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REMEDIAL INVESTIGATION WORK PLAN
FORMER JUST4WHEELS SITE
89-91 GERRY STREET
BROOKLYN, NEW YORK

by Haley & Aldrich of New York
New York, New York

for Gerry Gardens LLC
Brooklyn, New York

File No. 135597-002
July 2021

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13 July 2021
File No. 135597-002

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Attention: Mr. Sadique Ahmed, P.E.

Subject: REV-01 Remedial Investigation Work Plan
Former Just4Wheels Site
89-91 Gerry Street
Brooklyn, New York

Dear Mr. Ahmed,

On behalf of Gerry Gardens LLC, Haley & Aldrich of New York is submitting for the review and approval of the New York State Department of Environmental Conservation (NYSDEC) the revised Final Remedial Investigation Work Plan (RIWP) for the Former Just4Wheels Site, located at 89-91 Gerry Street in the Broadway Triangle neighborhood of Brooklyn, NY (Site). This document is being submitted as part of Gerry Garden LLC's Brownfield Cleanup Program Application for the Site. This RIWP has been developed based on the NYSDEC's "Technical Guidance for Site Investigation and Remediation" (DER-10 dated May 2010).

Haley & Aldrich is also pleased to provide responses to the comments to the RIWP provided by the NYSDEC on 12 July 2021. These comments have been incorporated in the attached and addressed in the manner described below.

Section 3.2 – Soil Sampling: The text and Table 4 have been updated to reflect the 0–2-inch sampling interval for locations SB02, SB03, SB04 and SB05.

Section 3.3 – Groundwater Sampling: Two additional wells were added at the SG05 and SG06 locations (MW05 and MW06, respectively). Language has been added to confirm that groundwater sampling will be conducted at least one week after well development.

Section 3.5 – Soil Vapor Sampling: Language has added to confirm that soil vapor points will be installed at least two-feet away from the corresponding soil boring/monitoring well location. Figure 2 has been updated to reflect the adjustment in locations of SG03, SG04 and SG05. The text has been edited to reflect the correct grammar as "in appropriately sized Summa cannisters."

Please do not hesitate to contact us if there are any questions regarding this submittal or any other aspects of the project.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK

James M. Bellew
Senior Associate

Mari C. Conlon, P.G.
Project Manager

Cc: Moses Karpen – Gerry Gardens LLC
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Jane O'Connell – NYSDEC
Gerard Burke - NYSDEC
Scarlett McLaughlin – NYSDOH
Gregory Rys - NYSDOH

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1. Introduction

On behalf of Gerry Gardens LLC (Gerry Gardens), Haley & Aldrich of New York (Haley & Aldrich) has prepared this Remedial Investigation Work Plan (RIWP) for the Former Just4Wheels Site, located at 89-91 Gerry Street (see Figure 1) in the Broadway Triangle neighborhood of Brooklyn, NY (Site). This RIWP is being submitted as part of the Brownfield Cleanup Program (BCP) Application submitted by Gerry Gardens and was prepared in accordance with the regulations and guidance applicable to the BCP.

The site, identified as Block 2266 Lots 40 and 41 on the New York City tax map, is 5,000-square feet and is bounded by a residential apartment building to the north, Gerry Street to the south beyond which is an industrial warehouse building, a parking lot east, and a vacant property to the west. The Site location is shown in Figure 1. Existing Site features are shown in Figure 2. The site is currently an unpaved open lot occupied by Just4Wheels Car, Truck, and Van Rental (Just4Wheels). Attachment 1a of the BCP Application provides a detailed description of the site, historical use, and regulatory history, including a summary of previous site characterization activities.

The land is currently zoned as R7-A for “medium-density apartment house districts,” which allows for residential use. The site is located in an urban area surrounded by commercial and residential properties served by municipal water. The Site owner plans to continue Site use for residential purposes consistent with current zoning.

1.1 PURPOSE

A Limited Phase II Environmental Site Investigation (ESI) was performed at the Site in October 2020 to investigate the anticipated contaminants of concern identified based on the site’s current and former uses. The Limited Phase II ESI partially determined the nature and extent of volatile organic compound (VOC), the semi-volatile organic compound (SVOC), polychlorinated biphenyl (PCB), pesticide, and metal contamination. Results of previous site characterization activities are summarized in Tables 1, 2, and 3. Details on previous site characterization activities are provided in Section 1.2 and Attachment 1a of the BCP Application.

The site characterization did not comprehensively delineate the extent of contamination on the site; therefore, additional targeted soil, groundwater, and soil vapor sampling are proposed. The RI will be performed upon acceptance of the site into the BCP and approval of this RIWP. Results of the additional sample analyses will be used to confirm the results of the previous site characterization activities, potentially identify an on-site source, and determine a course for remedial action.

2. Background

2.1 CURRENT LAND USE

The site is currently an undeveloped lot used for parking occupied by Just4Wheels and accessed from Gerry Street to the south.

2.2 SITE HISTORY

The site was developed in the late 1880s with two three-story dwellings and one-story dwelling along Gerry Street, and one dwelling in the rear of the 91 Gerry Street parcel. By 1904, the dwellings along Gerry Street had been razed, and the property was converted to a store, stable, and carriage house. By 1935, a garage replaced the former carriage house, and a laundry facility began operations on the 89 Gerry Street parcel. By the late 1940s, the laundry facility expanded operations to the 91 Gerry Street parcel. The laundry facilities on 89 and 91 Gerry Street operated until the late 1970s. By 1979, the buildings used as laundry facilities were razed, and the parcels remained vacant until the mid-2000s. According to aerial photographs, parking operations began at the site beginning in the mid to late-2000s. The site remained a parking lot through the present and is currently occupied by Just4Wheels. GGH Holdings LLC purchased the Site from Vinfeild Realty Corp. in August 2016. Gerry Gardens is currently in contract to acquire the site.

2.3 SURROUNDING LAND USE

The site is located in a mixed-use residential and commercial area. One school, Bais Ruchel High School, is located at 177 Harrison Avenue, approximately 500 feet to the northwest of the site. No hospitals or daycare facilities are located within a 500 ft radius of the site. The properties immediately surrounding the site are zoned R7-A, while the properties to the west adjacent to Harrison Avenue and east adjacent to Throop Avenue are zoned R7-A with commercial overlay C2-4.

2.4 SURROUNDING LAND USE HISTORY

The area surrounding the site was historically used for dwellings, light manufacturing, warehousing, and auto works from the late 1800s through the mid-1970s. From the mid to late-1970s, the area was primarily used for commercial/residential purposes and warehouses.

2.5 PREVIOUS INVESTIGATIONS

A Limited Phase II Environmental Site Investigation (ESI), performed by Haley & Aldrich on 1 October 2020 and included the following scope of work:

1. Conducted a Site inspection to identify areas of concern (AOC) and physical obstructions (i.e., structures, buildings, etc.);
2. Installed five (5) soil borings across the entire project Site and collected eight (8) soil samples for chemical analysis from the soil borings to evaluate soil quality;

3. Installed two (2) temporary groundwater monitoring wells throughout the site and collected two (2) groundwater samples for chemical analysis to evaluate groundwater quality;

4. Installed two (2) soil vapor probes in the western portion of the site and collected two (2) samples for chemical analysis to evaluate the potential for vapor intrusion.

Full investigation findings are included in Appendix A. A summary of environmental findings of the Limited Phase II Environmental Site Investigation include the following:

1. The stratigraphy of the site, from the surface, down, consists of urban fill material extending to approximately 5 feet below ground surface (ft bgs), underlain by brown fine to medium sand with varying amounts of silt and clay extending to 15 ft bgs. Groundwater was encountered at approximately 10 ft bgs.

2. Soil samples were compared to NYSDEC 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs) and Restricted Residential Use Soil Cleanup Objectives (RRSCOs). Soil samples collected during the Limited Phase II ESI showed:

- No volatile organic compounds (VOCs) were detected at concentrations exceeding UUSCOs or RRSCOs.
- Seven semi-volatile organic compounds (SVOCs), including benzo(a)anthracene (maximum 17 mg/kg), benzo(a)pyrene (maximum 16 mg/kg), benzo(b)fluoranthene (maximum 19 mg/kg), benzo(k)fluoranthene (maximum 7.2 mg/kg), chrysene (maximum 16 mg/kg), dibenzo(a,h)anthracene (maximum 2.5 mg/kg), and indeno(1,2,3-cd)pyrene (maximum 9.5 mg/kg) were detected above RRSCOs in borings B-1 (3-5'). B-4 (1-3'), and B-5 (0-2').
- One polychlorinated biphenyl (PCB), Aroclor 1254 (0.159 mg/kg), was detected in boring B-5 (0-2') above the UUSCO.
- Three metals were detected above UUSCOs. Total lead (maximum 449 mg/kg) was detected above UUSCOs in borings B-1 (3-5') and B-4 (1-3') and above RRSCOs in boring B-5 (0-2') at 449 mg/kg. Total zinc (maximum 347 mg/kg) was detected above UUSCOs in four soil borings in shallow soil. Mercury was detected above UUSCOs in all shallow soil samples and above RRSCOs in B-4 (1-3') at 1.44 mg/kg and B-5 (0-2') at 5.56 mg/kg.
- Four pesticides were detected above UUSCOs including, 4,4'-DDD (maximum 0.0226 mg/kg) and 4,4'-DDE (maximum 0.0669 mg/kg) in borings B-1 (3-5') and B-5 (0-2'), 4,4'-DDT (maximum 0.125 mg/kg) in borings B-1 (3-5'), B-5 (0-2'), and B-3 (1-3'), and Dieldrin (0.00609 mg/kg) in boring B-5 (0-2').

3. Groundwater analytical results were compared to NYSDEC 6NYCRR Part 703.5 Class GA Ambient Water Quality Standards (AWQS). Groundwater samples collected during the Limited Phase II ESI showed:

- Two VOCs were detected above the AWQS. Cis-1,2-dichloroethene (maximum 260 µg/L) was detected in both groundwater samples above the AWQS, and vinyl chloride (29 µg/L) was detected above the AWQS in TW-2.
- Six SVOCs (PAHs) including benzo(a)anthracene (maximum 0.07 µg/L), benzo(b)pyrene (maximum 0.06 µg/L), benzo(b)fluoranthene (maximum 0.06 µg/L), benzo(k)fluoranthene (maximum 0.05 µg/L), chrysene (maximum 0.07 µg/L) and indeno(1,2,3-cd)pyrene (maximum 0.05 µg/L) were detected above the AWQS.
- No PCBs were detected in any groundwater samples.

- Three metals were detected above AWQS, including iron (maximum 3810 µg/L) and sodium (maximum 88800 µg/L) in both groundwater samples, and manganese (320.2 µg/L) was detected above the AWQS in TW-2.

4. Soil vapor results were compared to the New York State Department of Health (NYSDOH) Final Guidance on Soil Vapor Intrusion, May 2017, Matrix A, B, and C guidance values. Vinyl chloride (455 $\mu g/m^3$), cis-1,2-dichloroethene (658 $\mu g/m^3$), and trichloroethene (118 $\mu g/m^3$) were detected above the sub-slab soil vapor guidance values in SV-1. Multiple other VOCs were detected in both soil vapor samples, but did not exceed guidance values, including tetrachloroethene (maximum 17 $\mu g/m^3$) carbon disulfide (maximum 87.2 $\mu g/m^3$), trans-1,2-dichloroethene (maximum 14.3 $\mu g/m^3$), 2,2,4-trimethylpentane (maximum 13.4 $\mu g/m^3$), toluene (maximum 47.5 $\mu g/m^3$), ethylbenzene (maximum 15.7 $\mu g/m^3$), and o-Xylene (maximum 17.7 $\mu g/m^3$).

3. Remedial Investigation

This section describes the field activities to be conducted during the RI and provides the sampling scope, objectives, methods, anticipated number of samples, and sample locations. A summary of the sampling and analysis plan is provided in Table 4 and Figure 2. The following activities will be conducted to fill data gaps and determine the nature and extent of contamination at the site.

3.1 UTILITY MARKOUT

Field personnel will mobilize to the site to stake (with flagging or paint) the proposed soil sample locations. Once the sample locations are marked, Dig Safely New York will be contacted to mark underground utilities. If necessary, the adjacent property owners and private vendors will be contacted for assistance with a mark out of utilities. Once the utilities are marked, field equipment and personnel will be mobilized to the site.

3.2 SOIL SAMPLING

To further characterize surface soil conditions, additional on-Site soil samples will be collected to meet NYSDEC DER-10 requirements for remedial investigations.

The sampling and analysis plan is summarized in Table 4. Seven soil borings will be installed to 11 feet below ground surface (ft-bgs) by a track-mounted direct-push drill rig (Geoprobe®) operated by a licensed operator. Soil samples will be collected from acetate liners using a stainless-steel trowel or sampling spoon. Samples will be collected using laboratory provided clean bottle ware. VOC grab samples will be collected using terra cores.

Soils will be logged continuously by a geologist or engineer using the Unified Soil Classification System. The presence of staining, odors, and photoionization detector (PID) response will be noted. Samples will be collected using laboratory-provided clean bottle ware. VOC grab samples will be collected using terra cores. Sampling methods are described in the Field Sampling Plan (FSP) provided as Appendix B. A Quality Assurance Project Plan (QAPP) is provided as Appendix C. Laboratory data will be reported in ASP Category B deliverable format.

Soil samples representative of Site conditions will be collected at seven locations widely distributed across the site, as shown in Figure 2. Samples will be collected from the surface, from 0 to 2 inches or 0 to 6 inches bgs, and from the groundwater interface at 9 to 11 ft bgs. Additional samples will be collected from any interval exhibiting elevated PID readings or visual and olfactory impacts. Soil samples will be analyzed for:

- Target Compound List (TCL) VOCs using EPA method 8260B
- TCL SVOCs using EPA method 8270C
- Total Analyte List (TAL) Metals using EPA method 6010
- PCBs using EPA method 8082
- TCL Pesticides EPA method 8081B
- Per- and polyfluoroalkyl substances (PFAS) by EPA Method 537.1

- 1,4-dioxane by EPA Method 8270 SIM

Soil borings SB02, SB03, SB05, and SB07, will also be sampled from 1 to 3 ft bgs and analyzed for total metals.

Samples to be analyzed for PFAS and 1,4-dioxane will be collected and analyzed in accordance with the NYSDEC issued January 2021 "Guidelines for sampling and Analysis of PFAS" and the June 2019 Sampling for "1,4-dioxane and Per- and Polyfluoroalkyl Substances (PFAS) Under DECs Part 375 Remedial Programs," respectively.

3.3 GROUNDWATER SAMPLING

The purpose of the groundwater sampling is to obtain current groundwater data and analyze for additional parameters (i.e., per- and polyfluoroalkyl substances [PFAS] and 1,4-dioxane) to meet NYSDEC DER-10 requirements for remedial investigations.

Four two-inch permanent monitoring wells will be installed to 15 ft bgs. Monitoring wells will have a 2-inch annular space and be installed using either #0 or #00 certified clean sand fill. Wells will be screened from 5 to 15 ft bgs. Groundwater was encountered at approximately 10 ft bgs during the Limited Phase II ESI completed in October 2020. Monitoring wells will be developed by surging a pump in the well several times to pull fine-grained material from the well. Development will be completed until the water turbidity is 50 nephelometric turbidity units (NTU) or less or ten well volumes are removed, if possible. The well casings will be surveyed by a New York State licensed surveyor to facilitate the preparation of a groundwater contour map and to determine the direction of groundwater flow.

The sampling and analysis plan is summarized in Table 4. Well locations are provided in Figure 2.

Monitoring wells MW01, MW01, MW03, MW04, MW05 and MW06 will be sampled and analyzed for:

- TCL VOCs using EPA method 8260B;
- TCL SVOCs using EPA method 8270C;
- Total Metals using EPA methods 6010/7471;
- PFAS using EPA method 537; and
- 1,4-Dioxane using EPA method 8260B.

Samples to be analyzed for PFAS and 1,4-dioxane will be collected and analyzed in accordance with the NYSDEC issued January 2020 "Guidelines for sampling and Analysis of PFAS" and the June 2019 Sampling for "1,4-dioxane and Per- and Polyfluoroalkyl Substances (PFAS) Under DECs Part 375 Remedial Programs," respectively.

Groundwater wells will be sampled using low-flow sampling methods described in the Field Sampling Plan (FSP). Following the low-flow purge, samples will be collected from monitoring wells for analysis of the analytes mentioned above. Groundwater sampling will be conducted at least one week after monitoring well development.

The FSP presented in Appendix B details field procedures and protocols that will be followed during field activities. The Quality Assurance Project Plan (QAPP) presented in Appendix C details the analytical methods and procedures that will be used to analyze samples collected during field activities. Select wells to be sampled for PFAS will be done following the purge and sampling method detailed in the NYSDEC guidance documents (see Appendix D).

3.4 INVESTIGATION DERIVED WASTE

Following sample collection, boreholes that are not converted to monitoring wells will be backfilled with soil cutting and an upper bentonite plug. Boreholes will be restored to grade with the surrounding area. If soil is identified as grossly contaminated, it will be separated and placed into a sealed and labeled Department of Transportation (DOT) approved 55-gallon drum pending characterization and offsite disposal. Groundwater purged from the monitoring wells during development and sample collected will be placed into a DOT approved 55-gallon drum pending offsite disposal.

3.5 SOIL VAPOR SAMPLING

Samples will be collected in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH October 2006). Six soil vapor probes will be installed to approximately 8 ft bgs, approximately one and two feet above the groundwater interface (previously encountered at approximately 10 ft bgs). The vapor implants will be installed at least two feet away from the corresponding soil boring/monitoring well location(s) with a direct-push drilling rig (e.g., Geoprobe®) to advance a stainless-steel probe to the desired sample depth. Sampling will occur for the duration of two hours.

Samples will be collected in appropriately sized Summa canisters that have been certified clean by the laboratory, and samples will be analyzed by using USEPA Method TO-15. Flow rate for both purging and sampling will not exceed 0.2 L/min. Sampling methods are described in the Field Sampling Plan (FSP) provided as Appendix B.

3.6 PROPOSED SAMPLING RATIONALE

Haley & Aldrich has proposed the sample plan described herein and as shown in Figure 2, in consideration of the data generated during the Limited Phase II ESI performed in October 2020. During the Limited Phase, II ESI Haley & Aldrich installed soil borings, temporary groundwater monitoring wells, and soil vapor points throughout the site. The sampling map from the Ph II (included in Appendix A) shows data gaps throughout the site, including a lack of groundwater and soil vapor sampling on the eastern portion of the site. Additionally, there is a data gap at the southern portion of the site with a lack of soil sampling. Soil samples collected at B-2 during the Phase II ESI were not analyzed by the laboratory; however, with the presence of SVOCs and chlorinated VOCs above the AWQS in TW-2, the soil should be analyzed in this area to determine if there are also SVOC and chlorinated VOCs impacting the soil. Proposed sample locations will help confirm if there is an on-site source of contamination. The remaining proposed sample locations were proposed to address the remaining data gaps.

4. Quality Assurance and Quality Control

Quality Assurance/Quality Control (QA/QC) procedures will be used to provide performance information with regard to the accuracy, precision, sensitivity, representation, completeness, and comparability associated with the sampling and analysis for this investigation. Field QA/QC procedures will be used (1) to document that samples are representative of actual conditions at the site and (2) identify possible cross-contamination from field activities or sample transit. Laboratory QA/QC procedures and analyses will be used to demonstrate whether analytical results have been biased either by interfering compounds in the sample matrix or by laboratory techniques that may have introduced systematic or random errors to the analytical process.

QA/QC procedures are defined in the Quality Assurance Project Plan included in Appendix C.

5. Data Use

5.1 DATA SUBMITTAL

Analytical data will be supplied in ASP Category B Data Packages if more stringent than those suggested by the United States Environmental Protection Agency, the laboratory's in-house QA/QC limits will be utilized. Validated data will be submitted to the NYSDEC EQuIS database in an EDD package.

5.2 DATA VALIDATION

Data packages will be sent to a qualified data validation specialist to evaluate the accuracy and precision of the analytical results. A Data Usability Summary Report (DUSR) will be created to confirm the compliance of methods with the protocols described in the NYSDEC Analytical service Protocol (ASP). DUSRs will summarize and confirm the usability of the data for project-related decisions. Data validation will be completed in accordance with the DUSR guidelines from the NYSDEC Division of Environmental Remediation. DUSRs will be included with the submittal of a Remedial Investigation Report (RIR), further discussed in Section 8.

6. Project Organization

A project team for the site has been created based on qualifications and experience with personnel suited for successfully completing the project.

The NYSDEC designated Case Manager (to be determined) will be responsible for overseeing the successful completion of the project work and adherence to the work plan on behalf of NYSDEC.

The NYSDOH designated Case Manager (to be determined) will be responsible for overseeing the successful completion of the project work and adherence to the work plan on behalf of NYSDOH.

James Bellew will be the Qualified Environmental Professional and Principal in Charge for this work. In this role, Mr. Bellew will be responsible for the overall completion of each task as per the requirements outlined in this work plan and accordance with the DER-10 guidance.

Mari Conlon will be the Project Manager for this work. In this role, Ms. Conlon will manage the day-to-day tasks, including coordination and supervision of field engineers and scientists, adherence to the work plan, and oversight of the project schedule. As the Project Manager, Ms. Conlon will also be responsible for communications with the NYSDEC Case Manager regarding project status, schedule, issues, and updates for project work.

Zachary Simmel will be the field engineer responsible for implementing the field effort for this work. Mr. Simmel's responsibilities will include implementing the work plan activities and directing the subcontractors to ensure successful completion of all field activities.

The drilling subcontractor will be Eastern Environmental Solutions. Eastern Environmental Solutions will provide a geoprobe operator to implement the scope of work in this RIWP.

The analytical laboratory will be Alpha Analytical of Westborough, MA, a New York Environmental Laboratory Approval Program (ELAP) certified laboratory. Alpha Analytical will be responsible for analyzing samples as per the analyses and methods identified in Section 2.

7. Health and Safety

7.1 HEALTH AND SAFETY PLAN

A Site-specific Health and Safety Plan (HASP) has been prepared in accordance with NYSDEC and NYSDOH guidelines and is provided as Appendix E of this work plan. The HASP includes a description of health and safety protocols to be followed by Haley & Aldrich field staff during implementation of the remedy, including monitoring within the work area, along with response actions should impacts be observed. The HASP has been developed in accordance with Occupational Health and Safety Administration (OSHA) 40 CFR Part 1910.120 regulatory requirements for use by Haley & Aldrich field staff that will work at the site during planned activities. Contractors or other personnel who perform work at the site are required to develop their own health and safety plan and procedures of comparable or higher content for their respective personnel in accordance with relevant OSHA regulatory requirements for work at hazardous waste sites as well as the general industry as applicable based on the nature of work being performed.

7.2 COMMUNITY AIR MONITORING PLAN

The proposed investigation work will be completed outdoors at the site. Where intrusive drilling operations are planned, community air monitoring will be implemented to protect the downwind receptors. A Haley & Aldrich representative will continually monitor the breathing air in the vicinity of the immediate work area using a PID to measure total volatile organic compounds in the air at concentrations as low as 1 part per million (ppm). The air in the work zone also will be monitored for visible dust generation.

If VOC measurements above 5 ppm are sustained for 15 minutes or visible dust generation is observed, the intrusive work will be temporarily halted, and a more rigorous monitoring of VOCs and dust using recordable meters will be implemented in accordance with the NYSDOH Generic Community Air Monitoring Plan (CAMP). CAMP data will be provided to NYSDEC in the daily reports, further detailed in Section 8.

8. Reporting

Daily reports will be submitted to NYSDEC and NYSDOH summarizing the Site activities completed during the remedial investigation. Daily reports will include a Site figure, a description of Site activities, a photo log, and CAMP data. Daily reports will be submitted the following morning after Site work is completed.

Following the completion of the work, a summary of the RI will be provided to NYSDEC in a Remedial Investigation Report (RIR) to support the implementation of proposed remedial action. The report will include:

- Summary of the RI activities;
- Figure showing sampling locations;
- Tables summarizing laboratory analytical results;
- Laboratory analytical data reports;
- Field sampling data sheets;
- Findings regarding the nature and extent of contamination at the site; and
- Conclusions and recommendations.

The RIR may be combined with the Remedial Action Work Plan (RAWP) as an RIR/RAWP. The RIR/RAWP will include all data collected during the RI and adhere to the technical requirements of DER-10.

9. Schedule

The Site owner plans to implement this RIWP promptly upon execution of a Brownfield Cleanup Agreement and after approval of the RIWP.

Anticipated RI Schedule	
RIWP and 45-Day Public Comment Period (concurrent with BCP application)	March-April 2021
Executed Brownfield Cleanup Agreement	May-June 2021
NYSDEC Approval of RIWP	June-July 2021
RI Implementation	August 2021
RIR/RAWP Submittal and 45-Day Public Comment Period	September-October 2021
NYSDEC Approval of RIR/RAWP	November-December 2021

References

1. Brownfield Cleanup Program Application. 89-91 Gerry Street, Brooklyn, New York. Prepared by Gerry Gardens LLC & Haley & Aldrich of New York, prepared for the New York State Department of Environmental Conservation. Submitted February 2021.

2. ASTM Phase I Environmental Site Assessment, 89-93 Gerry Street, Brooklyn, New York. Prepared by Haley & Aldrich of New York, prepared for Waterfront Management New York, October 2020.

3. Limited Phase II Investigation, 89-93 Gerry Street, Brooklyn, New York. Prepared by Haley & Aldrich of New York, prepared for Waterfront Management New York, October 2020.

4. Program Policy DER-10, "Technical Guidance for Site Investigation and Remediation," New York State Department of Environmental Conservation, May 2010.

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TABLES

Table 1. Summary of Historical
Soil Analytical Results
89-91 Gerry Street, Brooklyn, NY

Sample ID:				B-1 (3-5')		B-1 (10-12')		B-3 (1-3')		B-3 (13-15')		B-4 (1-3')		B-4 (10-12')		B-5 (0-2')		B-5 (10-12')	
Collection Date:				10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020	
Lab ID:				L2041810-01		L2041810-02		L2041810-03		L2041810-04		L2041810-05		L2041810-06		L2041810-07		L2041810-08	
Sample Type:				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																			
Solids, Total			%	81.9		78.9		84.8		84.3		89.4		84.8		84.7		80.8	
Organochlorine Pesticides by GC																			
Delta-BHC	100	0.04	mg/kg	0.00188	U	0.00197	U	0.00182	U	0.00186	U	0.00177	U	0.00183	U	0.00183	U	0.00191	U
Lindane	1.3	0.1	mg/kg	0.000782	U	0.000822	U	0.000757	U	0.000776	U	0.000736	U	0.000761	U	0.000764	U	0.000796	U
Alpha-BHC	0.48	0.02	mg/kg	0.000782	U	0.000822	U	0.000757	U	0.000776	U	0.000736	U	0.000761	U	0.000764	U	0.000796	U
Beta-BHC	0.36	0.036	mg/kg	0.00188	U	0.00197	U	0.00182	U	0.00186	U	0.00177	U	0.00183	U	0.00183	U	0.00191	U
Heptachlor	2.1	0.042	mg/kg	0.000939	U	0.000987	U	0.000908	U	0.000931	U	0.000884	U	0.000914	U	0.000917	U	0.000956	U
Aldrin	0.097	0.005	mg/kg	0.00188	U	0.00197	U	0.00182	U	0.00186	U	0.00177	U	0.00183	U	0.00183	U	0.00191	U
Heptachlor epoxide			mg/kg	0.00352	U	0.0037	U	0.00341	U	0.00349	U	0.00176	JIP	0.00342	U	0.00198	JIP	0.00358	U
Endrin	11	0.014	mg/kg	0.000782	U	0.000822	U	0.000757	U	0.000776	U	0.000736	U	0.000761	U	0.000764	U	0.000796	U
Endrin aldehyde			mg/kg	0.0304		0.00247	U	0.00227	U	0.00233	U	0.00221	U	0.00228	U	0.00229	U	0.00239	U
Endrin ketone			mg/kg	0.00188	U	0.00197	U	0.00182	U	0.00186	U	0.00177	U	0.00183	U	0.00183	U	0.00191	U
Dieldrin	0.2	0.005	mg/kg	0.00304		0.00123	U	0.00141		0.00116	U	0.0011	U	0.00114	U	0.00608	IP	0.00119	U
4,4'-DDE	8.9	0.0033	mg/kg	0.0105		0.00197	U	0.000478	JIP	0.00186	U	0.00264	IP	0.00183	U	0.0699		0.00191	U
4,4'-DDD	13	0.0033	mg/kg	0.00738		0.00197	U	0.000764	JIP	0.00186	U	0.00177	U	0.00183	U	0.0226		0.00191	U
4,4'-DDT	7.9	0.0033	mg/kg	0.0154		0.0037	U	0.00753		0.00349	U	0.00331	U	0.00342	U	0.125		0.00358	U
Endosulfan I	24	2.4	mg/kg	0.00188	U	0.00197	U	0.00182	U	0.00186	U	0.00177	U	0.00183	U	0.00183	U	0.00191	U
Endosulfan II	24	2.4	mg/kg	0.0027	IP	0.00197	U	0.00182	U	0.00186	U	0.00887	IP	0.00183	U	0.00136	JIP	0.00191	U
Endosulfan sulfate	24	2.4	mg/kg	0.000782	U	0.000822	U	0.000757	U	0.000776	U	0.000736	U	0.000761	U	0.000764	U	0.000796	U
Methoxychlor			mg/kg	0.00352	U	0.0037	U	0.00341	U	0.00349	U	0.00331	U	0.00342	U	0.00344	U	0.00358	U
Toxaphene			mg/kg	0.0352	U	0.037	U	0.0341	U	0.0349	U	0.0331	U	0.0342	U	0.0344	U	0.0358	U
cis-Chlordane	4.2	0.094	mg/kg	0.00235	U	0.00247	U	0.000929	J	0.00233	U	0.00221	U	0.00228	U	0.0326		0.00239	U
trans-Chlordane			mg/kg	0.00235	U	0.00247	U	0.00212	JIP	0.00233	U	0.00192	JIP	0.00228	U	0.025	IP	0.00239	U
Chlordane			mg/kg	0.0156	U	0.0164	U	0.0151	U	0.0155	U	0.0147	U	0.0152	U	0.18		0.0159	U
Polychlorinated Biphenyls by GC																			
Aroclor 1016	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0379	U	0.0405	U
Aroclor 1221	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0379	U	0.0405	U
Aroclor 1232	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0379	U	0.0405	U
Aroclor 1242	1	0.1	mg/kg	0.0177	J	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0379	U	0.0405	U
Aroclor 1248	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0379	U	0.0405	U
Aroclor 1254	1	0.1	mg/kg	0.00977	J	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.159		0.0405	U
Aroclor 1260	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0976		0.0405	U
Aroclor 1262	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0379	U	0.0405	U
Aroclor 1268	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0315	J	0.0405	U
PCBs, Total	1	0.1	mg/kg	0.0275	J	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.288	J	0.0405	U
Semivolatile Organics by GC/MS																			
Acenaphthene	100	20	mg/kg	0.37	J	0.17	U	0.16	U	0.15	U	0.63	J	0.15	U	0.12	J	0.026	J
1,2,4-Trichlorobenzene			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Hexachlorobenzene	1.2	0.33	mg/kg	0.6	U	0.12	U	0.12	U	0.12	U	0.55	U	0.12	U	0.58	U	0.12	U
Bis(2-chloroethyl)ether			mg/kg	0.9	U	0.19	U	0.18	U	0.17	U	0.83	U	0.17	U	0.87	U	0.18	U
2-Chloronaphthalene			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
1,2-Dichlorobenzene	100	1.1	mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
1,3-Dichlorobenzene	49	2.4	mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
1,4-Dichlorobenzene	13	1.8	mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
3,3'-Dichlorobenzidine			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2,4-Dinitrotoluene			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2,6-Dinitrotoluene			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Fluoranthene	100	100	mg/kg	14		0.12	U	0.73		0.12	U	28		0.12	U	4.3		0.023	J
4-Chlorophenyl phenyl ether			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
4-Bromophenyl phenyl ether			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Bis(2-chloroisopropyl)ether			mg/kg	1.2	U	0.25	U	0.24	U	0.23	U	1.1	U	0.23	U	1.2	U	0.24	U
Bis(2-chloroethoxy)methane			mg/kg	1.1	U	0.22	U	0.21	U	0.21	U	0.99	U	0.21	U	1	U	0.22	U
Hexachlorobutadiene			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U

Table 1. Summary of Historical
Soil Analytical Results
89-91 Gerry Street, Brooklyn, NY

Sample ID:				B-1 (3-5')		B-1 (10-12')		B-3 (1-3')		B-3 (13-15')		B-4 (1-3')		B-4 (10-12')		B-5 (0-2')		B-5 (10-12')	
Collection Date:				10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020	
Lab ID:				L2041810-01		L2041810-02		L2041810-03		L2041810-04		L2041810-05		L2041810-06		L2041810-07		L2041810-08	
Sample Type:				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Hexachlorocyclopentadiene			mg/kg	2.8	U	0.6	U	0.56	U	0.55	U	2.6	U	0.55	U	2.8	U	0.58	U
Hexachloroethane			mg/kg	0.8	U	0.17	U	0.16	U	0.15	U	0.74	U	0.15	U	0.77	U	0.16	U
Isophorone			mg/kg	0.9	U	0.19	U	0.18	U	0.17	U	0.83	U	0.17	U	0.87	U	0.18	U
Naphthalene	100	12	mg/kg	0.16	J	0.21	U	0.024	J	0.19	U	0.93		0.19	U	0.21	J	0.2	U
Nitrobenzene			mg/kg	0.9	U	0.19	U	0.18	U	0.17	U	0.83	U	0.17	U	0.87	U	0.18	U
NDPA/DPA			mg/kg	0.8	U	0.17	U	0.16	U	0.15	U	0.74	U	0.15	U	0.77	U	0.16	U
n-Nitrosodi-n-propylamine			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Bis(2-ethylhexyl)phthalate			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Butyl benzyl phthalate			mg/kg	0.54	J	0.21	U	0.11	J	0.19	U	1.5		0.19	U	0.97	U	0.2	U
Di-n-butylphthalate			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Di-n-octylphthalate			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Diethyl phthalate			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Dimethyl phthalate			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Benzo(a)anthracene	1	1	mg/kg	9.4		0.12	U	0.42		0.12	U	17		0.12	U	2.5		0.12	U
Benzo(a)pyrene	1	1	mg/kg	7.5		0.17	U	0.39		0.15	U	16		0.15	U	2.7		0.16	U
Benzo(b)fluoranthene	1	1	mg/kg	8.9		0.12	U	0.47		0.12	U	19		0.12	U	3.7		0.12	U
Benzo(k)fluoranthene	3.9	0.8	mg/kg	3.3		0.12	U	0.11	J	0.12	U	7.2		0.12	U	0.88		0.12	U
Chrysene	3.9	1	mg/kg	8.2		0.12	U	0.42		0.12	U	16		0.12	U	2.5		0.12	U
Acenaphthylene	100	100	mg/kg	0.85		0.17	U	0.16	U	0.15	U	3.6		0.15	U	0.52	J	0.16	U
Anthracene	100	100	mg/kg	2.2		0.12	U	0.092	J	0.12	U	3.3		0.12	U	0.61		0.12	U
Benzo(ghi)perylene	100	100	mg/kg	4.2		0.17	U	0.24		0.15	U	9.4		0.15	U	1.9		0.16	U
Fluorene	100	30	mg/kg	0.4	J	0.21	U	0.2	U	0.19	U	0.97		0.19	U	0.12	J	0.027	J
Phenanthrene	100	100	mg/kg	6.3		0.12	U	0.33		0.12	U	14		0.12	U	2.3		0.029	J
Dibenzo(a,h)anthracene	0.33	0.33	mg/kg	1.2		0.12	U	0.053	J	0.12	U	2.5		0.12	U	0.44	J	0.12	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	mg/kg	4.4		0.17	U	0.24		0.15	U	9.5		0.15	U	1.9		0.16	U
Pyrene	100	100	mg/kg	14		0.12	U	0.7		0.12	U	29		0.12	U	4.3		0.022	J
Biphenyl			mg/kg	2.3	U	0.48	U	0.45	U	0.44	U	2.1	U	0.44	U	2.2	U	0.46	U
4-Chloroaniline			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2-Nitroaniline			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
3-Nitroaniline			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
4-Nitroaniline			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Dibenzofuran	59	7	mg/kg	0.18	J	0.21	U	0.2	U	0.19	U	0.5	J	0.19	U	0.098	J	0.2	U
2-Methylnaphthalene			mg/kg	1.2	U	0.25	U	0.24	U	0.23	U	0.42	J	0.23	U	0.15	J	0.24	U
1,2,4,5-Tetrachlorobenzene			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Acetophenone			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2,4,6-Trichlorophenol			mg/kg	0.6	U	0.12	U	0.12	U	0.12	U	0.55	U	0.12	U	0.58	U	0.12	U
p-Chloro-m-cresol			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2-Chlorophenol			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2,4-Dichlorophenol			mg/kg	0.9	U	0.19	U	0.18	U	0.17	U	0.83	U	0.17	U	0.87	U	0.18	U
2,4-Dimethylphenol			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2-Nitrophenol			mg/kg	2.2	U	0.45	U	0.42	U	0.42	U	2	U	0.42	U	2.1	U	0.44	U
4-Nitrophenol			mg/kg	1.4	U	0.29	U	0.27	U	0.27	U	1.3	U	0.27	U	1.4	U	0.28	U
2,4-Dinitrophenol			mg/kg	4.8	U	1	U	0.94	U	0.93	U	4.4	U	0.93	U	4.6	U	0.97	U
4,6-Dinitro-o-cresol			mg/kg	2.6	U	0.54	U	0.51	U	0.5	U	2.4	U	0.5	U	2.5	U	0.53	U
Pentachlorophenol	6.7	0.8	mg/kg	0.8	U	0.17	U	0.16	U	0.15	U	0.74	U	0.15	U	0.77	U	0.16	U
Phenol	100	0.33	mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2-Methylphenol	100	0.33	mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
3-Methylphenol/4-Methylphenol	100	0.33	mg/kg	1.4	U	0.3	U	0.28	U	0.28	U	0.25	J	0.28	U	1.4	U	0.29	U
2,4,5-Trichlorophenol			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Benzoic Acid			mg/kg	3.2	U	0.68	U	0.64	U	0.62	U	3	U	0.63	U	3.1	U	0.66	U
Benzyl Alcohol			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Carbazole			mg/kg	0.44	J	0.21	U	0.2	U	0.19	U	1		0.19	U	0.2	J	0.2	U
1,4-Dioxane	13	0.1	mg/kg	0.15	U	0.031	U	0.029	U	0.029	U	0.14	U	0.029	U	0.14	U	0.03	U

Table 1. Summary of Historical
Soil Analytical Results
89-91 Gerry Street, Brooklyn, NY

Sample ID:				B-1 (3-5')		B-1 (10-12')		B-3 (1-3')		B-3 (13-15')		B-4 (1-3')		B-4 (10-12')		B-5 (0-2')		B-5 (10-12')	
Collection Date:				10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020	
Lab ID:				L2041810-01		L2041810-02		L2041810-03		L2041810-04		L2041810-05		L2041810-06		L2041810-07		L2041810-08	
Sample Type:				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Total Metals																			
Aluminum, Total			mg/kg	10600		8150		8030		3660		6580		4240		7280		6120	
Antimony, Total			mg/kg	1.11	J	1.43	J	0.804	J	4.63	U	0.896	J	4.68	U	4.53	J	4.72	U
Arsenic, Total	16	13	mg/kg	6.74		2.39		4.62		0.602	J	9.32		1.57		12.2		2.45	
Barium, Total	400	350	mg/kg	102		23.1		77.1		15.6		101		12.2		245		36.3	
Beryllium, Total	72	7.2	mg/kg	0.219	J	0.247	J	0.292	J	0.083	J	0.263	J	0.14	J	0.29	J	0.236	J
Cadmium, Total	4.3	2.5	mg/kg	1.11		0.396	J	0.676	J	0.167	J	0.764	J	0.271	J	1.76		0.34	J
Calcium, Total			mg/kg	35400		958		21300		386		13600		537		8870		928	
Chromium, Total			mg/kg	30.9		17.5		14.8		9.3		14.6		9.96		18.2		16.8	
Cobalt, Total			mg/kg	5.05		5.32		5.68		2.37		5.26		3.22		5.78		7.61	
Copper, Total	270	50	mg/kg	162		12.4		42.6		10.9		37.8		8.79		60.7		10.4	
Iron, Total			mg/kg	15700		12900		15400		5460		18100		8800		33600		10000	
P	400	63	mg/kg	93		4.08	J	124		1.76	J	204		2.4	J	449		6.24	
Magnesium, Total			mg/kg	3970		1600		1970		994		3640		999		2380		1840	
Manganese, Total	2000	1600	mg/kg	216		86.8		223		54.5		484		51.2		215		87.2	
Mercury, Total	0.81	0.18	mg/kg	0.219		0.079	U	0.413		0.074	U	1.44		0.074	U	5.56		0.078	U
Nickel, Total	310	30	mg/kg	21.5		9.72		11.3		6.06		10.9		6.53		15.8		10.4	
Potassium, Total			mg/kg	999		601		991		345		984		310		650		566	
Selenium, Total	180	3.9	mg/kg	1.9	U	1.98	U	1.83	U	1.85	U	0.246	J	1.87	U	0.245	J	1.89	U
Silver, Total	180	2	mg/kg	0.952	U	0.989	U	0.914	U	0.927	U	0.878	U	0.936	U	0.608	J	0.943	U
Sodium, Total			mg/kg	528		89.7	J	143	J	87	J	281		98.8	J	246		97.7	J
Thallium, Total			mg/kg	1.9	U	1.98	U	1.83	U	1.85	U	1.76	U	1.87	U	1.81	U	1.89	U
Vanadium, Total			mg/kg	57.5		33.3		23		10.8		20.9		13.3		30		24.5	
Zinc, Total	10000	109	mg/kg	257		24.6		159		13.3		126		15.9		347		30.2	
Volatile Organics by EPA 5035																			
Methylene chloride	100	0.05	mg/kg	0.0062	U	0.0051	U	0.0046	U	0.0062	U	0.0061	U	0.0059	U	0.0065	U	0.0057	U
1,1-Dichloroethane	26	0.27	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Chloroform	49	0.37	mg/kg	0.0018	U	0.0015	U	0.0014	U	0.0018	U	0.0018	U	0.0018	U	0.002	U	0.0017	U
Carbon tetrachloride	2.4	0.76	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
1,2-Dichloropropane			mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Dibromochloromethane			mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
1,1,2-Trichloroethane			mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Tetrachloroethene	19	1.3	mg/kg	0.00062	U	0.00051	U	0.02		0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Chlorobenzene	100	1.1	mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Trichlorofluoromethane			mg/kg	0.0049	U	0.0041	U	0.0037	U	0.0049	U	0.0049	U	0.0047	U	0.0052	U	0.0046	U
1,2-Dichloroethane	3.1	0.02	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
1,1,1-Trichloroethane	100	0.68	mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Bromodichloromethane			mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
trans-1,3-Dichloropropene			mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
cis-1,3-Dichloropropene			mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
1,3-Dichloropropene, Total			mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
1,1-Dichloropropene			mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Bromoform			mg/kg	0.0049	U	0.0041	U	0.0037	U	0.0049	U	0.0049	U	0.0047	U	0.0052	U	0.0046	U
1,1,2,2-Tetrachloroethane			mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Benzene	4.8	0.06	mg/kg	0.00028	J	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Toluene	100	0.7	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Ethylbenzene	41	1	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Chloromethane			mg/kg	0.0049	U	0.0041	U	0.0037	U	0.0049	U	0.0049	U	0.0047	U	0.0052	U	0.0046	U
Bromomethane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
Vinyl chloride	0.9	0.02	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Chloroethane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,1-Dichloroethene	100	0.33	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
trans-1,2-Dichloroethene	100	0.19	mg/kg	0.0018	U	0.0015	U	0.0014	U	0.0018	U	0.0018	U	0.0018	U	0.002	U	0.0017	U
Trichloroethene	21	0.47	mg/kg	0.00062	U	0.00051	U	0.022		0.00028	J	0.00061	U	0.00059	U	0.00065	U	0.00057	U

