohexane	ND	0.34	"								
Dibromochloromethane	ND	0.85	"								
Dichlorodifluoromethane	ND	0.49	"								
Ethyl acetate	ND	0.72	"								
Ethyl Benzene	ND	0.43	"								
Hexachlorobutadiene	ND	1.1	"								
Isopropanol	ND	0.49	"								
Methyl Methacrylate	ND	0.41	"								
Methyl tert-butyl ether (MTBE)	ND	0.36	"								
Methylene chloride	ND	0.69	"								
n-Heptane	ND	0.41	"								

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

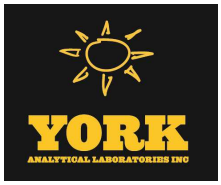
York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00112 - EPA TO15 PREP											
Blank (BE00112-BLK1) Blank								Prepared: 05/01/2020 Analyzed: 05/02/2020			
n-Hexane	ND	0.35	ug/m³								
o-Xylene	ND	0.43	"								
p- & m- Xylenes	ND	0.87	"								
p-Ethyltoluene	ND	0.49	"								
Propylene	ND	0.17	"								
Styrene	ND	0.43	"								
Tetrachloroethylene	ND	0.68	"								
Tetrahydrofuran	ND	0.59	"								
Toluene	ND	0.38	"								
trans-1,2-Dichloroethylene	ND	0.40	"								
trans-1,3-Dichloropropylene	ND	0.45	"								
Trichloroethylene	ND	0.13	"								
Trichlorofluoromethane (Freon 11)	ND	0.56	"								
Vinyl acetate	ND	0.35	"								
Vinyl bromide	ND	0.44	"								
Vinyl Chloride	ND	0.13	"								
Surrogate: SURR: p-Bromofluorobenzene	*9.39*		*ppbv*	*10.0*		*93.9*	*70-130*				
LCS (BE00112-BS1) LCS								Prepared & Analyzed: 05/01/2020			
1,1,1,2-Tetrachloroethane	9.70		ppbv	10.0		97.0	70-130				
1,1,1-Trichloroethane	9.85		"	10.0		98.5	70-130				
1,1,2,2-Tetrachloroethane	10.9		"	10.0		109	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.50		"	10.0		95.0	70-130				
1,1,2-Trichloroethane	10.4		"	10.0		104	70-130				
1,1-Dichloroethane	10.0		"	10.0		100	70-130				
1,1-Dichloroethylene	10.3		"	10.0		103	70-130				
1,2,4-Trichlorobenzene	6.99		"	10.0		69.9	70-130	Low Bias			
1,2,4-Trimethylbenzene	10.7		"	10.0		107	70-130				
1,2-Dibromoethane	10.3		"	10.0		103	70-130				
1,2-Dichlorobenzene	10.3		"	10.0		103	70-130				
1,2-Dichloroethane	10.3		"	10.0		103	70-130				
1,2-Dichloropropane	10.6		"	10.0		106	70-130				
1,2-Dichlorotetrafluoroethane	9.86		"	10.0		98.6	70-130				
1,3,5-Trimethylbenzene	10.0		"	10.0		100	70-130				
1,3-Butadiene	9.34		"	10.0		93.4	70-130				
1,3-Dichlorobenzene	10.5		"	10.0		105	70-130				
1,3-Dichloropropane	10.7		"	10.0		107	70-130				
1,4-Dichlorobenzene	10.6		"	10.0		106	70-130				
1,4-Dioxane	10.1		"	10.0		101	70-130				
2-Butanone	9.88		"	10.0		98.8	70-130				
2-Hexanone	11.5		"	10.0		115	70-130				
3-Chloropropene	9.62		"	10.0		96.2	70-130				
4-Methyl-2-pentanone	11.2		"	10.0		112	70-130				
Acetone	9.57		"	10.0		95.7	70-130				
Acrylonitrile	9.85		"	10.0		98.5	70-130				
Benzene	9.45		"	10.0		94.5	70-130				
Benzyl chloride	8.30		"	10.0		83.0	70-130				
Bromodichloromethane	11.0		"	10.0		110	70-130				
Bromoform	10.2		"	10.0		102	70-130				
Bromomethane	9.29		"	10.0		92.9	70-130				
Carbon disulfide	10.2		"	10.0		102	70-130				