Table 1. Summary of Historical
Soil Analytical Results
89-91 Gerry Street, Brooklyn, NY

Sample ID:				B-1 (3-5')		B-1 (10-12')		B-3 (1-3')		B-3 (13-15')		B-4 (1-3')		B-4 (10-12')		B-5 (0-2')		B-5 (10-12')	
Collection Date:				10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020	
Lab ID:				L2041810-01		L2041810-02		L2041810-03		L2041810-04		L2041810-05		L2041810-06		L2041810-07		L2041810-08	
Sample Type:				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
1,2-Dichlorobenzene	100	1.1	mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,3-Dichlorobenzene	49	2.4	mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,4-Dichlorobenzene	13	1.8	mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
Methyl tert butyl ether	100	0.93	mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
p/m-Xylene			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
o-Xylene			mg/kg	0.00047	J	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Xylenes, Total	100	0.26	mg/kg	0.00047	J	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
cis-1,2-Dichloroethene	100	0.25	mg/kg	0.0056		0.031		0.0037		0.086		0.0012	U	0.0083		0.0013	U	0.0011	U
1,2-Dichloroethene, Total			mg/kg	0.0056		0.031		0.0037		0.086		0.0012	U	0.0083		0.0013	U	0.0011	U
Dibromomethane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
Styrene			mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Dichlorodifluoromethane			mg/kg	0.012	U	0.01	U	0.0092	U	0.012	U	0.012	U	0.012	U	0.013	U	0.011	U
Acetone	100	0.05	mg/kg	0.03		0.01	U	0.0092	U	0.01	J	0.012	U	0.012	U	0.013	U	0.011	U
Carbon disulfide			mg/kg	0.012	U	0.01	U	0.0092	U	0.012	U	0.012	U	0.012	U	0.013	U	0.011	U
2-Butanone	100	0.12	mg/kg	0.0032	J	0.01	U	0.0092	U	0.012	U	0.012	U	0.012	U	0.013	U	0.011	U
Vinyl acetate			mg/kg	0.012	U	0.01	U	0.0092	U	0.012	U	0.012	U	0.012	U	0.013	U	0.011	U
4-Methyl-2-pentanone			mg/kg	0.012	U	0.01	U	0.0092	U	0.012	U	0.012	U	0.012	U	0.013	U	0.011	U
1,2,3-Trichloropropane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
2-Hexanone			mg/kg	0.012	U	0.01	U	0.0092	U	0.012	U	0.012	U	0.012	U	0.013	U	0.011	U
Bromochloromethane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
2,2-Dichloropropane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,2-Dibromoethane			mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
1,3-Dichloropropane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,1,1,2-Tetrachloroethane			mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Bromobenzene			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
n-Butylbenzene	100	12	mg/kg	0.0002	J	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
sec-Butylbenzene	100	11	mg/kg	0.00039	J	0.001	U	0.00092	U	0.0012	U	0.00018	J	0.0012	U	0.0013	U	0.0011	U
tert-Butylbenzene	100	5.9	mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
o-Chlorotoluene			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
p-Chlorotoluene			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,2-Dibromo-3-chloropropane			mg/kg	0.0037	U	0.0031	U	0.0028	U	0.0037	U	0.0037	U	0.0035	U	0.0039	U	0.0034	U
Hexachlorobutadiene			mg/kg	0.0049	U	0.0041	U	0.0037	U	0.0049	U	0.0049	U	0.0047	U	0.0052	U	0.0046	U
Isopropylbenzene			mg/kg	0.0002	J	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
p-Isopropyltoluene			mg/kg	0.00031	J	0.001	U	0.00092	U	0.0012	U	0.00034	J	0.0012	U	0.00021	J	0.0011	U
Naphthalene	100	12	mg/kg	0.0014	J	0.0041	U	0.0037	U	0.0049	U	0.0081		0.0047	U	0.0052	U	0.0046	U
Acrylonitrile			mg/kg	0.0049	U	0.0041	U	0.0037	U	0.0049	U	0.0049	U	0.0047	U	0.0052	U	0.0046	U
n-Propylbenzene	100	3.9	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
1,2,3-Trichlorobenzene			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,2,4-Trichlorobenzene			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,3,5-Trimethylbenzene	52	8.4	mg/kg	0.0012	J	0.002	U	0.0018	U	0.0025	U	0.00037	J	0.0024	U	0.0026	U	0.0023	U
1,2,4-Trimethylbenzene	52	3.6	mg/kg	0.0027		0.002	U	0.0018	U	0.0025	U	0.00041	J	0.0024	U	0.0026	U	0.0023	U
1,4-Dioxane	13	0.1	mg/kg	0.098	U	0.082	U	0.074	U	0.099	U	0.098	U	0.094	U	0.1	U	0.092	U
p-Diethylbenzene			mg/kg	0.0023	J	0.002	U	0.0018	U	0.0025	U	0.0037		0.0024	U	0.0026	U	0.0023	U
p-Ethyltoluene			mg/kg	0.0011	J	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,2,4,5-Tetramethylbenzene			mg/kg	0.00097	J	0.002	U	0.0018	U	0.0025	U	0.0015	J	0.0024	U	0.0026	U	0.0023	U
Ethyl ether			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
trans-1,4-Dichloro-2-butene			mg/kg	0.0062	U	0.0051	U	0.0046	U	0.0062	U	0.0061	U	0.0059	U	0.0065	U	0.0057	U

Notes:
* Comparison is not performed on parameters with non-numeric criteria. U - Non-detect Result J - Estaimated Result
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.
NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 2. Summary of Historical
Groundwater Results
89-91 Gerry Street, Brooklyn, NY

Sample ID:			TW-1		TW-2	
Collection Date:			10/1/2020		10/1/2020	
Lab ID:			L2041806-01		L2041806-02	
Sample Type:			WATER		WATER	
	NY-AWQS	Units	Results	Qual	Results	Qual
Polychlorinated Biphenyls by GC						
Aroclor 1016	0.09	ug/l	0.083	U	0.083	U
Aroclor 1221	0.09	ug/l	0.083	U	0.083	U
Aroclor 1232	0.09	ug/l	0.083	U	0.083	U
Aroclor 1242	0.09	ug/l	0.083	U	0.083	U
Aroclor 1248	0.09	ug/l	0.083	U	0.083	U
Aroclor 1254	0.09	ug/l	0.083	U	0.083	U
Aroclor 1260	0.09	ug/l	0.083	U	0.083	U
Aroclor 1262	0.09	ug/l	0.083	U	0.083	U
Aroclor 1268	0.09	ug/l	0.083	U	0.083	U
PCBs, Total		ug/l	0.083	U	0.083	U
Semivolatile Organics by GC/MS						
1,2,4-Trichlorobenzene	5	ug/l	5	U	5	U
Bis(2-chloroethyl)ether	1	ug/l	2	U	2	U
1,2-Dichlorobenzene	3	ug/l	2	U	2	U
1,3-Dichlorobenzene	3	ug/l	2	U	2	U
1,4-Dichlorobenzene	3	ug/l	2	U	2	U
3,3'-Dichlorobenzidine	5	ug/l	5	U	5	U
2,4-Dinitrotoluene	5	ug/l	5	U	5	U
2,6-Dinitrotoluene	5	ug/l	5	U	5	U
4-Chlorophenyl phenyl ether		ug/l	2	U	2	U
4-Bromophenyl phenyl ether		ug/l	2	U	2	U
Bis(2-chloroisopropyl)ether	5	ug/l	2	U	2	U
Bis(2-chloroethoxy)methane	5	ug/l	5	U	5	U
Hexachlorocyclopentadiene	5	ug/l	20	U	20	U
Isophorone	50	ug/l	5	U	5	U
Nitrobenzene	0.4	ug/l	2	U	2	U
NDPA/DPA	50	ug/l	2	U	2	U
n-Nitrosodi-n-propylamine		ug/l	5	U	5	U
Bis(2-ethylhexyl)phthalate	5	ug/l	3	U	1.5	J
Butyl benzyl phthalate	50	ug/l	5	U	5	U
Di-n-butylphthalate	50	ug/l	5	U	0.4	J
Di-n-octylphthalate	50	ug/l	5	U	5	U
Diethyl phthalate	50	ug/l	5	U	5	U
Dimethyl phthalate	50	ug/l	5	U	5	U
Biphenyl		ug/l	2	U	2	U
4-Chloroaniline	5	ug/l	5	U	5	U
2-Nitroaniline	5	ug/l	5	U	5	U
3-Nitroaniline	5	ug/l	5	U	5	U
4-Nitroaniline	5	ug/l	5	U	5	U
Dibenzofuran		ug/l	2	U	2	U
1,2,4,5-Tetrachlorobenzene	5	ug/l	10	U	10	U
Acetophenone		ug/l	5	U	5	U
2,4,6-Trichlorophenol		ug/l	5	U	5	U
p-Chloro-m-cresol		ug/l	2	U	2	U
2-Chlorophenol		ug/l	2	U	2	U
2,4-Dichlorophenol	1	ug/l	5	U	5	U
2,4-Dimethylphenol	50	ug/l	5	U	5	U
2-Nitrophenol		ug/l	10	U	10	U
4-Nitrophenol		ug/l	10	U	10	U
2,4-Dinitrophenol	10	ug/l	20	U	20	U
4,6-Dinitro-o-cresol		ug/l	10	U	10	U
Phenol	1	ug/l	5	U	5	U
2-Methylphenol		ug/l	5	U	5	U
3-Methylphenol/4-Methylphenol		ug/l	5	U	5	U
2,4,5-Trichlorophenol		ug/l	5	U	5	U
Benzoic Acid		ug/l	50	U	8.7	J
Benzyl Alcohol		ug/l	2	U	2	U
Carbazole		ug/l	2	U	2	U

Table 2. Summary of Historical
Groundwater Results
89-91 Gerry Street, Brooklyn, NY

Sample ID:			TW-1		TW-2	
Collection Date:			10/1/2020		10/1/2020	
Lab ID:			L2041806-01		L2041806-02	
Sample Type:			WATER		WATER	
	NY-AWQS	Units	Results	Qual	Results	Qual
Semivolatile Organics by GC/MS-SIM						
Acenaphthene	20	ug/l	0.1	U	0.02	J
2-Chloronaphthalene	10	ug/l	0.2	U	0.2	U
Fluoranthene	50	ug/l	0.12		0.09	J
Hexachlorobutadiene	0.5	ug/l	0.5	U	0.5	U
Naphthalene	10	ug/l	0.1	U	0.1	U
Benzo(a)anthracene	0.002	ug/l	0.07	J	0.04	J
Benzo(a)pyrene	0	ug/l	0.06	J	0.03	J
Benzo(b)fluoranthene	0.002	ug/l	0.06	J	0.03	J
Benzo(k)fluoranthene	0.002	ug/l	0.05	J	0.02	J
Chrysene	0.002	ug/l	0.07	J	0.04	J
Acenaphthylene		ug/l	0.1	U	0.1	U
Anthracene	50	ug/l	0.04	J	0.04	J
Benzo(ghi)perylene		ug/l	0.05	J	0.04	J
Fluorene	50	ug/l	0.1	U	0.1	U
Phenanthrene	50	ug/l	0.1	J	0.13	
Dibenzo(a,h)anthracene		ug/l	0.1	U	0.02	J
Indeno(1,2,3-cd)pyrene	0.002	ug/l	0.05	J	0.02	J
Pyrene	50	ug/l	0.11		0.08	J
2-Methylnaphthalene		ug/l	0.1	U	0.1	U
Pentachlorophenol	1	ug/l	0.8	U	0.8	U
Hexachlorobenzene	0.04	ug/l	0.8	U	0.8	U
Hexachloroethane	5	ug/l	0.8	U	0.8	U
Total Metals						
Aluminum, Total		ug/l	2950		619	
Antimony, Total	3	ug/l	0.66	J	4	U
Arsenic, Total	25	ug/l	1.55		0.66	
Barium, Total	1000	ug/l	94.65		75.41	
Beryllium, Total	3	ug/l	0.15	J	0.5	U
Cadmium, Total	5	ug/l	0.2	U	0.2	U
Calcium, Total		ug/l	253000		155000	
Chromium, Total	50	ug/l	9.28		2.03	
Cobalt, Total		ug/l	4.42		2.09	
Copper, Total	200	ug/l	15.56		8.04	
Iron, Total	300	ug/l	3810		1970	
Lead, Total	25	ug/l	4.97		4.07	
Magnesium, Total	35000	ug/l	26900		12200	
Manganese, Total	300	ug/l	127.3		320.2	
Mercury, Total	0.7	ug/l	0.2	U	0.2	U
Nickel, Total	100	ug/l	23.27		12.51	
Potassium, Total		ug/l	24600		16900	
Selenium, Total	10	ug/l	7.75		5	U
Silver, Total	50	ug/l	0.4	U	0.4	U
Sodium, Total	20000	ug/l	88800		61100	
Thallium, Total	0.5	ug/l	0.5	U	0.5	U
Vanadium, Total		ug/l	14.57		2.63	J
Zinc, Total	2000	ug/l	12.76		11.98	

Table 2. Summary of Historical
Groundwater Results
89-91 Gerry Street, Brooklyn, NY

Sample ID:			TW-1		TW-2	
Collection Date:			**10/1/2020**		**10/1/2020**	
Lab ID:			**L2041806-01**		**L2041806-02**	
Sample Type:			**WATER**		**WATER**	
	NY-AWQS	**Units**	**Results**	**Qual**	**Results**	**Qual**
Volatile Organics by GC/MS						
Methylene chloride	5	ug/l	6.2	U	2.5	U
1,1-Dichloroethane	5	ug/l	6.2	U	2.5	U
Chloroform	7	ug/l	6.2	U	2.5	U
Carbon tetrachloride	5	ug/l	1.2	U	0.5	U
1,2-Dichloropropane	1	ug/l	2.5	U	1	U
Dibromochloromethane	50	ug/l	1.2	U	0.5	U
1,1,2-Trichloroethane	1	ug/l	3.8	U	1.5	U
Tetrachloroethene	5	ug/l	1.2	U	0.19	J
Chlorobenzene	5	ug/l	6.2	U	2.5	U
Trichlorofluoromethane	5	ug/l	6.2	U	2.5	U
1,2-Dichloroethane	0.6	ug/l	1.2	U	0.5	U
1,1,1-Trichloroethane	5	ug/l	6.2	U	2.5	U
Bromodichloromethane	50	ug/l	1.2	U	0.5	U
trans-1,3-Dichloropropene	0.4	ug/l	1.2	U	0.5	U
cis-1,3-Dichloropropene	0.4	ug/l	1.2	U	0.5	U
1,3-Dichloropropene, Total		ug/l	1.2	U	0.5	U
1,1-Dichloropropene	5	ug/l	6.2	U	2.5	U
Bromoform	50	ug/l	5	U	2	U
1,1,2,2-Tetrachloroethane	5	ug/l	1.2	U	0.5	U
Benzene	1	ug/l	1.2	U	0.5	U
Toluene	5	ug/l	6.2	U	2.5	U
Ethylbenzene	5	ug/l	6.2	U	2.5	U
Chloromethane		ug/l	6.2	U	2.5	U
Bromomethane	5	ug/l	6.2	U	2.5	U
Vinyl chloride	2	ug/l	1.4	J	29	
Chloroethane	5	ug/l	6.2	U	2.5	U
1,1-Dichloroethene	5	ug/l	1.2	U	0.17	J
trans-1,2-Dichloroethene	5	ug/l	6.2	U	2.5	U
Trichloroethene	5	ug/l	1.4		0.51	
1,2-Dichlorobenzene	3	ug/l	6.2	U	2.5	U
1,3-Dichlorobenzene	3	ug/l	6.2	U	2.5	U
1,4-Dichlorobenzene	3	ug/l	6.2	U	2.5	U
Methyl tert butyl ether	10	ug/l	6.2	U	2.5	U
p/m-Xylene	5	ug/l	6.2	U	2.5	U
o-Xylene	5	ug/l	6.2	U	2.5	U
Xylenes, Total		ug/l	6.2	U	2.5	U
cis-1,2-Dichloroethene	5	ug/l	260		160	
1,2-Dichloroethene, Total		ug/l	260		160	
Dibromomethane	5	ug/l	12	U	5	U
1,2,3-Trichloropropane	0.04	ug/l	6.2	U	2.5	U
Acrylonitrile	5	ug/l	12	U	5	U
Styrene	5	ug/l	6.2	U	2.5	U
Dichlorodifluoromethane	5	ug/l	12	U	5	U
Acetone	50	ug/l	12	U	5	U
Carbon disulfide	60	ug/l	12	U	5	U
2-Butanone	50	ug/l	12	U	5	U
Vinyl acetate		ug/l	12	U	5	U
4-Methyl-2-pentanone		ug/l	12	U	5	U
2-Hexanone	50	ug/l	12	U	5	U
Bromochloromethane	5	ug/l	6.2	U	2.5	U
2,2-Dichloropropane	5	ug/l	6.2	U	2.5	U
1,2-Dibromoethane	0.0006	ug/l	5	U	2	U

Table 2. Summary of Historical
Groundwater Results
89-91 Gerry Street, Brooklyn, NY

Sample ID:			TW-1		TW-2	
Collection Date:			10/1/2020		10/1/2020	
Lab ID:			L2041806-01		L2041806-02	
Sample Type:			WATER		WATER	
	NY-AWQS	Units	Results	Qual	Results	Qual
1,3-Dichloropropane	5	ug/l	6.2	U	2.5	U
1,1,1,2-Tetrachloroethane	5	ug/l	6.2	U	2.5	U
Bromobenzene	5	ug/l	6.2	U	2.5	U
n-Butylbenzene	5	ug/l	6.2	U	2.5	U
sec-Butylbenzene	5	ug/l	6.2	U	2.5	U
tert-Butylbenzene	5	ug/l	6.2	U	2.5	U
o-Chlorotoluene	5	ug/l	6.2	U	2.5	U
p-Chlorotoluene	5	ug/l	6.2	U	2.5	U
1,2-Dibromo-3-chloropropane	0.04	ug/l	6.2	U	2.5	U
Hexachlorobutadiene	0.5	ug/l	6.2	U	2.5	U
Isopropylbenzene	5	ug/l	6.2	U	2.5	U
p-Isopropyltoluene	5	ug/l	6.2	U	2.5	U
Naphthalene	10	ug/l	6.2	U	2.5	U
n-Propylbenzene	5	ug/l	6.2	U	2.5	U
1,2,3-Trichlorobenzene	5	ug/l	6.2	U	2.5	U
1,2,4-Trichlorobenzene	5	ug/l	6.2	U	2.5	U
1,3,5-Trimethylbenzene	5	ug/l	6.2	U	2.5	U
1,2,4-Trimethylbenzene	5	ug/l	6.2	U	2.5	U
1,4-Dioxane		ug/l	620	U	250	U
p-Diethylbenzene		ug/l	5	U	2	U
p-Ethyltoluene		ug/l	5	U	2	U
1,2,4,5-Tetramethylbenzene	5	ug/l	5	U	2	U
Ethyl ether		ug/l	6.2	U	2.5	U
trans-1,4-Dichloro-2-butene	5	ug/l	6.2	U	2.5	U
Notes:						
* Comparison is not performed on parameters with non-numeric criteria.						
NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.						

Table 3. Summary of Historical
Soil Vapor Results
89-91 Gerry Street, Brooklyn, NY

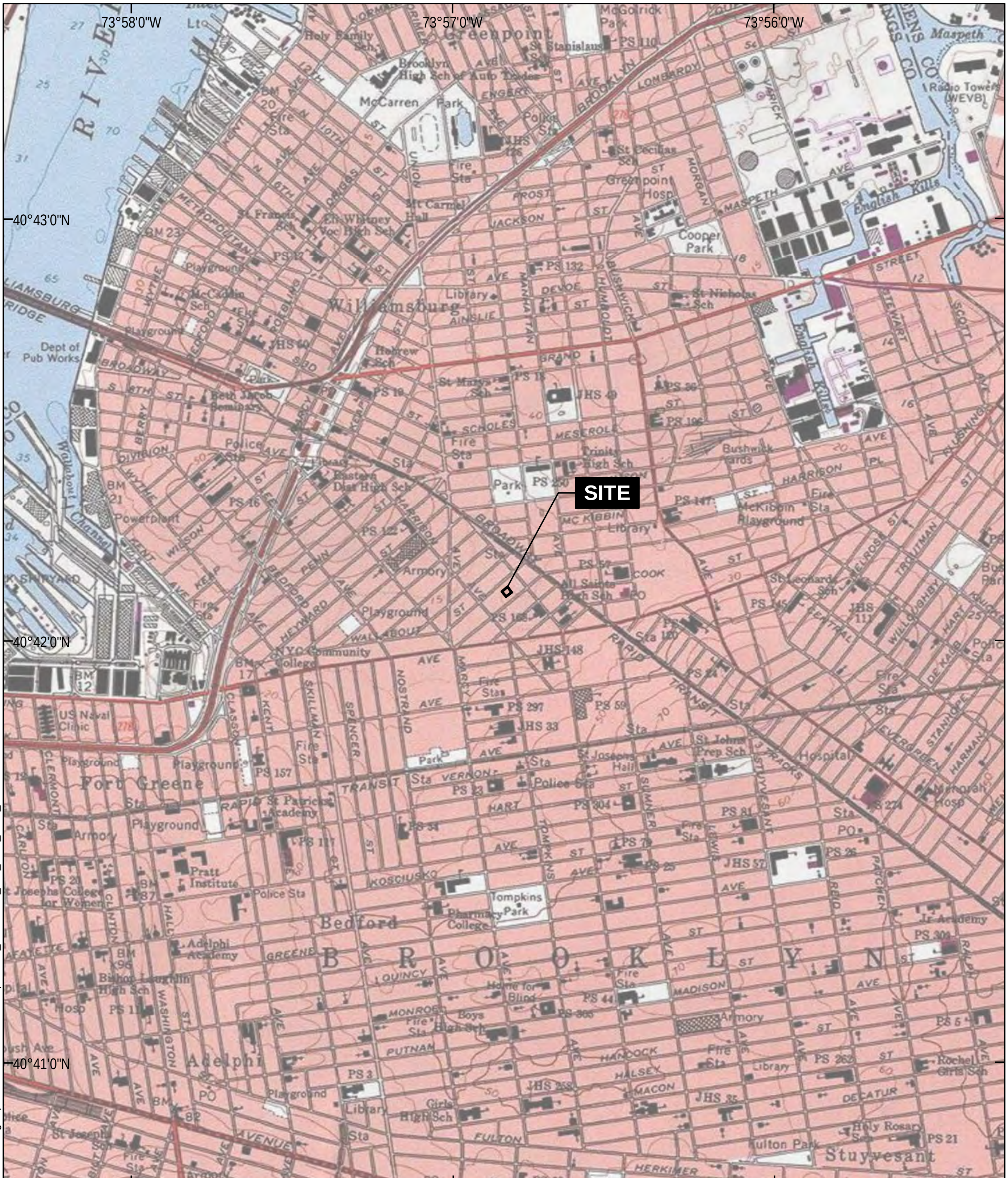
Sample ID:					SV-1		SV-2	
Collection Date:					10/1/2020		10/1/2020	
Lab ID:					L2041786-01		L2041786-02	
Sample Type:					SOIL VAPOR		SOIL_VAPOR	
	NY-SSC-A	NY-SSC-B	NY-SSC-C	Units	Results	Qual	Results	Qual
Volatile Organics in Air								
Dichlorodifluoromethane				ug/m3	9.89	U	12.4	U
Chloromethane				ug/m3	4.13	U	5.16	U
Freon-114				ug/m3	14	U	17.5	U
Vinyl chloride			6	ug/m3	455		6.39	U
1,3-Butadiene				ug/m3	4.42	U	5.53	U
Bromomethane				ug/m3	7.77	U	9.71	U
Chloroethane				ug/m3	5.28	U	6.6	U
Ethanol				ug/m3	94.2	U	118	U
Vinyl bromide				ug/m3	8.74	U	10.9	U
Acetone				ug/m3	119		2050	
Trichlorofluoromethane				ug/m3	11.2	U	14	U
Isopropanol				ug/m3	12.3	U	15.4	U
1,1-Dichloroethene	6			ug/m3	7.93	U	9.91	U
Tertiary butyl Alcohol				ug/m3	15.2	U	18.9	U
Methylene chloride		100		ug/m3	17.4	U	21.7	U
3-Chloropropene				ug/m3	6.26	U	7.83	U
Carbon disulfide				ug/m3	87.2		7.79	U
Freon-113				ug/m3	15.3	U	19.2	U
trans-1,2-Dichloroethene				ug/m3	14.3		9.91	U
1,1-Dichloroethane				ug/m3	8.09	U	10.1	U
Methyl tert butyl ether				ug/m3	7.21	U	9.01	U
2-Butanone				ug/m3	1240		1880	
cis-1,2-Dichloroethene	6			ug/m3	658		9.91	U
Ethyl Acetate				ug/m3	18	U	22.5	U
Chloroform				ug/m3	9.77	U	12.2	U
Tetrahydrofuran				ug/m3	14.7	U	18.4	U
1,2-Dichloroethane				ug/m3	8.09	U	10.1	U
n-Hexane				ug/m3	13.5		27.1	
1,1,1-Trichloroethane		100		ug/m3	10.9	U	13.6	U
Benzene				ug/m3	6.39	U	7.99	U
Carbon tetrachloride	6			ug/m3	12.6	U	15.7	U
Cyclohexane				ug/m3	17.4		8.61	U
1,2-Dichloropropane				ug/m3	9.24	U	11.6	U
Bromodichloromethane				ug/m3	13.4	U	16.7	U
1,4-Dioxane				ug/m3	7.21	U	9.01	U
Trichloroethene	6			ug/m3	118		13.4	U
2,2,4-Trimethylpentane				ug/m3	13.4		11.7	U
Heptane				ug/m3	8.2	U	10.4	
cis-1,3-Dichloropropene				ug/m3	9.08	U	11.3	U
4-Methyl-2-pentanone				ug/m3	20.5	U	25.6	U
trans-1,3-Dichloropropene				ug/m3	9.08	U	11.3	U
1,1,2-Trichloroethane				ug/m3	10.9	U	13.6	U
Toluene				ug/m3	47.5		34.2	
2-Hexanone				ug/m3	128		201	
Dibromochloromethane				ug/m3	17	U	21.3	U
1,2-Dibromoethane				ug/m3	15.4	U	19.2	U
Tetrachloroethene		100		ug/m3	13.9		17	U
Chlorobenzene				ug/m3	9.21	U	11.5	U
Ethylbenzene				ug/m3	10.9		15.7	
p/m-Xylene				ug/m3	40.7		49.5	
Bromoform				ug/m3	20.7	U	25.8	U
Styrene				ug/m3	8.52	U	10.6	U
1,1,2,2-Tetrachloroethane				ug/m3	13.7	U	17.2	U
o-Xylene				ug/m3	15.1		17.7	
4-Ethyltoluene				ug/m3	9.83	U	12.3	U
1,2,4-Trimethylbenzene				ug/m3	9.83	U	12.3	U
Benzyl chloride				ug/m3	10.4	U	12.9	U
1,3-Dichlorobenzene				ug/m3	12	U	15	U
1,4-Dichlorobenzene				ug/m3	12	U	15	U
1,2-Dichlorobenzene				ug/m3	12	U	15	U
1,2,4-Trichlorobenzene				ug/m3	14.8	U	18.6	U
Hexachlorobutadiene				ug/m3	21.3	U	26.7	U
Volatile Organics in Air by SIM								
1,3,5-Trimethybenzene				ug/m3	1.28		1.35	
Notes:								
* Comparison is not performed on parameters with non-numeric criteria.								
NY-SSC-A: New York DOH Matrix A Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.								
NY-SSC-B: New York DOH Matrix B Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.								
NY-SSC-C: New York DOH Matrix C Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.								

Table 4. Sample and Analysis Plan
89-91 Gerry Street, Brooklyn, NY

Boring Number	Sample Depth	Target Compound List VOCs (8260B)	Target Compound List SVOCs (8270C)	Total Analyte List Metals (6010)	PCBs (8082)	Pesticides (8081)	PFAS (537)	1,4-Dioxane (8270 SIM)	VOCs (TO-15)
SOIL									
SB01	0-6"	X	X	X	X	X	X	X	
	9-11'	X	X	X	X	X	X	X	
SB02	0-2"	X	X	X	X	X	X	X	
	1-3'			X					
	9-11'	X	X	X	X	X	X	X	
SB03	0-2"	X	X	X	X	X	X	X	
	1-3'			X					
	9-11'	X	X	X	X	X	X	X	
SB04	0-2"	X	X	X	X	X	X	X	
	9-11'	X	X	X	X	X	X	X	
SB05	0-2"	X	X	X	X	X	X	X	
	1-3'			X					
	9-11'	X	X	X	X	X	X	X	
SB06	0-6"	X	X	X	X	X	X	X	
	9-11'	X	X	X	X	X	X	X	
SB07	0-6"	X	X	X	X	X	X	X	
	1-3'			X					
	9-11'	X	X	X	X	X	X	X	
GROUNDWATER									
MW01	10'	X	X	X			X	X	
MW02	10'	X	X	X			X	X	
MW03	10'	X	X	X			X	X	
MW04	10'	X	X	X			X	X	
MW05	10'	X	X	X			X	X	
MW06	10'	X	X	X			X	X	
SOIL VAPOR									
SG01	-								X
SG02	-								X
SG03	-								X
SG04	-								X
SG05	-								X
SG06	-								X

Notes:
VOCs - Volatile Organic Compounds
SVOCs - Semi-volatile Organic Compounds
PCBs - Polychlorinated biphenyls
PFAS - Per- and Polyfluoroalkyl Substances
QAQC samples include:
- MS/MSD - 1 for every 20 samples
- Field Duplicate - 1 for every 20 samples
- Trip Blanks - 1 per cooler of samples to be analyzed for VOCs
- Field Blanks - 1 for every 20 samples

FIGURES



MAP SOURCE: ESRI
SITE COORDINATES: 40°42'7"N, 73°56'49"W

HALEY ALDRICH

89-91 GERRY STREET
BROOKLYN, NEW YORK

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
FEBRUARY 2021

FIGURE 1

GIS FILE PATH: C:\Users\hwachholz\Documents\working\superseded\135597\GIS\Maps\2020_10\135597_002_0001_SITE_LOCUS.mxd — USER: hwachholz — LAST SAVED: 2/3/2021 3:29:21 PM

LEGEND

- SITE BOUNDARY
- OCTOBER 2020 LIMITED PHASE II ESI SOIL BORING/ TEMPORARY WELL POINTS
- OCTOBER 2020 LIMITED PHASE II ESI TEMPORARY SOIL VAPOR POINTS
- PROPOSED SOIL BORING
- PROPOSED SOIL BORING/PERMANENT MONITORING WELL
- PROPOSED SOIL VAPOR PROBE

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: ESRI

N

0 20 40

SCALE IN FEET

HALEY ALDRICH

89-91 GERRY STREET
BROOKLYN, NEW YOR

PROPOSED SAMPLE LOCATION MAP

FEBRUARY 2021

FIGURE 2

GIS FILE PATH: C:\Users\hwachholz\Documents\working\135597\GIS\Maps\2020_10\135597_002_0002_SITE_PLAN.mxd — USER: hwachholz — LAST SAVED: 12/31/2020 1:47:52 PM

APPENDIX A

Previous Reports

www.haleyaldrich.com

REPORT ON

ASTM PHASE I ENVIRONMENTAL SITE ASSESSMENT
89-93 GERRY STREET
BROOKLYN, NEW YORK

by
Haley & Aldrich of New York
New York, New York

for
Waterfront Management New York
Brooklyn, New York

File No. 135597-002
October 2020

HALEY & ALDRICH OF NEW YORK
237 West 35th Street
16th Floor
New York, NY 10123
734.887.8400

15 October 2020
File No. 135579-002

Waterfront Management New York
320 Roebling Street #106
Brooklyn, NY 11211

Attention: Mr. Moses Karpen
Owner

Subject: ASTM Phase I Environmental Site Investigation
89-93 Gerry Street
Brooklyn, NY

Ladies and Gentlemen:

The enclosed report presents the results of a Phase I Environmental Site Assessment (Phase I) conducted at the above-referenced property, located at 89-93 Gerry Street, in Brooklyn, New York (herein referred to as the "subject site"). This work was performed by Haley & Aldrich of New York (Haley & Aldrich), in accordance with our proposal to Moses Karpen of Waterfront Management New York dated 15 September 2020 ("Agreement") as authorized on 24 September 2020. This Phase I was conducted in conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process as referenced in 40 Code of Federal Regulations (CFR) Part 312 (the All Appropriate Inquiries [AAI] Rule).

The objective of a Phase I is to assess whether known and suspect "recognized environmental conditions" (REC), historical RECs (HREC), or controlled RECs (CREC) are associated with the subject site, as defined in the ASTM E 1527-13 Standard.

This Phase I has revealed evidence of one REC associated with the subject site.

Thank you for the opportunity to perform these services for you. Please do not hesitate to contact us if you have any questions or comments.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK

Mari Cate Conlon
Project Manager

James M. Bellew
Senior Associate

Enclosures

\\haleyaldrich.com\share\CF\Projects\135597\Deliverables\1. Ph I ESA\Text\2020-1015-HANY-Phase I ESA-89-93 Gerry Street-D3.docx

HALEY & ALDRICH OF NEW YORK
237 West 35th Street
16th Floor
New York, NY 10123
734.887.8400

SIGNATURE PAGE FOR

REPORT ON

ASTM PHASE I ENVIRONMENTAL SITE ASSESSMENT
89-93 GERRY STREET
BROOKLYN, NEW YORK

PREPARED FOR

WATERFRONT MANAGEMENT NEW YORK
BROOKLYN, NEW YORK

PREPARED BY:

Mari Cate Conlon

Mari Cate Conlon
Project Manager
Haley & Aldrich of New York

REVIEWED AND APPROVED BY:

James M. Bellew

James M. Bellew
Senior Associate
Haley & Aldrich of New York

Executive Summary

Haley & Aldrich of New York (Haley & Aldrich) has performed a Phase I Environmental Site Assessment (Phase I) of the 89-93 Gerry Street property in Brooklyn, New York (herein referred to as the "subject site"). The scope of work is described and conditioned by our proposal dated 15 September 2020. This Phase I was performed for Waterfront Management New York who seeks to redevelop the property. This Phase I was performed in conformance with the scope and limitations of the ASTM E 1527-13 Standard and All Appropriate Inquiries (AAI) Rule[1].

SUBJECT SITE DESCRIPTION

The subject site, owned by GGH Holdings LLC, is identified as Block 2266 Lots 39, 40, and 41 on the New York City Tax Map and is approximately 7,500 square feet in size. The subject site is currently used as a parking lot operated by Just 4 Wheels Car, Truck, and Van Rental and is improved with a temporary metal trailer approximately 44x10 feet in size that is occupied by parking attendants.

OBJECTIVE

The objective of a Phase I is to assess whether "recognized environmental conditions" (REC), historical RECs (HREC), and controlled RECs (CREC) are associated with the subject site. Our conclusions are intended to help the user evaluate the "business environmental risk" associated with the subject site. Our opinion regarding a REC's potential impact on the subject site is based on the scope of our work, the information obtained during the course of our work, the conditions prevailing at the time our work was performed, the applicable regulatory requirements in effect at the time our work was performed, our experience evaluating similar sites, and on our understanding of the client's intention to redevelop the site for residential use.

RECOGNIZED ENVIRONMENTAL CONDITIONS

The ASTM E 1527-13 Standard defines an REC in part as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

RECs were not identified in connection with the subject site.

CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS

The ASTM E 1527-13 Standard defines a CREC as a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

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[1] American Society for Testing and Materials (ASTM) E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process as referenced in 40 Code of Federal Regulations (CFR) Part 312 (the All Appropriate Inquiries [AAI] Rule) ("ASTM E 1527-13 Standard"). Specified terms as are used in ASTM E 1527-13 are highlighted in blue in this report and defined in the Glossary at the end of the report text.

CRECs were not identified in connection with the subject site.

HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS

The ASTM E 1527-13 Standard defines an HREC as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

HRECs were not identified in connection with the subject site.

DE MINIMIS CONDITIONS

The ASTM E 1527-13 Standard defines *de minimis* conditions as those conditions which "do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies." The ASTM E 1527-13 Standard notes that "conditions determined to be *de minimis* are not recognized environmental conditions."

De minimis conditions were not identified in connection with the subject site.

OTHER FINDINGS

ASTM does not define the term "other finding", however, Haley & Aldrich utilizes the category to indicate conditions of potential risk that are not clearly defined in the ASTM Standard. While not considered RECs, Haley & Aldrich identified the following other findings:

Other Finding #1: New York City E-Designation

The subject site is identified in the New York City E-designation database for Hazardous Material and Air Components. Effective in 2009, the subject site was assigned designation E-238 as part of the Broadway Triangle rezoning action (CEQR 19HPD019K). The Air requirement for this E-Designation is to exclusively use natural gas with the stack location 35 ft from the northern, western, and eastern lot lines.

Other Finding #2: Former BCP Site (Pfizer Sites B & D) Adjoining the Subject Site

The property adjoining the subject site to the west, known as Pfizer Sites B & D, was formerly subject to investigation and remediation within the Brownfield Cleanup Program (BCP). This included the removal of 4,735 tons of petroleum VOC impacted soil and the removal of 18,449 gallons of contaminated groundwater. The primary contaminants of concern at the property included chlorinated VOCs in groundwater, soil, and soil vapor. To address these impacts, the property was remediated which included the implementation of institutional and installation of engineering controls to prevent contact with residual contamination left on the site.

Other Finding #3: Former Laundry Facilities on Subject Site

According to historic Sanborn Fire Insurance Maps, there was a laundry facility located on 89 Gerry Street from 1935 to 1977 and another laundry facility at 91 Gerry Street from 1947 to 1977.

SUMMARY AND RECOMMENDATIONS

In summary, no RECs were identified during this Phase I.

The remainder of this report contains additional information regarding the Phase I, the resulting findings summarized above, and limitations affecting this report.

Table of Contents

List of Figures

1. Introduction

This report presents the results of an ASTM Phase I (Phase I) conducted at 89-93 Gerry Street in Brooklyn, New York (herein referred to as the "subject site"). The approximately 7,500 square foot (sq ft) subject site is a parking lot located in the Broadway Triangle neighborhood of Brooklyn, as shown on the Project Locus, Figure 1. This Phase I was conducted in consideration of Waterfront Management's intention to redevelop the property.

1.1 OBJECTIVE

The objective of a Phase I is to assess whether "recognized environmental conditions" (REC), historical RECs (HREC), and controlled RECs (CREC) are associated with the subject site by evaluating site history, interviews, existing observable conditions, current site use, and current and former uses of adjoining properties as well as potential releases at surrounding properties that may impact the subject site. Our conclusions are intended to help the user evaluate the "business environmental risk" associated with the subject site.

RECs are defined in the ASTM E 1527-13 Standard as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment." The definitions of RECs, HRECs, and CRECs are included in the Glossary section of this report.

1.2 SCOPE OF SERVICES

This work was performed by Haley & Aldrich of New York (Haley & Aldrich) and this Phase I was performed in conformance with the scope and limitations of the ASTM E 1527-13 Standard and All Appropriate Inquiries (AAI) Rule[2] and in accordance with our proposal to Waterfront Management New York dated 15 September 2020 ("Agreement") as authorized on 24 September 2020. The Phase I limitations and Agreement are attached hereto as Appendix A.

As part of this Phase I, Haley & Aldrich conducted visual observations of site conditions and of abutting property use and interviewed a key site manager (site reconnaissance); reviewed federal, state, tribal, and local environmental database information, federal and state environmental files, previous reports (if identified and provided), and site historical use records; and formulated conclusions regarding the potential presence and impact of RECs.

1.3 NON-SCOPE CONSIDERATIONS

The ASTM E 1527-13 Standard includes the following list of "additional issues" that are non-scope considerations outside of the scope of the ASTM Phase I practice: asbestos-containing materials, biological agents, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered

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[2] American Society for Testing and Materials (ASTM) E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process as referenced in 40 Code of Federal Regulations (CFR) Part 312 (the All Appropriate Inquiries [AAI] Rule) ("ASTM E 1527-13 Standard"). Specified terms as are used in ASTM E 1527-13 are highlighted in blue in this report and defined in the Glossary at the end of the report text.

species, indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment, and mold. These items were not included in this Phase I of the subject site.

1.4 LIMITING CONDITIONS/DEVIATIONS

Haley & Aldrich completed this Phase I in substantial conformance with the ASTM E 1527-13 Standard. In our opinion, no additions were made to or deviations and deletions made from the ASTM work scope in completing this Phase I.

1.5 USER RESPONSIBILITIES

The completion of this Phase I is only one component of the process required to satisfy the AAI Rule. In addition, the user must adhere to a set of user responsibilities as defined by the ASTM E 1527-13 Standard and the AAI Rule. User responsibilities are discussed in section 6.6 of this report. A user seeking protection from Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) liability as an innocent landowner, bona fide prospective purchaser, or contiguous property owner must complete all components of the AAI process in addition to meeting ongoing obligations. AAI components, CERCLA liability relief, and ongoing obligations are discussed in the AAI Rule and in Appendix XI of the ASTM E 1527-13 Standard.

2. Site Description

A description of the subject site is detailed in the sections below. Refer to Figure 1 for a project locus and Figure 2 for a site plan showing relevant site features and adjacent properties.

2.1 SITE OWNERSHIP, LOCATION, AND VICINITY DESCRIPTION

Site Description		
Owner	GGH Holdings LLC 164 Hewes Street Brooklyn, New York	
Operator	Just 4 Wheels Car, Truck, and Van Rental 324 E White Horse Pike Galloway, NJ	
Occupant	Just 4 Wheels Car, Truck, and Van Rental	
Current Site Use	Parking lot	
Size	7,500 square feet	
Building Square Footage	No permanent buildings on subject site	
USGS 7.5 Minute Topographic Map	Brooklyn, 2013	
Site County	Kings	
Zoning	R7-A medium density apartment house district	
Parcel Information	Block 2266 Lots 39, 40, & 41	
Utilities	Water:	City of New York
	Sewerage:	New York City Department of Environmental Protection
	Electricity:	Consolidated Edison
	Gas/Oil/LPG:	N/A
Heating/Cooling System	N/A	

Site Description		
Site Vicinity Description		
General Area Description	Mixed use residential, commercial, and industrial	
Adjoining Property Description	North:	Multi-story residential apartment buildings
	East:	Light manufacturing warehouse
	South:	Gerry Street followed by light manufacturing warehouse
	West:	Under construction for development of multi-story residential apartment buildings

2.2 PHYSICAL SETTING

Subsurface explorations and/or hydrogeologic investigations were not performed for this Phase I. Subject site geology and hydrology were evaluated on the basis of readily available public information or references, and/or based upon our experience and understanding of subsurface conditions in the vicinity of the subject site. It is unknown to what extent localized variations in groundwater depth and flow occur on the subject site.

Physical Setting		Source
Topography Summary	The subject site is generally flat with a gentle slope to the northeast.	1,3
Site Elevation	Approximately 14 feet above mean sea level	2
Overburden Soils	Urban fill material extends from the surface to approximately 5-8 feet below ground surface (ft bgs) and is comprised of fine to medium brown sand with silt with pieces of brick, concrete, and glass. Urban fill material is underlain by native fine-grained clays ranging in color from light brown to black to depths of 10-12 ft bgs. This layer is underlain by medium to coarse grained brown to light brown sand to 15 ft bgs.	3
Bedrock Formation	Bedrock underlying the site is part of the Raritan Formation, which consists of Cretaceous aged coastal plains deposits.	4
Depth to Bedrock	Greater than 100 ft bgs	4
Depth to Groundwater	Approximately 8-10 ft bgs	3
Surface Water Flow Direction	Surface water appears to flow towards the northeast based on observed surface topography.	1,3

Physical Setting		Source
Regional Groundwater Flow Direction	Regional groundwater flow appears to flow to the north-northwest based on the proximity to the East River	1
Nearest Surface Water Body	The East River is located approximately 1.3 miles northwest of the subject site.	1,2

Sources:

1. *Brooklyn 2013 USGS 7.5 Minute Topographic Map*
2. *EDR Radius Map Report with Geocheck- Inquiry Number 06206479.2r, 28 September 2020*
3. *Site visit and limited investigation conducted by Haley & Aldrich of New York 1 October 2020*
4. *USGS Bedrock Map of New York*

Environmentally Sensitive Areas		Source
Floodplain	No	1,2
Mapped Wetlands	No	1,3
Aquifer Protection Area/District	No	1
Watershed Protection District	No	1
Natural Resources Protection District	No	1

Sources:

1. *EDR Radius Map Report with Geocheck- Inquiry Number 06206479.2r, 28 September 2020*
2. *FEMA Flood Map Service Center- https://msc.fema.gov/portal/home, accessed 30 September 2020*
3. *National Wetlands Inventory Map- https://www.fws.gov/wetlands/data/mapper.html, accessed 30 September 2020*

3. Previous Reports

Previously prepared reports for the subject site were not identified or provided as part of this assessment.

4. Site History

Haley & Aldrich assessed past usage of the subject site and adjoining properties through a review of:

- Sanborn Fire Insurance Maps dated 1887, 1904, 1918, 1935, 1947, 1950, 1965, 1977, 1979, 1980, 1981, 1982, 1984, 1986, 1987, 1989, 1991, 1992, 1993, 1995, 1996, 2001, 2002, 2003, 2004, 2005, 2006, 2007
- Topographic Maps dated 1897, 1898, 1900, 1947, 1956, 1967, 1979, 1995, 2013
- Aerial Photographs dated 1924, 1951, 1954, 1961, 1966, 1974, 1976, 1980, 1984, 1991, 1994, 2006, 2009, 2013, 2017
- City Directories dated 1928, 1934, 1940, 1945, 1949, 1960, 1965, 1970, 1973, 1976, 1980, 1985, 1992, 1994, 1997, 1999, 2000, 2004, 2005, 2009, 2014, 2017
- Municipal records
- Interviews with subject site personnel

Copies of information obtained from historical references reviewed are included in Appendix B. Unless otherwise noted below, per the ASTM standard, sources were reviewed dating back to 1940 or first developed use, whichever is earlier, and at 5-year intervals if the use of the property has changed within the time period.

4.1 SUBJECT SITE

In the late 1880s, the subject site encompassed three adjoining parcels and was improved with two three-story dwellings and one one-story dwelling along Gerry Street, and two dwellings in the rear of the 91 and 93 Gerry Street parcels. By 1904, the dwellings along Gerry Street had been razed and the property was converted to a store, stable, and carriage house. According to the 1935 Sanborn Map, a garage replaced the former carriage house, and a laundry facility began operations on the 89 Gerry Street parcel. By the late 1940s, the laundry facility expanded operations to the 91 Gerry Street parcel. The laundry facilities on 89 and 91 Gerry Street operated until the late 1970s. By 1979, the buildings used as laundry facilities were razed and all three parcels remained vacant until the mid-2000s. According to aerial photographs, parking operations began at the subject site beginning in the mid to late 2000s. The site remained a parking lot through the present and is currently occupied by Just 4 Wheels Car, Truck, and Van Rental.

The table below provides a detailed summary of pertinent information from the historical sources reviewed:

Dates	Description of Subject Site	Sources
1887- early 1930s	The 1887 Sanborn Map showed that the subject site was improved with three dwellings, one on each parcel along Gerry Street. Additionally, there were two dwellings in the rear of the 91 and 93 Gerry Street parcels. The 1904 Sanborn map showed that the dwelling on the 91 Gerry Street parcel was converted to a carriage house, the dwelling at 93 Gerry Street became a store, and a dwelling remained on the 89 Gerry Street parcel until 1918 when it was converted to a stable. The site remains largely unchanged until the 1930s.	Sanborn Maps, Aerial Photographs
Early 1930s- late 1970s	By the mid-1930s, the former carriage house became a garage and the stable was replaced with a laundry facility. In the mid-1940s, laundry facility operation expanded into what was the former garage area. Both laundry facilities located on 89 & 91 Gerry Street continued to operate through the late 1970s.	Sanborn Maps, Aerial Photographs, City Directories
Late 1970s- present	The laundry facilities were demolished in the late 1970s, and the 1979 Sanborn Map shows that the three parcels were vacant. Aerial photographs show that the site remained vacant throughout the late 1900s and early 2000s. By the late 2000s, the site began to operate as a parking facility and continues to operate as a parking lot today.	Sanborn Maps, Aerial Photographs, City Directories

4.2 ADJOINING PROPERTIES

The table below provides a summary of pertinent information from the historical sources reviewed regarding adjacent properties:

Dates	Description of Adjacent Properties	Sources
1887- early 1940s	North: Dwellings, with one labeled as "Bklyn Potter" adjacent to 89 Gerry Street. The 1904 Sanborn map shows several dwellings, a store, a shed, and a stable where the former "Bklyn Potter" was labeled. By the mid-1910s there were two structures labeled "storage" adjacent to the site, with several dwellings still in place. South: Gerry Street followed by dwellings and stores. The 1904 Sanborn map shows a "tailor" at 84 Gerry Street. By the mid-1910s many of the dwellings had been converted to stores. East: Several dwellings West: Several dwellings and stores	Sanborn Maps, Aerial Photographs
Early 1940s- late 1970s	North: Several buildings labeled as storage and dwellings along Wallabout Street. By 1965, many of the buildings were demolished and the property became vacant. South: Gerry Street followed by a building utilized for machine repair adjacent to vacant land. The vacant land became a private parking facility according to the 1965 Sanborn Map. East: Vacant land followed by dwellings. The 1965 Sanborn Map showed a flat of unknown use constructed adjacent to 93 Gerry Street. West: The 1947 Sanborn Map showed a dwelling and store followed by a parcel labeled "truck renting." By 1965 the dwelling and store was converted to a parking area and the "truck renting" facility had become a garage. The garage was shown to contain a gas tank of unknown size.	Sanborn Maps, Aerial Photographs

Dates	Description of Adjacent Properties	Sources
Late 1970s-present	North: All dwellings were razed and the properties were vacant by 1977 through the late-2000s until the development of residential apartment buildings. South: Gerry Street followed by private parking and a machine repair building. By 1996 the machine repair building was converted to "Iron Works." This remains until the mid-2000s East: By 1987 the flat was followed by an automotive repair shop. The automotive repair shop originated in 1968 and remained in use until the mid-2000s. West: Parking facility followed by a building labeled "steel" that still contained the gas tank of unknown size. By the late 1990s the building was demolished, and the gas tank was no longer present. This entire area adjacent to the site is labeled as "parking" until the mid-2000s.	Sanborn Maps, Aerial Photographs

5. Environmental Records Review

5.1 ENVIRONMENTAL DATABASE RECORDS SEARCH

Haley & Aldrich used the electronic database service, Environmental Data Resources (EDR) to complete the environmental records review. The database search was used to identify properties that may be listed in the referenced agency records, located within the ASTM-specified approximate minimum search distances as shown in the table below. A description of each database searched is in Section 11.2 of this report. The complete environmental database report is provided in Appendix C. Pertinent information obtained from the database is summarized in Section 5.3 below.

Database Searched	Approximate Minimum Search Distance	Subject Site Listed?	Number of Sites within Search Distance[1]
1. NPL Sites	1 mile	No	0
2. Delisted NPL Sites	0.5 mile	No	0
3. CERCLIS[2] Sites	0.5 mile	No	0
4. CERCLIS-NFRAP[2] Sites	0.5 mile	No	2
5. Federal ERNS	Site only	No	Not Applicable
6. RCRA non-CORRACTS TSD Facilities	0.5 mile	No	0
7. RCRA CORRACTS TSD Facilities	1 mile	No	2
8. RCRA Generators	Site & Adjoining	No	0
9. Federal Institutional/Engineering Controls	Site Only	No	Not Applicable
10. State/Tribal Equivalent NPL Sites	1 mile	No	8
11. State/Tribal Equivalent CERCLIS[2] Sites	0.5 mile	No	2
12. State/Tribal Registered Storage Tanks	Site & Adjoining	No	0
13. State/Tribal Landfills and Solid Waste Disposal Sites	0.5 mile	No	2
14. State/Tribal Leaking Storage Tanks	0.5 mile	No	31
15. State/Tribal Institutional Controls/Engineering Controls	Site Only	No	Not Applicable
16. State/Tribal Voluntary Cleanup Sites	0.5 mile	No	45
17. State/Tribal Brownfield Sites	0.5 mile	No	12
18. Orphan Site List[3]	Site & Adjoining	No	0

Notes:

1. *Some sites may be included on multiple databases.*
2. *The US EPA retired the CERCLIS database in October 2013. In January 2016, the Superfund Enterprise Management System (SEMS), which replaces the CERCLIS database, became active. The CERCLIS database records search included as part of this assessment includes currently ascertainable data from the SEMS and SEMS-Archive databases as reported through the database vendor.*
3. *Haley & Aldrich also searched the Orphan Site List provided in the database report for the subject site and sites adjoining the subject site. Orphan sites are those that, due to incorrect or incomplete addresses, could not be mapped.*

5.2 ADDITIONAL ENVIRONMENTAL RECORDS OR FILE REVIEW

To supplement the environmental record search, we contacted the following state and local government agencies and searched applicable online databases. If copies of the documents reviewed were obtained, pertinent material is included in Appendix C. Relevant information obtained is included in the appropriate sections of the report and/or discussed in Section 5.3 below. Adjacent properties were also included in requests for additional information if a significant incident or release was identified. Those adjacent properties reviewed for this assessment include:

- Pfizer Sites B and D: 59-71 Gerry Street and 73-87 Gerry Street, Brooklyn, NY

Agency	Request Sent or Files Searched		Files Exist and are Available for Review	Files Reviewed
	Subject Site	Adjoining Properties		
New York State Department of Environmental Conservation[2]	Yes	Yes	Yes	Yes
New York State Department of Finance City Registry[3]	Yes	No	Yes	Yes (online)
New York City Department of Buildings[4]	Yes	No	Yes	Yes (online)
New York City Department of Health[5,1]	Yes	No	No	N/A
Fire Department of New York[6]	Yes	No	Yes	Yes
New York State Department of Environmental Protection[7,1]	Yes	No	No	N/A

Notes:

1. *To date, no responses have been received from the Freedom of Information Act (FOIA) requests noted above. Based on the information obtained through our interviews with key site personnel, and our review of other records, it does not appear that responses to the FOIA requests should affect our conclusions regarding RECs on the site. However, when a response is received, it will be forwarded to Waterfront Management New York and, if it affects our conclusions regarding the site, Waterfront Management New York will be informed.*
2. *The New York State Department of Environmental Conservation maintains information regarding spills, petroleum bulk storage (PBS) including underground storage tanks (UST) and above ground storage tanks (AST), and investigation/remediations overseen by New York State regulatory programs. NYSDEC responded that there were no records responsive to this request for the subject site. Records for offsite properties included spill reports and remediation/investigation reports further discussed in Section 5.3.2.*
3. *The New York City Department of Finance City Register maintains information regarding property transactions including deeds, lease, and mortgage documents. Records were reviewed in the online database.*
4. *The New York City Department of Buildings (NYCDOB) maintains information regarding violations, complaints, certificates of occupancy, elevator records, asbestos assessments, and permits. Records were reviewed in the online database which included a Certificate of Occupancy for the subject site.*
5. *The New York City Health Department maintains information regarding environmental concerns for public health. A response has not yet been received by the NYCDOH.*

6. *The Fire Department of New York maintains information regarding underground storage tanks (USTs) and emergencies/fire episodes. A response from the FDNY included Building Information Profiles for 89, 91, & 93 Gerry Street.*
7. *The New York City Department of Environmental Protection maintains information regarding wastewater discharge and boilers. A response has not yet been received by the NYCDEP.*

5.3 DETAILED DESCRIPTION OF RELEVANT INFORMATION

5.3.1 Subject Site

The subject site was identified in the EDR database report as an E-Designation site by the New York City Office of Environmental Remediation. The subject site was assigned an E-Designation under the E-238-Broadway Triangle rezoning action (CEQR 19HPD019K) effective 22 December 2009. The requirements under the E-Designation program are satisfaction of the requirements for Hazardous Material and Air Components with the New York City Office of Environmental Remediation (NYCOER). The Air requirements for this E-Designation are to exclusively use natural gas with the stack location 35 ft from the northern, western, and eastern lot lines. A listing in this database does not necessarily indicate an environmental concern.

The subject site was not identified in any other databases searched by EDR.

5.3.2 Nearby Sites

Several sites were listed in the database report within the applicable search radii or identified in regulatory records reviews. Due to their location with respect to the subject site (on the opposite side of a hydrogeologic barrier, distance from the site, location of the site relative to inferred groundwater flow, subsurface utilities and building levels, etc.), or their status (closed out release, etc.), several of the sites are not likely to adversely affect the subject site and are not discussed herein. Only those sites adjacent to the subject site and sites with a potential to have impacted the subject site are discussed below. The complete database report and relevant records review information is included in Appendix C.

Property Name & Location	Database/ Record Identified	Description	Potential Impact to Subject Site
Pfizer Sites B and D: 73-87 Gerry Street & 59-71 Gerry Street (adjoining- 35-165 ft WSW)	RCRA, MANIFEST, NY Spills, LTANKS, Brownfield, Engineering Controls, Institutional Controls, VCP	This property is listed in the NY MANIFEST database for the transportation of wastes and in the RCRA very small quantity generator database for generation of hazardous waste at 73 Gerry Street. Additionally, at 81-85 Gerry Street, there is a listing in the NY MANIFEST database for the transportation of hazardous waste, specifically lead in a large quantity generator. The property located at Pfizer Site B, 73-87 Gerry Street, is listed in the NY Spills database as case number 9704207. A spill was reported on 14 May 1996 when an environmental investigation found the soil to be impacted by petroleum. Details were provided regarding remediation, however, the case achieved regulatory closure on 14 November 2006. Pfizer Inc. is also listed in the LTANKS database as Case No. 9203348 due to tank failure on 19 June 1992. Contaminated soil was stockpiled into dumpsters, characterized, and was properly disposed of. The case achieved regulatory closure on 22 June 1992.	Due to the fact that this property has been remediated through the BCP and VCP with oversight from NYSDEC and due to the installation of engineering and institutional controls to prevent potential contact with residual contamination, this site is not considered an environmental concern.

Property Name & Location	Database/ Record Identified	Description	Potential Impact to Subject Site
Pfizer Sites B and D: 73-87 Gerry Street & 59-71 Gerry Street (adjoining- 35-165 ft WSW) (Cont.)	RCRA, MANIFEST, NY Spills, LTANKS, Brownfield, Engineering Controls, Institutional Controls, VCP	This entire Pfizer property (Pfizer Sites B and D) is listed in the New York Voluntary Cleanup Program (VCP) as Site V00350 with Pfizer Site B listed in the BCP as Site C224101. The property was separated into three operable units. Preliminary investigations at the site included on-site and off-site delineation of petroleum related contamination in the fill material and an Interim Remedial Measure (IRM) was conducted in December 2002. This included the removal of 4,735 tons of petroleum impacted soils and 18,000 gallons of groundwater. Nine USTs were also removed and properly disposed of off-site. The investigation indicated a plume of groundwater contamination that extended north of the property border. Additional remediation in the form of soil excavation and in situ chemical oxidation of groundwater occurred at the property in 2015 and 2016. A Final Engineering Report and Site Management Plans for each operable unit were submitted to NYSDEC in June 2018.	Due to the fact that this property has been remediated through the BCP and VCP with oversight from NYSDEC and due to the installation of engineering and institutional controls to prevent potential contact with residual contamination, this site is not considered an environmental concern.

Property Name & Location	Database/ Record Identified	Description	Potential Impact to Subject Site
Pfizer Sites B and D: 73-87 Gerry Street & 59-71 Gerry Street (adjoining- 35-165 ft WSW) (Cont.)	RCRA, MANIFEST, NY Spills, LTANKS, Brownfield, Engineering Controls, Institutional Controls, VCP	The Pfizer property is listed in the Engineering Controls and Institutional controls database. Prior to the remediation, the primary contaminants of concern were chlorinated VOCs, specifically tetrachloroethene (PCE) and its degradation products impacting soil, groundwater, and soil vapor, and remaining petroleum VOC contamination. In 2006, an air sparge/soil vapor extraction (AS/SVE) system was installed to address groundwater contamination remaining on-site following the soil and tank excavations. The system operated from October 2006 through February 2011 and quarterly groundwater monitoring indicated that the system was effective at treating remaining petroleum-related VOCs in groundwater. To address remaining chlorinated VOC contamination, a sub-slab depressurization system and vapor barrier were installed in new buildings as engineering controls for the site. Remedial measures are reported to be complete and engineering controls are operational to protect human health and the environment and to prevent contact with residual contamination remaining at the property. Groundwater flow is indicated to be to the north with some radial flow to the northwest.	Due to the fact that this property has been remediated through the BCP and VCP with oversight from NYSDEC and due to the installation of engineering and institutional controls to prevent potential contact with residual contamination, this site is not considered an environmental concern.
63 Grey Road (122 ft WSW)	NY Spills	This property is listed in the NY Spills database as Case No. 1110386. A spill was reported on 22 November 2011 due to an overfilled 550-gallon tank causing approximately 5 to 10 gallons of oil to spill into the soil. A subsurface investigation was performed, and significant soil or groundwater impacts were not detected. No further remedial action was deemed necessary and the case achieved regulatory closure on 9 June 2014.	Since the records at this property have achieved regulatory closure, this is not considered an environmental concern.

Property Name & Location	Database/ Record Identified	Description	Potential Impact to Subject Site
Pfizer Inc. Brooklyn Plant- 80 Gerry Street (adjoining 80 ft SSE)	UST	This property is listed in the Petroleum Bulk Storage Tank (PBS) database under ID No. 2-603703. Two 275-gallon was oil USTs and one 400-gallon waste oil UST were registered on the property. The tanks are listed as closed-in-place however a date was not provided.	Since the records at this property have achieved regulatory closure, this is not considered an environmental concern.
90-92 Gerry Street (adjoining 122 ft ESE)	NY Spills	This property is listed in the NY Spills database as Case No. 0411773. A spill was reported on 3 February 2005 when a 20-gallon drum was found leaking an unknown black oil on the property during the installation of soil borings. Approximately 35 tons of contaminated soil was excavated and removed from the site. An endpoint sample was collected to confirm removal of impacted soils and a report was sent to the NYSDEC documenting completion of the excavation. The case achieved regulatory closure on 26 June 2008.	Since the records at this property have achieved regulatory closure, this is not considered an environmental concern.
398 Wallabout Street (adjoining 89 ft NNE)	NY Spills, AST	This property is listed in the NY Spills database as Case No. 9912454. Case remarks indicate that on 31 January 2000, approximately 600 gallons of trichloroethene was reported to be pooled on the floor inside the building. PID readings were reported in at approximately 2,000 parts per million. Details were provided regarding remediation, however the case achieved regulatory closure on 28 January 2008.	398 Wallabout Street (adjoining 89 ft NNE)
390 Wallabout Street (adjoining 63 ft NNW)	VCP	This property is listed in the Voluntary Cleanup Program (VCP) database under project IDs 12TMP0442K, 12EHAN442K, 12CVCP056K.	A listing in this database by itself does not indicate an environmental concern
386-388 Wallabout Street (adjoining 64 ft NNW)	VCP	This property is listed in the Voluntary Cleanup Program (VCP) database under project ID 12TMP0058K, 12EHAN058K, 12CBCP025K.	A listing in this database by itself does not indicate an environmental concern.

5.4 VAPOR MIGRATION

The ASTM 1527-13 standard states that "for the purposes of this practice, "migrate" and "migration" refers to the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface." Thus, this section specifies whether or not we perceive a risk of vapor migration to the subject site.

To assess a vapor migration risk, we conducted a detailed review and analysis of the site-specific environmental database report and/or other reasonably ascertainable records to assess whether:

1. Off-site properties have documented chlorinated volatile organic compound (VOC) contamination located within 100 feet of the subject property, or
2. Off-site properties have documented volatile petroleum hydrocarbon contamination within 30 feet of the subject property.

Based on our records review, we have identified and assessed the following potential sources for vapor migration:

The subject site was historically used as a laundry facility. Frequently, laundry facilities use hazardous chemicals for cleaning that with improper disposal can impact soil and groundwater beneath the surface. If present in groundwater, chlorinated VOCs, typical of dry cleaning and laundry facility products, could volatize into soil vapor. Additionally, the property abutting the subject site to the west, formerly Pfizer Sites B and D, located at 59-71 and 73-87 Gerry Street, has documented the presence of chlorinated VOCs in soil and groundwater. While this property has been remediated under the BCP with engineering and institutional controls put in place to address the residual contamination, due to the close proximity to the subject site impacted soil vapor may have migrated and could be present under the subject site.

6. Site Reconnaissance and Key Personnel Interview(s)

A site visit to observe subject site conditions was conducted by Sarah Commisso of Haley & Aldrich, on 1 October 2020. Access to the subject site was provided by Nelson Alvarado.

Haley & Aldrich personnel observed the parking lot occupying the subject site and the interior of the trailer located on the property. Haley & Aldrich also observed the exterior portions of the subject site, including the property boundaries, and observed adjoining property conditions from the subject site boundaries and/or public thoroughfares. No weather-related conditions or other conditions that would limit our ability to observe the subject site or adjoining properties occurred during our site visit.

An interview with Nelson Alvarado of Just 4 Wheels car, Truck, and Van Rental, the key site manager, was performed in conjunction with the site visit. Per the ASTM Standard, past owners, operators, and occupants of the subject site who are likely to have material information regarding the potential for contamination at the subject property shall be contacted to the extent that they can be identified and that the information likely to be obtained is not duplicative of information already obtained from other sources. Haley & Aldrich was not provided with contact information in order to interview past owners and/or operators at the subject site. Based upon historical data collected from other sources, this potential data gap is not expected to adversely impact the results of this assessment.

The findings of the site visit and interview is discussed below. Site photographs are included in Appendix D.

ASTM E 1527-13 Standard Section 10.8 requires that, prior to the site visit**,** the current subject site owner or key site manager and user, if different from the current owner or key site manager, be asked if there are any helpful documents that can be made available for review. Documents were not provided.

6.1 CURRENT USE OF THE PROPERTY

The property is currently used as a parking lot operated by Just 4 Wheels car, Truck, and Van Rental and is improved with a temporary metal trailer that is occupied by parking attendants.

6.2 GENERAL DESCRIPTION OF STRUCTURES

A single temporary metal trailer is located on the rear portion of Lot 39 and is approximately 44 x 10 feet in size. There are no permanent structures located on the subject site.

6.3 USE, STORAGE, AND DISPOSAL OF PETROLEUM PRODUCTS AND HAZARDOUS MATERIALS

The use, storage and/or disposal of petroleum products or hazardous materials was not observed or reported at the subject site.

6.4 OTHER SUBJECT SITE OBSERVATIONS

The table below summarizes items that were observed and/or reported at the subject site during the site visit other than those items related to use, storage, and disposal of petroleum or hazardous materials (described in Section 6.3 above). If items were observed or reported, they are further described either in the table or below.

Description	Observed or Reported at Time of Site Visit	Observations/Comments
Potable Water Supply	N/A	
Nearest Drinking Water Source	No	
Sewage Disposal System	Yes	Sewer grate in the street directly outside site entrance
Septic System	No	
Unidentified Storage Containers	No	
Wastewater Discharge	No	
Stormwater Discharge	No	
Odors	No	
PCBs Associated with Electrical or Hydraulic Equipment	No	
Elevators (Traction or Hydraulic)	No	
Vehicle Maintenance Lifts	No	
Emergency Generators	No	
Sprinkler System Pumps	No	
Heating System	N/A	
Cooling System	N/A	
Stains or Corrosion on Floors, Walls, or Ceilings	No	
Floor Drains	No	
Sumps	No	
Catch Basins	No	
Pits, Ponds, Lagoons, and Pools of Liquid	No	
Stained Soil or Pavement	No	
Stressed Vegetation	No	
Solid Waste and Evidence of Waste Filling	No	
Dry Wells	No	
Monitoring Wells	No	
Water Supply Wells	No	
Irrigation Wells	No	
Injection Wells	No	
Abandoned Wells	No	

Notes:

1. *N/A items are those that were not observed or reported and/or not anticipated to be present given the nature of the site (e.g., building features not present on an undeveloped property).*

6.5 ADJOINING PROPERTY OBSERVATIONS

Property adjoining the site to the southwest along Gerry Street is currently in construction for the development of multiple story apartment buildings. Adjoining the site to the northeast is a warehouse labeled as "MZ Sheet Metal." Across Gerry Street is a warehouse labeled "Shanghai Stove Inc." and is surrounded by vacant land. The rear of the property is adjoined by several residential multi-story apartment buildings. Haley & Aldrich did not observe any conditions at the adjoining properties that would have a potential adverse effect on the subject site.

6.6 USER RESPONSIBILITIES

The AAI Rule requires that the User of the report consider the following:

- Whether the user has specialized knowledge about previous ownership or uses of the subject site that may be material to identifying RECs;
- whether the user has determined that the subject site's Title contains environmental liens or other information related to the environmental condition of the property, including engineering and institutional controls and Activity and Use Limitations (AULs), as defined by ASTM;
- whether the user is aware of commonly known or reasonably ascertainable information about the subject site including whether or not the presence of contamination is likely on the subject site and to what degree it can be detected; and
- whether the user has prior knowledge that the price of the subject site has been reduced for environmentally related reasons.

While such information is not required to be provided by the environmental professional(s), the information can assist the environmental professional in identifying recognized environmental conditions. The "All Appropriate Inquiries" Final Rule (40 CFR Part 312) requires that these tasks be performed by or on behalf of a party seeking to qualify for an LLP to CERCLA liability.

Haley & Aldrich was provided with a completed user responsibilities questionnaire, which is attached in Appendix E.

7. Findings and Opinions

7.1 DATA GAPS

Our ability to identify and evaluate RECs at the subject site is conditioned upon data gaps identified as part of this Phase I.

No significant data gaps were identified during the performance of this Phase I. Thus, it is our opinion that sufficient information was obtained to identify subject site conditions indicative of releases or threatened releases of hazardous substances and petroleum hydrocarbons. Our opinion is limited by the conditions prevailing at the time our work is performed and the applicable regulatory requirements in effect.

7.2 RECOGNIZED ENVIRONMENTAL CONDITIONS

The ASTM E 1527-13 Standard defines a REC in part as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

Our opinion regarding an REC's potential impact on the subject site is based on the scope of our work, the information obtained during the course of our work, the conditions prevailing at the time our work was performed, the applicable regulatory requirements in effect at the time our work was performed, our experience evaluating similar sites, and on our understanding of the client's intended use for the subject site.

RECs were not identified in connection with the subject site.

7.3 CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS

The ASTM E 1527-13 Standard defines a CREC as a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

CRECs were not identified in connection with the subject site.

7.4 HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS

The ASTM E 1527-13 Standard defines an HREC as an environmental condition "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

HRECs were not identified in connection with the subject site.

7.5 DE MINIMIS CONDITIONS

The ASTM E 1527-13 Standard defines *de minimis* conditions as those conditions which “do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.” The ASTM E 1527-13 Standard notes that “conditions determined to be *de minimis* are not recognized environmental conditions.”

De minimis conditions were not identified in connection with the subject site.

7.6 OTHER FINDINGS

ASTM does not define the term “other finding”, however, Haley & Aldrich utilized the category to indicate conditions of potential risk that are not clearly defined in the ASTM Standard. While not considered RECs, Haley & Aldrich identified the following other findings:

Other Finding #1: New York City E-Designation

The subject site is identified in the New York City E-designation database for Hazardous Material and Air Components. Effective in 2009, the subject site was assigned designation E-238 as part of the Broadway Triangle rezoning action (CEQR 19HPD019K). The Air requirement for this E-Designation is to exclusively use natural gas with the stack location 35 ft from the northern, western, and eastern lot lines.

Other Finding #2: Former BCP Site (Pfizer Sites B & D) Adjoining the Subject Site

The property adjoining the subject site to the west, known as Pfizer Sites B & D, was formerly subject to investigation and remediation within the Brownfield Cleanup Program. This included the removal of 4,735 tons of petroleum VOC impacted soil and the removal of 18,449 gallons of contaminated groundwater. The primary contaminants of concern at the property included chlorinated VOCs in groundwater, soil, and soil vapor. To address these impacts, the property was remediated which included the implementation of institutional and installation of engineering controls to prevent contact with residual contamination left on the site.

Other Finding #3: Former Laundry Facilities on Subject Site

According to historic Sanborn Fire Insurance Maps, there was a laundry facility located on 89 Gerry Street from 1935 to 1977 and another laundry facility at 91 Gerry Street from 1947 to 1977.

8. Conclusions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of the ASTM Practice E 1527 at 89-93 Gerry Street, in Brooklyn, New York, the property. Any exceptions to or deletions from, this practice are described in Section 1.4 of this report.

This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the property.

9. Environmental Professional Certification

The undersigned declare the following:

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR Part 312 and

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Mari Cate Conlon

Mari Cate Conlon
Project Manager

James M. Bellew

James M. Bellew
Senior Associate

10. Credentials

This Phase I report was prepared by Mari Cate Conlon, under the direct supervision of James Bellew, who served as the Environmental Professional(s) for this project. Qualification information for the project personnel is provided below.

James M. Bellew is a Senior Associate at Haley & Aldrich with strong environmental background and thirteen years of experience in bedrock, soil, and groundwater investigation with a focus on remedial design and implementation.

Mari Cate Conlon is a Project Manager at Haley & Aldrich and a licensed Professional Geologist in the state of New York with more than five years of experience conducting Phase I and Phase II Environmental Site Assessments.

11. Glossary and Other Descriptions

11.1 GLOSSARY

All Appropriate Inquiry (AAI*)* — that inquiry constituting "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in CERCLA, 42 U.S.C §9601(35)(B), that will qualify a party to a commercial real estate transaction for one of threshold criteria for satisfying the LLPs to CERCLA liability (42 U.S.C §9601(35)(A) & (B), §9607(b)(3), §9607(q); and §9607(r)), assuming compliance with other elements of the defense.

Business Environmental Risk — a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice. Consideration of business environmental risk issues may involve addressing one or more non-scope considerations.

Controlled Recognized Environmental Condition (CREC) – a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

Data Gap — a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the key site manager, regulatory officials, etc.).

De Minimis Conditions — conditions which do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* conditions are not recognized environmental conditions nor controlled recognized environmental conditions.

Environmental Professional — a person meeting the education, training, and experience requirements as set forth in 40 CFR §312.10(b).

Historical Recognized Environmental Condition (HREC) — a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

Key Site Manager — the person identified by the owner or operator of a property as having good knowledge of the uses and physical characteristics of the property.

Material Threat —a physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the environmental professional, is threatening and might result in impact to public health or the environment. An example might include an aboveground storage tank system that contains a hazardous substance and which shows evidence of damage. The damage would represent a material threat if it is deemed serious enough that it may cause or contribute to tank integrity failure with a release of contents to the environment.

Orphan Site — (not ASTM E 1527-13 definition) — sites that could not be mapped due to poor or inadequate address information.

Recognized Environmental Condition (REC) — the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions.

11.2 DESCRIPTIONS OF DATABASES SEARCHED

Numerous regulatory databases were searched during this Phase I. Each database reviewed is described in the database report presented in Appendix C. Those databases required by the ASTM E 1527-13 Standard are identified below.

1. **NPL Sites:** The National Priorities List (NPL) is a list of contaminated sites that are considered the highest priority for cleanup by the U.S. Environmental Protection Agency (USEPA).
2. **Delisted NPL Sites:** The Delisted National Priorities List (NPL) is a list of formal NPL sites formerly considered the highest priority for cleanup by the USEPA that met the criteria of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) for deletion from the NPL because a no further response was appropriate.
3. **CERCLIS Sites:** The Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS) list identifies sites which are suspected to have contamination and require additional investigation to assess whether they should be considered for inclusion on the NPL.
4. **CERCLIS-NFRAP Sites:** CERCLIS-NFRAP status indicates that a site was once on the CERCLIS List but has No Further Response Actions Planned (NFRAP). Sites on the CERCLIS-NFRAP List were removed from the CERCLIS List in February 1995 because, after an initial investigation was performed, no contamination was found, contamination was removed quickly, or the contamination was not significant enough to warrant NPL status.
5. **Federal ERNS:** The Federal Emergency Response Notification System (ERNS) list tracks information on reported releases of oil and hazardous materials.
6. **RCRA non-CORRACTS TSD facilities:** The Resource Conservation and Recovery Act (RCRA) non-CORRACTS TSD Facilities List tracks facilities which treat, store, or dispose of hazardous waste and are not associated with corrective action activity.
7. **RCRA CORRACTS TSD facilities:** The RCRA CORRACTS TSD Facilities list catalogues facilities that treat, store, or dispose of hazardous waste and have been associated with corrective action activity.

8. **RCRA Generators:** The RCRA Generator list is maintained by the USEPA to track facilities that generate hazardous waste.

9. **Federal Institutional Controls/Engineering Controls:** The Federal Institutional Control list and Engineering Control list are maintained by the USEPA. Some Institutional Control and Engineering Control information may not be made publicly available and therefore will not be included on this registry.

10. **State and Tribal Equivalent NPL/CERCLIS Sites:** The (ASTM E 1527-13 Standard) requires searching "State and Tribal Equivalent NPL Sites." In New York, the equivalent NPL is the Inactive Hazardous Waste Disposal Sites, which is maintained by the NYSDEC.

11. **State and Tribal Registered Storage Tanks:** The NYSDEC maintains a list of aboveground and underground storage tanks registered with the NYSDEC Petroleum Bulk Storage program.

12. **State and Tribal Landfills and Solid Waste Disposal Sites:** NYSDEC maintains a list of regulated waste disposal sites.

13. **State and Tribal Leaking Storage Tanks:** NYSDEC maintains a list of Leaking Storage Tanks (LUST/LAST). The LUST/LAST lists are a listing of release sites that have an Underground or Aboveground Storage Tank listed as the source.

14. **State and Tribal Institutional Controls/Engineering Controls:** NYSDEC maintains a list of sites with Institutional controls or Engineering controls in place.

15. **State and Tribal Voluntary Cleanup Sites:** NYSDEC maintains a list of Voluntary Cleanup sites.

16. **State and Tribal Brownfield Sites:** NYSDEC maintains a list of Brownfield sites which includes properties where redevelopment or re-use may be compromised by the presence or presumed presence of hazardous materials or petroleum.