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00112 - EPA TO15 PREP											
LCS (BE00112-BS1) LCS							Prepared & Analyzed: 05/01/2020				
Carbon tetrachloride	10.0		ppbv	10.0		100	70-130				
Chlorobenzene	9.68		"	10.0		96.8	70-130				
Chloroethane	10.5		"	10.0		105	70-130				
Chloroform	9.98		"	10.0		99.8	70-130				
Chloromethane	7.96		"	10.0		79.6	70-130				
cis-1,2-Dichloroethylene	9.99		"	10.0		99.9	70-130				
cis-1,3-Dichloropropylene	11.2		"	10.0		112	70-130				
Cyclohexane	9.85		"	10.0		98.5	70-130				
Dibromochloromethane	10.4		"	10.0		104	70-130				
Dichlorodifluoromethane	11.6		"	10.0		116	70-130				
Ethyl acetate	12.2		"	10.0		122	70-130				
Ethyl Benzene	10.0		"	10.0		100	70-130				
Hexachlorobutadiene	10.2		"	10.0		102	70-130				
Isopropanol	9.54		"	10.0		95.4	70-130				
Methyl Methacrylate	10.8		"	10.0		108	70-130				
Methyl tert-butyl ether (MTBE)	9.73		"	10.0		97.3	70-130				
Methylene chloride	9.09		"	10.0		90.9	70-130				
n-Heptane	9.68		"	10.0		96.8	70-130				
n-Hexane	9.83		"	10.0		98.3	70-130				
o-Xylene	10.2		"	10.0		102	70-130				
p- & m- Xylenes	20.6		"	20.0		103	70-130				
p-Ethyltoluene	10.6		"	10.0		106	70-130				
Propylene	9.19		"	10.0		91.9	70-130				
Styrene	10.4		"	10.0		104	70-130				
Tetrachloroethylene	6.99		"	10.0		69.9	70-130	Low Bias			
Tetrahydrofuran	9.95		"	10.0		99.5	70-130				
Toluene	9.96		"	10.0		99.6	70-130				
trans-1,2-Dichloroethylene	10.4		"	10.0		104	70-130				
trans-1,3-Dichloropropylene	11.1		"	10.0		111	70-130				
Trichloroethylene	10.7		"	10.0		107	70-130				
Trichlorofluoromethane (Freon 11)	9.53		"	10.0		95.3	70-130				
Vinyl acetate	8.14		"	10.0		81.4	70-130				
Vinyl bromide	8.86		"	10.0		88.6	70-130				
Vinyl Chloride	7.76		"	10.0		77.6	70-130				
Surrogate: SURR: p-Bromofluorobenzene	*10.5*		*"*	*10.0*		*105*	*70-130*				



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00112 - EPA TO15 PREP											
Duplicate (BE00112-DUP1) Duplicate	*Source sample: 20E0004-07 (IA09_043020)								Prepared: 05/01/2020 Analyzed: 05/02/2020		
1,1,1,2-Tetrachloroethane	ND	0.65	ug/m³		ND					25	
1,1,1-Trichloroethane	ND	0.52	"		ND					25	
1,1,2,2-Tetrachloroethane	ND	0.65	"		ND					25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.73	"		ND					25	
1,1,2-Trichloroethane	ND	0.52	"		ND					25	
1,1-Dichloroethane	ND	0.39	"		ND					25	
1,1-Dichloroethylene	ND	0.094	"		ND					25	
1,2,4-Trichlorobenzene	ND	0.71	"		ND					25	
1,2,4-Trimethylbenzene	0.33	0.47	"		0.33				0.00	25	
1,2-Dibromoethane	ND	0.73	"		ND					25	
1,2-Dichlorobenzene	ND	0.57	"		ND					25	
1,2-Dichloroethane	ND	0.39	"		ND					25	
1,2-Dichloropropane	ND	0.44	"		ND					25	
1,2-Dichlorotetrafluoroethane	ND	0.67	"		ND					25	
1,3,5-Trimethylbenzene	ND	0.47	"		ND					25	
1,3-Butadiene	ND	0.63	"		ND					25	
1,3-Dichlorobenzene	ND	0.57	"		ND					25	
1,3-Dichloropropane	ND	0.44	"		ND					25	
1,4-Dichlorobenzene	ND	0.57	"		ND					25	
1,4-Dioxane	ND	0.69	"		ND					25	
2-Butanone	0.76	0.28	"		0.79				3.64	25	
2-Hexanone	ND	0.78	"		ND					25	
3-Chloropropene	ND	1.5	"		ND					25	
4-Methyl-2-pentanone	ND	0.39	"		ND					25	
Acetone	4.2	0.45	"		4.2				0.00	25	
Acrylonitrile	ND	0.21	"		ND					25	
Benzene	0.37	0.30	"		0.30				18.2	25	
Benzyl chloride	ND	0.49	"		ND					25	
Bromodichloromethane	ND	0.64	"		ND					25	
Bromoform	ND	0.99	"		ND					25	
Bromomethane	ND	0.37	"		ND					25	
Carbon disulfide	ND	0.30	"		ND					25	
Carbon tetrachloride	0.48	0.15	"		0.48				0.00	25	
Chlorobenzene	ND	0.44	"		ND					25	
Chloroethane	ND	0.25	"		ND					25	
Chloroform	ND	0.47	"		ND					25	
Chloromethane	1.1	0.20	"		1.1				7.14	25	
cis-1,2-Dichloroethylene	ND	0.094	"		ND					25	
cis-1,3-Dichloropropylene	ND	0.43	"		ND					25	
Cyclohexane	ND	0.33	"		ND					25	
Dibromochloromethane	ND	0.81	"		ND					25	
Dichlorodifluoromethane	1.8	0.47	"		1.9				2.53	25	
Ethyl acetate	ND	0.69	"		ND					25	
Ethyl Benzene	0.50	0.41	"		0.50				0.00	25	
Hexachlorobutadiene	ND	1.0	"		ND					25	
Isopropanol	1.6	0.47	"		1.6				0.00	25	
Methyl Methacrylate	0.23	0.39	"		0.23				0.00	25	
Methyl tert-butyl ether (MTBE)	ND	0.34	"		ND					25	
Methylene chloride	ND	0.66	"		ND					25	
n-Heptane	0.20	0.39	"		0.20				0.00	25	
n-Hexane	ND	0.34	"		ND					25	

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00112 - EPA TO15 PREP											
Duplicate (BE00112-DUP1) Duplicate	*Source sample: 20E0004-07 (IA09_043020)								Prepared: 05/01/2020 Analyzed: 05/02/2020		
o-Xylene	0.54	0.41	ug/m³		0.54				0.00	25	
p- & m- Xylenes	1.6	0.83	"		1.6				2.60	25	
p-Ethyltoluene	ND	0.47	"		ND					25	
Propylene	ND	0.16	"		ND					25	
Styrene	ND	0.41	"		ND					25	
Tetrachloroethylene	0.39	0.65	"		0.39				0.00	25	
Tetrahydrofuran	ND	0.56	"		ND					25	
Toluene	2.7	0.36	"		2.7				1.32	25	
trans-1,2-Dichloroethylene	ND	0.38	"		ND					25	
trans-1,3-Dichloropropylene	ND	0.43	"		ND					25	
Trichloroethylene	ND	0.13	"		ND					25	
Trichlorofluoromethane (Freon 11)	1.3	0.54	"		1.3				0.00	25	
Vinyl acetate	ND	0.34	"		ND					25	
Vinyl bromide	ND	0.42	"		ND					25	
Vinyl Chloride	ND	0.12	"		ND					25	
Surrogate: SURR: p-Bromofluorobenzene	*10.6*		*ppbv*	*10.0*		*106*	*70-130*				
Batch BE00113 - EPA TO15 PREP											
Blank (BE00113-BLK1) Blank									Prepared & Analyzed: 05/05/2020		
1,1,1,2-Tetrachloroethane	ND	0.69	ug/m³								
1,1,1-Trichloroethane	ND	0.55	"								
1,1,2,2-Tetrachloroethane	ND	0.69	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.77	"								
1,1,2-Trichloroethane	ND	0.55	"								
1,1-Dichloroethane	ND	0.40	"								
1,1-Dichloroethylene	ND	0.099	"								
1,2,4-Trichlorobenzene	ND	0.74	"								
1,2,4-Trimethylbenzene	ND	0.49	"								
1,2-Dibromoethane	ND	0.77	"								
1,2-Dichlorobenzene	ND	0.60	"								
1,2-Dichloroethane	ND	0.40	"								
1,2-Dichloropropane	ND	0.46	"								
1,2-Dichlorotetrafluoroethane	ND	0.70	"								
1,3,5-Trimethylbenzene	ND	0.49	"								
1,3-Butadiene	ND	0.66	"								
1,3-Dichlorobenzene	ND	0.60	"								
1,3-Dichloropropane	ND	0.46	"								
1,4-Dichlorobenzene	ND	0.60	"								
1,4-Dioxane	ND	0.72	"								
2-Butanone	ND	0.29	"								
2-Hexanone	ND	0.82	"								
3-Chloropropene	ND	1.6	"								
4-Methyl-2-pentanone	ND	0.41	"								
Acetone	ND	0.48	"								
Acrylonitrile	ND	0.22	"								
Benzene	ND	0.32	"								
Benzyl chloride	ND	0.52	"								
Bromodichloromethane	ND	0.67	"								
Bromoform	ND	1.0	"								
Bromomethane	ND	0.39	"								