References

1. Topographic Map, Brooklyn, United States Geological Survey 7.5 minute series, 2013.

2. Haley & Aldrich of New York, site visit conducted by Sarah Commisso on 1 October 2020.

3. Nelson Alvarado of Just 4 Wheels Car, Truck, and Van Rental, interview with Haley & Aldrich, 1 October 2020.

4. EDR Inquiry No. 06206479.2r, Database Report, dated 28 September 2020.

5. City Directories dated 1928, 1934, 1940, 1945, 1949, 1960, 1965, 1970, 1973, 1976, 1980, 1985, 1992, 1994, 1997, 1999, 2000, 2004, 2005, 2009, 2014, 2017

6. Aerial Photographs dated 1924, 1951, 1954, 1961, 1966, 1974, 1976, 1980, 1984, 1991, 1994, 2006, 2009, 2013, 2017

7. Sanborn Fire Maps dated 1887, 1904, 1918, 1935, 1947, 1950, 1965, 1977, 1979, 1980, 1981, 1982, 1984, 1986, 1987, 1989, 1991, 1992, 1993, 1995, 1996, 2001, 2002, 2003, 2004, 2005, 2006, 2007

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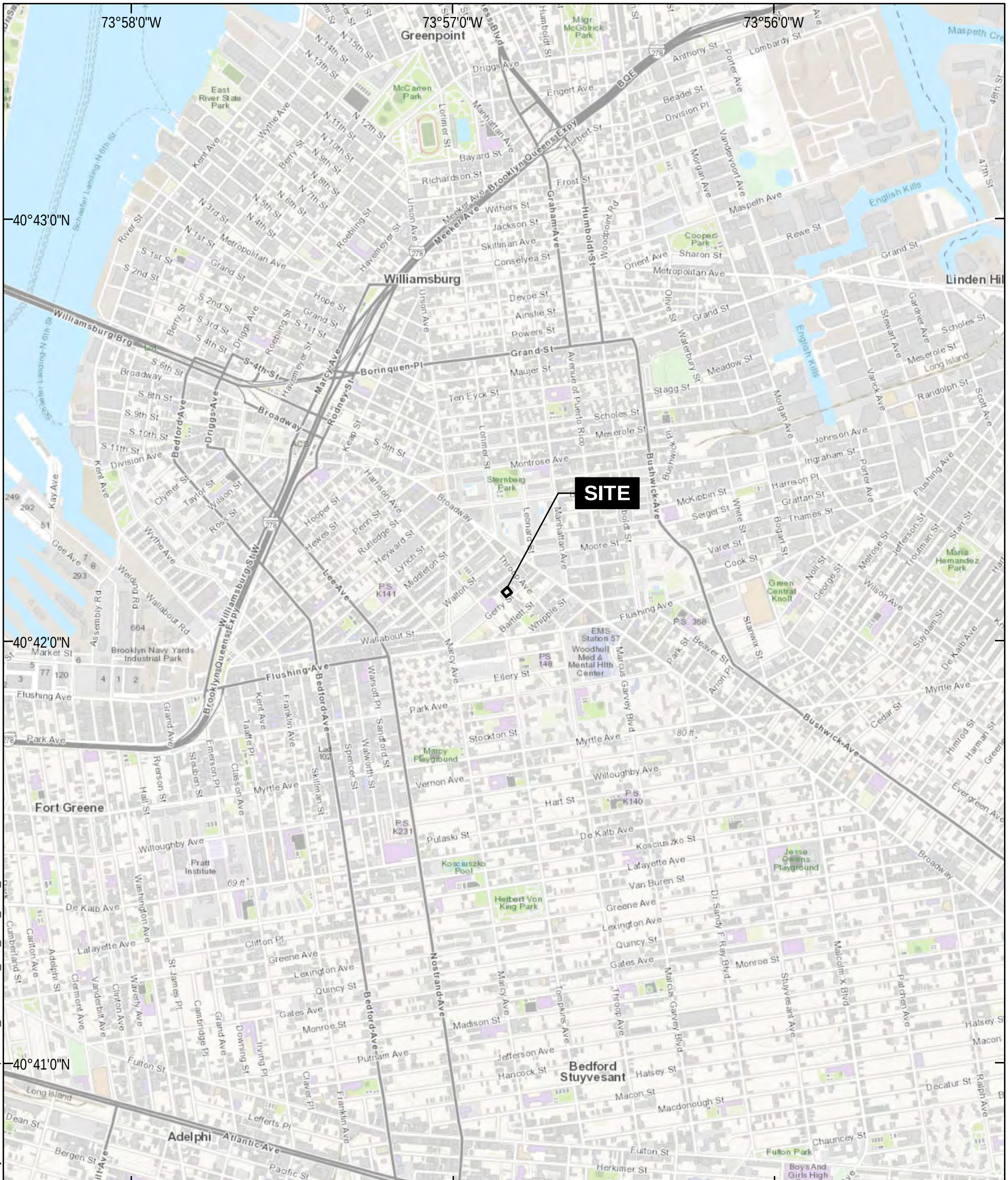
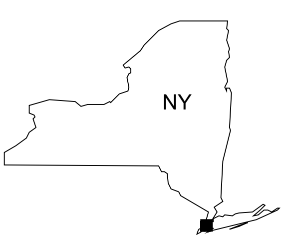
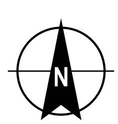
FIGURES







MAP SOURCE: ESRI
SITE COORDINATES: 40°42'7"N, 73°56'49"W

HALEY ALDRICH

89-93 GERRY STREET
BROOKLYN, NEW YORK

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
OCTOBER 2020

FIGURE 1

GIS FILE PATH: \\haleyaldrich.com\share\CF\Projects\135597\GIS\Maps\2020_10\135597_002_0001_SITE_LOCUS.mxd — USER: hwachholz — LAST SAVED: 10/7/2020 12:17:59 PM

LEGEND

89-91 GERRY STREET BOUNDARY

93 GERRY STREET BOUNDARY

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: ESRI

N

0 20 40

SCALE IN FEET

HALEY ALDRICH

89-91 GERRY STREET
BROOKLYN, NEW YORK

SITE PLAN

DECEMBER 2020

FIGURE 2

GIS FILE PATH: C:\Users\hwachholz\Documents\working\135597\GIS\Maps\2020_10\135597_002_0002_SITE_PLAN.mxd — USER: hwachholz — LAST SAVED: 12/31/2020 1:47:52 PM

APPENDIX A

Phase I Environmental Site Assessment Limitations

APPENDIX B

Historical Research Documentation

APPENDIX C

Regulatory Records Documentation

APPENDIX D

Site Photographs

Photo 1: View of subject site facing north.

Photo 2: View of subject site facing northwest, with neighboring construction site.

Photo 3: View of trailer located in the northern portion of the site.

Photo 4: View of parking area in rear of site.

Photo 5: View of rear of subject site with residential apartment buildings adjacent.

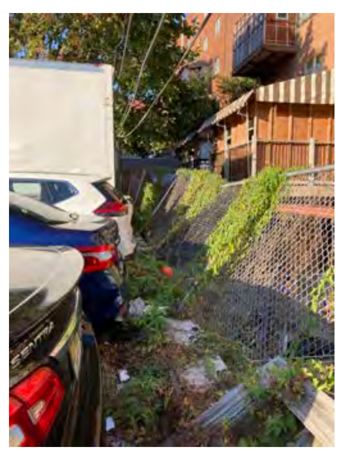


Photo 6: View of fence bordering the subject site in rear of lot.

Photo 7: View of fence along rear of lot facing the trailer.

Photo 8: View of powerlines overhead along rear of the property.

Photo 9: View of adjacent warehouse to the northeast labeled "MZ Sheet Metal".

Photo 10: View of outside of subject site occupied by Just 4 Wheels Car, Truck, and Van Rental.

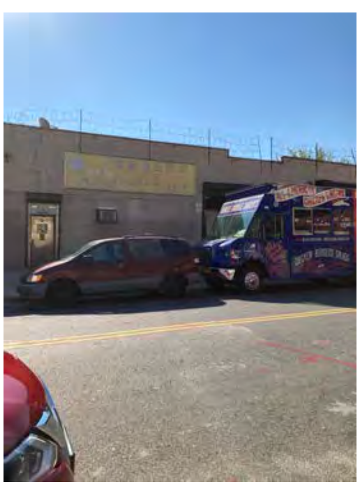


Photo 11: View of warehouse across Gerry Street labeled "Shanghai Stove Inc."

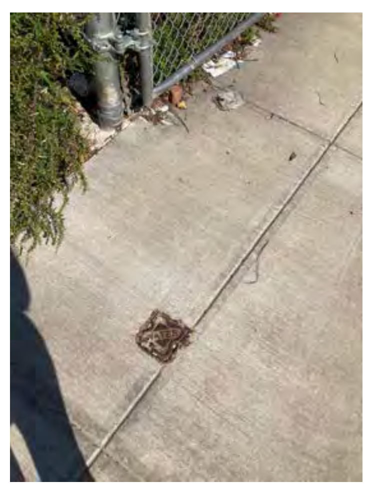


Photo 12: View of cover for shut-off valve for water located directly outside of entrance to subject site.

Photo 13: View of some debris along northeastern side of subject site.

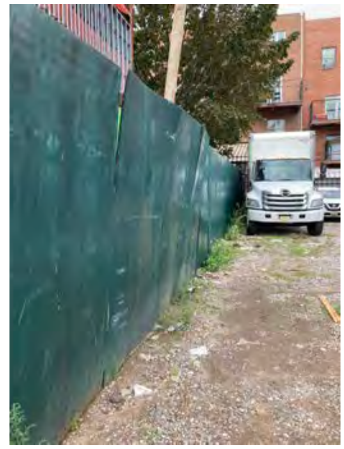


Photo 14: View of barrier between the subject site and adjacent construction site.

APPENDIX E

User Questionnaire

15 October 2020
File No. 135597-002

Via Electronic Mail

Waterfront Management New York
320 Roebling Street #106
Brooklyn, NY 11211

Attention: Mr. Moses Karpen

RE: 89-93 Gerry Street Limited Phase II Environmental Site Investigation
89-93 Gerry Street
Brooklyn, New York

Dear Mr. Karpen:

As requested, Haley & Aldrich of New York (Haley & Aldrich), is providing this letter to Waterfront Management New York summarizing the results of the Limited Phase II Environmental Site Investigation (ESI) completed 89-93 Gerry Street, Brooklyn, New York (the Site).

BACKGROUND

The Site is located at 89-93 Gerry Street, Brooklyn, Kings County, New York. The Site consists of three adjoining parcels identified as Block 2266 Lots 39, 40 and 41 on the New York City tax map in a residential R7-A zoning area. The Site is currently occupied by an at grade parking lot and is approximately 7,500 square-feet (sf) in size. There are no permanent structures located on the Site and former tenants include a variety of commercial tenants including a laundry facility that operated on the Site from the 1930s to 1970s.

The Site has an E-Designation identified under the E-238—Broadway Triangle rezoning action (CEQR 19HPDD19K). The requirements under the E-Designation program are satisfaction of the requirements for Hazardous Material and Air components with the New York City Office of Environmental Remediation (NYCOER). The Air requirement for this E-Designation are to exclusively use natural gas with the stack location 35’ from the northern, western and eastern lot lines.

We understand that the proposed development will include the construction of two-6-story residential buildings with one-level cellar on each building encompassing the entire site footprint and extending approximately 11 feet below current grade.

Haley & Aldrich completed a Phase I Environmental Site Assessment (ESA) for the Site in October 2020. The Phase I ESA revealed no Recognized Environmental Conditions (RECs) in connection with the Site. While no RECs were identified, two other findings were noted which include the proximity to the Former Pfizer Site B&D and the historic Site use as a laundromat. The Site directly abuts the Pfizer where the primary contaminants of concern at the property included chlorinated VOCs in groundwater, soil, and soil vapor. The remediation for Pfizer included removal of 4,735 tons of VOC impacted soil and the removal of 18,449 gallons of contaminated groundwater. Further to this the site included implementation of institutional controls and installation of engineering controls to prevent contact with residual contamination left on the site

SUBSURFACE INVESTIGATION

On 1 October 2020, Haley & Aldrich mobilized to the Site with Eastern Environmental Solutions, Inc. to install six soil borings, two temporary groundwater monitoring wells, and two soil vapor points using a track mounted Geoprobe drill rig.

Boring locations were chosen to assess the potential impacts from onsite and offsite sources. Three soil borings were installed in the southern half of the Site (B-2, B-3, and B-6) to 15 feet below ground surface (ft bgs). One temporary groundwater monitoring well (TW-2) was installed at the location of B-2 to a depth of approximately 15 ft bgs. A soil vapor point (SV-2) was installed proximal to this location to a depth of 6 ft bgs, approximately 1 to 2 feet above the groundwater interface. An additional soil vapor point was installed proximal to B-3 along the western property line to a depth of 6 ft bgs.

Two borings were installed in the northern half of the Site (B-1 and B-5) and one soil boring was installed in the central portion of the Site (B-4) to 15 ft bgs. One temporary groundwater monitoring well (TW-1) was installed at the location of B-1 to a depth of approximately 15 ft bgs.

Subsurface soil consisted primarily of urban fill extending to approximately 5 ft bgs (extended to 8 ft bgs in B-2), underlain by brown to light brown fine to medium sand with varying amounts of silt and clay lenses extending to 15 ft bgs. Borings logs are included in Attachment B. Groundwater was encountered at approximately 8 ft bgs throughout the Site.

Two soil samples were collected from each boring from varying depth intervals. Samples were biased towards visual and olfactory evidence of contamination and any photoionization detector (PID) readings. Except for observed urban fill material in the shallow soil interval (0 to 5 ft bgs) across the Site, no apparent subsurface impacts were observed including odors and staining. PID readings ranged from 0 to 2.6 ppm. Soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and total metals. Groundwater samples were analyzed for VOCs, SVOCs, PCBs, and total metals. Soil vapor samples were collected in 2.7L stainless-steel summa canisters and analyzed for VOCs. Sample locations are provided in Figure 1. All samples were collected in laboratory provided containers, placed on ice in coolers, and shipped by courier to Alpha Analytica of Westborough, Massachusetts, a NYSDOH ELAP-certified laboratory.

RESULTS

Full analytical results are provided in Tables 1-3 and laboratory reports in Attachment A.

Soil

Soil results were compared to New York State Department of Environmental Conservation (NYSDEC) 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs) and Restricted-Residential Use Soil Cleanup Objectives (RRSCOs). No VOCs were detected in any sample above UUSCOs. Three pesticides, including 4,4’-DDE (maximum 0.0669 mg/kg), 4,4’-DDD (maximum 0.0226 mg/kg), and 4,4’-DDT (maximum 0.125 mg/kg) were detected above UUSCOs in borings B-1 (3-5’) and B-5 (0-2’). 4,4’-DDT (0.00753 mg/kg) was detected at boring B-3 (1-3’) and Dieldrin (0.00608 mg/kg) was detected in boring

B-5 (0-2’) above UUSCOs. One PCB, Aroclor 1254 (0.159 mg/kg) was detected in boring B-5 (0-2’) above UUSCOs. Aroclor 1260 (0.0976 mg/kg) was also detected in boring B-5 (0-2’), but below applicable SCOs. Seven SVOCs, including benzo(a)anthracene (maximum 17 mg/kg), benzo(a)pyrene (maximum 16 mg/kg), benzo(b)fluoranthene (maximum 19 mg/kg), benzo(k)fluoranthene (maximum 7.2 mg/kg), chrysene (maximum 16 mg/kg), dibenzo(a,h)anthrancene (maximum 2.5 mg/kg), and indeno(1,2,3-cd)pyrene (maximum 9.5 mg/kg) were detected above RRSCOs in borings B-1 (3-5’). B-4 (1-3’), and B-5 (0-2’). Total lead (maximum 449 mg/kg) was detected above UUSCOs in borings B-1 (3-5’) and B-4 (1-3’) and total zinc (maximum 347 mg/kg) was detected above UUSCOs in borings B-1 (3-5’), B-3 (1-3’), B-4 (1-3’), and B-5 (0-2’). Mercury was detected above the RRSCOs in all shallow soil samples and above RRSCOs in B-4 (1-3’) at 1.44 mg/kg and in B-5 (0-2’) at 5.56 mg/kg.

Full soil analytical results are provided in Table 1 and laboratory report in Attachment A.

Groundwater

Groundwater results were compared to NYSDEC 6NYCRR Part 703.5 Class GA Ambient Water Quality Standards (AWQS). No PCBs were detected in either groundwater sample exceeding the AWQS. Several SVOCs, including PAHs such as benzo(a)anthracene (maximum 0.07 µg/L), benzo(b)pyrene (maximum 0.06 µg/L), benzo(k)fluoranthene (maximum 0.06 µg/L), benzo(k)fluoranthene (maximum 0.05 µg/L), chrysene (maximum 0.07 µg/L) and indeno(1,2,3-cd)pyrene (maximum 0.05 µg/L) were detected above the AWQS. Metals, including iron (maximum 3810 µg/L) and sodium (maximum 88800 µg/L) were detected above the AWQS in both groundwater samples. Manganese (320.2 µg/L) was also detected above the AWQS in TW-2. One VOC, cis-1,2-dichloroethene (maximum 260 µg/L) was detected above the AWQS in both groundwater samples. Vinyl chloride (29 µg/L) was detected above the AWQS in TW-2.

Full groundwater analytical results are provided in Table 2 and laboratory report in Attachment A.

Soil Vapor

Soil vapor results were compared to the New York State Department of Health (NYSDOH) Final Guidance on Soil Vapor Intrusion, May 2017, Matrix A, B, and C guidance values. Vinyl chloride (455 µg/m^3), cis-1,2-dichloroethene (658 µg/m^3), and trichloroethene (118 µg/m^3) were detected above the sub-slab soil vapor guidance values in SV-1. Multiple other VOCs were detected in both soil vapor samples, but did not exceed guidance values, including tetrachloroethene (maximum 17 µg/m^3) carbon disulfide (maximum 87.2 µg/m^3), trans-1,2-dichloroethene (maximum 14.3 µg/m^3), 2,2,4-trimethylpentane (maximum 13.4 µg/m^3), toluene (maximum 47.5 µg/m^3), ethylbenzene (maximum 15.7 µg/m^3), and o-Xylene (maximum 17.7 µg/m^3).

Full soil vapor analytical results are provided in Table 3 and laboratory report in Attachment A.

CONCLUSIONS AND RECOMMENDATIONS

Field observations and analytical results found Site conditions to be comparable to similar properties in the surrounding area. Metals, SVOCs, and pesticides identified in shallow soils from 0 to 5 ft bgs are consistent with characteristics of urban fill found throughout the New York City area. Urban fill was observed to extend to a maximum depth of 10 ft bgs across the Site. Metals, SVOCs, and VOCs identified in groundwater are likely present due to former Site use and the regional industrial activity. Chlorinated VOCs (CVOCs) identified in groundwater and soil vapor are potentially the result of the former laundry operations at the Site and/or migrating from the abutting westerly property, the former Pfizer site. It is noted that a 2 to 3 inch lens of blue crystals was observed at approximately 5 ft bgs during the Remedial Investigation. Haley & Aldrich discussed this with consultants working in this area who, based on their experience, suggested that this may be the origin of the mercury contamination on the Site.

BROWNFIELD CLEANUP PROGRAM EVALUATION

Due to elevated concentrations of PAHs, mercury and lead above the RRSCOs as well as residual chlorinated VOC contamination indicated in soil vapor and groundwater, there is a chance this Site would be accepted into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP). Confirmation of this should be sought with an environmental attorney experience in the BCP program requirements. In the event the Site is not entered into the BCP program, the Site will be remediated and redeveloped in the hazardous materials E-Designation program with NYCOER.

Whether redeveloped under the BCP or E-Designation program, the Site will still need to complete the air quality E-Designation requirements with NYCOER, which include submission of the Air Quality Remedial Action Plan and Air Quality Installation report confirming exclusively use natural gas with the stack location 35' from the northern, western, and eastern lot lines.

Should you have any questions regarding the findings or recommendations please do not hesitate to contact us.

Sincerely,
Haley & Aldrich of New York

James M. Bellew

James M. Bellew
Senior Associate

Mari Cate Conlon

Mari Cate Conlon, P.G.
Project Manager

Attachments:
Figure 1 – Sample Location Map
Table 1 – Map of Soil Chemistry
Table 2 – Map of Groundwater Chemistry
Table 3 – Map of Soil Vapor Chemistry
Attachment A – Laboratory Reports
Attachment B – Soil Boring Logs

FIGURES

LEGEND

- 89-91 GERRY STREET BOUNDARY
- 93 GERRY STREET BOUNDARY
- SOIL BORING
- TEMPORARY MONITORING WELL
- SOIL VAPOR POINT

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: ESRI

0 20 40
SCALE IN FEET

HALEY ALDRICH

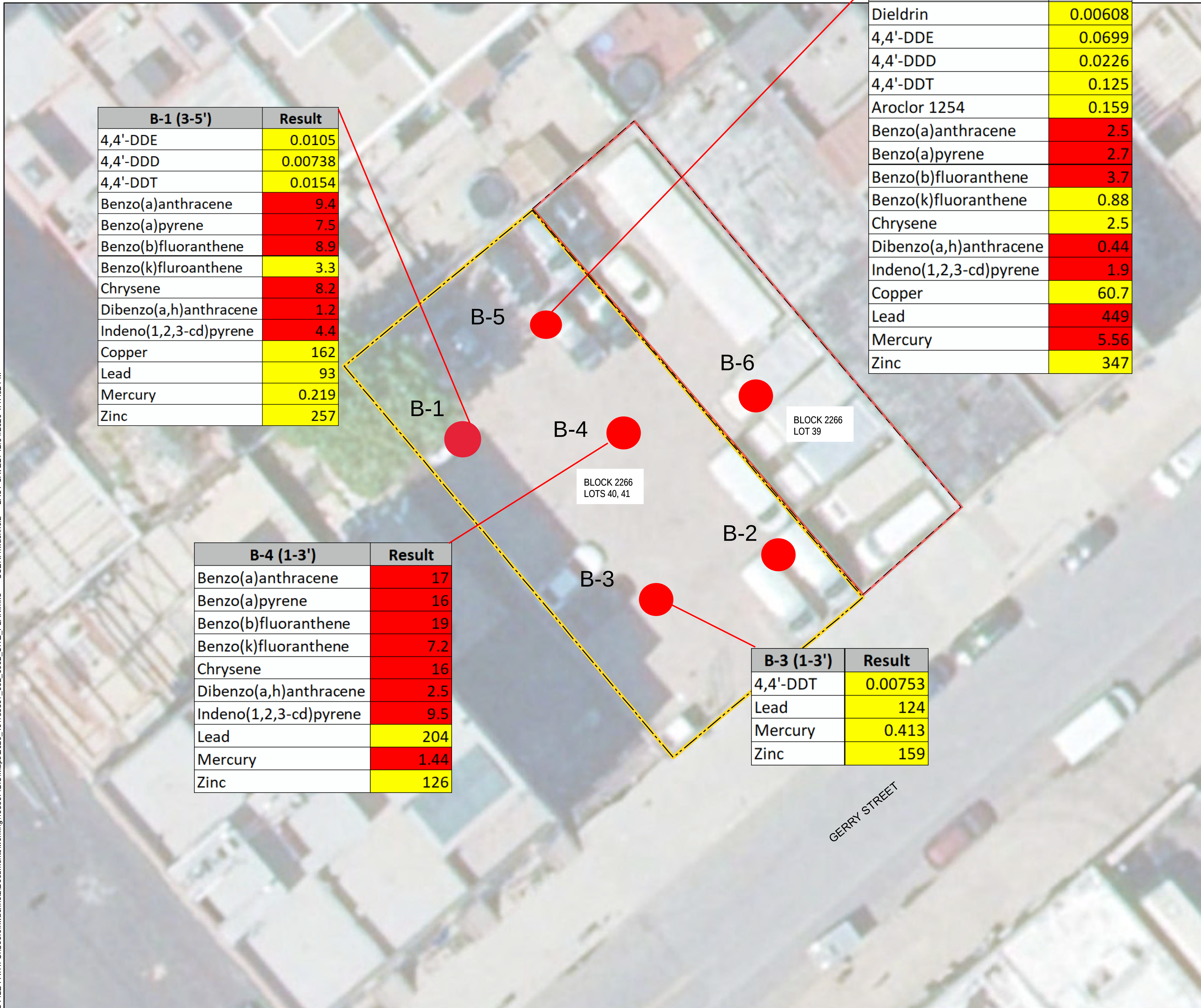
89-91 GERRY STREET
BROOKLYN, NEW YORK

SAMPLE LOCATION MAP

OCTOBER 2020

FIGURE 1

GIS FILE PATH: C:\Users\hwachholz\Documents\working\135597\GIS\Maps\2020_10\135597_002_0002_SITE_PLAN.mxd — USER: hwachholz — LAST SAVED: 12/31/2020 1:47:52 PM



B-1 (3-5')	Result
4,4'-DDE	0.0105
4,4'-DDD	0.00738
4,4'-DDT	0.0154
Benzo(a)anthracene	9.4
Benzo(a)pyrene	7.5
Benzo(b)fluoranthene	8.9
Benzo(k)fluroanthene	3.3
Chrysene	8.2
Dibenzo(a,h)anthracene	1.2
Indeno(1,2,3-cd)pyrene	4.4
Copper	162
Lead	93
Mercury	0.219
Zinc	257

B-5 (0-2')	Result
Dieldrin	0.00608
4,4'-DDE	0.0699
4,4'-DDD	0.0226
4,4'-DDT	0.125
Aroclor 1254	0.159
Benzo(a)anthracene	2.5
Benzo(a)pyrene	2.7
Benzo(b)fluoranthene	3.7
Benzo(k)fluoranthene	0.88
Chrysene	2.5
Dibenzo(a,h)anthracene	0.44
Indeno(1,2,3-cd)pyrene	1.9
Copper	60.7
Lead	449
Mercury	5.56
Zinc	347

B-4 (1-3')	Result
Benzo(a)anthracene	17
Benzo(a)pyrene	16
Benzo(b)fluoranthene	19
Benzo(k)fluoranthene	7.2
Chrysene	16
Dibenzo(a,h)anthracene	2.5
Indeno(1,2,3-cd)pyrene	9.5
Lead	204
Mercury	1.44
Zinc	126

B-3 (1-3')	Result
4,4'-DDT	0.00753
Lead	124
Mercury	0.413
Zinc	159

LEGEND

89-91 GERRY STREET BOUNDARY

93 GERRY STREET BOUNDARY

SOIL BORING

NYCRR Part 375 Unrestricted and Restricted Residential SCOs

Analyte	Units	NY- ResRestricted	NY- Unrestricted
Dieldrin	mg/kg	0.2	0.005
4,4'-DDE	mg/kg	8.9	0.0033
4,4'-DDD	mg/kg	13	0.0033
4,4'-DDT	mg/kg	7.9	0.0033
Aroclor 1254	mg/kg	1	0.1
Benzo(a)anthracene	mg/kg	1	1
Benzo(a)pyrene	mg/kg	1	1
Benzo(b)fluoranthene	mg/kg	1	1
Benzo(k)fluoranthene	mg/kg	3.9	0.8
Chrysene	mg/kg	3.9	1
Dibenzo(a,h)anthracene	mg/kg	0.33	0.33
Indeno(1,2,3-cd)pyrene	mg/kg	0.5	0.5
Copper	mg/kg	270	50
Lead	mg/kg	400	63
Mercury	mg/kg	0.81	0.18
Zinc	mg/kg	10000	109

NOTES

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0 20 40

SCALE IN FEET

HALEY ALDRICH

89-91 GERRY STREET
BROOKLYN, NEW YORK

MAP OF SOIL CHEMSITRY

OCTOBER 2020

FIGURE 2

GIS FILE PATH: C:\Users\hwachholz\Documents\working\135597\GIS\Maps\2020_10\135597_002_0002_SITE_PLAN.mxd — USER: hwachholz — LAST SAVED: 12/31/2020 1:47:52 PM

TW-1	Result
Cis-1,2-Dichloroethene	260
Benzo(a)anthracene	0.07
Benzo(a)pyrene	0.06
Benzo(b)fluoranthene	0.06
Benzo(k)fluoranthene	0.05
Chrysene	0.07
Indeno(1,2,3-cd)pyrene	0.05
Iron	3810
Sodium	88800

TW-2	Result
Vinyl Chloride	29
Cis-1,2-Dichloroethene	160
Benzo(a)anthracene	0.04
Benzo(a)pyrene	0.03
Benzo(b)fluoranthene	0.03
Benzo(k)fluoranthene	0.02
Chrysene	0.04
Indeno(1,2,3-cd)pyrene	0.02
Iron	1970
Manganese	320.2
Sodium	61100

LEGEND

89-91 GERRY STREET BOUNDARY

93 GERRY STREET BOUNDARY

TEMPORARY MONITORING WELL

New York TOGS 111 Ambient Water Quality Standards		
Analyte	Units	NY-AWQS
Vinyl Chloride	µg/L	2
Cis-1,2-Dichloroethene	µg/L	5
Benzo(a)anthracene	µg/L	0.002
Benzo(a)pyrene	µg/L	0
Benzo(b)fluoranthene	µg/L	0.002
Benzo(k)fluoranthene	µg/L	0.002
Chrysene	µg/L	0.002
Indeno(1,2,3-cd)pyrene	µg/L	0.002
Iron	µg/L	300
Manganese	µg/L	300
Sodium	µg/L	20000

NOTES

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N

0 20 40
SCALE IN FEET

HALEY ALDRICH

89-91 GERRY STREET
BROOKLYN, NEW YOR

MAP OF GROUNDWATER CHEMISTRY

OCTOBER 2020

FIGURE 3

GIS FILE PATH: C:\Users\hwachholz\Documents\working\135597\GIS\Maps\2020_10\135597_002_0002_SITE_PLAN.mxd — USER: hwachholz — LAST SAVED: 12/31/2020 1:47:52 PM

SV-1	Result
Vinyl Chloride	455
Cis-1,2-dichloroethene	658
Trichloroethene	118

LEGEND

89-91 GERRY STREET BOUNDARY

93 GERRY STREET BOUNDARY

SOIL VAPOR POINT

2017 NYSDOH Soil Vapor Intrusion Guidance Decision Matrices		
Analyte	Units	NYSDOH VI Sub-Slab Vapor Guidance
Vinyl Chloride	µg/m^3	6
Cis-1,2-dichloroethene	µg/m^3	6
Trichloroethene	µg/m^3	6

NOTES

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0 20 40

SCALE IN FEET

HALEY ALDRICH

89-91 GERRY STREET
BROOKLYN, NEW YORK

MAP OF SOIL VAPOR CHEMISTRY

OCTOBER 2020

FIGURE 4

GIS FILE PATH: C:\Users\hwachholz\Documents\working\135597\GIS\Maps\2020_10\135597_002_0002_SITE_PLAN.mxd — USER: hwachholz — LAST SAVED: 12/31/2020 1:47:52 PM

TABLES

Sample ID:				B-1 (3-5')		B-1 (10-12')		B-3 (1-3')		B-3 (13-15')		B-4 (1-3')		B-4 (10-12')		B-5 (0-2')		B-5 (10-12')	
Collection Date:				10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020	
Lab ID:				L2041810-01		L2041810-02		L2041810-03		L2041810-04		L2041810-05		L2041810-06		L2041810-07		L2041810-08	
Sample Type:				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																			
Solids, Total			%	81.9		78.9		84.8		84.3		89.4		84.8		84.7		80.8	
Organochlorine Pesticides by GC																			
Delta-BHC	100	0.04	mg/kg	0.00188	U	0.00197	U	0.00182	U	0.00186	U	0.00177	U	0.00183	U	0.00183	U	0.00191	U
Lindane	1.3	0.1	mg/kg	0.000782	U	0.000822	U	0.000757	U	0.000776	U	0.000736	U	0.000761	U	0.000764	U	0.000796	U
Alpha-BHC	0.48	0.02	mg/kg	0.000782	U	0.000822	U	0.000757	U	0.000776	U	0.000736	U	0.000761	U	0.000764	U	0.000796	U
Beta-BHC	0.36	0.036	mg/kg	0.00188	U	0.00197	U	0.00182	U	0.00186	U	0.00177	U	0.00183	U	0.00183	U	0.00191	U
Heptachlor	2.1	0.042	mg/kg	0.000939	U	0.000987	U	0.000908	U	0.000931	U	0.000884	U	0.000914	U	0.000917	U	0.000956	U
Aldrin	0.097	0.005	mg/kg	0.00188	U	0.00197	U	0.00182	U	0.00186	U	0.00177	U	0.00183	U	0.00183	U	0.00191	U
Heptachlor epoxide			mg/kg	0.00352	U	0.0037	U	0.00341	U	0.00349	U	0.00176	JIP	0.00342	U	0.00198	JIP	0.00358	U
Endrin	11	0.014	mg/kg	0.000782	U	0.000822	U	0.000757	U	0.000776	U	0.000736	U	0.000761	U	0.000764	U	0.000796	U
Endrin aldehyde			mg/kg	0.0304		0.00247	U	0.00227	U	0.00233	U	0.00221	U	0.00228	U	0.00229	U	0.00239	U
Endrin ketone			mg/kg	0.00188	U	0.00197	U	0.00182	U	0.00186	U	0.00177	U	0.00183	U	0.00183	U	0.00191	U
Dieldrin	0.2	0.005	mg/kg	0.00304		0.00123	U	0.00141		0.00116	U	0.0011	U	0.00114	U	0.00608	IP	0.00119	U
4,4'-DDE	8.9	0.0033	mg/kg	0.0105		0.00197	U	0.000478	JIP	0.00186	U	0.00264	IP	0.00183	U	0.0699		0.00191	U
4,4'-DDD	13	0.0033	mg/kg	0.00738		0.00197	U	0.000764	JIP	0.00186	U	0.00177	U	0.00183	U	0.0226		0.00191	U
4,4'-DDT	7.9	0.0033	mg/kg	0.0154		0.0037	U	0.00753		0.00349	U	0.00331	U	0.00342	U	0.125		0.00358	U
Endosulfan I	24	2.4	mg/kg	0.00188	U	0.00197	U	0.00182	U	0.00186	U	0.00177	U	0.00183	U	0.00183	U	0.00191	U
Endosulfan II	24	2.4	mg/kg	0.0027	IP	0.00197	U	0.00182	U	0.00186	U	0.00887	IP	0.00183	U	0.00136	JIP	0.00191	U
Endosulfan sulfate	24	2.4	mg/kg	0.000782	U	0.000822	U	0.000757	U	0.000776	U	0.000736	U	0.000761	U	0.000764	U	0.000796	U
Methoxychlor			mg/kg	0.00352	U	0.0037	U	0.00341	U	0.00349	U	0.00331	U	0.00342	U	0.00344	U	0.00358	U
Toxaphene			mg/kg	0.0352	U	0.037	U	0.0341	U	0.0349	U	0.0331	U	0.0342	U	0.0344	U	0.0358	U
cis-Chlordane	4.2	0.094	mg/kg	0.00235	U	0.00247	U	0.000929	J	0.00233	U	0.00221	U	0.00228	U	0.0326		0.00239	U
trans-Chlordane			mg/kg	0.00235	U	0.00247	U	0.00212	JIP	0.00233	U	0.00192	JIP	0.00228	U	0.025	IP	0.00239	U
Chlordane			mg/kg	0.0156	U	0.0164	U	0.0151	U	0.0155	U	0.0147	U	0.0152	U	0.18		0.0159	U
Polychlorinated Biphenyls by GC																			
Aroclor 1016	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0379	U	0.0405	U
Aroclor 1221	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0379	U	0.0405	U
Aroclor 1232	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0379	U	0.0405	U
Aroclor 1242	1	0.1	mg/kg	0.0177	J	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0379	U	0.0405	U
Aroclor 1248	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0379	U	0.0405	U
Aroclor 1254	1	0.1	mg/kg	0.00977	J	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.159		0.0405	U
Aroclor 1260	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0976		0.0405	U
Aroclor 1262	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0379	U	0.0405	U
Aroclor 1268	1	0.1	mg/kg	0.0406	U	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.0315	J	0.0405	U
PCBs, Total	1	0.1	mg/kg	0.0275	J	0.0417	U	0.0382	U	0.0381	U	0.0366	U	0.0377	U	0.288	J	0.0405	U
Semivolatile Organics by GC/MS																			
Acenaphthene	100	20	mg/kg	0.37	J	0.17	U	0.16	U	0.15	U	0.63	J	0.15	U	0.12	J	0.026	J
1,2,4-Trichlorobenzene			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Hexachlorobenzene	1.2	0.33	mg/kg	0.6	U	0.12	U	0.12	U	0.12	U	0.55	U	0.12	U	0.58	U	0.12	U
Bis(2-chloroethyl)ether			mg/kg	0.9	U	0.19	U	0.18	U	0.17	U	0.83	U	0.17	U	0.87	U	0.18	U
2-Chloronaphthalene			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
1,2-Dichlorobenzene	100	1.1	mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
1,3-Dichlorobenzene	49	2.4	mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
1,4-Dichlorobenzene	13	1.8	mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
3,3'-Dichlorobenzidine			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2,4-Dinitrotoluene			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2,6-Dinitrotoluene			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Fluoranthene	100	100	mg/kg	14		0.12	U	0.73		0.12	U	28		0.12	U	4.3		0.023	J
4-Chlorophenyl phenyl ether			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
4-Bromophenyl phenyl ether			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Bis(2-chloroisopropyl)ether			mg/kg	1.2	U	0.25	U	0.24	U	0.23	U	1.1	U	0.23	U	1.2	U	0.24	U
Bis(2-chloroethoxy)methane			mg/kg	1.1	U	0.22	U	0.21	U	0.21	U	0.99	U	0.21	U	1	U	0.22	U
Hexachlorobutadiene			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U

Sample ID:				B-1 (3-5')		B-1 (10-12')		B-3 (1-3')		B-3 (13-15')		B-4 (1-3')		B-4 (10-12')		B-5 (0-2')		B-5 (10-12')	
Collection Date:				10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020	
Lab ID:				L2041810-01		L2041810-02		L2041810-03		L2041810-04		L2041810-05		L2041810-06		L2041810-07		L2041810-08	
Sample Type:				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Hexachlorocyclopentadiene			mg/kg	2.8	U	0.6	U	0.56	U	0.55	U	2.6	U	0.55	U	2.8	U	0.58	U
Hexachloroethane			mg/kg	0.8	U	0.17	U	0.16	U	0.15	U	0.74	U	0.15	U	0.77	U	0.16	U
Isophorone			mg/kg	0.9	U	0.19	U	0.18	U	0.17	U	0.83	U	0.17	U	0.87	U	0.18	U
Naphthalene	100	12	mg/kg	0.16	J	0.21	U	0.024	J	0.19	U	0.93		0.19	U	0.21	J	0.2	U
Nitrobenzene			mg/kg	0.9	U	0.19	U	0.18	U	0.17	U	0.83	U	0.17	U	0.87	U	0.18	U
NDPA/DPA			mg/kg	0.8	U	0.17	U	0.16	U	0.15	U	0.74	U	0.15	U	0.77	U	0.16	U
n-Nitrosodi-n-propylamine			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Bis(2-ethylhexyl)phthalate			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Butyl benzyl phthalate			mg/kg	0.54	J	0.21	U	0.11	J	0.19	U	1.5		0.19	U	0.97	U	0.2	U
Di-n-butylphthalate			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Di-n-octylphthalate			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Diethyl phthalate			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Dimethyl phthalate			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Benzo(a)anthracene	1	1	mg/kg	9.4		0.12	U	0.42		0.12	U	17		0.12	U	2.5		0.12	U
Benzo(a)pyrene	1	1	mg/kg	7.5		0.17	U	0.39		0.15	U	16		0.15	U	2.7		0.16	U
Benzo(b)fluoranthene	1	1	mg/kg	8.9		0.12	U	0.47		0.12	U	19		0.12	U	3.7		0.12	U
Benzo(k)fluoranthene	3.9	0.8	mg/kg	3.3		0.12	U	0.11	J	0.12	U	7.2		0.12	U	0.88		0.12	U
Chrysene	3.9	1	mg/kg	8.2		0.12	U	0.42		0.12	U	16		0.12	U	2.5		0.12	U
Acenaphthylene	100	100	mg/kg	0.85		0.17	U	0.16	U	0.15	U	3.6		0.15	U	0.52	J	0.16	U
Anthracene	100	100	mg/kg	2.2		0.12	U	0.092	J	0.12	U	3.3		0.12	U	0.61		0.12	U
Benzo(ghi)perylene	100	100	mg/kg	4.2		0.17	U	0.24		0.15	U	9.4		0.15	U	1.9		0.16	U
Fluorene	100	30	mg/kg	0.4	J	0.21	U	0.2	U	0.19	U	0.97		0.19	U	0.12	J	0.027	J
Phenanthrene	100	100	mg/kg	6.3		0.12	U	0.33		0.12	U	14		0.12	U	2.3		0.029	J
Dibenzo(a,h)anthracene	0.33	0.33	mg/kg	1.2		0.12	U	0.053	J	0.12	U	2.5		0.12	U	0.44	J	0.12	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	mg/kg	4.4		0.17	U	0.24		0.15	U	9.5		0.15	U	1.9		0.16	U
Pyrene	100	100	mg/kg	14		0.12	U	0.7		0.12	U	29		0.12	U	4.3		0.022	J
Biphenyl			mg/kg	2.3	U	0.48	U	0.45	U	0.44	U	2.1	U	0.44	U	2.2	U	0.46	U
4-Chloroaniline			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2-Nitroaniline			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
3-Nitroaniline			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
4-Nitroaniline			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Dibenzofuran	59	7	mg/kg	0.18	J	0.21	U	0.2	U	0.19	U	0.5	J	0.19	U	0.098	J	0.2	U
2-Methylnaphthalene			mg/kg	1.2	U	0.25	U	0.24	U	0.23	U	0.42	J	0.23	U	0.15	J	0.24	U
1,2,4,5-Tetrachlorobenzene			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Acetophenone			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2,4,6-Trichlorophenol			mg/kg	0.6	U	0.12	U	0.12	U	0.12	U	0.55	U	0.12	U	0.58	U	0.12	U
p-Chloro-m-cresol			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2-Chlorophenol			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2,4-Dichlorophenol			mg/kg	0.9	U	0.19	U	0.18	U	0.17	U	0.83	U	0.17	U	0.87	U	0.18	U
2,4-Dimethylphenol			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2-Nitrophenol			mg/kg	2.2	U	0.45	U	0.42	U	0.42	U	2	U	0.42	U	2.1	U	0.44	U
4-Nitrophenol			mg/kg	1.4	U	0.29	U	0.27	U	0.27	U	1.3	U	0.27	U	1.4	U	0.28	U
2,4-Dinitrophenol			mg/kg	4.8	U	1	U	0.94	U	0.93	U	4.4	U	0.93	U	4.6	U	0.97	U
4,6-Dinitro-o-cresol			mg/kg	2.6	U	0.54	U	0.51	U	0.5	U	2.4	U	0.5	U	2.5	U	0.53	U
Pentachlorophenol	6.7	0.8	mg/kg	0.8	U	0.17	U	0.16	U	0.15	U	0.74	U	0.15	U	0.77	U	0.16	U
Phenol	100	0.33	mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
2-Methylphenol	100	0.33	mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
3-Methylphenol/4-Methylphenol	100	0.33	mg/kg	1.4	U	0.3	U	0.28	U	0.28	U	0.25	J	0.28	U	1.4	U	0.29	U
2,4,5-Trichlorophenol			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Benzoic Acid			mg/kg	3.2	U	0.68	U	0.64	U	0.62	U	3	U	0.63	U	3.1	U	0.66	U
Benzyl Alcohol			mg/kg	1	U	0.21	U	0.2	U	0.19	U	0.92	U	0.19	U	0.97	U	0.2	U
Carbazole			mg/kg	0.44	J	0.21	U	0.2	U	0.19	U	1		0.19	U	0.2	J	0.2	U
1,4-Dioxane	13	0.1	mg/kg	0.15	U	0.031	U	0.029	U	0.029	U	0.14	U	0.029	U	0.14	U	0.03	U

Table 1. Soil Analytical Results
89-93 Gerry Street, Brooklyn, NY

Sample ID:				B-1 (3-5')		B-1 (10-12')		B-3 (1-3')		B-3 (13-15')		B-4 (1-3')		B-4 (10-12')		B-5 (0-2')		B-5 (10-12')	
Collection Date:				10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020	
Lab ID:				L2041810-01		L2041810-02		L2041810-03		L2041810-04		L2041810-05		L2041810-06		L2041810-07		L2041810-08	
Sample Type:				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Total Metals																			
Aluminum, Total			mg/kg	10600		8150		8030		3660		6580		4240		7280		6120	
Antimony, Total			mg/kg	1.11	J	1.43	J	0.804	J	4.63	U	0.896	J	4.68	U	4.53	J	4.72	U
Arsenic, Total	16	13	mg/kg	6.74		2.39		4.62		0.602	J	9.32		1.57		12.2		2.45	
Barium, Total	400	350	mg/kg	102		23.1		77.1		15.6		101		12.2		245		36.3	
Beryllium, Total	72	7.2	mg/kg	0.219	J	0.247	J	0.292	J	0.083	J	0.263	J	0.14	J	0.29	J	0.236	J
Cadmium, Total	4.3	2.5	mg/kg	1.11		0.396	J	0.676	J	0.167	J	0.764	J	0.271	J	1.76		0.34	J
Calcium, Total			mg/kg	35400		958		21300		386		13600		537		8870		928	
Chromium, Total			mg/kg	30.9		17.5		14.8		9.3		14.6		9.96		18.2		16.8	
Cobalt, Total			mg/kg	5.05		5.32		5.68		2.37		5.26		3.22		5.78		7.61	
Copper, Total	270	50	mg/kg	162		12.4		42.6		10.9		37.8		8.79		60.7		10.4	
Iron, Total			mg/kg	15700		12900		15400		5460		18100		8800		33600		10000	
Lead, Total	400	63	mg/kg	93		4.08	J	124		1.76	J	204		2.4	J	449		6.24	
Magnesium, Total			mg/kg	3970		1600		1970		994		3640		999		2380		1840	
Manganese, Total	2000	1600	mg/kg	216		86.8		223		54.5		484		51.2		215		87.2	
Mercury, Total	0.81	0.18	mg/kg	0.219		0.079	U	0.413		0.074	U	1.44		0.074	U	5.56		0.078	U
Nickel, Total	310	30	mg/kg	21.5		9.72		11.3		6.06		10.9		6.53		15.8		10.4	
Potassium, Total			mg/kg	999		601		991		345		984		310		650		566	
Selenium, Total	180	3.9	mg/kg	1.9	U	1.98	U	1.83	U	1.85	U	0.246	J	1.87	U	0.245	J	1.89	U
Silver, Total	180	2	mg/kg	0.952	U	0.989	U	0.914	U	0.927	U	0.878	U	0.936	U	0.608	J	0.943	U
Sodium, Total			mg/kg	528		89.7	J	143	J	87	J	281		98.8	J	246		97.7	J
Thallium, Total			mg/kg	1.9	U	1.98	U	1.83	U	1.85	U	1.76	U	1.87	U	1.81	U	1.89	U
Vanadium, Total			mg/kg	57.5		33.3		23		10.8		20.9		13.3		30		24.5	
Zinc, Total	10000	109	mg/kg	257		24.6		159		13.3		126		15.9		347		30.2	
Volatile Organics by EPA 5035																			
Methylene chloride	100	0.05	mg/kg	0.0062	U	0.0051	U	0.0046	U	0.0062	U	0.0061	U	0.0059	U	0.0065	U	0.0057	U
1,1-Dichloroethane	26	0.27	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Chloroform	49	0.37	mg/kg	0.0018	U	0.0015	U	0.0014	U	0.0018	U	0.0018	U	0.0018	U	0.002	U	0.0017	U
Carbon tetrachloride	2.4	0.76	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
1,2-Dichloropropane			mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Dibromochloromethane			mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
1,1,2-Trichloroethane			mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Tetrachloroethene	19	1.3	mg/kg	0.00062	U	0.00051	U	0.02		0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Chlorobenzene	100	1.1	mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Trichlorofluoromethane			mg/kg	0.0049	U	0.0041	U	0.0037	U	0.0049	U	0.0049	U	0.0047	U	0.0052	U	0.0046	U
1,2-Dichloroethane	3.1	0.02	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
1,1,1-Trichloroethane	100	0.68	mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Bromodichloromethane			mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
trans-1,3-Dichloropropene			mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
cis-1,3-Dichloropropene			mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
1,3-Dichloropropene, Total			mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
1,1-Dichloropropene			mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Bromoform			mg/kg	0.0049	U	0.0041	U	0.0037	U	0.0049	U	0.0049	U	0.0047	U	0.0052	U	0.0046	U
1,1,2,2-Tetrachloroethane			mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Benzene	4.8	0.06	mg/kg	0.00028	J	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Toluene	100	0.7	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Ethylbenzene	41	1	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Chloromethane			mg/kg	0.0049	U	0.0041	U	0.0037	U	0.0049	U	0.0049	U	0.0047	U	0.0052	U	0.0046	U
Bromomethane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
Vinyl chloride	0.9	0.02	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Chloroethane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,1-Dichloroethene	100	0.33	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
trans-1,2-Dichloroethene	100	0.19	mg/kg	0.0018	U	0.0015	U	0.0014	U	0.0018	U	0.0018	U	0.0018	U	0.002	U	0.0017	U
Trichloroethene	21	0.47	mg/kg	0.00062	U	0.00051	U	0.022		0.00028	J	0.00061	U	0.00059	U	0.00065	U	0.00057	U

Table 1. Soil Analytical Results
89-93 Gerry Street, Brooklyn, NY

Sample ID:				B-1 (3-5')		B-1 (10-12')		B-3 (1-3')		B-3 (13-15')		B-4 (1-3')		B-4 (10-12')		B-5 (0-2')		B-5 (10-12')	
Collection Date:				10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020		10/1/2020	
Lab ID:				L2041810-01		L2041810-02		L2041810-03		L2041810-04		L2041810-05		L2041810-06		L2041810-07		L2041810-08	
Sample Type:				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
1,2-Dichlorobenzene	100	1.1	mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,3-Dichlorobenzene	49	2.4	mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,4-Dichlorobenzene	13	1.8	mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
Methyl tert butyl ether	100	0.93	mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
p/m-Xylene			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
o-Xylene			mg/kg	0.00047	J	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Xylenes, Total	100	0.26	mg/kg	0.00047	J	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
cis-1,2-Dichloroethene	100	0.25	mg/kg	0.0056		0.031		0.0037		0.086		0.0012	U	0.0083		0.0013	U	0.0011	U
1,2-Dichloroethene, Total			mg/kg	0.0056		0.031		0.0037		0.086		0.0012	U	0.0083		0.0013	U	0.0011	U
Dibromomethane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
Styrene			mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
Dichlorodifluoromethane			mg/kg	0.012	U	0.01	U	0.0092	U	0.012	U	0.012	U	0.012	U	0.013	U	0.011	U
Acetone	100	0.05	mg/kg	0.03		0.01	U	0.0092	U	0.01	J	0.012	U	0.012	U	0.013	U	0.011	U
Carbon disulfide			mg/kg	0.012	U	0.01	U	0.0092	U	0.012	U	0.012	U	0.012	U	0.013	U	0.011	U
2-Butanone	100	0.12	mg/kg	0.0032	J	0.01	U	0.0092	U	0.012	U	0.012	U	0.012	U	0.013	U	0.011	U
Vinyl acetate			mg/kg	0.012	U	0.01	U	0.0092	U	0.012	U	0.012	U	0.012	U	0.013	U	0.011	U
4-Methyl-2-pentanone			mg/kg	0.012	U	0.01	U	0.0092	U	0.012	U	0.012	U	0.012	U	0.013	U	0.011	U
1,2,3-Trichloropropane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
2-Hexanone			mg/kg	0.012	U	0.01	U	0.0092	U	0.012	U	0.012	U	0.012	U	0.013	U	0.011	U
Bromochloromethane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
2,2-Dichloropropane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,2-Dibromoethane			mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
1,3-Dichloropropane			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,1,1,2-Tetrachloroethane			mg/kg	0.00062	U	0.00051	U	0.00046	U	0.00062	U	0.00061	U	0.00059	U	0.00065	U	0.00057	U
Bromobenzene			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
n-Butylbenzene	100	12	mg/kg	0.0002	J	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
sec-Butylbenzene	100	11	mg/kg	0.00039	J	0.001	U	0.00092	U	0.0012	U	0.00018	J	0.0012	U	0.0013	U	0.0011	U
tert-Butylbenzene	100	5.9	mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
o-Chlorotoluene			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
p-Chlorotoluene			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,2-Dibromo-3-chloropropane			mg/kg	0.0037	U	0.0031	U	0.0028	U	0.0037	U	0.0037	U	0.0035	U	0.0039	U	0.0034	U
Hexachlorobutadiene			mg/kg	0.0049	U	0.0041	U	0.0037	U	0.0049	U	0.0049	U	0.0047	U	0.0052	U	0.0046	U
Isopropylbenzene			mg/kg	0.0002	J	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
p-Isopropyltoluene			mg/kg	0.00031	J	0.001	U	0.00092	U	0.0012	U	0.00034	J	0.0012	U	0.00021	J	0.0011	U
Naphthalene	100	12	mg/kg	0.0014	J	0.0041	U	0.0037	U	0.0049	U	0.0081		0.0047	U	0.0052	U	0.0046	U
Acrylonitrile			mg/kg	0.0049	U	0.0041	U	0.0037	U	0.0049	U	0.0049	U	0.0047	U	0.0052	U	0.0046	U
n-Propylbenzene	100	3.9	mg/kg	0.0012	U	0.001	U	0.00092	U	0.0012	U	0.0012	U	0.0012	U	0.0013	U	0.0011	U
1,2,3-Trichlorobenzene			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,2,4-Trichlorobenzene			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,3,5-Trimethylbenzene	52	8.4	mg/kg	0.0012	J	0.002	U	0.0018	U	0.0025	U	0.00037	J	0.0024	U	0.0026	U	0.0023	U
1,2,4-Trimethylbenzene	52	3.6	mg/kg	0.0027		0.002	U	0.0018	U	0.0025	U	0.00041	J	0.0024	U	0.0026	U	0.0023	U
1,4-Dioxane	13	0.1	mg/kg	0.098	U	0.082	U	0.074	U	0.099	U	0.098	U	0.094	U	0.1	U	0.092	U
p-Diethylbenzene			mg/kg	0.0023	J	0.002	U	0.0018	U	0.0025	U	0.0037		0.0024	U	0.0026	U	0.0023	U
p-Ethyltoluene			mg/kg	0.0011	J	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
1,2,4,5-Tetramethylbenzene			mg/kg	0.00097	J	0.002	U	0.0018	U	0.0025	U	0.0015	J	0.0024	U	0.0026	U	0.0023	U
Ethyl ether			mg/kg	0.0025	U	0.002	U	0.0018	U	0.0025	U	0.0024	U	0.0024	U	0.0026	U	0.0023	U
trans-1,4-Dichloro-2-butene			mg/kg	0.0062	U	0.0051	U	0.0046	U	0.0062	U	0.0061	U	0.0059	U	0.0065	U	0.0057	U

Notes:
* Comparison is not performed on parameters with non-numeric criteria. U - Non-detect Result J - Estaimated Result
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria, New York Restricted use Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.
NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria Criteria per 6 NYCRR Part 375 Environmental Remediation Programs, effective December 14, 2006.

Table 2. Groundwater Results
89-93 Gerry Street, Brooklyn, NY

Sample ID:			TW-1		TW-2	
Collection Date:			10/1/2020		10/1/2020	
Lab ID:			L2041806-01		L2041806-02	
Sample Type:			WATER		WATER	
	NY-AWQS	Units	Results	Qual	Results	Qual
Polychlorinated Biphenyls by GC						
Aroclor 1016	0.09	ug/l	0.083	U	0.083	U
Aroclor 1221	0.09	ug/l	0.083	U	0.083	U
Aroclor 1232	0.09	ug/l	0.083	U	0.083	U
Aroclor 1242	0.09	ug/l	0.083	U	0.083	U
Aroclor 1248	0.09	ug/l	0.083	U	0.083	U
Aroclor 1254	0.09	ug/l	0.083	U	0.083	U
Aroclor 1260	0.09	ug/l	0.083	U	0.083	U
Aroclor 1262	0.09	ug/l	0.083	U	0.083	U
Aroclor 1268	0.09	ug/l	0.083	U	0.083	U
PCBs, Total		ug/l	0.083	U	0.083	U
Semivolatile Organics by GC/MS						
1,2,4-Trichlorobenzene	5	ug/l	5	U	5	U
Bis(2-chloroethyl)ether	1	ug/l	2	U	2	U
1,2-Dichlorobenzene	3	ug/l	2	U	2	U
1,3-Dichlorobenzene	3	ug/l	2	U	2	U
1,4-Dichlorobenzene	3	ug/l	2	U	2	U
3,3'-Dichlorobenzidine	5	ug/l	5	U	5	U
2,4-Dinitrotoluene	5	ug/l	5	U	5	U
2,6-Dinitrotoluene	5	ug/l	5	U	5	U
4-Chlorophenyl phenyl ether		ug/l	2	U	2	U
4-Bromophenyl phenyl ether		ug/l	2	U	2	U
Bis(2-chloroisopropyl)ether	5	ug/l	2	U	2	U
Bis(2-chloroethoxy)methane	5	ug/l	5	U	5	U
Hexachlorocyclopentadiene	5	ug/l	20	U	20	U
Isophorone	50	ug/l	5	U	5	U
Nitrobenzene	0.4	ug/l	2	U	2	U
NDPA/DPA	50	ug/l	2	U	2	U
n-Nitrosodi-n-propylamine		ug/l	5	U	5	U
Bis(2-ethylhexyl)phthalate	5	ug/l	3	U	1.5	J
Butyl benzyl phthalate	50	ug/l	5	U	5	U
Di-n-butylphthalate	50	ug/l	5	U	0.4	J
Di-n-octylphthalate	50	ug/l	5	U	5	U
Diethyl phthalate	50	ug/l	5	U	5	U
Dimethyl phthalate	50	ug/l	5	U	5	U
Biphenyl		ug/l	2	U	2	U
4-Chloroaniline	5	ug/l	5	U	5	U
2-Nitroaniline	5	ug/l	5	U	5	U
3-Nitroaniline	5	ug/l	5	U	5	U
4-Nitroaniline	5	ug/l	5	U	5	U
Dibenzofuran		ug/l	2	U	2	U
1,2,4,5-Tetrachlorobenzene	5	ug/l	10	U	10	U
Acetophenone		ug/l	5	U	5	U
2,4,6-Trichlorophenol		ug/l	5	U	5	U
p-Chloro-m-cresol		ug/l	2	U	2	U
2-Chlorophenol		ug/l	2	U	2	U
2,4-Dichlorophenol	1	ug/l	5	U	5	U
2,4-Dimethylphenol	50	ug/l	5	U	5	U
2-Nitrophenol		ug/l	10	U	10	U
4-Nitrophenol		ug/l	10	U	10	U
2,4-Dinitrophenol	10	ug/l	20	U	20	U
4,6-Dinitro-o-cresol		ug/l	10	U	10	U
Phenol	1	ug/l	5	U	5	U
2-Methylphenol		ug/l	5	U	5	U
3-Methylphenol/4-Methylphenol		ug/l	5	U	5	U
2,4,5-Trichlorophenol		ug/l	5	U	5	U
Benzoic Acid		ug/l	50	U	8.7	J
Benzyl Alcohol		ug/l	2	U	2	U
Carbazole		ug/l	2	U	2	U

Table 2. Groundwater Results
89-93 Gerry Street, Brooklyn, NY

Sample ID:			TW-1		TW-2	
Collection Date:			10/1/2020		10/1/2020	
Lab ID:			L2041806-01		L2041806-02	
Sample Type:			WATER		WATER	
	NY-AWQS	Units	Results	Qual	Results	Qual
Semivolatile Organics by GC/MS-SIM						
Acenaphthene	20	ug/l	0.1	U	0.02	J
2-Chloronaphthalene	10	ug/l	0.2	U	0.2	U
Fluoranthene	50	ug/l	0.12		0.09	J
Hexachlorobutadiene	0.5	ug/l	0.5	U	0.5	U
Naphthalene	10	ug/l	0.1	U	0.1	U
Benzo(a)anthracene	0.002	ug/l	0.07	J	0.04	J
Benzo(a)pyrene	0	ug/l	0.06	J	0.03	J
Benzo(b)fluoranthene	0.002	ug/l	0.06	J	0.03	J
Benzo(k)fluoranthene	0.002	ug/l	0.05	J	0.02	J
Chrysene	0.002	ug/l	0.07	J	0.04	J
Acenaphthylene		ug/l	0.1	U	0.1	U
Anthracene	50	ug/l	0.04	J	0.04	J
Benzo(ghi)perylene		ug/l	0.05	J	0.04	J
Fluorene	50	ug/l	0.1	U	0.1	U
Phenanthrene	50	ug/l	0.1	J	0.13	
Dibenzo(a,h)anthracene		ug/l	0.1	U	0.02	J
Indeno(1,2,3-cd)pyrene	0.002	ug/l	0.05	J	0.02	J
Pyrene	50	ug/l	0.11		0.08	J
2-Methylnaphthalene		ug/l	0.1	U	0.1	U
Pentachlorophenol	1	ug/l	0.8	U	0.8	U
Hexachlorobenzene	0.04	ug/l	0.8	U	0.8	U
Hexachloroethane	5	ug/l	0.8	U	0.8	U
Total Metals						
Aluminum, Total		ug/l	2950		619	
Antimony, Total	3	ug/l	0.66	J	4	U
Arsenic, Total	25	ug/l	1.55		0.66	
Barium, Total	1000	ug/l	94.65		75.41	
Beryllium, Total	3	ug/l	0.15	J	0.5	U
Cadmium, Total	5	ug/l	0.2	U	0.2	U
Calcium, Total		ug/l	253000		155000	
Chromium, Total	50	ug/l	9.28		2.03	
Cobalt, Total		ug/l	4.42		2.09	
Copper, Total	200	ug/l	15.56		8.04	
Iron, Total	300	ug/l	3810		1970	
Lead, Total	25	ug/l	4.97		4.07	
Magnesium, Total	35000	ug/l	26900		12200	
Manganese, Total	300	ug/l	127.3		320.2	
Mercury, Total	0.7	ug/l	0.2	U	0.2	U
Nickel, Total	100	ug/l	23.27		12.51	
Potassium, Total		ug/l	24600		16900	
Selenium, Total	10	ug/l	7.75		5	U
Silver, Total	50	ug/l	0.4	U	0.4	U
Sodium, Total	20000	ug/l	88800		61100	
Thallium, Total	0.5	ug/l	0.5	U	0.5	U
Vanadium, Total		ug/l	14.57		2.63	J
Zinc, Total	2000	ug/l	12.76		11.98	

Table 2. Groundwater Results
89-93 Gerry Street, Brooklyn, NY

Sample ID:			**TW-1**		**TW-2**	
Collection Date:			**10/1/2020**		**10/1/2020**	
Lab ID:			**L2041806-01**		**L2041806-02**	
Sample Type:			**WATER**		**WATER**	
	NY-AWQS	**Units**	**Results**	**Qual**	**Results**	**Qual**
Volatile Organics by GC/MS						
Methylene chloride	5	ug/l	6.2	U	2.5	U
1,1-Dichloroethane	5	ug/l	6.2	U	2.5	U
Chloroform	7	ug/l	6.2	U	2.5	U
Carbon tetrachloride	5	ug/l	1.2	U	0.5	U
1,2-Dichloropropane	1	ug/l	2.5	U	1	U
Dibromochloromethane	50	ug/l	1.2	U	0.5	U
1,1,2-Trichloroethane	1	ug/l	3.8	U	1.5	U
Tetrachloroethene	5	ug/l	1.2	U	0.19	J
Chlorobenzene	5	ug/l	6.2	U	2.5	U
Trichlorofluoromethane	5	ug/l	6.2	U	2.5	U
1,2-Dichloroethane	0.6	ug/l	1.2	U	0.5	U
1,1,1-Trichloroethane	5	ug/l	6.2	U	2.5	U
Bromodichloromethane	50	ug/l	1.2	U	0.5	U
trans-1,3-Dichloropropene	0.4	ug/l	1.2	U	0.5	U
cis-1,3-Dichloropropene	0.4	ug/l	1.2	U	0.5	U
1,3-Dichloropropene, Total		ug/l	1.2	U	0.5	U
1,1-Dichloropropene	5	ug/l	6.2	U	2.5	U
Bromoform	50	ug/l	5	U	2	U
1,1,2,2-Tetrachloroethane	5	ug/l	1.2	U	0.5	U
Benzene	1	ug/l	1.2	U	0.5	U
Toluene	5	ug/l	6.2	U	2.5	U
Ethylbenzene	5	ug/l	6.2	U	2.5	U
Chloromethane		ug/l	6.2	U	2.5	U
Bromomethane	5	ug/l	6.2	U	2.5	U
Vinyl chloride	2	ug/l	1.4	J	29	
Chloroethane	5	ug/l	6.2	U	2.5	U
1,1-Dichloroethene	5	ug/l	1.2	U	0.17	J
trans-1,2-Dichloroethene	5	ug/l	6.2	U	2.5	U
Trichloroethene	5	ug/l	1.4		0.51	
1,2-Dichlorobenzene	3	ug/l	6.2	U	2.5	U
1,3-Dichlorobenzene	3	ug/l	6.2	U	2.5	U
1,4-Dichlorobenzene	3	ug/l	6.2	U	2.5	U
Methyl tert butyl ether	10	ug/l	6.2	U	2.5	U
p/m-Xylene	5	ug/l	6.2	U	2.5	U
o-Xylene	5	ug/l	6.2	U	2.5	U
Xylenes, Total		ug/l	6.2	U	2.5	U
cis-1,2-Dichloroethene	5	ug/l	260		160	
1,2-Dichloroethene, Total		ug/l	260		160	
Dibromomethane	5	ug/l	12	U	5	U
1,2,3-Trichloropropane	0.04	ug/l	6.2	U	2.5	U
Acrylonitrile	5	ug/l	12	U	5	U
Styrene	5	ug/l	6.2	U	2.5	U
Dichlorodifluoromethane	5	ug/l	12	U	5	U
Acetone	50	ug/l	12	U	5	U
Carbon disulfide	60	ug/l	12	U	5	U
2-Butanone	50	ug/l	12	U	5	U
Vinyl acetate		ug/l	12	U	5	U
4-Methyl-2-pentanone		ug/l	12	U	5	U
2-Hexanone	50	ug/l	12	U	5	U
Bromochloromethane	5	ug/l	6.2	U	2.5	U
2,2-Dichloropropane	5	ug/l	6.2	U	2.5	U
1,2-Dibromoethane	0.0006	ug/l	5	U	2	U

Sample ID:			TW-1		TW-2	
Collection Date:			**10/1/2020**		**10/1/2020**	
Lab ID:			**L2041806-01**		**L2041806-02**	
Sample Type:			**WATER**		**WATER**	
	NY-AWQS	**Units**	**Results**	**Qual**	**Results**	**Qual**
1,3-Dichloropropane	5	ug/l	6.2	U	2.5	U
1,1,1,2-Tetrachloroethane	5	ug/l	6.2	U	2.5	U
Bromobenzene	5	ug/l	6.2	U	2.5	U
n-Butylbenzene	5	ug/l	6.2	U	2.5	U
sec-Butylbenzene	5	ug/l	6.2	U	2.5	U
tert-Butylbenzene	5	ug/l	6.2	U	2.5	U
o-Chlorotoluene	5	ug/l	6.2	U	2.5	U
p-Chlorotoluene	5	ug/l	6.2	U	2.5	U
1,2-Dibromo-3-chloropropane	0.04	ug/l	6.2	U	2.5	U
Hexachlorobutadiene	0.5	ug/l	6.2	U	2.5	U
Isopropylbenzene	5	ug/l	6.2	U	2.5	U
p-Isopropyltoluene	5	ug/l	6.2	U	2.5	U
Naphthalene	10	ug/l	6.2	U	2.5	U
n-Propylbenzene	5	ug/l	6.2	U	2.5	U
1,2,3-Trichlorobenzene	5	ug/l	6.2	U	2.5	U
1,2,4-Trichlorobenzene	5	ug/l	6.2	U	2.5	U
1,3,5-Trimethylbenzene	5	ug/l	6.2	U	2.5	U
1,2,4-Trimethylbenzene	5	ug/l	6.2	U	2.5	U
1,4-Dioxane		ug/l	620	U	250	U
p-Diethylbenzene		ug/l	5	U	2	U
p-Ethyltoluene		ug/l	5	U	2	U
1,2,4,5-Tetramethylbenzene	5	ug/l	5	U	2	U
Ethyl ether		ug/l	6.2	U	2.5	U
trans-1,4-Dichloro-2-butene	5	ug/l	6.2	U	2.5	U

Notes:

* Comparison is not performed on parameters with non-numeric criteria.

NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.

Table 3. Soil Vapor Results
89-93 Gerry Street, Brooklyn, NY

Sample ID:					**SV-1**		**SV-2**	
Collection Date:					**10/1/2020**		**10/1/2020**	
Lab ID:					**L2041786-01**		**L2041786-02**	
Sample Type:					**SOIL VAPOR**		**SOIL_VAPOR**	
	NY-SSC-A	**NY-SSC-B**	**NY-SSC-C**	**Units**	**Results**	**Qual**	**Results**	**Qual**
Volatile Organics in Air								
Dichlorodifluoromethane				ug/m3	9.89	U	12.4	U
Chloromethane				ug/m3	4.13	U	5.16	U
Freon-114				ug/m3	14	U	17.5	U
Vinyl chloride			6	ug/m3	455		6.39	U
1,3-Butadiene				ug/m3	4.42	U	5.53	U
Bromomethane				ug/m3	7.77	U	9.71	U
Chloroethane				ug/m3	5.28	U	6.6	U
Ethanol				ug/m3	94.2	U	118	U
Vinyl bromide				ug/m3	8.74	U	10.9	U
Acetone				ug/m3	119		2050	
Trichlorofluoromethane				ug/m3	11.2	U	14	U
Isopropanol				ug/m3	12.3	U	15.4	U
1,1-Dichloroethene	6			ug/m3	7.93	U	9.91	U
Tertiary butyl Alcohol				ug/m3	15.2	U	18.9	U
Methylene chloride		100		ug/m3	17.4	U	21.7	U
3-Chloropropene				ug/m3	6.26	U	7.83	U
Carbon disulfide				ug/m3	87.2		7.79	U
Freon-113				ug/m3	15.3	U	19.2	U
trans-1,2-Dichloroethene				ug/m3	14.3		9.91	U
1,1-Dichloroethane				ug/m3	8.09	U	10.1	U
Methyl tert butyl ether				ug/m3	7.21	U	9.01	U
2-Butanone				ug/m3	1240		1880	
cis-1,2-Dichloroethene	6			ug/m3	658		9.91	U
Ethyl Acetate				ug/m3	18	U	22.5	U
Chloroform				ug/m3	9.77	U	12.2	U
Tetrahydrofuran				ug/m3	14.7	U	18.4	U
1,2-Dichloroethane				ug/m3	8.09	U	10.1	U
n-Hexane				ug/m3	13.5		27.1	
1,1,1-Trichloroethane		100		ug/m3	10.9	U	13.6	U
Benzene				ug/m3	6.39	U	7.99	U
Carbon tetrachloride	6			ug/m3	12.6	U	15.7	U
Cyclohexane				ug/m3	17.4		8.61	U
1,2-Dichloropropane				ug/m3	9.24	U	11.6	U
Bromodichloromethane				ug/m3	13.4	U	16.7	U
1,4-Dioxane				ug/m3	7.21	U	9.01	U
Trichloroethene	6			ug/m3	118		13.4	U
2,2,4-Trimethylpentane				ug/m3	13.4		11.7	U
Heptane				ug/m3	8.2	U	10.4	
cis-1,3-Dichloropropene				ug/m3	9.08	U	11.3	U
4-Methyl-2-pentanone				ug/m3	20.5	U	25.6	U
trans-1,3-Dichloropropene				ug/m3	9.08	U	11.3	U
1,1,2-Trichloroethane				ug/m3	10.9	U	13.6	U
Toluene				ug/m3	47.5		34.2	
2-Hexanone				ug/m3	128		201	
Dibromochloromethane				ug/m3	17	U	21.3	U
1,2-Dibromoethane				ug/m3	15.4	U	19.2	U
Tetrachloroethene		100		ug/m3	13.9		17	U
Chlorobenzene				ug/m3	9.21	U	11.5	U
Ethylbenzene				ug/m3	10.9		15.7	
p/m-Xylene				ug/m3	40.7		49.5	
Bromoform				ug/m3	20.7	U	25.8	U
Styrene				ug/m3	8.52	U	10.6	U
1,1,2,2-Tetrachloroethane				ug/m3	13.7	U	17.2	U
o-Xylene				ug/m3	15.1		17.7	
4-Ethyltoluene				ug/m3	9.83	U	12.3	U
1,2,4-Trimethylbenzene				ug/m3	9.83	U	12.3	U
Benzyl chloride				ug/m3	10.4	U	12.9	U
1,3-Dichlorobenzene				ug/m3	12	U	15	U
1,4-Dichlorobenzene				ug/m3	12	U	15	U
1,2-Dichlorobenzene				ug/m3	12	U	15	U
1,2,4-Trichlorobenzene				ug/m3	14.8	U	18.6	U
Hexachlorobutadiene				ug/m3	21.3	U	26.7	U
Volatile Organics in Air by SIM								
1,3,5-Trimethybenzene				ug/m3	1.28		1.35	
Notes:								
* Comparison is not performed on parameters with non-numeric criteria.								
NY-SSC-A: New York DOH Matrix A Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.								
NY-SSC-B: New York DOH Matrix B Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.								
NY-SSC-C: New York DOH Matrix C Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.								

ATTACHMENT A

LABORATORY REPORTS

ANALYTICAL REPORT

Lab Number:	L2041786
Client:	Haley & Aldrich 237 West 35th Street 16th Floor New York, NY 10123
ATTN:	Mari Conlon
Phone:	(347) 271-1521
Project Name:	89-93 GERRY STREET
Project Number:	135597-002
Report Date:	10/07/20

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

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Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041786
Report Date: 10/07/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2041786-01	SV-1	SOIL_VAPOR	89-93 GERRY STREET, BROOKLYN, NY	10/01/20 13:55	10/01/20
L2041786-02	SV-2	SOIL_VAPOR	89-93 GERRY STREET, BROOKLYN, NY	10/01/20 13:12	10/01/20

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041786
Project Number:	135597-002	**Report Date:**	10/07/20

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on October 1, 2020. The canister certification results are provided as an addendum.

L2041786-01: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

L2041786-02: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

The WG1418804-3 LCS recoveries for 1,3,5-trimethylbenzene (69%) are outside the 70%-130% acceptance limit. Results for this analyte were reported via the TO15-SIM analysis.

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

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative

Date: 10/07/20

AIR

Project Name: 89-93 GERRY STREET **Lab Number:** L2041786
Project Number: 135597-002 **Report Date:** 10/07/20

SAMPLE RESULTS

Lab ID: L2041786-01 D
Client ID: SV-1
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 13:55
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 10/06/20 19:54
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	2.00	--	ND	9.89	--		10
Chloromethane	ND	2.00	--	ND	4.13	--		10
Freon-114	ND	2.00	--	ND	14.0	--		10
Vinyl chloride	178	2.00	--	455	5.11	--		10
1,3-Butadiene	ND	2.00	--	ND	4.42	--		10
Bromomethane	ND	2.00	--	ND	7.77	--		10
Chloroethane	ND	2.00	--	ND	5.28	--		10
Ethanol	ND	50.0	--	ND	94.2	--		10
Vinyl bromide	ND	2.00	--	ND	8.74	--		10
Acetone	50.0	10.0	--	119	23.8	--		10
Trichlorofluoromethane	ND	2.00	--	ND	11.2	--		10
Isopropanol	ND	5.00	--	ND	12.3	--		10
1,1-Dichloroethene	ND	2.00	--	ND	7.93	--		10
Tertiary butyl Alcohol	ND	5.00	--	ND	15.2	--		10
Methylene chloride	ND	5.00	--	ND	17.4	--		10
3-Chloropropene	ND	2.00	--	ND	6.26	--		10
Carbon disulfide	28.0	2.00	--	87.2	6.23	--		10
Freon-113	ND	2.00	--	ND	15.3	--		10
trans-1,2-Dichloroethene	3.60	2.00	--	14.3	7.93	--		10
1,1-Dichloroethane	ND	2.00	--	ND	8.09	--		10
Methyl tert butyl ether	ND	2.00	--	ND	7.21	--		10
2-Butanone	421	5.00	--	1240	14.7	--		10
cis-1,2-Dichloroethene	166	2.00	--	658	7.93	--		10

Project Name:	89-93 GERRY STREET	***Lab Number:***	L2041786
Project Number:	135597-002	***Report Date:***	10/07/20

SAMPLE RESULTS

Lab ID:	L2041786-01 D	Date Collected:	10/01/20 13:55
Client ID:	SV-1	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	5.00	--	ND	18.0	--		10
Chloroform	ND	2.00	--	ND	9.77	--		10
Tetrahydrofuran	ND	5.00	--	ND	14.7	--		10
1,2-Dichloroethane	ND	2.00	--	ND	8.09	--		10
n-Hexane	3.83	2.00	--	13.5	7.05	--		10
1,1,1-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Benzene	ND	2.00	--	ND	6.39	--		10
Carbon tetrachloride	ND	2.00	--	ND	12.6	--		10
Cyclohexane	5.06	2.00	--	17.4	6.88	--		10
1,2-Dichloropropane	ND	2.00	--	ND	9.24	--		10
Bromodichloromethane	ND	2.00	--	ND	13.4	--		10
1,4-Dioxane	ND	2.00	--	ND	7.21	--		10
Trichloroethene	22.0	2.00	--	118	10.7	--		10
2,2,4-Trimethylpentane	2.87	2.00	--	13.4	9.34	--		10
Heptane	ND	2.00	--	ND	8.20	--		10
cis-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
4-Methyl-2-pentanone	ND	5.00	--	ND	20.5	--		10
trans-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
1,1,2-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Toluene	12.6	2.00	--	47.5	7.54	--		10
2-Hexanone	31.2	2.00	--	128	8.20	--		10
Dibromochloromethane	ND	2.00	--	ND	17.0	--		10
1,2-Dibromoethane	ND	2.00	--	ND	15.4	--		10
Tetrachloroethene	2.05	2.00	--	13.9	13.6	--		10
Chlorobenzene	ND	2.00	--	ND	9.21	--		10
Ethylbenzene	2.52	2.00	--	10.9	8.69	--		10

Project Name:	89-93 GERRY STREET	***Lab Number:***	L2041786
Project Number:	135597-002	***Report Date:***	10/07/20

SAMPLE RESULTS

Lab ID:	L2041786-01 D	Date Collected:	10/01/20 13:55
Client ID:	SV-1	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	9.38	4.00	--	40.7	17.4	--		10
Bromoform	ND	2.00	--	ND	20.7	--		10
Styrene	ND	2.00	--	ND	8.52	--		10
1,1,2,2-Tetrachloroethane	ND	2.00	--	ND	13.7	--		10
o-Xylene	3.47	2.00	--	15.1	8.69	--		10
4-Ethyltoluene	ND	2.00	--	ND	9.83	--		10
1,2,4-Trimethylbenzene	ND	2.00	--	ND	9.83	--		10
Benzyl chloride	ND	2.00	--	ND	10.4	--		10
1,3-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,4-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2,4-Trichlorobenzene	ND	2.00	--	ND	14.8	--		10
Hexachlorobutadiene	ND	2.00	--	ND	21.3	--		10

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	99		60-140
Bromochloromethane	100		60-140
chlorobenzene-d5	96		60-140

Project Name:	89-93 GERRY STREET	***Lab Number:***	L2041786
Project Number:	135597-002	***Report Date:***	10/07/20

SAMPLE RESULTS

Lab ID:	L2041786-01 D	Date Collected:	10/01/20 13:55
Client ID:	SV-1	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 10/06/20 19:54
Analyst: EW

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
1,3,5-Trimethybenzene	0.260	0.200	--	1.28	0.983	--		10

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	99		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	95		60-140

Project Name: 89-93 GERRY STREET | **Lab Number:** L2041786
Project Number: 135597-002 | **Report Date:** 10/07/20

SAMPLE RESULTS

Lab ID: L2041786-02 D
Client ID: SV-2
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 13:12
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 10/06/20 20:30
Analyst: RY

	ppbV			ug/m3				
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	2.50	--	ND	12.4	--		12.5
Chloromethane	ND	2.50	--	ND	5.16	--		12.5
Freon-114	ND	2.50	--	ND	17.5	--		12.5
Vinyl chloride	ND	2.50	--	ND	6.39	--		12.5
1,3-Butadiene	ND	2.50	--	ND	5.53	--		12.5
Bromomethane	ND	2.50	--	ND	9.71	--		12.5
Chloroethane	ND	2.50	--	ND	6.60	--		12.5
Ethanol	ND	62.5	--	ND	118	--		12.5
Vinyl bromide	ND	2.50	--	ND	10.9	--		12.5
Acetone	862	12.5	--	2050	29.7	--		12.5
Trichlorofluoromethane	ND	2.50	--	ND	14.0	--		12.5
Isopropanol	ND	6.25	--	ND	15.4	--		12.5
1,1-Dichloroethene	ND	2.50	--	ND	9.91	--		12.5
Tertiary butyl Alcohol	ND	6.25	--	ND	18.9	--		12.5
Methylene chloride	ND	6.25	--	ND	21.7	--		12.5
3-Chloropropene	ND	2.50	--	ND	7.83	--		12.5
Carbon disulfide	ND	2.50	--	ND	7.79	--		12.5
Freon-113	ND	2.50	--	ND	19.2	--		12.5
trans-1,2-Dichloroethene	ND	2.50	--	ND	9.91	--		12.5
1,1-Dichloroethane	ND	2.50	--	ND	10.1	--		12.5
Methyl tert butyl ether	ND	2.50	--	ND	9.01	--		12.5
2-Butanone	636	6.25	--	1880	18.4	--		12.5
cis-1,2-Dichloroethene	ND	2.50	--	ND	9.91	--		12.5

Project Name: 89-93 GERRY STREET **Lab Number:** L2041786
Project Number: 135597-002 **Report Date:** 10/07/20

SAMPLE RESULTS

Lab ID: L2041786-02 D
Client ID: SV-2
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 13:12
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	6.25	--	ND	22.5	--		12.5
Chloroform	ND	2.50	--	ND	12.2	--		12.5
Tetrahydrofuran	ND	6.25	--	ND	18.4	--		12.5
1,2-Dichloroethane	ND	2.50	--	ND	10.1	--		12.5
n-Hexane	7.70	2.50	--	27.1	8.81	--		12.5
1,1,1-Trichloroethane	ND	2.50	--	ND	13.6	--		12.5
Benzene	ND	2.50	--	ND	7.99	--		12.5
Carbon tetrachloride	ND	2.50	--	ND	15.7	--		12.5
Cyclohexane	ND	2.50	--	ND	8.61	--		12.5
1,2-Dichloropropane	ND	2.50	--	ND	11.6	--		12.5
Bromodichloromethane	ND	2.50	--	ND	16.7	--		12.5
1,4-Dioxane	ND	2.50	--	ND	9.01	--		12.5
Trichloroethene	ND	2.50	--	ND	13.4	--		12.5
2,2,4-Trimethylpentane	ND	2.50	--	ND	11.7	--		12.5
Heptane	2.54	2.50	--	10.4	10.2	--		12.5
cis-1,3-Dichloropropene	ND	2.50	--	ND	11.3	--		12.5
4-Methyl-2-pentanone	ND	6.25	--	ND	25.6	--		12.5
trans-1,3-Dichloropropene	ND	2.50	--	ND	11.3	--		12.5
1,1,2-Trichloroethane	ND	2.50	--	ND	13.6	--		12.5
Toluene	9.08	2.50	--	34.2	9.42	--		12.5
2-Hexanone	49.1	2.50	--	201	10.2	--		12.5
Dibromochloromethane	ND	2.50	--	ND	21.3	--		12.5
1,2-Dibromoethane	ND	2.50	--	ND	19.2	--		12.5
Tetrachloroethene	ND	2.50	--	ND	17.0	--		12.5
Chlorobenzene	ND	2.50	--	ND	11.5	--		12.5
Ethylbenzene	3.61	2.50	--	15.7	10.9	--		12.5

Project Name:	89-93 GERRY STREET	***Lab Number:***	L2041786
Project Number:	135597-002	***Report Date:***	10/07/20

SAMPLE RESULTS

Lab ID:	L2041786-02 D	Date Collected:	10/01/20 13:12
Client ID:	SV-2	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	11.4	5.00	--	49.5	21.7	--		12.5
Bromoform	ND	2.50	--	ND	25.8	--		12.5
Styrene	ND	2.50	--	ND	10.6	--		12.5
1,1,2,2-Tetrachloroethane	ND	2.50	--	ND	17.2	--		12.5
o-Xylene	4.08	2.50	--	17.7	10.9	--		12.5
4-Ethyltoluene	ND	2.50	--	ND	12.3	--		12.5
1,2,4-Trimethylbenzene	ND	2.50	--	ND	12.3	--		12.5
Benzyl chloride	ND	2.50	--	ND	12.9	--		12.5
1,3-Dichlorobenzene	ND	2.50	--	ND	15.0	--		12.5
1,4-Dichlorobenzene	ND	2.50	--	ND	15.0	--		12.5
1,2-Dichlorobenzene	ND	2.50	--	ND	15.0	--		12.5
1,2,4-Trichlorobenzene	ND	2.50	--	ND	18.6	--		12.5
Hexachlorobutadiene	ND	2.50	--	ND	26.7	--		12.5

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	96		60-140
Bromochloromethane	98		60-140
chlorobenzene-d5	94		60-140

Project Name:	89-93 GERRY STREET	***Lab Number:***	L2041786
Project Number:	135597-002	***Report Date:***	10/07/20