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00113 - EPA TO15 PREP											
Blank (BE00113-BLK1) Blank									Prepared & Analyzed: 05/05/2020		
Carbon disulfide	ND	0.31	ug/m³								
Carbon tetrachloride	ND	0.16	"								
Chlorobenzene	ND	0.46	"								
Chloroethane	ND	0.26	"								
Chloroform	ND	0.49	"								
Chloromethane	ND	0.21	"								
cis-1,2-Dichloroethylene	ND	0.099	"								
cis-1,3-Dichloropropylene	ND	0.45	"								
Cyclohexane	ND	0.34	"								
Dibromochloromethane	ND	0.85	"								
Dichlorodifluoromethane	ND	0.49	"								
Ethyl acetate	ND	0.72	"								
Ethyl Benzene	ND	0.43	"								
Hexachlorobutadiene	ND	1.1	"								
Isopropanol	ND	0.49	"								
Methyl Methacrylate	ND	0.41	"								
Methyl tert-butyl ether (MTBE)	ND	0.36	"								
Methylene chloride	ND	0.69	"								
n-Heptane	ND	0.41	"								
n-Hexane	ND	0.35	"								
o-Xylene	ND	0.43	"								
p- & m- Xylenes	ND	0.87	"								
p-Ethyltoluene	ND	0.49	"								
Propylene	ND	0.17	"								
Styrene	ND	0.43	"								
Tetrachloroethylene	ND	0.68	"								
Tetrahydrofuran	ND	0.59	"								
Toluene	ND	0.38	"								
trans-1,2-Dichloroethylene	ND	0.40	"								
trans-1,3-Dichloropropylene	ND	0.45	"								
Trichloroethylene	ND	0.13	"								
Trichlorofluoromethane (Freon 11)	ND	0.56	"								
Vinyl acetate	ND	0.35	"								
Vinyl bromide	ND	0.44	"								
Vinyl Chloride	ND	0.13	"								
Surrogate: SURR: p-Bromofluorobenzene	*9.74*		*ppbv*	*10.0*		*97.4*	*70-130*				

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Batch BE00113 - EPA TO15 PREP