SAMPLE RESULTS

Lab ID:	L2041786-02 D	Date Collected:	10/01/20 13:12
Client ID:	SV-2	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:	
Matrix:	Soil_Vapor
Anaytical Method:	48,TO-15-SIM
Analytical Date:	10/06/20 20:30
Analyst:	EW

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
1,3,5-Trimethybenzene	0.275	0.250	--	1.35	1.23	--		12.5

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	96		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	93		60-140

Project Name: 89-93 GERRY STREET **Lab Number:** L2041786
Project Number: 135597-002 **Report Date:** 10/07/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 10/06/20 14:19

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG1418804-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041786
Project Number: 135597-002 **Report Date:** 10/07/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 10/06/20 14:19

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG1418804-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041786
Project Number: 135597-002 **Report Date:** 10/07/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 10/06/20 14:19

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG1418804-4								
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041786
Report Date: 10/07/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 10/06/20 14:59

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-02 Batch: WG1418823-4								
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Lab Number: L2041786
Project Number: 135597-002
Report Date: 10/07/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1418804-3								
Dichlorodifluoromethane	80		-		70-130	-		
Chloromethane	89		-		70-130	-		
Freon-114	86		-		70-130	-		
Vinyl chloride	87		-		70-130	-		
1,3-Butadiene	101		-		70-130	-		
Bromomethane	85		-		70-130	-		
Chloroethane	82		-		70-130	-		
Ethanol	92		-		40-160	-		
Vinyl bromide	82		-		70-130	-		
Acetone	86		-		40-160	-		
Trichlorofluoromethane	81		-		70-130	-		
Isopropanol	85		-		40-160	-		
1,1-Dichloroethene	93		-		70-130	-		
Tertiary butyl Alcohol	81		-		70-130	-		
Methylene chloride	105		-		70-130	-		
3-Chloropropene	106		-		70-130	-		
Carbon disulfide	91		-		70-130	-		
Freon-113	87		-		70-130	-		
trans-1,2-Dichloroethene	93		-		70-130	-		
1,1-Dichloroethane	94		-		70-130	-		
Methyl tert butyl ether	85		-		70-130	-		
2-Butanone	104		-		70-130	-		
cis-1,2-Dichloroethene	95		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041786
Report Date: 10/07/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1418804-3								
Ethyl Acetate	99		-		70-130	-		
Chloroform	100		-		70-130	-		
Tetrahydrofuran	100		-		70-130	-		
1,2-Dichloroethane	101		-		70-130	-		
n-Hexane	106		-		70-130	-		
1,1,1-Trichloroethane	108		-		70-130	-		
Benzene	103		-		70-130	-		
Carbon tetrachloride	117		-		70-130	-		
Cyclohexane	107		-		70-130	-		
1,2-Dichloropropane	107		-		70-130	-		
Bromodichloromethane	116		-		70-130	-		
1,4-Dioxane	106		-		70-130	-		
Trichloroethene	100		-		70-130	-		
2,2,4-Trimethylpentane	111		-		70-130	-		
Heptane	121		-		70-130	-		
cis-1,3-Dichloropropene	109		-		70-130	-		
4-Methyl-2-pentanone	125		-		70-130	-		
trans-1,3-Dichloropropene	98		-		70-130	-		
1,1,2-Trichloroethane	104		-		70-130	-		
Toluene	85		-		70-130	-		
2-Hexanone	107		-		70-130	-		
Dibromochloromethane	102		-		70-130	-		
1,2-Dibromoethane	91		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041786
Report Date: 10/07/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1418804-3								
Tetrachloroethene	85		-		70-130	-		
Chlorobenzene	90		-		70-130	-		
Ethylbenzene	91		-		70-130	-		
p/m-Xylene	91		-		70-130	-		
Bromoform	99		-		70-130	-		
Styrene	91		-		70-130	-		
1,1,2,2-Tetrachloroethane	102		-		70-130	-		
o-Xylene	92		-		70-130	-		
4-Ethyltoluene	94		-		70-130	-		
1,3,5-Trimethylbenzene	**69**	Q	-		70-130	-		
1,2,4-Trimethylbenzene	95		-		70-130	-		
Benzyl chloride	100		-		70-130	-		
1,3-Dichlorobenzene	96		-		70-130	-		
1,4-Dichlorobenzene	94		-		70-130	-		
1,2-Dichlorobenzene	92		-		70-130	-		
1,2,4-Trichlorobenzene	79		-		70-130	-		
Hexachlorobutadiene	86		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Lab Number: L2041786
Project Number: 135597-002
Report Date: 10/07/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG1418823-3								
1,3,5-Trimethybenzene	87		-		70-130	-		25

Project Name: 89-93 GERRY STREET | **Lab Number:** L2041786

Project Number: 135597-002 | **Report Date:** 10/07/20

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2041786-01	SV-1	01820	Flow 3	10/01/20	331602		-	-	-	Pass	18.0	17.2	5
L2041786-01	SV-1	321	2.7L Can	10/01/20	331602	L2039642-01	Pass	-29.4	-5.4	-	-	-	-
L2041786-02	SV-2	01785	Flow 3	10/01/20	331602		-	-	-	Pass	18.0	17.2	5
L2041786-02	SV-2	325	2.7L Can	10/01/20	331602	L2039642-01	Pass	-29.4	-4.9	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2039642
Project Number: CANISTER QC BAT **Report Date:** 10/07/20

Air Canister Certification Results

Lab ID: L2039642-01
Client ID: CAN 2019 SHELF 20
Sample Location:

Date Collected: 09/21/20 16:00
Date Received: 09/22/20
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 09/23/20 02:15
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2039642
Project Number: CANISTER QC BAT **Report Date:** 10/07/20

Air Canister Certification Results

Lab ID: L2039642-01
Client ID: CAN 2019 SHELF 20
Sample Location:

Date Collected: 09/21/20 16:00
Date Received: 09/22/20
Field Prep: Not Specified

Sample Depth:

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name:	BATCH CANISTER CERTIFICATION	**Lab Number:**	L2039642
Project Number:	CANISTER QC BAT	**Report Date:**	10/07/20

Air Canister Certification Results

Lab ID:	L2039642-01	Date Collected:	09/21/20 16:00
Client ID:	CAN 2019 SHELF 20	Date Received:	09/22/20
Sample Location:		Field Prep:	Not Specified

Sample Depth:

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2039642
Project Number: CANISTER QC BAT **Report Date:** 10/07/20

Air Canister Certification Results

Lab ID: L2039642-01
Client ID: CAN 2019 SHELF 20
Sample Location:

Date Collected: 09/21/20 16:00
Date Received: 09/22/20
Field Prep: Not Specified

Sample Depth:

	ppbV			ug/m3				Dilution Factor
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2039642
Project Number: CANISTER QC BAT **Report Date:** 10/07/20

Air Canister Certification Results

Lab ID: L2039642-01
Client ID: CAN 2019 SHELF 20
Sample Location:

Date Collected: 09/21/20 16:00
Date Received: 09/22/20
Field Prep: Not Specified

Sample Depth:

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								

	Results	**Qualifier**	**Units**	**RDL**	**Dilution Factor**
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	94		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	90		60-140

Project Name: BATCH CANISTER CERTIFICATION | **Lab Number:** L2039642

Project Number: CANISTER QC BAT | **Report Date:** 10/07/20

Air Canister Certification Results

Lab ID: L2039642-01
Client ID: CAN 2019 SHELF 20
Sample Location:

Date Collected: 09/21/20 16:00
Date Received: 09/22/20
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 09/23/20 02:15
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Lab Number: L2039642
Project Number: CANISTER QC BAT
Report Date: 10/07/20

Air Canister Certification Results

Lab ID: L2039642-01
Client ID: CAN 2019 SHELF 20
Sample Location:
Date Collected: 09/21/20 16:00
Date Received: 09/22/20
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2039642
Project Number: CANISTER QC BAT **Report Date:** 10/07/20

Air Canister Certification Results

Lab ID: L2039642-01
Client ID: CAN 2019 SHELF 20
Sample Location:

Date Collected: 09/21/20 16:00
Date Received: 09/22/20
Field Prep: Not Specified

Sample Depth:

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	93		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	90		60-140

Project Name: 89-93 GERRY STREET

Project Number: 135597-002

Lab Number: L2041786

Report Date: 10/07/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2041786-01A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2041786-01Z	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2041786-02A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2041786-02Z	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-SIM(30)

*Values in parentheses indicate holding time in days

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Footnotes

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

Terms

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

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

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

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

Data Qualifiers

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

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

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

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

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

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

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

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

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

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

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

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

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

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

Report Format: Data Usability Report

Data Qualifiers

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

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

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

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

AIR ANALYSIS

ALPHA ANALYTICAL — CHAIN OF CUSTODY

PAGE 1 OF 1

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

Date Rec'd in Lab: 10/2/20

ALPHA Job #: L2041786

Client Information

Client: Haley & Aldrich of NY

Address: 237 West 35th Street, Floor 16, New York, NY 10123

Phone:

Fax:

Email: MConlon@haleyaldrich.com

❑ These samples have been previously analyzed by Alpha

Project Information

Project Name: 89-93 Gerry Street

Project Location: 89-93 Gerry Street Brooklyn, NY

Project #: 135597-002

Project Manager: Mari Conlon

ALPHA Quote #:

Turn-Around Time

☒ Standard ❑ RUSH (only confirmed if pre-approved)

Date Due: Time:

Report Information - Data Deliverables

❑ FAX

❑ ADEx

Criteria Checker:

(Default based on Regulatory Criteria Indicated)

Other Formats:

☒ EMAIL (standard pdf report)

☒ Additional Deliverables: PDF+ Excel

Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ❑

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM	APH	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
41786-01	SV-1	10-1-20	1155	1355	-29.84	-5.74	SV	SC	2.7L	321	01820	X					
02	SV-2	10-1-20	1109	1312	-30.01	-4.91	SV	SC	2.7L	325	01785	X					

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Relinquished By:	Date/Time	Received By:	Date/Time:
[signature]	10-1-2020 1600	[signature] (AAL)	10/1/2020 1600
[signature] (AAL)	10/1/2020 1945	[signature] AAL	10/1/20 22:30
[signature] AAL	10/2/20 03:30	[signature]	10/2/20 03:30

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

(25-Sep-15)

ANALYTICAL REPORT

Lab Number:	L2041806
Client:	Haley & Aldrich 237 West 35th Street 16th Floor New York, NY 10123
ATTN:	Mari Conlon
Phone:	(347) 271-1521
Project Name:	89-93 GERRY STREET
Project Number:	135597-002
Report Date:	10/08/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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

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

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041806
Report Date: 10/08/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2041806-01	TW-1	WATER	89-93 GERRY STREET, BROOKLYN, NY	10/01/20 14:07	10/01/20
L2041806-02	TW-2	WATER	89-93 GERRY STREET, BROOKLYN, NY	10/01/20 14:45	10/01/20

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission

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

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

Authorized Signature: Cristin Walker Cristin Walker

Title: Technical Director/Representative Date: 10/08/20

ORGANICS

VOLATILES

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806

Project Number: 135597-002 **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID:	L2041806-01	D	Date Collected:	10/01/20 14:07
Client ID:	TW-1		Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY		Field Prep:	Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/20 23:52
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethane	ND		ug/l	6.2	1.8	2.5
Chloroform	ND		ug/l	6.2	1.8	2.5
Carbon tetrachloride	ND		ug/l	1.2	0.34	2.5
1,2-Dichloropropane	ND		ug/l	2.5	0.34	2.5
Dibromochloromethane	ND		ug/l	1.2	0.37	2.5
1,1,2-Trichloroethane	ND		ug/l	3.8	1.2	2.5
Tetrachloroethene	ND		ug/l	1.2	0.45	2.5
Chlorobenzene	ND		ug/l	6.2	1.8	2.5
Trichlorofluoromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dichloroethane	ND		ug/l	1.2	0.33	2.5
1,1,1-Trichloroethane	ND		ug/l	6.2	1.8	2.5
Bromodichloromethane	ND		ug/l	1.2	0.48	2.5
trans-1,3-Dichloropropene	ND		ug/l	1.2	0.41	2.5
cis-1,3-Dichloropropene	ND		ug/l	1.2	0.36	2.5
1,3-Dichloropropene, Total	ND		ug/l	1.2	0.36	2.5
1,1-Dichloropropene	ND		ug/l	6.2	1.8	2.5
Bromoform	ND		ug/l	5.0	1.6	2.5
1,1,2,2-Tetrachloroethane	ND		ug/l	1.2	0.42	2.5
Benzene	ND		ug/l	1.2	0.40	2.5
Toluene	ND		ug/l	6.2	1.8	2.5
Ethylbenzene	ND		ug/l	6.2	1.8	2.5
Chloromethane	ND		ug/l	6.2	1.8	2.5
Bromomethane	ND		ug/l	6.2	1.8	2.5
Vinyl chloride	1.4	J	ug/l	2.5	0.18	2.5
Chloroethane	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethene	ND		ug/l	1.2	0.42	2.5
trans-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID:	L2041806-01 D	Date Collected:	10/01/20 14:07
Client ID:	TW-1	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	1.4		ug/l	1.2	0.44	2.5
1,2-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
Methyl tert butyl ether	ND		ug/l	6.2	1.8	2.5
p/m-Xylene	ND		ug/l	6.2	1.8	2.5
o-Xylene	ND		ug/l	6.2	1.8	2.5
Xylenes, Total	ND		ug/l	6.2	1.8	2.5
cis-1,2-Dichloroethene	260		ug/l	6.2	1.8	2.5
1,2-Dichloroethene, Total	260		ug/l	6.2	1.8	2.5
Dibromomethane	ND		ug/l	12	2.5	2.5
1,2,3-Trichloropropane	ND		ug/l	6.2	1.8	2.5
Acrylonitrile	ND		ug/l	12	3.8	2.5
Styrene	ND		ug/l	6.2	1.8	2.5
Dichlorodifluoromethane	ND		ug/l	12	2.5	2.5
Acetone	ND		ug/l	12	3.6	2.5
Carbon disulfide	ND		ug/l	12	2.5	2.5
2-Butanone	ND		ug/l	12	4.8	2.5
Vinyl acetate	ND		ug/l	12	2.5	2.5
4-Methyl-2-pentanone	ND		ug/l	12	2.5	2.5
2-Hexanone	ND		ug/l	12	2.5	2.5
Bromochloromethane	ND		ug/l	6.2	1.8	2.5
2,2-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,2-Dibromoethane	ND		ug/l	5.0	1.6	2.5
1,3-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	6.2	1.8	2.5
Bromobenzene	ND		ug/l	6.2	1.8	2.5
n-Butylbenzene	ND		ug/l	6.2	1.8	2.5
sec-Butylbenzene	ND		ug/l	6.2	1.8	2.5
tert-Butylbenzene	ND		ug/l	6.2	1.8	2.5
o-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
p-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	6.2	1.8	2.5
Hexachlorobutadiene	ND		ug/l	6.2	1.8	2.5
Isopropylbenzene	ND		ug/l	6.2	1.8	2.5
p-Isopropyltoluene	ND		ug/l	6.2	1.8	2.5
Naphthalene	ND		ug/l	6.2	1.8	2.5

Project Name: 89-93 GERRY STREET | **Lab Number:** L2041806
Project Number: 135597-002 | **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID:	L2041806-01 D	Date Collected:	10/01/20 14:07
Client ID:	TW-1	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	6.2	1.8	2.5
1,2,3-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3,5-Trimethylbenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trimethylbenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dioxane	ND		ug/l	620	150	2.5
p-Diethylbenzene	ND		ug/l	5.0	1.8	2.5
p-Ethyltoluene	ND		ug/l	5.0	1.8	2.5
1,2,4,5-Tetramethylbenzene	ND		ug/l	5.0	1.4	2.5
Ethyl ether	ND		ug/l	6.2	1.8	2.5
trans-1,4-Dichloro-2-butene	ND		ug/l	6.2	1.8	2.5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	95		70-130

Project Name: 89-93 GERRY STREET | **Lab Number:** L2041806
Project Number: 135597-002 | **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID: L2041806-02
Client ID: TW-2
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY
Date Collected: 10/01/20 14:45
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/06/20 23:51
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	0.19	J	ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	29		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	0.17	J	ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 89-93 GERRY STREET | **Lab Number:** L2041806
Project Number: 135597-002 | **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID: L2041806-02 | Date Collected: 10/01/20 14:45
Client ID: TW-2 | Date Received: 10/01/20
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY | Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.51		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	160		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	160		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806

Project Number: 135597-002 **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID:	L2041806-02	Date Collected:	10/01/20 14:45
Client ID:	TW-2	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	88		70-130
Dibromofluoromethane	103		70-130

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/05/20 18:50
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1418784-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041806
Report Date: 10/08/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/05/20 18:50
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1418784-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041806
Report Date: 10/08/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/05/20 18:50
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1418784-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	120		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	94		70-130

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/06/20 20:11
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1419425-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041806
Project Number:	135597-002	**Report Date:**	10/08/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/06/20 20:11
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1419425-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041806
Project Number:	135597-002	**Report Date:**	10/08/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/06/20 20:11
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1419425-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	106		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806

Project Number: 135597-002 **Report Date:** 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1418784-3 WG1418784-4								
Methylene chloride	90		89		70-130	1		20
1,1-Dichloroethane	97		96		70-130	1		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	100		100		63-132	0		20
1,2-Dichloropropane	95		95		70-130	0		20
Dibromochloromethane	110		110		63-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	98		99		70-130	1		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Bromodichloromethane	110		110		67-130	0		20
trans-1,3-Dichloropropene	120		120		70-130	0		20
cis-1,3-Dichloropropene	100		98		70-130	2		20
1,1-Dichloropropene	90		89		70-130	1		20
Bromoform	110		110		54-136	0		20
1,1,2,2-Tetrachloroethane	120		120		67-130	0		20
Benzene	92		91		70-130	1		20
Toluene	100		100		70-130	0		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	72		72		64-130	0		20
Bromomethane	47		51		39-139	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET

Project Number: 135597-002

Lab Number: L2041806

Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1418784-3 WG1418784-4								
Vinyl chloride	87		86		55-140	1		20
Chloroethane	96		95		55-138	1		20
1,1-Dichloroethene	86		85		61-145	1		20
trans-1,2-Dichloroethene	87		89		70-130	2		20
Trichloroethene	98		96		70-130	2		20
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	100		100		63-130	0		20
p/m-Xylene	105		105		70-130	0		20
o-Xylene	105		110		70-130	5		20
cis-1,2-Dichloroethene	94		94		70-130	0		20
Dibromomethane	96		95		70-130	1		20
1,2,3-Trichloropropane	120		130		64-130	8		20
Acrylonitrile	100		100		70-130	0		20
Styrene	110		110		70-130	0		20
Dichlorodifluoromethane	98		96		36-147	2		20
Acetone	100		100		58-148	0		20
Carbon disulfide	89		88		51-130	1		20
2-Butanone	99		99		63-138	0		20
Vinyl acetate	100		100		70-130	0		20
4-Methyl-2-pentanone	120		120		59-130	0		20
2-Hexanone	120		120		57-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041806
Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1418784-3 WG1418784-4								
Bromochloromethane	95		94		70-130	1		20
2,2-Dichloropropane	100		100		63-133	0		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		64-130	0		20
Bromobenzene	110		110		70-130	0		20
n-Butylbenzene	120		120		53-136	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	110		110		70-130	0		20
o-Chlorotoluene	120		120		70-130	0		20
p-Chlorotoluene	120		120		70-130	0		20
1,2-Dibromo-3-chloropropane	100		110		41-144	10		20
Hexachlorobutadiene	100		100		63-130	0		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	110		110		70-130	0		20
Naphthalene	100		120		70-130	18		20
n-Propylbenzene	110		110		69-130	0		20
1,2,3-Trichlorobenzene	100		110		70-130	10		20
1,2,4-Trichlorobenzene	100		110		70-130	10		20
1,3,5-Trimethylbenzene	110		110		64-130	0		20
1,2,4-Trimethylbenzene	110		120		70-130	9		20
1,4-Dioxane	84		86		56-162	2		20
p-Diethylbenzene	120		120		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET

Project Number: 135597-002

Lab Number: L2041806

Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1418784-3 WG1418784-4								
p-Ethyltoluene	120		120		70-130	0		20
1,2,4,5-Tetramethylbenzene	120		120		70-130	0		20
Ethyl ether	91		93		59-134	2		20
trans-1,4-Dichloro-2-butene	120		120		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	117		116		70-130
Toluene-d8	105		105		70-130
4-Bromofluorobenzene	110		111		70-130
Dibromofluoromethane	95		93		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041806
Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1419425-3 WG1419425-4								
Methylene chloride	97		99		70-130	2		20
1,1-Dichloroethane	100		110		70-130	10		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	120		110		63-132	9		20
1,2-Dichloropropane	98		100		70-130	2		20
Dibromochloromethane	110		120		63-130	9		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	96		100		70-130	4		20
Chlorobenzene	97		100		75-130	3		20
Trichlorofluoromethane	120		120		62-150	0		20
1,2-Dichloroethane	100		110		70-130	10		20
1,1,1-Trichloroethane	120		120		67-130	0		20
Bromodichloromethane	110		110		67-130	0		20
trans-1,3-Dichloropropene	110		110		70-130	0		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	120		130		54-136	8		20
1,1,2,2-Tetrachloroethane	95		100		67-130	5		20
Benzene	97		99		70-130	2		20
Toluene	98		100		70-130	2		20
Ethylbenzene	100		110		70-130	10		20
Chloromethane	77		76		64-130	1		20
Bromomethane	82		80		39-139	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041806
Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1419425-3 WG1419425-4								
Vinyl chloride	94		95		55-140	1		20
Chloroethane	120		130		55-138	8		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	100		110		70-130	10		20
1,3-Dichlorobenzene	100		110		70-130	10		20
1,4-Dichlorobenzene	99		100		70-130	1		20
Methyl tert butyl ether	100		110		63-130	10		20
p/m-Xylene	105		110		70-130	5		20
o-Xylene	110		110		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	100		100		70-130	0		20
1,2,3-Trichloropropane	96		100		64-130	4		20
Acrylonitrile	100		100		70-130	0		20
Styrene	110		110		70-130	0		20
Dichlorodifluoromethane	100		100		36-147	0		20
Acetone	110		120		58-148	9		20
Carbon disulfide	99		100		51-130	1		20
2-Butanone	85		94		63-138	10		20
Vinyl acetate	91		94		70-130	3		20
4-Methyl-2-pentanone	100		110		59-130	10		20
2-Hexanone	92		100		57-130	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041806
Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1419425-3 WG1419425-4								
Bromochloromethane	110		110		70-130	0		20
2,2-Dichloropropane	120		120		63-133	0		20
1,2-Dibromoethane	100		110		70-130	10		20
1,3-Dichloropropane	98		100		70-130	2		20
1,1,1,2-Tetrachloroethane	110		120		64-130	9		20
Bromobenzene	100		110		70-130	10		20
n-Butylbenzene	110		120		53-136	9		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	92		97		70-130	5		20
o-Chlorotoluene	100		110		70-130	10		20
p-Chlorotoluene	100		110		70-130	10		20
1,2-Dibromo-3-chloropropane	100		110		41-144	10		20
Hexachlorobutadiene	100		110		63-130	10		20
Isopropylbenzene	100		110		70-130	10		20
p-Isopropyltoluene	110		120		70-130	9		20
Naphthalene	97		110		70-130	13		20
n-Propylbenzene	100		110		69-130	10		20
1,2,3-Trichlorobenzene	100		110		70-130	10		20
1,2,4-Trichlorobenzene	100		110		70-130	10		20
1,3,5-Trimethylbenzene	110		120		64-130	9		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
1,4-Dioxane	106		116		56-162	9		20
p-Diethylbenzene	100		110		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Lab Number: L2041806
Project Number: 135597-002
Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1419425-3 WG1419425-4								
p-Ethyltoluene	110		110		70-130	0		20
1,2,4,5-Tetramethylbenzene	100		110		70-130	10		20
Ethyl ether	100		100		59-134	0		20
trans-1,4-Dichloro-2-butene	100		110		70-130	10		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	113		113		70-130
Toluene-d8	97		98		70-130
4-Bromofluorobenzene	102		101		70-130
Dibromofluoromethane	108		107		70-130

SEMIVOLATILES

Project Name: 89-93 GERRY STREET | **Lab Number:** L2041806
Project Number: 135597-002 | **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID: L2041806-01
Client ID: TW-1
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY
Date Collected: 10/01/20 14:07
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 10/08/20 04:43
Analyst: WR
Extraction Method: EPA 3510C
Extraction Date: 10/03/20 08:14

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

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041806
Project Number:	135597-002	**Report Date:**	10/08/20

SAMPLE RESULTS

Lab ID:	L2041806-01	Date Collected:	10/01/20 14:07
Client ID:	TW-1	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		21-120
Phenol-d6	46		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	62		15-120
2,4,6-Tribromophenol	36		10-120
4-Terphenyl-d14	67		41-149

Project Name: 89-93 GERRY STREET
Lab Number: L2041806
Project Number: 135597-002
Report Date: 10/08/20

SAMPLE RESULTS

Lab ID: L2041806-01
Client ID: TW-1
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 14:07
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 10/04/20 17:22
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 10/03/20 08:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.12		ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.07	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.06	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.06	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.05	J	ug/l	0.10	0.01	1
Chrysene	0.07	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.04	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.05	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.10	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.05	J	ug/l	0.10	0.01	1
Pyrene	0.11		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041806
Project Number:	135597-002	**Report Date:**	10/08/20

SAMPLE RESULTS

Lab ID:	L2041806-01	Date Collected:	10/01/20 14:07
Client ID:	TW-1	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		21-120
Phenol-d6	43		10-120
Nitrobenzene-d5	68		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	58		10-120
4-Terphenyl-d14	81		41-149

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID: L2041806-02
Client ID: TW-2
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY
Date Collected: 10/01/20 14:45
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 10/08/20 01:16
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 10/03/20 08:14

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

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID:	L2041806-02	Date Collected:	10/01/20 14:45
Client ID:	TW-2	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	8.7	J	ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		21-120
Phenol-d6	56		10-120
Nitrobenzene-d5	87		23-120
2-Fluorobiphenyl	72		15-120
2,4,6-Tribromophenol	56		10-120
4-Terphenyl-d14	73		41-149

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID: L2041806-02
Client ID: TW-2
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 14:45
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 10/04/20 17:42
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 10/03/20 08:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.02	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.09	J	ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.04	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.03	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.03	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Chrysene	0.04	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.04	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.04	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.13		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.02	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01	1
Pyrene	0.08	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041806
Project Number:	135597-002	**Report Date:**	10/08/20

SAMPLE RESULTS

Lab ID:	L2041806-02	Date Collected:	10/01/20 14:45
Client ID:	TW-2	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		21-120
Phenol-d6	52		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	82		10-120
4-Terphenyl-d14	83		41-149

Project Name: 89-93 GERRY STREET
Lab Number: L2041806
Project Number: 135597-002
Report Date: 10/08/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/04/20 05:52
Analyst: CB
Extraction Method: EPA 3510C
Extraction Date: 10/03/20 08:14

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1417677-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Fluoranthene	ND		ug/l	2.0	0.26
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.66
Hexachlorocyclopentadiene	ND		ug/l	20	0.69
Hexachloroethane	ND		ug/l	2.0	0.58
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
NDPA/DPA	ND		ug/l	2.0	0.42
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041806
Project Number:	135597-002	**Report Date:**	10/08/20

Method Blank Analysis
Batch Quality Control

Analytical Method:	1,8270D	Extraction Method:	EPA 3510C
Analytical Date:	10/04/20 05:52	Extraction Date:	10/03/20 08:14
Analyst:	CB		

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1417677-1					
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Biphenyl	ND		ug/l	2.0	0.46
4-Chloroaniline	ND		ug/l	5.0	1.1
2-Nitroaniline	ND		ug/l	5.0	0.50
3-Nitroaniline	ND		ug/l	5.0	0.81
4-Nitroaniline	ND		ug/l	5.0	0.80
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041806
Report Date: 10/08/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/04/20 05:52
Analyst: CB

Extraction Method: EPA 3510C
Extraction Date: 10/03/20 08:14

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1417677-1					
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77
Benzoic Acid	ND		ug/l	50	2.6
Benzyl Alcohol	ND		ug/l	2.0	0.59
Carbazole	ND		ug/l	2.0	0.49

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	36		10-120
Nitrobenzene-d5	57		23-120
2-Fluorobiphenyl	63		15-120
2,4,6-Tribromophenol	55		10-120
4-Terphenyl-d14	80		41-149

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/04/20 12:01
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 10/03/20 08:16

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1417678-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.02
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	0.01	J	ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	0.05	J	ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.01
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/04/20 12:01
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 10/03/20 08:16

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1417678-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	62		15-120
2,4,6-Tribromophenol	53		10-120
4-Terphenyl-d14	77		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041806
Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1417677-2 WG1417677-3								
Acenaphthene	70		50		37-111	**33**	Q	30
1,2,4-Trichlorobenzene	63		43		39-98	**38**	Q	30
Hexachlorobenzene	92		70		40-140	27		30
Bis(2-chloroethyl)ether	55		**37**	Q	40-140	**39**	Q	30
2-Chloronaphthalene	68		50		40-140	**31**	Q	30
1,2-Dichlorobenzene	56		**28**	Q	40-140	**67**	Q	30
1,3-Dichlorobenzene	52		**37**	Q	40-140	**34**	Q	30
1,4-Dichlorobenzene	54		37		36-97	**37**	Q	30
3,3'-Dichlorobenzidine	68		54		40-140	23		30
2,4-Dinitrotoluene	82		63		48-143	26		30
2,6-Dinitrotoluene	82		60		40-140	**31**	Q	30
Fluoranthene	80		63		40-140	24		30
4-Chlorophenyl phenyl ether	83		59		40-140	**34**	Q	30
4-Bromophenyl phenyl ether	95		71		40-140	29		30
Bis(2-chloroisopropyl)ether	54		41		40-140	27		30
Bis(2-chloroethoxy)methane	64		44		40-140	**37**	Q	30
Hexachlorobutadiene	77		56		40-140	**32**	Q	30
Hexachlorocyclopentadiene	85		57		40-140	**39**	Q	30
Hexachloroethane	61		42		40-140	**37**	Q	30
Isophorone	61		42		40-140	**37**	Q	30
Naphthalene	61		43		40-140	**35**	Q	30
Nitrobenzene	67		44		40-140	**41**	Q	30
NDPA/DPA	75		55		40-140	**31**	Q	30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041806
Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1417677-2 WG1417677-3								
n-Nitrosodi-n-propylamine	62		44		29-132	**34**	Q	30
Bis(2-ethylhexyl)phthalate	68		62		40-140	9		30
Butyl benzyl phthalate	87		74		40-140	16		30
Di-n-butylphthalate	69		57		40-140	19		30
Di-n-octylphthalate	67		60		40-140	11		30
Diethyl phthalate	76		59		40-140	25		30
Dimethyl phthalate	74		58		40-140	24		30
Benzo(a)anthracene	80		66		40-140	19		30
Benzo(a)pyrene	92		79		40-140	15		30
Benzo(b)fluoranthene	87		73		40-140	18		30
Benzo(k)fluoranthene	81		69		40-140	16		30
Chrysene	78		62		40-140	23		30
Acenaphthylene	70		50		45-123	**33**	Q	30
Anthracene	73		56		40-140	26		30
Benzo(ghi)perylene	80		67		40-140	18		30
Fluorene	72		52		40-140	**32**	Q	30
Phenanthrene	73		56		40-140	26		30
Dibenzo(a,h)anthracene	76		62		40-140	20		30
Indeno(1,2,3-cd)pyrene	73		62		40-140	16		30
Pyrene	81		66		26-127	20		30
Biphenyl	66		46		40-140	**36**	Q	30
4-Chloroaniline	65		49		40-140	28		30
2-Nitroaniline	84		59		52-143	**35**	Q	30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1417677-2 WG1417677-3								
3-Nitroaniline	72		59		25-145	20		30
4-Nitroaniline	64		55		51-143	15		30
Dibenzofuran	72		52		40-140	**32**	Q	30
2-Methylnaphthalene	65		45		40-140	**36**	Q	30
1,2,4,5-Tetrachlorobenzene	84		60		2-134	**33**	Q	30
Acetophenone	60		42		39-129	**35**	Q	30
2,4,6-Trichlorophenol	88		64		30-130	**32**	Q	30
p-Chloro-m-cresol	77		59		23-97	26		30
2-Chlorophenol	67		46		27-123	**37**	Q	30
2,4-Dichlorophenol	72		51		30-130	**34**	Q	30
2,4-Dimethylphenol	56		40		30-130	**33**	Q	30
2-Nitrophenol	78		52		30-130	**40**	Q	30
4-Nitrophenol	80		62		10-80	25		30
2,4-Dinitrophenol	74		79		20-130	7		30
4,6-Dinitro-o-cresol	98		84		20-164	15		30
Pentachlorophenol	82		76		9-103	8		30
Phenol	46		37		12-110	22		30
2-Methylphenol	62		46		30-130	30		30
3-Methylphenol/4-Methylphenol	69		50		30-130	**32**	Q	30
2,4,5-Trichlorophenol	93		71		30-130	27		30
Benzoic Acid	58		77		10-164	28		30
Benzyl Alcohol	64		51		26-116	23		30
Carbazole	74		57		55-144	26		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Lab Number: L2041806
Project Number: 135597-002
Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1417677-2 WG1417677-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	54		40		21-120
Phenol-d6	50		40		10-120
Nitrobenzene-d5	71		52		23-120
2-Fluorobiphenyl	74		55		15-120
2,4,6-Tribromophenol	112		79		10-120
4-Terphenyl-d14	87		70		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Lab Number: L2041806
Project Number: 135597-002
Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1417678-2 WG1417678-3								
Acenaphthene	72		73		40-140	1		40
2-Chloronaphthalene	78		80		40-140	3		40
Fluoranthene	85		84		40-140	1		40
Hexachlorobutadiene	59		63		40-140	7		40
Naphthalene	64		70		40-140	9		40
Benzo(a)anthracene	82		80		40-140	2		40
Benzo(a)pyrene	97		96		40-140	1		40
Benzo(b)fluoranthene	77		74		40-140	4		40
Benzo(k)fluoranthene	88		89		40-140	1		40
Chrysene	87		88		40-140	1		40
Acenaphthylene	76		78		40-140	3		40
Anthracene	89		89		40-140	0		40
Benzo(ghi)perylene	89		89		40-140	0		40
Fluorene	75		75		40-140	0		40
Phenanthrene	77		77		40-140	0		40
Dibenzo(a,h)anthracene	95		95		40-140	0		40
Indeno(1,2,3-cd)pyrene	91		92		40-140	1		40
Pyrene	86		84		40-140	2		40
2-Methylnaphthalene	67		71		40-140	6		40
Pentachlorophenol	69		72		40-140	4		40
Hexachlorobenzene	80		81		40-140	1		40
Hexachloroethane	60		64		40-140	6		40

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Lab Number: L2041806
Project Number: 135597-002
Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1417678-2 WG1417678-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	56		54		21-120
Phenol-d6	48		46		10-120
Nitrobenzene-d5	70		72		23-120
2-Fluorobiphenyl	70		70		15-120
2,4,6-Tribromophenol	77		76		10-120
4-Terphenyl-d14	78		76		41-149

PCBS

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806

Project Number: 135597-002 **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID:	L2041806-01	Date Collected:	10/01/20 14:07
Client ID:	TW-1	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	10/02/20 19:20
Analytical Date:	10/03/20 18:33	Cleanup Method:	EPA 3665A
Analyst:	AD	Cleanup Date:	10/03/20
		Cleanup Method:	EPA 3660B
		Cleanup Date:	10/03/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.034	1	A
Aroclor 1221	ND		ug/l	0.083	0.067	1	A
Aroclor 1232	ND		ug/l	0.083	0.046	1	A
Aroclor 1242	ND		ug/l	0.083	0.039	1	A
Aroclor 1248	ND		ug/l	0.083	0.049	1	A
Aroclor 1254	ND		ug/l	0.083	0.039	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.035	1	A
Aroclor 1268	ND		ug/l	0.083	0.034	1	A
PCBs, Total	ND		ug/l	0.083	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	50		30-150	A
2,4,5,6-Tetrachloro-m-xylene	62		30-150	B
Decachlorobiphenyl	55		30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806

Project Number: 135597-002 **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID:	L2041806-02	Date Collected:	10/01/20 14:45
Client ID:	TW-2	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	10/02/20 19:20
Analytical Date:	10/03/20 19:14	Cleanup Method:	EPA 3665A
Analyst:	AD	Cleanup Date:	10/03/20
		Cleanup Method:	EPA 3660B
		Cleanup Date:	10/03/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.034	1	A
Aroclor 1221	ND		ug/l	0.083	0.067	1	A
Aroclor 1232	ND		ug/l	0.083	0.046	1	A
Aroclor 1242	ND		ug/l	0.083	0.039	1	A
Aroclor 1248	ND		ug/l	0.083	0.049	1	A
Aroclor 1254	ND		ug/l	0.083	0.039	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.035	1	A
Aroclor 1268	ND		ug/l	0.083	0.034	1	A
PCBs, Total	ND		ug/l	0.083	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	52		30-150	A
Decachlorobiphenyl	41		30-150	A
2,4,5,6-Tetrachloro-m-xylene	54		30-150	B
Decachlorobiphenyl	45		30-150	B

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041806
Project Number:	135597-002	**Report Date:**	10/08/20

Method Blank Analysis
Batch Quality Control

Analytical Method:	1,8082A	Extraction Method:	EPA 3510C
Analytical Date:	10/03/20 16:00	Extraction Date:	10/02/20 19:20
Analyst:	HT	Cleanup Method:	EPA 3665A
		Cleanup Date:	10/03/20
		Cleanup Method:	EPA 3660B
		Cleanup Date:	10/03/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-02 Batch: WG1417541-1						
Aroclor 1016	ND		ug/l	0.083	0.034	A
Aroclor 1221	ND		ug/l	0.083	0.067	A
Aroclor 1232	ND		ug/l	0.083	0.046	A
Aroclor 1242	ND		ug/l	0.083	0.039	A
Aroclor 1248	ND		ug/l	0.083	0.049	A
Aroclor 1254	ND		ug/l	0.083	0.039	A
Aroclor 1260	ND		ug/l	0.083	0.032	A
Aroclor 1262	ND		ug/l	0.083	0.035	A
Aroclor 1268	ND		ug/l	0.083	0.034	B
PCBs, Total	ND		ug/l	0.083	0.032	B

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	42		30-150	A
Decachlorobiphenyl	49		30-150	A
2,4,5,6-Tetrachloro-m-xylene	43		30-150	B
Decachlorobiphenyl	55		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG1417541-2 WG1417541-3									
Aroclor 1016	64		103		40-140	47		50	A
Aroclor 1260	66		94		40-140	36		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		90		30-150	A
Decachlorobiphenyl	57		78		30-150	A
2,4,5,6-Tetrachloro-m-xylene	54		86		30-150	B
Decachlorobiphenyl	65		94		30-150	B

METALS

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

SAMPLE RESULTS

Lab ID: L2041806-01 Date Collected: 10/01/20 14:07
Client ID: TW-1 Date Received: 10/01/20
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	2.95		mg/l	0.0100	0.00327	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Antimony, Total	0.00066	J	mg/l	0.00400	0.00042	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Arsenic, Total	0.00155		mg/l	0.00050	0.00016	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Barium, Total	0.09465		mg/l	0.00050	0.00017	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Beryllium, Total	0.00015	J	mg/l	0.00050	0.00010	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Calcium, Total	253.		mg/l	0.100	0.0394	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Chromium, Total	0.00928		mg/l	0.00100	0.00017	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Cobalt, Total	0.00442		mg/l	0.00100	0.00016	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Copper, Total	0.01556		mg/l	0.00100	0.00038	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Iron, Total	3.81		mg/l	0.0500	0.0191	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Lead, Total	0.00497		mg/l	0.00100	0.00034	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Magnesium, Total	26.9		mg/l	0.0700	0.0242	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Manganese, Total	0.1273		mg/l	0.00100	0.00044	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Mercury, Total	ND		mg/l	0.00020	0.00009	1	10/05/20 13:03	10/06/20 10:55	EPA 7470A	1,7470A	EW
Nickel, Total	0.02327		mg/l	0.00200	0.00055	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Potassium, Total	24.6		mg/l	0.100	0.0309	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Selenium, Total	0.00775		mg/l	0.00500	0.00173	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Silver, Total	ND		mg/l	0.00040	0.00016	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Sodium, Total	88.8		mg/l	0.100	0.0293	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Thallium, Total	ND		mg/l	0.00050	0.00014	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Vanadium, Total	0.01457		mg/l	0.00500	0.00157	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD
Zinc, Total	0.01276		mg/l	0.01000	0.00341	1	10/05/20 12:56	10/05/20 19:27	EPA 3005A	1,6020B	CD

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041806
Project Number:	135597-002	**Report Date:**	10/08/20

SAMPLE RESULTS

Lab ID:	L2041806-02	Date Collected:	10/01/20 14:45
Client ID:	TW-2	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.619		mg/l	0.0100	0.00327	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Antimony, Total	ND		mg/l	0.00400	0.00042	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Arsenic, Total	0.00066		mg/l	0.00050	0.00016	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Barium, Total	0.07541		mg/l	0.00050	0.00017	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Calcium, Total	155.		mg/l	0.100	0.0394	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Chromium, Total	0.00203		mg/l	0.00100	0.00017	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Cobalt, Total	0.00209		mg/l	0.00100	0.00016	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Copper, Total	0.00804		mg/l	0.00100	0.00038	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Iron, Total	1.97		mg/l	0.0500	0.0191	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Lead, Total	0.00407		mg/l	0.00100	0.00034	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Magnesium, Total	12.2		mg/l	0.0700	0.0242	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Manganese, Total	0.3202		mg/l	0.00100	0.00044	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Mercury, Total	ND		mg/l	0.00020	0.00009	1	10/05/20 13:03	10/06/20 10:57	EPA 7470A	1,7470A	EW
Nickel, Total	0.01251		mg/l	0.00200	0.00055	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Potassium, Total	16.9		mg/l	0.100	0.0309	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Selenium, Total	ND		mg/l	0.00500	0.00173	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Silver, Total	ND		mg/l	0.00040	0.00016	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Sodium, Total	61.1		mg/l	0.100	0.0293	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Thallium, Total	ND		mg/l	0.00050	0.00014	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Vanadium, Total	0.00263	J	mg/l	0.00500	0.00157	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD
Zinc, Total	0.01198		mg/l	0.01000	0.00341	1	10/05/20 12:56	10/05/20 19:32	EPA 3005A	1,6020B	CD