LCS (BE00113-BS1) LCS — Prepared & Analyzed: 05/05/2020

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
1,1,1,2-Tetrachloroethane	9.75		ppbv	10.0		97.5	70-130				
1,1,1-Trichloroethane	9.97		"	10.0		99.7	70-130				
1,1,2,2-Tetrachloroethane	10.9		"	10.0		109	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.62		"	10.0		96.2	70-130				
1,1,2-Trichloroethane	10.5		"	10.0		105	70-130				
1,1-Dichloroethane	10.2		"	10.0		102	70-130				
1,1-Dichloroethylene	10.6		"	10.0		106	70-130				
1,2,4-Trichlorobenzene	7.31		"	10.0		73.1	70-130				
1,2,4-Trimethylbenzene	10.7		"	10.0		107	70-130				
1,2-Dibromoethane	10.5		"	10.0		105	70-130				
1,2-Dichlorobenzene	10.3		"	10.0		103	70-130				
1,2-Dichloroethane	10.6		"	10.0		106	70-130				
1,2-Dichloropropane	10.8		"	10.0		108	70-130				
1,2-Dichlorotetrafluoroethane	9.83		"	10.0		98.3	70-130				
1,3,5-Trimethylbenzene	10.3		"	10.0		103	70-130				
1,3-Butadiene	10.0		"	10.0		100	70-130				
1,3-Dichlorobenzene	10.5		"	10.0		105	70-130				
1,3-Dichloropropane	10.9		"	10.0		109	70-130				
1,4-Dichlorobenzene	10.6		"	10.0		106	70-130				
1,4-Dioxane	10.2		"	10.0		102	70-130				
2-Butanone	10.1		"	10.0		101	70-130				
2-Hexanone	11.7		"	10.0		117	70-130				
3-Chloropropene	9.89		"	10.0		98.9	70-130				
4-Methyl-2-pentanone	11.4		"	10.0		114	70-130				
Acetone	9.80		"	10.0		98.0	70-130				
Acrylonitrile	9.97		"	10.0		99.7	70-130				
Benzene	9.68		"	10.0		96.8	70-130				
Benzyl chloride	8.20		"	10.0		82.0	70-130				
Bromodichloromethane	11.2		"	10.0		112	70-130				
Bromoform	10.2		"	10.0		102	70-130				
Bromomethane	9.50		"	10.0		95.0	70-130				
Carbon disulfide	10.4		"	10.0		104	70-130				
Carbon tetrachloride	10.2		"	10.0		102	70-130				
Chlorobenzene	9.75		"	10.0		97.5	70-130				
Chloroethane	10.8		"	10.0		108	70-130				
Chloroform	10.2		"	10.0		102	70-130				
Chloromethane	8.45		"	10.0		84.5	70-130				
cis-1,2-Dichloroethylene	10.4		"	10.0		104	70-130				
cis-1,3-Dichloropropylene	11.4		"	10.0		114	70-130				
Cyclohexane	10.0		"	10.0		100	70-130				
Dibromochloromethane	10.6		"	10.0		106	70-130				
Dichlorodifluoromethane	11.2		"	10.0		112	70-130				
Ethyl acetate	12.6		"	10.0		126	70-130				
Ethyl Benzene	9.98		"	10.0		99.8	70-130				
Hexachlorobutadiene	10.1		"	10.0		101	70-130				
Isopropanol	9.72		"	10.0		97.2	70-130				
Methyl Methacrylate	11.1		"	10.0		111	70-130				
Methyl tert-butyl ether (MTBE)	9.88		"	10.0		98.8	70-130				
Methylene chloride	9.24		"	10.0		92.4	70-130				
n-Heptane	10.0		"	10.0		100	70-130				
n-Hexane	10.0		"	10.0		100	70-130				

Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE00113 - EPA TO15 PREP											
LCS (BE00113-BS1) LCS								Prepared & Analyzed: 05/05/2020			
o-Xylene	10.1		ppbv	10.0		101	70-130				
p- & m- Xylenes	20.6		"	20.0		103	70-130				
p-Ethyltoluene	10.5		"	10.0		105	70-130				
Propylene	9.40		"	10.0		94.0	70-130				
Styrene	10.5		"	10.0		105	70-130				
Tetrachloroethylene	7.04		"	10.0		70.4	70-130				
Tetrahydrofuran	10.3		"	10.0		103	70-130				
Toluene	9.98		"	10.0		99.8	70-130				
trans-1,2-Dichloroethylene	10.6		"	10.0		106	70-130				
trans-1,3-Dichloropropylene	11.2		"	10.0		112	70-130				
Trichloroethylene	10.9		"	10.0		109	70-130				
Trichlorofluoromethane (Freon 11)	9.62		"	10.0		96.2	70-130				
Vinyl acetate	8.21		"	10.0		82.1	70-130				
Vinyl bromide	9.09		"	10.0		90.9	70-130				
Vinyl Chloride	8.28		"	10.0		82.8	70-130				
Surrogate: SURR: p-Bromofluorobenzene	*10.6*		*"*	*10.0*		*106*	*70-130*				

Sample and Data Qualifiers Relating to This Work Order

TO-LCS-L	The result reported for this compound may be biased low due to its behavior in the analysis batch LCS where it recovered less 70% of the expected value.
TO-CCV	The value reported is ESTIMATED for this compound due to its behavior during continuing calibration verification (>30% Difference from initial calibration).