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1418160-1										
Aluminum, Total	ND		mg/l	0.0100	0.00327	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Antimony, Total	ND		mg/l	0.00400	0.00042	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Arsenic, Total	ND		mg/l	0.00050	0.00016	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Barium, Total	ND		mg/l	0.00050	0.00017	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Calcium, Total	ND		mg/l	0.100	0.0394	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Chromium, Total	ND		mg/l	0.00100	0.00017	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Cobalt, Total	ND		mg/l	0.00100	0.00016	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Copper, Total	ND		mg/l	0.00100	0.00038	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Iron, Total	ND		mg/l	0.0500	0.0191	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Lead, Total	ND		mg/l	0.00100	0.00034	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Manganese, Total	ND		mg/l	0.00100	0.00044	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Nickel, Total	ND		mg/l	0.00200	0.00055	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Potassium, Total	ND		mg/l	0.100	0.0309	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Selenium, Total	ND		mg/l	0.00500	0.00173	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Silver, Total	ND		mg/l	0.00040	0.00016	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Sodium, Total	ND		mg/l	0.100	0.0293	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Thallium, Total	ND		mg/l	0.00050	0.00014	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD
Zinc, Total	ND		mg/l	0.01000	0.00341	1	10/05/20 12:56	10/05/20 17:59	1,6020B	CD

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1418166-1										
Mercury, Total	ND		mg/l	0.00020	0.00009	1	10/05/20 13:03	10/06/20 10:37	1,7470A	EW

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 7470A

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041806
Report Date: 10/08/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1418160-2								
Aluminum, Total	103		-		80-120	-		
Antimony, Total	99		-		80-120	-		
Arsenic, Total	108		-		80-120	-		
Barium, Total	104		-		80-120	-		
Beryllium, Total	108		-		80-120	-		
Cadmium, Total	112		-		80-120	-		
Calcium, Total	97		-		80-120	-		
Chromium, Total	102		-		80-120	-		
Cobalt, Total	101		-		80-120	-		
Copper, Total	103		-		80-120	-		
Iron, Total	101		-		80-120	-		
Lead, Total	111		-		80-120	-		
Magnesium, Total	106		-		80-120	-		
Manganese, Total	100		-		80-120	-		
Nickel, Total	98		-		80-120	-		
Potassium, Total	103		-		80-120	-		
Selenium, Total	108		-		80-120	-		
Silver, Total	108		-		80-120	-		
Sodium, Total	107		-		80-120	-		
Thallium, Total	107		-		80-120	-		
Vanadium, Total	100		-		80-120	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET **Lab Number:** L2041806
Project Number: 135597-002 **Report Date:** 10/08/20

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1418160-2					
Zinc, Total	110	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1418166-2					
Mercury, Total	108	-	80-120	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041806
Report Date: 10/08/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1418160-3 QC Sample: L2041977-03 Client ID: MS Sample												
Aluminum, Total	0.179	2	2.24	103		-	-		75-125	-		20
Antimony, Total	0.00471	0.5	0.4846	96		-	-		75-125	-		20
Arsenic, Total	0.00099	0.12	0.1069	88		-	-		75-125	-		20
Barium, Total	0.9970	2	3.032	102		-	-		75-125	-		20
Beryllium, Total	ND	0.05	0.05362	107		-	-		75-125	-		20
Cadmium, Total	0.00031	0.051	0.05641	110		-	-		75-125	-		20
Calcium, Total	77.7	10	96.0	**183**	Q	-	-		75-125	-		20
Chromium, Total	0.00245	0.2	0.2044	101		-	-		75-125	-		20
Cobalt, Total	0.00209	0.5	0.5113	102		-	-		75-125	-		20
Copper, Total	0.00894	0.25	0.2681	104		-	-		75-125	-		20
Iron, Total	42.4	1	38.0	**0**	Q	-	-		75-125	-		20
Lead, Total	0.07717	0.51	0.6290	108		-	-		75-125	-		20
Magnesium, Total	12.1	10	24.0	119		-	-		75-125	-		20
Manganese, Total	0.3892	0.5	0.9111	104		-	-		75-125	-		20
Nickel, Total	0.00401	0.5	0.4964	98		-	-		75-125	-		20
Potassium, Total	14.7	10	25.8	111		-	-		75-125	-		20
Selenium, Total	ND	0.12	0.100	83		-	-		75-125	-		20
Silver, Total	0.00016J	0.05	0.05282	106		-	-		75-125	-		20
Sodium, Total	209.	10	242	**330**	Q	-	-		75-125	-		20
Thallium, Total	ND	0.12	0.1266	106		-	-		75-125	-		20
Vanadium, Total	0.00236J	0.5	0.4975	100		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041806
Report Date: 10/08/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1418160-3 QC Sample: L2041977-03 Client ID: MS Sample									
Zinc, Total	0.1121	0.5	0.6791	113	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1418166-3 QC Sample: L2041822-01 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.00524	105	-	-	75-125	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041806
Report Date: 10/08/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1418160-4 QC Sample: L2041977-03 Client ID: DUP Sample						
Aluminum, Total	0.179	0.174	mg/l	3		20
Antimony, Total	0.00471	0.00447	mg/l	5		20
Arsenic, Total	0.00099	0.00093	mg/l	6		20
Barium, Total	0.9970	0.9978	mg/l	0		20
Beryllium, Total	ND	ND	mg/l	NC		20
Cadmium, Total	0.00031	0.00030	mg/l	5		20
Calcium, Total	77.7	77.0	mg/l	1		20
Chromium, Total	0.00245	0.00217	mg/l	12		20
Cobalt, Total	0.00209	0.00202	mg/l	3		20
Copper, Total	0.00894	0.00919	mg/l	3		20
Iron, Total	42.4	40.8	mg/l	4		20
Lead, Total	0.07717	0.07701	mg/l	0		20
Magnesium, Total	12.1	11.9	mg/l	2		20
Manganese, Total	0.3892	0.3797	mg/l	2		20
Nickel, Total	0.00401	0.00395	mg/l	1		20
Potassium, Total	14.7	14.6	mg/l	1		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	0.00016J	ND	mg/l	NC		20
Sodium, Total	209.	208	mg/l	0		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041806
Report Date: 10/08/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1418160-4 QC Sample: L2041977-03 Client ID: DUP Sample					
Thallium, Total	ND	ND	mg/l	NC	20
Vanadium, Total	0.00236J	0.00230J	mg/l	NC	20
Zinc, Total	0.1121	0.1116	mg/l	0	20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1418166-4 QC Sample: L2041822-01 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2041806-01A	Vial HCl preserved	A	NA		5.3	Y	Absent		NYTCL-8260(14)
L2041806-01B	Vial HCl preserved	A	NA		5.3	Y	Absent		NYTCL-8260(14)
L2041806-01C	Vial HCl preserved	A	NA		5.3	Y	Absent		NYTCL-8260(14)
L2041806-01D	Amber 120ml unpreserved	A	7	7	5.3	Y	Absent		NYTCL-8082-LVI(7)
L2041806-01E	Amber 120ml unpreserved	A	7	7	5.3	Y	Absent		NYTCL-8082-LVI(7)
L2041806-01F	Plastic 250ml HNO3 preserved	A	<2	<2	5.3	Y	Absent		BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),NI-6020T(180),CR-6020T(180),CA-6020T(180),K-6020T(180),NA-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),V-6020T(180),AS-6020T(180),SB-6020T(180),MG-6020T(180),AL-6020T(180),CD-6020T(180),AG-6020T(180),HG-T(28),CO-6020T(180)
L2041806-01G	Amber 250ml unpreserved	A	7	7	5.3	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2041806-01H	Amber 250ml unpreserved	A	7	7	5.3	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2041806-02A	Vial HCl preserved	A	NA		5.3	Y	Absent		NYTCL-8260(14)
L2041806-02B	Vial HCl preserved	A	NA		5.3	Y	Absent		NYTCL-8260(14)
L2041806-02C	Vial HCl preserved	A	NA		5.3	Y	Absent		NYTCL-8260(14)
L2041806-02D	Amber 120ml unpreserved	A	7	7	5.3	Y	Absent		NYTCL-8082-LVI(7)
L2041806-02E	Amber 120ml unpreserved	A	7	7	5.3	Y	Absent		NYTCL-8082-LVI(7)
L2041806-02F	Plastic 250ml HNO3 preserved	A	<2	<2	5.3	Y	Absent		BA-6020T(180),SE-6020T(180),FE-6020T(180),TL-6020T(180),NI-6020T(180),CR-6020T(180),K-6020T(180),CA-6020T(180),ZN-6020T(180),CU-6020T(180),NA-6020T(180),PB-6020T(180),MN-6020T(180),BE-6020T(180),V-6020T(180),AS-6020T(180),SB-6020T(180),AL-6020T(180),CD-6020T(180),AG-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L2041806-02G	Amber 250ml unpreserved	A	7	7	5.3	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2041806-02H	Amber 250ml unpreserved	A	7	7	5.3	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)

*Values in parentheses indicate holding time in days

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

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

Terms

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

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

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

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

Data Qualifiers

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

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

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

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

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

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

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

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

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

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

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

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

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Data Qualifiers

the identification is based on a mass spectral library search.

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

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

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

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

ALPHA

NEW YORK CHAIN OF CUSTODY

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

Page 1 of 1

Date Rec'd in Lab: 10/2/20

ALPHA Job #: L2041806

Westborough, MA 01581, 8 Walkup Dr., TEL: 508-898-9220, FAX: 508-898-9193
Mansfield, MA 02048, 320 Forbes Blvd, TEL: 508-822-9300, FAX: 508-822-3288

Project Information
Project Name: 89-93 Gerry Street
Project Location: 89-93 Gerry street, Brooklyn, NY
Project # 135597-002
(Use Project name as Project #) ☐
Project Manager: Mari Cate Conlon
ALPHAQuote #:

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

Client Information
Client: Haley and Aldrich
Address: 237 W 35th Street
New York, NY 10123
Phone:
Fax:
Email: MConlon@haleyaldrich.com

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☒ Other (PDF + excel)

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

Billing Information
☒ Same as Client Info
PO #

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs 8260C	SVOCs 8270D	Tot PCBs 8082A	TAL Metals					Sample Specific Comments	Total Bottles
41806 -01	TW-1	10/1/20	1407	GW	SC	X	X	X	X						8
-02	TW-2	10/1/20	1445	GW	SC	X	X	X	X						8
Container Type						V	A	A	P						
Preservative						B	A	A	C						

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10-1-2020 1600	[signature] AAL	10/1/2020 1600
[signature] AAL	10/1/2020 1945	[signature] AAL	10/1/20 2200
[signature] AAL	10/2/20 0030	[signature]	10/2/20 00:30

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

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

ANALYTICAL REPORT

Lab Number:	L2041810
Client:	Haley & Aldrich 237 West 35th Street 16th Floor New York, NY 10123
ATTN:	Mari Conlon
Phone:	(347) 271-1521
Project Name:	89-93 GERRY STREET
Project Number:	135597-002
Report Date:	10/12/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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

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

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041810
Report Date: 10/12/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2041810-01	B-1 (3-5')	SOIL	89-93 GERRY STREET, BROOKLYN, NY	10/01/20 10:05	10/01/20
L2041810-02	B-1 (10-12')	SOIL	89-93 GERRY STREET, BROOKLYN, NY	10/01/20 10:10	10/01/20
L2041810-03	B-3 (1-3')	SOIL	89-93 GERRY STREET, BROOKLYN, NY	10/01/20 10:47	10/01/20
L2041810-04	B-3 (13-15')	SOIL	89-93 GERRY STREET, BROOKLYN, NY	10/01/20 10:45	10/01/20
L2041810-05	B-4 (1-3')	SOIL	89-93 GERRY STREET, BROOKLYN, NY	10/01/20 12:10	10/01/20
L2041810-06	B-4 (10-12')	SOIL	89-93 GERRY STREET, BROOKLYN, NY	10/01/20 12:09	10/01/20
L2041810-07	B-5 (0-2')	SOIL	89-93 GERRY STREET, BROOKLYN, NY	10/01/20 12:30	10/01/20
L2041810-08	B-5 (10-12')	SOIL	89-93 GERRY STREET, BROOKLYN, NY	10/01/20 12:29	10/01/20

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission

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

Semivolatile Organics

L2041810-01 and -07 (B-1 (3-5') and B-5 (0-2')): The sample has elevated detection limits due to the dilution required by the sample matrix.

Total Metals

L2041810-01 through -08 (all analyzed samples): The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by matrix interferences encountered during analysis.

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

Authorized Signature: Cristin Walker Cristin Walker

Title: Technical Director/Representative Date: 10/12/20

ORGANICS

VOLATILES

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-01
Client ID: B-1 (3-5')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 10:05
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 10/06/20 13:02
Analyst: MKS
Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	6.2	2.8	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.18	1
Chloroform	ND		ug/kg	1.8	0.17	1
Carbon tetrachloride	ND		ug/kg	1.2	0.28	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.15	1
Dibromochloromethane	ND		ug/kg	1.2	0.17	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.33	1
Tetrachloroethene	ND		ug/kg	0.62	0.24	1
Chlorobenzene	ND		ug/kg	0.62	0.16	1
Trichlorofluoromethane	ND		ug/kg	4.9	0.86	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.32	1
1,1,1-Trichloroethane	ND		ug/kg	0.62	0.20	1
Bromodichloromethane	ND		ug/kg	0.62	0.13	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.34	1
cis-1,3-Dichloropropene	ND		ug/kg	0.62	0.19	1
1,3-Dichloropropene, Total	ND		ug/kg	0.62	0.19	1
1,1-Dichloropropene	ND		ug/kg	0.62	0.20	1
Bromoform	ND		ug/kg	4.9	0.30	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.62	0.20	1
Benzene	0.28	J	ug/kg	0.62	0.20	1
Toluene	ND		ug/kg	1.2	0.67	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Chloromethane	ND		ug/kg	4.9	1.1	1
Bromomethane	ND		ug/kg	2.5	0.72	1
Vinyl chloride	ND		ug/kg	1.2	0.41	1
Chloroethane	ND		ug/kg	2.5	0.56	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.29	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.17	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-01	Date Collected:	10/01/20 10:05
Client ID:	B-1 (3-5')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.62	0.17	1
1,2-Dichlorobenzene	ND		ug/kg	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/kg	2.5	0.18	1
1,4-Dichlorobenzene	ND		ug/kg	2.5	0.21	1
Methyl tert butyl ether	ND		ug/kg	2.5	0.25	1
p/m-Xylene	ND		ug/kg	2.5	0.69	1
o-Xylene	0.47	J	ug/kg	1.2	0.36	1
Xylenes, Total	0.47	J	ug/kg	1.2	0.36	1
cis-1,2-Dichloroethene	5.6		ug/kg	1.2	0.22	1
1,2-Dichloroethene, Total	5.6		ug/kg	1.2	0.17	1
Dibromomethane	ND		ug/kg	2.5	0.29	1
Styrene	ND		ug/kg	1.2	0.24	1
Dichlorodifluoromethane	ND		ug/kg	12	1.1	1
Acetone	30		ug/kg	12	5.9	1
Carbon disulfide	ND		ug/kg	12	5.6	1
2-Butanone	3.2	J	ug/kg	12	2.7	1
Vinyl acetate	ND		ug/kg	12	2.6	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.6	1
1,2,3-Trichloropropane	ND		ug/kg	2.5	0.16	1
2-Hexanone	ND		ug/kg	12	1.4	1
Bromochloromethane	ND		ug/kg	2.5	0.25	1
2,2-Dichloropropane	ND		ug/kg	2.5	0.25	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.34	1
1,3-Dichloropropane	ND		ug/kg	2.5	0.20	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.62	0.16	1
Bromobenzene	ND		ug/kg	2.5	0.18	1
n-Butylbenzene	0.20	J	ug/kg	1.2	0.20	1
sec-Butylbenzene	0.39	J	ug/kg	1.2	0.18	1
tert-Butylbenzene	ND		ug/kg	2.5	0.14	1
o-Chlorotoluene	ND		ug/kg	2.5	0.24	1
p-Chlorotoluene	ND		ug/kg	2.5	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.7	1.2	1
Hexachlorobutadiene	ND		ug/kg	4.9	0.21	1
Isopropylbenzene	0.20	J	ug/kg	1.2	0.13	1
p-Isopropyltoluene	0.31	J	ug/kg	1.2	0.13	1
Naphthalene	1.4	J	ug/kg	4.9	0.80	1
Acrylonitrile	ND		ug/kg	4.9	1.4	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-01	Date Collected:	10/01/20 10:05
Client ID:	B-1 (3-5')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.2	0.21	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.5	0.40	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.5	0.33	1
1,3,5-Trimethylbenzene	1.2	J	ug/kg	2.5	0.24	1
1,2,4-Trimethylbenzene	2.7		ug/kg	2.5	0.41	1
1,4-Dioxane	ND		ug/kg	98	43.	1
p-Diethylbenzene	2.3	J	ug/kg	2.5	0.22	1
p-Ethyltoluene	1.1	J	ug/kg	2.5	0.47	1
1,2,4,5-Tetramethylbenzene	0.97	J	ug/kg	2.5	0.24	1
Ethyl ether	ND		ug/kg	2.5	0.42	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.2	1.7	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	125		70-130
Dibromofluoromethane	89		70-130

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-02	Date Collected:	10/01/20 10:10
Client ID:	B-1 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Matrix:	Soil
Analytical Method:	1,8260C
Analytical Date:	10/06/20 13:29
Analyst:	MKS
Percent Solids:	79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.1	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.15	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	1.0	0.24	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.13	1
Dibromochloromethane	ND		ug/kg	1.0	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27	1
Tetrachloroethene	ND		ug/kg	0.51	0.20	1
Chlorobenzene	ND		ug/kg	0.51	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.1	0.71	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.26	1
1,1,1-Trichloroethane	ND		ug/kg	0.51	0.17	1
Bromodichloromethane	ND		ug/kg	0.51	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.28	1
cis-1,3-Dichloropropene	ND		ug/kg	0.51	0.16	1
1,3-Dichloropropene, Total	ND		ug/kg	0.51	0.16	1
1,1-Dichloropropene	ND		ug/kg	0.51	0.16	1
Bromoform	ND		ug/kg	4.1	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.51	0.17	1
Benzene	ND		ug/kg	0.51	0.17	1
Toluene	ND		ug/kg	1.0	0.56	1
Ethylbenzene	ND		ug/kg	1.0	0.14	1
Chloromethane	ND		ug/kg	4.1	0.96	1
Bromomethane	ND		ug/kg	2.0	0.60	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
Chloroethane	ND		ug/kg	2.0	0.46	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-02	Date Collected:	10/01/20 10:10
Client ID:	B-1 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.51	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.21	1
p/m-Xylene	ND		ug/kg	2.0	0.57	1
o-Xylene	ND		ug/kg	1.0	0.30	1
Xylenes, Total	ND		ug/kg	1.0	0.30	1
cis-1,2-Dichloroethene	31		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	31		ug/kg	1.0	0.14	1
Dibromomethane	ND		ug/kg	2.0	0.24	1
Styrene	ND		ug/kg	1.0	0.20	1
Dichlorodifluoromethane	ND		ug/kg	10	0.94	1
Acetone	ND		ug/kg	10	4.9	1
Carbon disulfide	ND		ug/kg	10	4.7	1
2-Butanone	ND		ug/kg	10	2.3	1
Vinyl acetate	ND		ug/kg	10	2.2	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.3	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13	1
2-Hexanone	ND		ug/kg	10	1.2	1
Bromochloromethane	ND		ug/kg	2.0	0.21	1
2,2-Dichloropropane	ND		ug/kg	2.0	0.21	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.29	1
1,3-Dichloropropane	ND		ug/kg	2.0	0.17	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.51	0.14	1
Bromobenzene	ND		ug/kg	2.0	0.15	1
n-Butylbenzene	ND		ug/kg	1.0	0.17	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
tert-Butylbenzene	ND		ug/kg	2.0	0.12	1
o-Chlorotoluene	ND		ug/kg	2.0	0.20	1
p-Chlorotoluene	ND		ug/kg	2.0	0.11	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.1	1.0	1
Hexachlorobutadiene	ND		ug/kg	4.1	0.17	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.11	1
Naphthalene	ND		ug/kg	4.1	0.67	1
Acrylonitrile	ND		ug/kg	4.1	1.2	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-02	Date Collected:	10/01/20 10:10
Client ID:	B-1 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.0	0.18	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.33	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.28	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.20	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.34	1
1,4-Dioxane	ND		ug/kg	82	36.	1
p-Diethylbenzene	ND		ug/kg	2.0	0.18	1
p-Ethyltoluene	ND		ug/kg	2.0	0.39	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.20	1
Ethyl ether	ND		ug/kg	2.0	0.35	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.1	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	91		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	89		70-130

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-03 Date Collected: 10/01/20 10:47

Client ID: B-3 (1-3') Date Received: 10/01/20

Sample Location: 89-93 GERRY STREET, BROOKLYN, NY Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 10/06/20 13:56

Analyst: MKS

Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.6	2.1	1
1,1-Dichloroethane	ND		ug/kg	0.92	0.13	1
Chloroform	ND		ug/kg	1.4	0.13	1
Carbon tetrachloride	ND		ug/kg	0.92	0.21	1
1,2-Dichloropropane	ND		ug/kg	0.92	0.12	1
Dibromochloromethane	ND		ug/kg	0.92	0.13	1
1,1,2-Trichloroethane	ND		ug/kg	0.92	0.25	1
Tetrachloroethene	20		ug/kg	0.46	0.18	1
Chlorobenzene	ND		ug/kg	0.46	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.7	0.64	1
1,2-Dichloroethane	ND		ug/kg	0.92	0.24	1
1,1,1-Trichloroethane	ND		ug/kg	0.46	0.15	1
Bromodichloromethane	ND		ug/kg	0.46	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.92	0.25	1
cis-1,3-Dichloropropene	ND		ug/kg	0.46	0.15	1
1,3-Dichloropropene, Total	ND		ug/kg	0.46	0.15	1
1,1-Dichloropropene	ND		ug/kg	0.46	0.15	1
Bromoform	ND		ug/kg	3.7	0.23	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.46	0.15	1
Benzene	ND		ug/kg	0.46	0.15	1
Toluene	ND		ug/kg	0.92	0.50	1
Ethylbenzene	ND		ug/kg	0.92	0.13	1
Chloromethane	ND		ug/kg	3.7	0.86	1
Bromomethane	ND		ug/kg	1.8	0.54	1
Vinyl chloride	ND		ug/kg	0.92	0.31	1
Chloroethane	ND		ug/kg	1.8	0.42	1
1,1-Dichloroethene	ND		ug/kg	0.92	0.22	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.13	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-03	Date Collected:	10/01/20 10:47
Client ID:	B-3 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	22		ug/kg	0.46	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	1.8	0.13	1
1,3-Dichlorobenzene	ND		ug/kg	1.8	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	1.8	0.16	1
Methyl tert butyl ether	ND		ug/kg	1.8	0.18	1
p/m-Xylene	ND		ug/kg	1.8	0.52	1
o-Xylene	ND		ug/kg	0.92	0.27	1
Xylenes, Total	ND		ug/kg	0.92	0.27	1
cis-1,2-Dichloroethene	3.7		ug/kg	0.92	0.16	1
1,2-Dichloroethene, Total	3.7		ug/kg	0.92	0.13	1
Dibromomethane	ND		ug/kg	1.8	0.22	1
Styrene	ND		ug/kg	0.92	0.18	1
Dichlorodifluoromethane	ND		ug/kg	9.2	0.84	1
Acetone	ND		ug/kg	9.2	4.4	1
Carbon disulfide	ND		ug/kg	9.2	4.2	1
2-Butanone	ND		ug/kg	9.2	2.0	1
Vinyl acetate	ND		ug/kg	9.2	2.0	1
4-Methyl-2-pentanone	ND		ug/kg	9.2	1.2	1
1,2,3-Trichloropropane	ND		ug/kg	1.8	0.12	1
2-Hexanone	ND		ug/kg	9.2	1.1	1
Bromochloromethane	ND		ug/kg	1.8	0.19	1
2,2-Dichloropropane	ND		ug/kg	1.8	0.19	1
1,2-Dibromoethane	ND		ug/kg	0.92	0.26	1
1,3-Dichloropropane	ND		ug/kg	1.8	0.15	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.46	0.12	1
Bromobenzene	ND		ug/kg	1.8	0.13	1
n-Butylbenzene	ND		ug/kg	0.92	0.15	1
sec-Butylbenzene	ND		ug/kg	0.92	0.13	1
tert-Butylbenzene	ND		ug/kg	1.8	0.11	1
o-Chlorotoluene	ND		ug/kg	1.8	0.18	1
p-Chlorotoluene	ND		ug/kg	1.8	0.10	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.8	0.92	1
Hexachlorobutadiene	ND		ug/kg	3.7	0.16	1
Isopropylbenzene	ND		ug/kg	0.92	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.92	0.10	1
Naphthalene	ND		ug/kg	3.7	0.60	1
Acrylonitrile	ND		ug/kg	3.7	1.1	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-03	Date Collected:	10/01/20 10:47
Client ID:	B-3 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	0.92	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.8	0.30	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.8	0.25	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.8	0.18	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.8	0.31	1
1,4-Dioxane	ND		ug/kg	74	32.	1
p-Diethylbenzene	ND		ug/kg	1.8	0.16	1
p-Ethyltoluene	ND		ug/kg	1.8	0.35	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	1.8	0.18	1
Ethyl ether	ND		ug/kg	1.8	0.32	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.6	1.3	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	91		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	120		70-130
Dibromofluoromethane	91		70-130

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-04	Date Collected:	10/01/20 10:45
Client ID:	B-3 (13-15')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 10/06/20 14:23
Analyst: MKS
Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	6.2	2.8	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.18	1
Chloroform	ND		ug/kg	1.8	0.17	1
Carbon tetrachloride	ND		ug/kg	1.2	0.28	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.15	1
Dibromochloromethane	ND		ug/kg	1.2	0.17	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.33	1
Tetrachloroethene	ND		ug/kg	0.62	0.24	1
Chlorobenzene	ND		ug/kg	0.62	0.16	1
Trichlorofluoromethane	ND		ug/kg	4.9	0.86	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.32	1
1,1,1-Trichloroethane	ND		ug/kg	0.62	0.21	1
Bromodichloromethane	ND		ug/kg	0.62	0.13	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.34	1
cis-1,3-Dichloropropene	ND		ug/kg	0.62	0.20	1
1,3-Dichloropropene, Total	ND		ug/kg	0.62	0.20	1
1,1-Dichloropropene	ND		ug/kg	0.62	0.20	1
Bromoform	ND		ug/kg	4.9	0.30	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.62	0.20	1
Benzene	ND		ug/kg	0.62	0.20	1
Toluene	ND		ug/kg	1.2	0.67	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Chloromethane	ND		ug/kg	4.9	1.2	1
Bromomethane	ND		ug/kg	2.5	0.72	1
Vinyl chloride	ND		ug/kg	1.2	0.41	1
Chloroethane	ND		ug/kg	2.5	0.56	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.29	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.17	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-04	Date Collected:	10/01/20 10:45
Client ID:	B-3 (13-15')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	0.28	J	ug/kg	0.62	0.17	1
1,2-Dichlorobenzene	ND		ug/kg	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/kg	2.5	0.18	1
1,4-Dichlorobenzene	ND		ug/kg	2.5	0.21	1
Methyl tert butyl ether	ND		ug/kg	2.5	0.25	1
p/m-Xylene	ND		ug/kg	2.5	0.69	1
o-Xylene	ND		ug/kg	1.2	0.36	1
Xylenes, Total	ND		ug/kg	1.2	0.36	1
cis-1,2-Dichloroethene	86		ug/kg	1.2	0.22	1
1,2-Dichloroethene, Total	86		ug/kg	1.2	0.17	1
Dibromomethane	ND		ug/kg	2.5	0.29	1
Styrene	ND		ug/kg	1.2	0.24	1
Dichlorodifluoromethane	ND		ug/kg	12	1.1	1
Acetone	10	J	ug/kg	12	5.9	1
Carbon disulfide	ND		ug/kg	12	5.6	1
2-Butanone	ND		ug/kg	12	2.7	1
Vinyl acetate	ND		ug/kg	12	2.6	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.6	1
1,2,3-Trichloropropane	ND		ug/kg	2.5	0.16	1
2-Hexanone	ND		ug/kg	12	1.4	1
Bromochloromethane	ND		ug/kg	2.5	0.25	1
2,2-Dichloropropane	ND		ug/kg	2.5	0.25	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.34	1
1,3-Dichloropropane	ND		ug/kg	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.62	0.16	1
Bromobenzene	ND		ug/kg	2.5	0.18	1
n-Butylbenzene	ND		ug/kg	1.2	0.21	1
sec-Butylbenzene	ND		ug/kg	1.2	0.18	1
tert-Butylbenzene	ND		ug/kg	2.5	0.14	1
o-Chlorotoluene	ND		ug/kg	2.5	0.24	1
p-Chlorotoluene	ND		ug/kg	2.5	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.7	1.2	1
Hexachlorobutadiene	ND		ug/kg	4.9	0.21	1
Isopropylbenzene	ND		ug/kg	1.2	0.13	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.13	1
Naphthalene	ND		ug/kg	4.9	0.80	1
Acrylonitrile	ND		ug/kg	4.9	1.4	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-04	Date Collected:	10/01/20 10:45
Client ID:	B-3 (13-15')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.2	0.21	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.5	0.40	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.5	0.34	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.5	0.24	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.5	0.41	1
1,4-Dioxane	ND		ug/kg	99	43.	1
p-Diethylbenzene	ND		ug/kg	2.5	0.22	1
p-Ethyltoluene	ND		ug/kg	2.5	0.47	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.5	0.24	1
Ethyl ether	ND		ug/kg	2.5	0.42	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.2	1.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	89		70-130

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-05	Date Collected:	10/01/20 12:10
Client ID:	B-4 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 10/06/20 14:50
Analyst: MKS
Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	6.1	2.8	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.18	1
Chloroform	ND		ug/kg	1.8	0.17	1
Carbon tetrachloride	ND		ug/kg	1.2	0.28	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.15	1
Dibromochloromethane	ND		ug/kg	1.2	0.17	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.33	1
Tetrachloroethene	ND		ug/kg	0.61	0.24	1
Chlorobenzene	ND		ug/kg	0.61	0.16	1
Trichlorofluoromethane	ND		ug/kg	4.9	0.85	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.31	1
1,1,1-Trichloroethane	ND		ug/kg	0.61	0.20	1
Bromodichloromethane	ND		ug/kg	0.61	0.13	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.33	1
cis-1,3-Dichloropropene	ND		ug/kg	0.61	0.19	1
1,3-Dichloropropene, Total	ND		ug/kg	0.61	0.19	1
1,1-Dichloropropene	ND		ug/kg	0.61	0.19	1
Bromoform	ND		ug/kg	4.9	0.30	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.61	0.20	1
Benzene	ND		ug/kg	0.61	0.20	1
Toluene	ND		ug/kg	1.2	0.66	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Chloromethane	ND		ug/kg	4.9	1.1	1
Bromomethane	ND		ug/kg	2.4	0.71	1
Vinyl chloride	ND		ug/kg	1.2	0.41	1
Chloroethane	ND		ug/kg	2.4	0.55	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.29	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.17	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-05	Date Collected:	10/01/20 12:10
Client ID:	B-4 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.61	0.17	1
1,2-Dichlorobenzene	ND		ug/kg	2.4	0.18	1
1,3-Dichlorobenzene	ND		ug/kg	2.4	0.18	1
1,4-Dichlorobenzene	ND		ug/kg	2.4	0.21	1
Methyl tert butyl ether	ND		ug/kg	2.4	0.24	1
p/m-Xylene	ND		ug/kg	2.4	0.68	1
o-Xylene	ND		ug/kg	1.2	0.36	1
Xylenes, Total	ND		ug/kg	1.2	0.36	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.21	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.17	1
Dibromomethane	ND		ug/kg	2.4	0.29	1
Styrene	ND		ug/kg	1.2	0.24	1
Dichlorodifluoromethane	ND		ug/kg	12	1.1	1
Acetone	ND		ug/kg	12	5.9	1
Carbon disulfide	ND		ug/kg	12	5.6	1
2-Butanone	ND		ug/kg	12	2.7	1
Vinyl acetate	ND		ug/kg	12	2.6	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.6	1
1,2,3-Trichloropropane	ND		ug/kg	2.4	0.16	1
2-Hexanone	ND		ug/kg	12	1.4	1
Bromochloromethane	ND		ug/kg	2.4	0.25	1
2,2-Dichloropropane	ND		ug/kg	2.4	0.25	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.34	1
1,3-Dichloropropane	ND		ug/kg	2.4	0.20	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.61	0.16	1
Bromobenzene	ND		ug/kg	2.4	0.18	1
n-Butylbenzene	ND		ug/kg	1.2	0.20	1
sec-Butylbenzene	0.18	J	ug/kg	1.2	0.18	1
tert-Butylbenzene	ND		ug/kg	2.4	0.14	1
o-Chlorotoluene	ND		ug/kg	2.4	0.23	1
p-Chlorotoluene	ND		ug/kg	2.4	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.7	1.2	1
Hexachlorobutadiene	ND		ug/kg	4.9	0.21	1
Isopropylbenzene	ND		ug/kg	1.2	0.13	1
p-Isopropyltoluene	0.34	J	ug/kg	1.2	0.13	1
Naphthalene	8.1		ug/kg	4.9	0.79	1
Acrylonitrile	ND		ug/kg	4.9	1.4	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-05	Date Collected:	10/01/20 12:10
Client ID:	B-4 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.2	0.21	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.4	0.39	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.4	0.33	1
1,3,5-Trimethylbenzene	0.37	J	ug/kg	2.4	0.24	1
1,2,4-Trimethylbenzene	0.41	J	ug/kg	2.4	0.41	1
1,4-Dioxane	ND		ug/kg	98	43.	1
p-Diethylbenzene	3.7		ug/kg	2.4	0.22	1
p-Ethyltoluene	ND		ug/kg	2.4	0.47	1
1,2,4,5-Tetramethylbenzene	1.5	J	ug/kg	2.4	0.23	1
Ethyl ether	ND		ug/kg	2.4	0.42	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.1	1.7	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	118		70-130
Dibromofluoromethane	92		70-130

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-06	Date Collected:	10/01/20 12:09
Client ID:	B-4 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 10/06/20 15:17
Analyst: AJK
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.9	2.7	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.17	1
Chloroform	ND		ug/kg	1.8	0.16	1
Carbon tetrachloride	ND		ug/kg	1.2	0.27	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.15	1
Dibromochloromethane	ND		ug/kg	1.2	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.31	1
Tetrachloroethene	ND		ug/kg	0.59	0.23	1
Chlorobenzene	ND		ug/kg	0.59	0.15	1
Trichlorofluoromethane	ND		ug/kg	4.7	0.82	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.30	1
1,1,1-Trichloroethane	ND		ug/kg	0.59	0.20	1
Bromodichloromethane	ND		ug/kg	0.59	0.13	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.32	1
cis-1,3-Dichloropropene	ND		ug/kg	0.59	0.18	1
1,3-Dichloropropene, Total	ND		ug/kg	0.59	0.18	1
1,1-Dichloropropene	ND		ug/kg	0.59	0.19	1
Bromoform	ND		ug/kg	4.7	0.29	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.59	0.20	1
Benzene	ND		ug/kg	0.59	0.20	1
Toluene	ND		ug/kg	1.2	0.64	1
Ethylbenzene	ND		ug/kg	1.2	0.16	1
Chloromethane	ND		ug/kg	4.7	1.1	1
Bromomethane	ND		ug/kg	2.4	0.68	1
Vinyl chloride	ND		ug/kg	1.2	0.39	1
Chloroethane	ND		ug/kg	2.4	0.53	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.28	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.16	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-06 Date Collected: 10/01/20 12:09
Client ID: B-4 (10-12') Date Received: 10/01/20
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.59	0.16	1
1,2-Dichlorobenzene	ND		ug/kg	2.4	0.17	1
1,3-Dichlorobenzene	ND		ug/kg	2.4	0.17	1
1,4-Dichlorobenzene	ND		ug/kg	2.4	0.20	1
Methyl tert butyl ether	ND		ug/kg	2.4	0.24	1
p/m-Xylene	ND		ug/kg	2.4	0.66	1
o-Xylene	ND		ug/kg	1.2	0.34	1
Xylenes, Total	ND		ug/kg	1.2	0.34	1
cis-1,2-Dichloroethene	8.3		ug/kg	1.2	0.20	1
1,2-Dichloroethene, Total	8.3		ug/kg	1.2	0.16	1
Dibromomethane	ND		ug/kg	2.4	0.28	1
Styrene	ND		ug/kg	1.2	0.23	1
Dichlorodifluoromethane	ND		ug/kg	12	1.1	1
Acetone	ND		ug/kg	12	5.7	1
Carbon disulfide	ND		ug/kg	12	5.4	1
2-Butanone	ND		ug/kg	12	2.6	1
Vinyl acetate	ND		ug/kg	12	2.5	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.5	1
1,2,3-Trichloropropane	ND		ug/kg	2.4	0.15	1
2-Hexanone	ND		ug/kg	12	1.4	1
Bromochloromethane	ND		ug/kg	2.4	0.24	1
2,2-Dichloropropane	ND		ug/kg	2.4	0.24	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.33	1
1,3-Dichloropropane	ND		ug/kg	2.4	0.20	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.59	0.16	1
Bromobenzene	ND		ug/kg	2.4	0.17	1
n-Butylbenzene	ND		ug/kg	1.2	0.20	1
sec-Butylbenzene	ND		ug/kg	1.2	0.17	1
tert-Butylbenzene	ND		ug/kg	2.4	0.14	1
o-Chlorotoluene	ND		ug/kg	2.4	0.22	1
p-Chlorotoluene	ND		ug/kg	2.4	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.5	1.2	1
Hexachlorobutadiene	ND		ug/kg	4.7	0.20	1
Isopropylbenzene	ND		ug/kg	1.2	0.13	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.13	1
Naphthalene	ND		ug/kg	4.7	0.76	1
Acrylonitrile	ND		ug/kg	4.7	1.4	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-06	Date Collected:	10/01/20 12:09
Client ID:	B-4 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.2	0.20	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.4	0.38	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.4	0.32	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.4	0.23	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.4	0.39	1
1,4-Dioxane	ND		ug/kg	94	41.	1
p-Diethylbenzene	ND		ug/kg	2.4	0.21	1
p-Ethyltoluene	ND		ug/kg	2.4	0.45	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.4	0.22	1
Ethyl ether	ND		ug/kg	2.4	0.40	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.9	1.7	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	89		70-130

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-07 Date Collected: 10/01/20 12:30
Client ID: B-5 (0-2') Date Received: 10/01/20
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 10/06/20 15:44
Analyst: AJK
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	6.5	3.0	1
1,1-Dichloroethane	ND		ug/kg	1.3	0.19	1
Chloroform	ND		ug/kg	2.0	0.18	1
Carbon tetrachloride	ND		ug/kg	1.3	0.30	1
1,2-Dichloropropane	ND		ug/kg	1.3	0.16	1
Dibromochloromethane	ND		ug/kg	1.3	0.18	1
1,1,2-Trichloroethane	ND		ug/kg	1.3	0.35	1
Tetrachloroethene	ND		ug/kg	0.65	0.25	1
Chlorobenzene	ND		ug/kg	0.65	0.16	1
Trichlorofluoromethane	ND		ug/kg	5.2	0.90	1
1,2-Dichloroethane	ND		ug/kg	1.3	0.33	1
1,1,1-Trichloroethane	ND		ug/kg	0.65	0.22	1
Bromodichloromethane	ND		ug/kg	0.65	0.14	1
trans-1,3-Dichloropropene	ND		ug/kg	1.3	0.35	1
cis-1,3-Dichloropropene	ND		ug/kg	0.65	0.20	1
1,3-Dichloropropene, Total	ND		ug/kg	0.65	0.20	1
1,1-Dichloropropene	ND		ug/kg	0.65	0.21	1
Bromoform	ND		ug/kg	5.2	0.32	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.65	0.22	1
Benzene	ND		ug/kg	0.65	0.22	1
Toluene	ND		ug/kg	1.3	0.71	1
Ethylbenzene	ND		ug/kg	1.3	0.18	1
Chloromethane	ND		ug/kg	5.2	1.2	1
Bromomethane	ND		ug/kg	2.6	0.76	1
Vinyl chloride	ND		ug/kg	1.3	0.44	1
Chloroethane	ND		ug/kg	2.6	0.59	1
1,1-Dichloroethene	ND		ug/kg	1.3	0.31	1
trans-1,2-Dichloroethene	ND		ug/kg	2.0	0.18	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-07	Date Collected:	10/01/20 12:30
Client ID:	B-5 (0-2')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.65	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	2.6	0.19	1
1,3-Dichlorobenzene	ND		ug/kg	2.6	0.19	1
1,4-Dichlorobenzene	ND		ug/kg	2.6	0.22	1
Methyl tert butyl ether	ND		ug/kg	2.6	0.26	1
p/m-Xylene	ND		ug/kg	2.6	0.73	1
o-Xylene	ND		ug/kg	1.3	0.38	1
Xylenes, Total	ND		ug/kg	1.3	0.38	1
cis-1,2-Dichloroethene	ND		ug/kg	1.3	0.23	1
1,2-Dichloroethene, Total	ND		ug/kg	1.3	0.18	1
Dibromomethane	ND		ug/kg	2.6	0.31	1
Styrene	ND		ug/kg	1.3	0.25	1
Dichlorodifluoromethane	ND		ug/kg	13	1.2	1
Acetone	ND		ug/kg	13	6.2	1
Carbon disulfide	ND		ug/kg	13	5.9	1
2-Butanone	ND		ug/kg	13	2.9	1
Vinyl acetate	ND		ug/kg	13	2.8	1
4-Methyl-2-pentanone	ND		ug/kg	13	1.7	1
1,2,3-Trichloropropane	ND		ug/kg	2.6	0.16	1
2-Hexanone	ND		ug/kg	13	1.5	1
Bromochloromethane	ND		ug/kg	2.6	0.27	1
2,2-Dichloropropane	ND		ug/kg	2.6	0.26	1
1,2-Dibromoethane	ND		ug/kg	1.3	0.36	1
1,3-Dichloropropane	ND		ug/kg	2.6	0.22	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.65	0.17	1
Bromobenzene	ND		ug/kg	2.6	0.19	1
n-Butylbenzene	ND		ug/kg	1.3	0.22	1
sec-Butylbenzene	ND		ug/kg	1.3	0.19	1
tert-Butylbenzene	ND		ug/kg	2.6	0.15	1
o-Chlorotoluene	ND		ug/kg	2.6	0.25	1
p-Chlorotoluene	ND		ug/kg	2.6	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.9	1.3	1
Hexachlorobutadiene	ND		ug/kg	5.2	0.22	1
Isopropylbenzene	ND		ug/kg	1.3	0.14	1
p-Isopropyltoluene	0.21	J	ug/kg	1.3	0.14	1
Naphthalene	ND		ug/kg	5.2	0.84	1
Acrylonitrile	ND		ug/kg	5.2	1.5	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-07 Date Collected: 10/01/20 12:30