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

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Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20E0004

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company:
Address: 360 west 31st Street, New York NY 10001	Address:	Address:
Phone: 212 479 5400	Phone.:	Phone.:
Contact: Kime Semon	Contact: Dino Palazzolo	Contact:
E-mail: Ksemon@langan.com	E-mail: DPalazzolo@langan.com	E-mail:

YOUR Project Number: 170610601

YOUR Project Name: 475 Bay Street

YOUR PO#:

Turn-Around Time: RUSH - Next Day; RUSH - Two Day; RUSH - Three Day; RUSH - Four Day; Standard (5-7 Day) (X)

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below)
Deirdre Casey
Deirdre Casey

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil ¦ Other

Samples From: New York (X); New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections): Summary Report; QA Report; NY ASP A Package; NY ASP B Package; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
SB11_18-20	S	4/30 1450	VOC, SVOC, PCB, Pest, Herb, metals (+hex/tri/chromium & cyanide	
SOFB02_043020	S & QA/QC	4/30 1200	↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	
MW06-043020	GW	4/30 1414	VOC SVOC PCB Pest Herb metals (+hex/tri/chromium cyanide	
MW08_043020	GW	4/30 1055	(filtered & unfiltered)	
MW05_043020	GW	4/30		
MWDUP01_043020	GW	4/30 —		
MWFB01_043020	QA/QC	4/30 1400		
TBLK01_043020	QA/QC	4/30 —		
SV04_043020	Air	4/30 1433	TO-15 (can ID - Y67; start time 1233 (-30 in Hg); end time 1433 (-5 in Hg)	
SV07_043020	Air	4/30 1430	TO-15 (can ID - 2396; start time 1230 (-31.5 in Hg); end time 1430 (-7.75 in Hg)	

Comments:

Preservation: (check all that apply) HCl (X) MeOH (X) HNO3 (X) H2SO4 ( ) NaOH ___ ZnAc ___ Ascorbic Acid ___ Other: ___

Special Instruction: Field Filtered (X) Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Deirdre Casey Langan	4/30 1740	C Shafer	4/30/20	C Shafer	4/30/20
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
				PGrace 4-30-20 1938	
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Temp. Received at Lab
					1.2

York Analytical Laboratories, Inc.
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clientservices@yorklab.com
www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No.: 20E0004

YOUR Information	Report To:	Invoice To:
Company: Langan	Company:	Company: same
Address: 360 West 31st Street New York NY 10001	Address:	Address: same
Phone.: 212 479 5400	Phone.:	Phone.: same
Contact: Kim Semon	Contact: Dina Palazzolo	Contact: same
E-mail: KSemon@langan.com	E-mail: DPalazzolo@langan.com	E-mail: same

YOUR Project Number: 170161601

YOUR Project Name: 475 Bay Street

YOUR PO#:

Turn-Around Time

- RUSH - Next Day
- RUSH - Two Day
- RUSH - Three Day
- RUSH - Four Day
- Standard (5-7 Day) ✓

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below) Luke McCartney

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil ; Other

Samples From: New York ✓; New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections): Summary Report; QA Report; NY ASP A Package; NY ASP B Package; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
AA01_043020	air	4/30 1431	TO15	(Can ID 15528; Start 1235 (-28 inHg); Stop 1431 (-4.25 inHg)
SS08_043020	air	4/30 1713	TO15	(Can ID 16956; Start 0913 (-29.75"); Stop 1713 (-7.0 inHg)
SS09_043020	air	4/30 1712	TO15	(Can ID 18305; Start 0911 (-30); Stop 1712 (-6 inHg)
IA08_043020	air	4/30 1723	TO15	(Can ID 18302; Start 0923 (-31.5"); Stop 1723 (-7 inHg)
IA09_043020	air	4/30 1723	TO15	20316; Start 0923 (-29.9"); Stop 1723 (-8 inHg

Comments:

Preservation: (check all that apply) HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other: _____

Special Instruction: Field Filtered ___ Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Luke McCartney Langan	4/30 1740	LANGAN 4/30 1740			4/30/20
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
	4/30/20				
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Date/Time / Temp. Received at Lab
					4-30-20 1738 @ 1.2 Degrees C