Client ID: B-5 (0-2') Date Received: 10/01/20

Sample Location: 89-93 GERRY STREET, BROOKLYN, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.3	0.22	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.6	0.42	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.6	0.35	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.6	0.25	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.6	0.43	1
1,4-Dioxane	ND		ug/kg	100	46.	1
p-Diethylbenzene	ND		ug/kg	2.6	0.23	1
p-Ethyltoluene	ND		ug/kg	2.6	0.50	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.6	0.25	1
Ethyl ether	ND		ug/kg	2.6	0.44	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.5	1.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	89		70-130

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-08	Date Collected:	10/01/20 12:29
Client ID:	B-5 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 10/06/20 16:11
Analyst: AJK
Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.7	2.6	1
1,1-Dichloroethane	ND		ug/kg	1.1	0.17	1
Chloroform	ND		ug/kg	1.7	0.16	1
Carbon tetrachloride	ND		ug/kg	1.1	0.26	1
1,2-Dichloropropane	ND		ug/kg	1.1	0.14	1
Dibromochloromethane	ND		ug/kg	1.1	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.1	0.30	1
Tetrachloroethene	ND		ug/kg	0.57	0.22	1
Chlorobenzene	ND		ug/kg	0.57	0.14	1
Trichlorofluoromethane	ND		ug/kg	4.6	0.80	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.29	1
1,1,1-Trichloroethane	ND		ug/kg	0.57	0.19	1
Bromodichloromethane	ND		ug/kg	0.57	0.12	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.31	1
cis-1,3-Dichloropropene	ND		ug/kg	0.57	0.18	1
1,3-Dichloropropene, Total	ND		ug/kg	0.57	0.18	1
1,1-Dichloropropene	ND		ug/kg	0.57	0.18	1
Bromoform	ND		ug/kg	4.6	0.28	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.57	0.19	1
Benzene	ND		ug/kg	0.57	0.19	1
Toluene	ND		ug/kg	1.1	0.62	1
Ethylbenzene	ND		ug/kg	1.1	0.16	1
Chloromethane	ND		ug/kg	4.6	1.1	1
Bromomethane	ND		ug/kg	2.3	0.66	1
Vinyl chloride	ND		ug/kg	1.1	0.38	1
Chloroethane	ND		ug/kg	2.3	0.52	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.27	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.16	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-08	Date Collected:	10/01/20 12:29
Client ID:	B-5 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.57	0.16	1
1,2-Dichlorobenzene	ND		ug/kg	2.3	0.16	1
1,3-Dichlorobenzene	ND		ug/kg	2.3	0.17	1
1,4-Dichlorobenzene	ND		ug/kg	2.3	0.20	1
Methyl tert butyl ether	ND		ug/kg	2.3	0.23	1
p/m-Xylene	ND		ug/kg	2.3	0.64	1
o-Xylene	ND		ug/kg	1.1	0.33	1
Xylenes, Total	ND		ug/kg	1.1	0.33	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.20	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.16	1
Dibromomethane	ND		ug/kg	2.3	0.27	1
Styrene	ND		ug/kg	1.1	0.22	1
Dichlorodifluoromethane	ND		ug/kg	11	1.0	1
Acetone	ND		ug/kg	11	5.5	1
Carbon disulfide	ND		ug/kg	11	5.2	1
2-Butanone	ND		ug/kg	11	2.5	1
Vinyl acetate	ND		ug/kg	11	2.5	1
4-Methyl-2-pentanone	ND		ug/kg	11	1.5	1
1,2,3-Trichloropropane	ND		ug/kg	2.3	0.14	1
2-Hexanone	ND		ug/kg	11	1.4	1
Bromochloromethane	ND		ug/kg	2.3	0.23	1
2,2-Dichloropropane	ND		ug/kg	2.3	0.23	1
1,2-Dibromoethane	ND		ug/kg	1.1	0.32	1
1,3-Dichloropropane	ND		ug/kg	2.3	0.19	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.57	0.15	1
Bromobenzene	ND		ug/kg	2.3	0.17	1
n-Butylbenzene	ND		ug/kg	1.1	0.19	1
sec-Butylbenzene	ND		ug/kg	1.1	0.17	1
tert-Butylbenzene	ND		ug/kg	2.3	0.14	1
o-Chlorotoluene	ND		ug/kg	2.3	0.22	1
p-Chlorotoluene	ND		ug/kg	2.3	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.4	1.1	1
Hexachlorobutadiene	ND		ug/kg	4.6	0.19	1
Isopropylbenzene	ND		ug/kg	1.1	0.12	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.12	1
Naphthalene	ND		ug/kg	4.6	0.74	1
Acrylonitrile	ND		ug/kg	4.6	1.3	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-08	Date Collected:	10/01/20 12:29
Client ID:	B-5 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.1	0.20	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.3	0.37	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.3	0.31	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.3	0.22	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.3	0.38	1
1,4-Dioxane	ND		ug/kg	92	40.	1
p-Diethylbenzene	ND		ug/kg	2.3	0.20	1
p-Ethyltoluene	ND		ug/kg	2.3	0.44	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.3	0.22	1
Ethyl ether	ND		ug/kg	2.3	0.39	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.7	1.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	89		70-130

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/06/20 07:13
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-08 Batch: WG1418552-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	0.70	J	ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 89-93 GERRY STREET
Lab Number: L2041810
Project Number: 135597-002
Report Date: 10/12/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/06/20 07:13
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-08 Batch: WG1418552-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/06/20 07:13
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-08 Batch: WG1418552-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	80	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	90		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041810
Report Date: 10/12/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-08 Batch: WG1418552-3 WG1418552-4								
Methylene chloride	93		89		70-130	4		30
1,1-Dichloroethane	101		97		70-130	4		30
Chloroform	96		92		70-130	4		30
Carbon tetrachloride	95		90		70-130	5		30
1,2-Dichloropropane	99		96		70-130	3		30
Dibromochloromethane	76		75		70-130	1		30
1,1,2-Trichloroethane	92		91		70-130	1		30
Tetrachloroethene	92		89		70-130	3		30
Chlorobenzene	84		83		70-130	1		30
Trichlorofluoromethane	100		95		70-139	5		30
1,2-Dichloroethane	91		90		70-130	1		30
1,1,1-Trichloroethane	94		91		70-130	3		30
Bromodichloromethane	83		83		70-130	0		30
trans-1,3-Dichloropropene	72		72		70-130	0		30
cis-1,3-Dichloropropene	80		79		70-130	1		30
1,1-Dichloropropene	106		102		70-130	4		30
Bromoform	70		**69**	Q	70-130	1		30
1,1,2,2-Tetrachloroethane	103		103		70-130	0		30
Benzene	93		90		70-130	3		30
Toluene	93		91		70-130	2		30
Ethylbenzene	91		89		70-130	2		30
Chloromethane	100		96		52-130	4		30
Bromomethane	122		117		57-147	4		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041810
Report Date: 10/12/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-08 Batch: WG1418552-3 WG1418552-4								
Vinyl chloride	110		99		67-130	11		30
Chloroethane	128		127		50-151	1		30
1,1-Dichloroethene	113		105		65-135	7		30
trans-1,2-Dichloroethene	109		102		70-130	7		30
Trichloroethene	96		94		70-130	2		30
1,2-Dichlorobenzene	90		90		70-130	0		30
1,3-Dichlorobenzene	94		93		70-130	1		30
1,4-Dichlorobenzene	94		91		70-130	3		30
Methyl tert butyl ether	86		84		66-130	2		30
p/m-Xylene	87		85		70-130	2		30
o-Xylene	84		82		70-130	2		30
cis-1,2-Dichloroethene	102		99		70-130	3		30
Dibromomethane	97		95		70-130	2		30
Styrene	82		81		70-130	1		30
Dichlorodifluoromethane	102		96		30-146	6		30
Acetone	86		82		54-140	5		30
Carbon disulfide	92		86		59-130	7		30
2-Butanone	77		77		70-130	0		30
Vinyl acetate	83		82		70-130	1		30
4-Methyl-2-pentanone	95		96		70-130	1		30
1,2,3-Trichloropropane	96		96		68-130	0		30
2-Hexanone	84		89		70-130	6		30
Bromochloromethane	95		92		70-130	3		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041810
Report Date: 10/12/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-08 Batch: WG1418552-3 WG1418552-4								
2,2-Dichloropropane	**69**	Q	**66**	Q	70-130	4		30
1,2-Dibromoethane	95		95		70-130	0		30
1,3-Dichloropropane	96		95		69-130	1		30
1,1,1,2-Tetrachloroethane	76		77		70-130	1		30
Bromobenzene	94		90		70-130	4		30
n-Butylbenzene	106		104		70-130	2		30
sec-Butylbenzene	102		100		70-130	2		30
tert-Butylbenzene	98		96		70-130	2		30
o-Chlorotoluene	98		94		70-130	4		30
p-Chlorotoluene	98		96		70-130	2		30
1,2-Dibromo-3-chloropropane	70		71		68-130	1		30
Hexachlorobutadiene	90		89		67-130	1		30
Isopropylbenzene	103		99		70-130	4		30
p-Isopropyltoluene	100		98		70-130	2		30
Naphthalene	90		92		70-130	2		30
Acrylonitrile	90		95		70-130	5		30
n-Propylbenzene	106		103		70-130	3		30
1,2,3-Trichlorobenzene	89		90		70-130	1		30
1,2,4-Trichlorobenzene	98		98		70-130	0		30
1,3,5-Trimethylbenzene	98		97		70-130	1		30
1,2,4-Trimethylbenzene	97		96		70-130	1		30
1,4-Dioxane	108		102		65-136	6		30
p-Diethylbenzene	100		99		70-130	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Lab Number: L2041810
Project Number: 135597-002
Report Date: 10/12/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-08 Batch: WG1418552-3 WG1418552-4								
p-Ethyltoluene	103		100		70-130	3		30
1,2,4,5-Tetramethylbenzene	93		92		70-130	1		30
Ethyl ether	102		98		67-130	4		30
trans-1,4-Dichloro-2-butene	85		83		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	91		90		70-130
Toluene-d8	99		100		70-130
4-Bromofluorobenzene	102		104		70-130
Dibromofluoromethane	95		98		70-130

SEMIVOLATILES

Project Name: 89-93 GERRY STREET
Lab Number: L2041810
Project Number: 135597-002
Report Date: 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-01 D
Client ID: B-1 (3-5')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY
Date Collected: 10/01/20 10:05
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 10/05/20 17:15
Analyst: EK
Percent Solids: 82%
Extraction Method: EPA 3546
Extraction Date: 10/04/20 05:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	370	J	ug/kg	800	100	5
1,2,4-Trichlorobenzene	ND		ug/kg	1000	110	5
Hexachlorobenzene	ND		ug/kg	600	110	5
Bis(2-chloroethyl)ether	ND		ug/kg	900	140	5
2-Chloronaphthalene	ND		ug/kg	1000	99.	5
1,2-Dichlorobenzene	ND		ug/kg	1000	180	5
1,3-Dichlorobenzene	ND		ug/kg	1000	170	5
1,4-Dichlorobenzene	ND		ug/kg	1000	170	5
3,3'-Dichlorobenzidine	ND		ug/kg	1000	260	5
2,4-Dinitrotoluene	ND		ug/kg	1000	200	5
2,6-Dinitrotoluene	ND		ug/kg	1000	170	5
Fluoranthene	14000		ug/kg	600	110	5
4-Chlorophenyl phenyl ether	ND		ug/kg	1000	110	5
4-Bromophenyl phenyl ether	ND		ug/kg	1000	150	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	1200	170	5
Bis(2-chloroethoxy)methane	ND		ug/kg	1100	100	5
Hexachlorobutadiene	ND		ug/kg	1000	150	5
Hexachlorocyclopentadiene	ND		ug/kg	2800	900	5
Hexachloroethane	ND		ug/kg	800	160	5
Isophorone	ND		ug/kg	900	130	5
Naphthalene	160	J	ug/kg	1000	120	5
Nitrobenzene	ND		ug/kg	900	150	5
NDPA/DPA	ND		ug/kg	800	110	5
n-Nitrosodi-n-propylamine	ND		ug/kg	1000	150	5
Bis(2-ethylhexyl)phthalate	ND		ug/kg	1000	340	5
Butyl benzyl phthalate	540	J	ug/kg	1000	250	5
Di-n-butylphthalate	ND		ug/kg	1000	190	5
Di-n-octylphthalate	ND		ug/kg	1000	340	5

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-01	D	Date Collected:	10/01/20 10:05
Client ID:	B-1 (3-5')		Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY		Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	1000	92.	5
Dimethyl phthalate	ND		ug/kg	1000	210	5
Benzo(a)anthracene	9400		ug/kg	600	110	5
Benzo(a)pyrene	7500		ug/kg	800	240	5
Benzo(b)fluoranthene	8900		ug/kg	600	170	5
Benzo(k)fluoranthene	3300		ug/kg	600	160	5
Chrysene	8200		ug/kg	600	100	5
Acenaphthylene	850		ug/kg	800	150	5
Anthracene	2200		ug/kg	600	190	5
Benzo(ghi)perylene	4200		ug/kg	800	120	5
Fluorene	400	J	ug/kg	1000	97.	5
Phenanthrene	6300		ug/kg	600	120	5
Dibenzo(a,h)anthracene	1200		ug/kg	600	120	5
Indeno(1,2,3-cd)pyrene	4400		ug/kg	800	140	5
Pyrene	14000		ug/kg	600	99.	5
Biphenyl	ND		ug/kg	2300	230	5
4-Chloroaniline	ND		ug/kg	1000	180	5
2-Nitroaniline	ND		ug/kg	1000	190	5
3-Nitroaniline	ND		ug/kg	1000	190	5
4-Nitroaniline	ND		ug/kg	1000	410	5
Dibenzofuran	180	J	ug/kg	1000	94.	5
2-Methylnaphthalene	ND		ug/kg	1200	120	5
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	1000	100	5
Acetophenone	ND		ug/kg	1000	120	5
2,4,6-Trichlorophenol	ND		ug/kg	600	190	5
p-Chloro-m-cresol	ND		ug/kg	1000	150	5
2-Chlorophenol	ND		ug/kg	1000	120	5
2,4-Dichlorophenol	ND		ug/kg	900	160	5
2,4-Dimethylphenol	ND		ug/kg	1000	330	5
2-Nitrophenol	ND		ug/kg	2200	380	5
4-Nitrophenol	ND		ug/kg	1400	410	5
2,4-Dinitrophenol	ND		ug/kg	4800	460	5
4,6-Dinitro-o-cresol	ND		ug/kg	2600	480	5
Pentachlorophenol	ND		ug/kg	800	220	5
Phenol	ND		ug/kg	1000	150	5
2-Methylphenol	ND		ug/kg	1000	150	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	1400	160	5

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-01	D	Date Collected:	10/01/20 10:05
Client ID:	B-1 (3-5')		Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY		Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	1000	190	5
Benzoic Acid	ND		ug/kg	3200	1000	5
Benzyl Alcohol	ND		ug/kg	1000	300	5
Carbazole	440	J	ug/kg	1000	97.	5
1,4-Dioxane	ND		ug/kg	150	46.	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		25-120
Phenol-d6	61		10-120
Nitrobenzene-d5	65		23-120
2-Fluorobiphenyl	60		30-120
2,4,6-Tribromophenol	71		10-136
4-Terphenyl-d14	64		18-120

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-02	Date Collected:	10/01/20 10:10
Client ID:	B-1 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270D	Extraction Date:	10/04/20 05:33
Analytical Date:	10/05/20 14:52		
Analyst:	EK		
Percent Solids:	79%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	170	22.	1
1,2,4-Trichlorobenzene	ND		ug/kg	210	24.	1
Hexachlorobenzene	ND		ug/kg	120	23.	1
Bis(2-chloroethyl)ether	ND		ug/kg	190	28.	1
2-Chloronaphthalene	ND		ug/kg	210	21.	1
1,2-Dichlorobenzene	ND		ug/kg	210	38.	1
1,3-Dichlorobenzene	ND		ug/kg	210	36.	1
1,4-Dichlorobenzene	ND		ug/kg	210	36.	1
3,3'-Dichlorobenzidine	ND		ug/kg	210	56.	1
2,4-Dinitrotoluene	ND		ug/kg	210	42.	1
2,6-Dinitrotoluene	ND		ug/kg	210	36.	1
Fluoranthene	ND		ug/kg	120	24.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	210	22.	1
4-Bromophenyl phenyl ether	ND		ug/kg	210	32.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	250	36.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	220	21.	1
Hexachlorobutadiene	ND		ug/kg	210	30.	1
Hexachlorocyclopentadiene	ND		ug/kg	600	190	1
Hexachloroethane	ND		ug/kg	170	34.	1
Isophorone	ND		ug/kg	190	27.	1
Naphthalene	ND		ug/kg	210	25.	1
Nitrobenzene	ND		ug/kg	190	31.	1
NDPA/DPA	ND		ug/kg	170	24.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	210	32.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	210	72.	1
Butyl benzyl phthalate	ND		ug/kg	210	53.	1
Di-n-butylphthalate	ND		ug/kg	210	40.	1
Di-n-octylphthalate	ND		ug/kg	210	71.	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-02	Date Collected:	10/01/20 10:10
Client ID:	B-1 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	210	19.	1
Dimethyl phthalate	ND		ug/kg	210	44.	1
Benzo(a)anthracene	ND		ug/kg	120	24.	1
Benzo(a)pyrene	ND		ug/kg	170	51.	1
Benzo(b)fluoranthene	ND		ug/kg	120	35.	1
Benzo(k)fluoranthene	ND		ug/kg	120	33.	1
Chrysene	ND		ug/kg	120	22.	1
Acenaphthylene	ND		ug/kg	170	32.	1
Anthracene	ND		ug/kg	120	41.	1
Benzo(ghi)perylene	ND		ug/kg	170	24.	1
Fluorene	ND		ug/kg	210	20.	1
Phenanthrene	ND		ug/kg	120	25.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	24.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	170	29.	1
Pyrene	ND		ug/kg	120	21.	1
Biphenyl	ND		ug/kg	480	48.	1
4-Chloroaniline	ND		ug/kg	210	38.	1
2-Nitroaniline	ND		ug/kg	210	40.	1
3-Nitroaniline	ND		ug/kg	210	39.	1
4-Nitroaniline	ND		ug/kg	210	86.	1
Dibenzofuran	ND		ug/kg	210	20.	1
2-Methylnaphthalene	ND		ug/kg	250	25.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	210	22.	1
Acetophenone	ND		ug/kg	210	26.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	40.	1
p-Chloro-m-cresol	ND		ug/kg	210	31.	1
2-Chlorophenol	ND		ug/kg	210	25.	1
2,4-Dichlorophenol	ND		ug/kg	190	34.	1
2,4-Dimethylphenol	ND		ug/kg	210	69.	1
2-Nitrophenol	ND		ug/kg	450	78.	1
4-Nitrophenol	ND		ug/kg	290	85.	1
2,4-Dinitrophenol	ND		ug/kg	1000	97.	1
4,6-Dinitro-o-cresol	ND		ug/kg	540	100	1
Pentachlorophenol	ND		ug/kg	170	46.	1
Phenol	ND		ug/kg	210	32.	1
2-Methylphenol	ND		ug/kg	210	32.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	300	33.	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-02	Date Collected:	10/01/20 10:10
Client ID:	B-1 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	210	40.	1
Benzoic Acid	ND		ug/kg	680	210	1
Benzyl Alcohol	ND		ug/kg	210	64.	1
Carbazole	ND		ug/kg	210	20.	1
1,4-Dioxane	ND		ug/kg	31	9.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	64		25-120
Phenol-d6	61		10-120
Nitrobenzene-d5	58		23-120
2-Fluorobiphenyl	59		30-120
2,4,6-Tribromophenol	69		10-136
4-Terphenyl-d14	64		18-120

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-03	Date Collected:	10/01/20 10:47
Client ID:	B-3 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270D	Extraction Date:	10/04/20 05:33
Analytical Date:	10/05/20 15:14		
Analyst:	EK		
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	160	20.	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	22.	1
Hexachlorobenzene	ND		ug/kg	120	22.	1
Bis(2-chloroethyl)ether	ND		ug/kg	180	26.	1
2-Chloronaphthalene	ND		ug/kg	200	19.	1
1,2-Dichlorobenzene	ND		ug/kg	200	35.	1
1,3-Dichlorobenzene	ND		ug/kg	200	34.	1
1,4-Dichlorobenzene	ND		ug/kg	200	34.	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	52.	1
2,4-Dinitrotoluene	ND		ug/kg	200	39.	1
2,6-Dinitrotoluene	ND		ug/kg	200	34.	1
Fluoranthene	730		ug/kg	120	22.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	200	21.	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	30.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	240	33.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	20.	1
Hexachlorobutadiene	ND		ug/kg	200	29.	1
Hexachlorocyclopentadiene	ND		ug/kg	560	180	1
Hexachloroethane	ND		ug/kg	160	32.	1
Isophorone	ND		ug/kg	180	25.	1
Naphthalene	24	J	ug/kg	200	24.	1
Nitrobenzene	ND		ug/kg	180	29.	1
NDPA/DPA	ND		ug/kg	160	22.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	200	30.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	200	68.	1
Butyl benzyl phthalate	110	J	ug/kg	200	49.	1
Di-n-butylphthalate	ND		ug/kg	200	37.	1
Di-n-octylphthalate	ND		ug/kg	200	67.	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-03	Date Collected:	10/01/20 10:47
Client ID:	B-3 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	200	18.	1
Dimethyl phthalate	ND		ug/kg	200	41.	1
Benzo(a)anthracene	420		ug/kg	120	22.	1
Benzo(a)pyrene	390		ug/kg	160	48.	1
Benzo(b)fluoranthene	470		ug/kg	120	33.	1
Benzo(k)fluoranthene	110	J	ug/kg	120	31.	1
Chrysene	420		ug/kg	120	20.	1
Acenaphthylene	ND		ug/kg	160	30.	1
Anthracene	92	J	ug/kg	120	38.	1
Benzo(ghi)perylene	240		ug/kg	160	23.	1
Fluorene	ND		ug/kg	200	19.	1
Phenanthrene	330		ug/kg	120	24.	1
Dibenzo(a,h)anthracene	53	J	ug/kg	120	23.	1
Indeno(1,2,3-cd)pyrene	240		ug/kg	160	27.	1
Pyrene	700		ug/kg	120	19.	1
Biphenyl	ND		ug/kg	450	45.	1
4-Chloroaniline	ND		ug/kg	200	36.	1
2-Nitroaniline	ND		ug/kg	200	38.	1
3-Nitroaniline	ND		ug/kg	200	37.	1
4-Nitroaniline	ND		ug/kg	200	81.	1
Dibenzofuran	ND		ug/kg	200	18.	1
2-Methylnaphthalene	ND		ug/kg	240	24.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	200	20.	1
Acetophenone	ND		ug/kg	200	24.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	37.	1
p-Chloro-m-cresol	ND		ug/kg	200	29.	1
2-Chlorophenol	ND		ug/kg	200	23.	1
2,4-Dichlorophenol	ND		ug/kg	180	32.	1
2,4-Dimethylphenol	ND		ug/kg	200	65.	1
2-Nitrophenol	ND		ug/kg	420	74.	1
4-Nitrophenol	ND		ug/kg	270	80.	1
2,4-Dinitrophenol	ND		ug/kg	940	91.	1
4,6-Dinitro-o-cresol	ND		ug/kg	510	94.	1
Pentachlorophenol	ND		ug/kg	160	43.	1
Phenol	ND		ug/kg	200	30.	1
2-Methylphenol	ND		ug/kg	200	30.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	31.	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-03	Date Collected:	10/01/20 10:47
Client ID:	B-3 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	200	38.	1
Benzoic Acid	ND		ug/kg	640	200	1
Benzyl Alcohol	ND		ug/kg	200	60.	1
Carbazole	ND		ug/kg	200	19.	1
1,4-Dioxane	ND		ug/kg	29	9.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		25-120
Phenol-d6	73		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	66		30-120
2,4,6-Tribromophenol	74		10-136
4-Terphenyl-d14	63		18-120

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-04
Client ID: B-3 (13-15')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 10:45
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 10/05/20 13:46
Analyst: EK
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 10/04/20 05:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	150	20.	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	22.	1
Hexachlorobenzene	ND		ug/kg	120	22.	1
Bis(2-chloroethyl)ether	ND		ug/kg	170	26.	1
2-Chloronaphthalene	ND		ug/kg	190	19.	1
1,2-Dichlorobenzene	ND		ug/kg	190	35.	1
1,3-Dichlorobenzene	ND		ug/kg	190	33.	1
1,4-Dichlorobenzene	ND		ug/kg	190	34.	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	51.	1
2,4-Dinitrotoluene	ND		ug/kg	190	39.	1
2,6-Dinitrotoluene	ND		ug/kg	190	33.	1
Fluoranthene	ND		ug/kg	120	22.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	190	21.	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	29.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	230	33.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	19.	1
Hexachlorobutadiene	ND		ug/kg	190	28.	1
Hexachlorocyclopentadiene	ND		ug/kg	550	170	1
Hexachloroethane	ND		ug/kg	150	31.	1
Isophorone	ND		ug/kg	170	25.	1
Naphthalene	ND		ug/kg	190	24.	1
Nitrobenzene	ND		ug/kg	170	28.	1
NDPA/DPA	ND		ug/kg	150	22.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	190	30.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	190	67.	1
Butyl benzyl phthalate	ND		ug/kg	190	49.	1
Di-n-butylphthalate	ND		ug/kg	190	36.	1
Di-n-octylphthalate	ND		ug/kg	190	66.	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-04	Date Collected:	10/01/20 10:45
Client ID:	B-3 (13-15')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	190	18.	1
Dimethyl phthalate	ND		ug/kg	190	40.	1
Benzo(a)anthracene	ND		ug/kg	120	22.	1
Benzo(a)pyrene	ND		ug/kg	150	47.	1
Benzo(b)fluoranthene	ND		ug/kg	120	32.	1
Benzo(k)fluoranthene	ND		ug/kg	120	31.	1
Chrysene	ND		ug/kg	120	20.	1
Acenaphthylene	ND		ug/kg	150	30.	1
Anthracene	ND		ug/kg	120	38.	1
Benzo(ghi)perylene	ND		ug/kg	150	23.	1
Fluorene	ND		ug/kg	190	19.	1
Phenanthrene	ND		ug/kg	120	23.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	22.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	150	27.	1
Pyrene	ND		ug/kg	120	19.	1
Biphenyl	ND		ug/kg	440	45.	1
4-Chloroaniline	ND		ug/kg	190	35.	1
2-Nitroaniline	ND		ug/kg	190	37.	1
3-Nitroaniline	ND		ug/kg	190	36.	1
4-Nitroaniline	ND		ug/kg	190	80.	1
Dibenzofuran	ND		ug/kg	190	18.	1
2-Methylnaphthalene	ND		ug/kg	230	23.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	190	20.	1
Acetophenone	ND		ug/kg	190	24.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	36.	1
p-Chloro-m-cresol	ND		ug/kg	190	29.	1
2-Chlorophenol	ND		ug/kg	190	23.	1
2,4-Dichlorophenol	ND		ug/kg	170	31.	1
2,4-Dimethylphenol	ND		ug/kg	190	64.	1
2-Nitrophenol	ND		ug/kg	420	72.	1
4-Nitrophenol	ND		ug/kg	270	79.	1
2,4-Dinitrophenol	ND		ug/kg	930	90.	1
4,6-Dinitro-o-cresol	ND		ug/kg	500	93.	1
Pentachlorophenol	ND		ug/kg	150	42.	1
Phenol	ND		ug/kg	190	29.	1
2-Methylphenol	ND		ug/kg	190	30.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	30.	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-04	Date Collected:	10/01/20 10:45
Client ID:	B-3 (13-15')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	190	37.	1
Benzoic Acid	ND		ug/kg	620	200	1
Benzyl Alcohol	ND		ug/kg	190	59.	1
Carbazole	ND		ug/kg	190	19.	1
1,4-Dioxane	ND		ug/kg	29	8.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		25-120
Phenol-d6	70		10-120
Nitrobenzene-d5	64		23-120
2-Fluorobiphenyl	65		30-120
2,4,6-Tribromophenol	77		10-136
4-Terphenyl-d14	66		18-120

Project Name: 89-93 GERRY STREET
Lab Number: L2041810
Project Number: 135597-002
Report Date: 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-05 D
Client ID: B-4 (1-3')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY
Date Collected: 10/01/20 12:10
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 10/05/20 16:53
Analyst: EK
Percent Solids: 89%
Extraction Method: EPA 3546
Extraction Date: 10/04/20 05:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	630	J	ug/kg	740	95.	5
1,2,4-Trichlorobenzene	ND		ug/kg	920	100	5
Hexachlorobenzene	ND		ug/kg	550	100	5
Bis(2-chloroethyl)ether	ND		ug/kg	830	120	5
2-Chloronaphthalene	ND		ug/kg	920	91.	5
1,2-Dichlorobenzene	ND		ug/kg	920	160	5
1,3-Dichlorobenzene	ND		ug/kg	920	160	5
1,4-Dichlorobenzene	ND		ug/kg	920	160	5
3,3'-Dichlorobenzidine	ND		ug/kg	920	240	5
2,4-Dinitrotoluene	ND		ug/kg	920	180	5
2,6-Dinitrotoluene	ND		ug/kg	920	160	5
Fluoranthene	28000		ug/kg	550	100	5
4-Chlorophenyl phenyl ether	ND		ug/kg	920	98.	5
4-Bromophenyl phenyl ether	ND		ug/kg	920	140	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	1100	160	5
Bis(2-chloroethoxy)methane	ND		ug/kg	990	92.	5
Hexachlorobutadiene	ND		ug/kg	920	130	5
Hexachlorocyclopentadiene	ND		ug/kg	2600	830	5
Hexachloroethane	ND		ug/kg	740	150	5
Isophorone	ND		ug/kg	830	120	5
Naphthalene	930		ug/kg	920	110	5
Nitrobenzene	ND		ug/kg	830	140	5
NDPA/DPA	ND		ug/kg	740	100	5
n-Nitrosodi-n-propylamine	ND		ug/kg	920	140	5
Bis(2-ethylhexyl)phthalate	ND		ug/kg	920	320	5
Butyl benzyl phthalate	1500		ug/kg	920	230	5
Di-n-butylphthalate	ND		ug/kg	920	170	5
Di-n-octylphthalate	ND		ug/kg	920	310	5

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-05 D	Date Collected:	10/01/20 12:10
Client ID:	B-4 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	920	85.	5
Dimethyl phthalate	ND		ug/kg	920	190	5
Benzo(a)anthracene	17000		ug/kg	550	100	5
Benzo(a)pyrene	16000		ug/kg	740	220	5
Benzo(b)fluoranthene	19000		ug/kg	550	150	5
Benzo(k)fluoranthene	7200		ug/kg	550	150	5
Chrysene	16000		ug/kg	550	96.	5
Acenaphthylene	3600		ug/kg	740	140	5
Anthracene	3300		ug/kg	550	180	5
Benzo(ghi)perylene	9400		ug/kg	740	110	5
Fluorene	970		ug/kg	920	89.	5
Phenanthrene	14000		ug/kg	550	110	5
Dibenzo(a,h)anthracene	2500		ug/kg	550	110	5
Indeno(1,2,3-cd)pyrene	9500		ug/kg	740	130	5
Pyrene	29000		ug/kg	550	91.	5
Biphenyl	ND		ug/kg	2100	210	5
4-Chloroaniline	ND		ug/kg	920	170	5
2-Nitroaniline	ND		ug/kg	920	180	5
3-Nitroaniline	ND		ug/kg	920	170	5
4-Nitroaniline	ND		ug/kg	920	380	5
Dibenzofuran	500	J	ug/kg	920	87.	5
2-Methylnaphthalene	420	J	ug/kg	1100	110	5
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	920	96.	5
Acetophenone	ND		ug/kg	920	110	5
2,4,6-Trichlorophenol	ND		ug/kg	550	170	5
p-Chloro-m-cresol	ND		ug/kg	920	140	5
2-Chlorophenol	ND		ug/kg	920	110	5
2,4-Dichlorophenol	ND		ug/kg	830	150	5
2,4-Dimethylphenol	ND		ug/kg	920	300	5
2-Nitrophenol	ND		ug/kg	2000	340	5
4-Nitrophenol	ND		ug/kg	1300	380	5
2,4-Dinitrophenol	ND		ug/kg	4400	430	5
4,6-Dinitro-o-cresol	ND		ug/kg	2400	440	5
Pentachlorophenol	ND		ug/kg	740	200	5
Phenol	ND		ug/kg	920	140	5
2-Methylphenol	ND		ug/kg	920	140	5
3-Methylphenol/4-Methylphenol	250	J	ug/kg	1300	140	5

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-05 D	Date Collected:	10/01/20 12:10
Client ID:	B-4 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	920	180	5
Benzoic Acid	ND		ug/kg	3000	930	5
Benzyl Alcohol	ND		ug/kg	920	280	5
Carbazole	1000		ug/kg	920	89.	5
1,4-Dioxane	ND		ug/kg	140	42.	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		25-120
Phenol-d6	70		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	68		30-120
2,4,6-Tribromophenol	78		10-136
4-Terphenyl-d14	71		18-120

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-06	Date Collected:	10/01/20 12:09
Client ID:	B-4 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270D	Extraction Date:	10/04/20 05:33
Analytical Date:	10/05/20 14:30		
Analyst:	EK		
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	150	20.	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	22.	1
Hexachlorobenzene	ND		ug/kg	120	22.	1
Bis(2-chloroethyl)ether	ND		ug/kg	170	26.	1
2-Chloronaphthalene	ND		ug/kg	190	19.	1
1,2-Dichlorobenzene	ND		ug/kg	190	35.	1
1,3-Dichlorobenzene	ND		ug/kg	190	33.	1
1,4-Dichlorobenzene	ND		ug/kg	190	34.	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	51.	1
2,4-Dinitrotoluene	ND		ug/kg	190	39.	1
2,6-Dinitrotoluene	ND		ug/kg	190	33.	1
Fluoranthene	ND		ug/kg	120	22.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	190	21.	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	30.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	230	33.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	19.	1
Hexachlorobutadiene	ND		ug/kg	190	28.	1
Hexachlorocyclopentadiene	ND		ug/kg	550	180	1
Hexachloroethane	ND		ug/kg	150	31.	1
Isophorone	ND		ug/kg	170	25.	1
Naphthalene	ND		ug/kg	190	24.	1
Nitrobenzene	ND		ug/kg	170	29.	1
NDPA/DPA	ND		ug/kg	150	22.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	190	30.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	190	67.	1
Butyl benzyl phthalate	ND		ug/kg	190	49.	1
Di-n-butylphthalate	ND		ug/kg	190	37.	1
Di-n-octylphthalate	ND		ug/kg	190	66.	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-06	Date Collected:	10/01/20 12:09
Client ID:	B-4 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	190	18.	1
Dimethyl phthalate	ND		ug/kg	190	40.	1
Benzo(a)anthracene	ND		ug/kg	120	22.	1
Benzo(a)pyrene	ND		ug/kg	150	47.	1
Benzo(b)fluoranthene	ND		ug/kg	120	32.	1
Benzo(k)fluoranthene	ND		ug/kg	120	31.	1
Chrysene	ND		ug/kg	120	20.	1
Acenaphthylene	ND		ug/kg	150	30.	1
Anthracene	ND		ug/kg	120	38.	1
Benzo(ghi)perylene	ND		ug/kg	150	23.	1
Fluorene	ND		ug/kg	190	19.	1
Phenanthrene	ND		ug/kg	120	24.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	22.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	150	27.	1
Pyrene	ND		ug/kg	120	19.	1
Biphenyl	ND		ug/kg	440	45.	1
4-Chloroaniline	ND		ug/kg	190	35.	1
2-Nitroaniline	ND		ug/kg	190	37.	1
3-Nitroaniline	ND		ug/kg	190	36.	1
4-Nitroaniline	ND		ug/kg	190	80.	1
Dibenzofuran	ND		ug/kg	190	18.	1
2-Methylnaphthalene	ND		ug/kg	230	23.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	190	20.	1
Acetophenone	ND		ug/kg	190	24.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	37.	1
p-Chloro-m-cresol	ND		ug/kg	190	29.	1
2-Chlorophenol	ND		ug/kg	190	23.	1
2,4-Dichlorophenol	ND		ug/kg	170	31.	1
2,4-Dimethylphenol	ND		ug/kg	190	64.	1
2-Nitrophenol	ND		ug/kg	420	73.	1
4-Nitrophenol	ND		ug/kg	270	79.	1
2,4-Dinitrophenol	ND		ug/kg	930	90.	1
4,6-Dinitro-o-cresol	ND		ug/kg	500	93.	1
Pentachlorophenol	ND		ug/kg	150	42.	1
Phenol	ND		ug/kg	190	29.	1
2-Methylphenol	ND		ug/kg	190	30.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	30.	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-06	Date Collected:	10/01/20 12:09
Client ID:	B-4 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	190	37.	1
Benzoic Acid	ND		ug/kg	630	200	1
Benzyl Alcohol	ND		ug/kg	190	59.	1
Carbazole	ND		ug/kg	190	19.	1
1,4-Dioxane	ND		ug/kg	29	8.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		25-120
Phenol-d6	75		10-120
Nitrobenzene-d5	70		23-120
2-Fluorobiphenyl	72		30-120
2,4,6-Tribromophenol	81		10-136
4-Terphenyl-d14	67		18-120

Project Name: 89-93 GERRY STREET
Lab Number: L2041810
Project Number: 135597-002
Report Date: 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-07 D
Date Collected: 10/01/20 12:30
Client ID: B-5 (0-2')
Date Received: 10/01/20
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Extraction Method: EPA 3546
Analytical Method: 1,8270D
Extraction Date: 10/04/20 05:33
Analytical Date: 10/05/20 16:31
Analyst: EK
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	120	J	ug/kg	770	100	5
1,2,4-Trichlorobenzene	ND		ug/kg	970	110	5
Hexachlorobenzene	ND		ug/kg	580	110	5
Bis(2-chloroethyl)ether	ND		ug/kg	870	130	5
2-Chloronaphthalene	ND		ug/kg	970	96.	5
1,2-Dichlorobenzene	ND		ug/kg	970	170	5
1,3-Dichlorobenzene	ND		ug/kg	970	170	5
1,4-Dichlorobenzene	ND		ug/kg	970	170	5
3,3'-Dichlorobenzidine	ND		ug/kg	970	260	5
2,4-Dinitrotoluene	ND		ug/kg	970	190	5
2,6-Dinitrotoluene	ND		ug/kg	970	160	5
Fluoranthene	4300		ug/kg	580	110	5
4-Chlorophenyl phenyl ether	ND		ug/kg	970	100	5
4-Bromophenyl phenyl ether	ND		ug/kg	970	150	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	1200	160	5
Bis(2-chloroethoxy)methane	ND		ug/kg	1000	97.	5
Hexachlorobutadiene	ND		ug/kg	970	140	5
Hexachlorocyclopentadiene	ND		ug/kg	2800	880	5
Hexachloroethane	ND		ug/kg	770	160	5
Isophorone	ND		ug/kg	870	120	5
Naphthalene	210	J	ug/kg	970	120	5
Nitrobenzene	ND		ug/kg	870	140	5
NDPA/DPA	ND		ug/kg	770	110	5
n-Nitrosodi-n-propylamine	ND		ug/kg	970	150	5
Bis(2-ethylhexyl)phthalate	ND		ug/kg	970	330	5
Butyl benzyl phthalate	ND		ug/kg	970	240	5
Di-n-butylphthalate	ND		ug/kg	970	180	5
Di-n-octylphthalate	ND		ug/kg	970	330	5

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-07 D	Date Collected:	10/01/20 12:30
Client ID:	B-5 (0-2')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	970	89.	5
Dimethyl phthalate	ND		ug/kg	970	200	5
Benzo(a)anthracene	2500		ug/kg	580	110	5
Benzo(a)pyrene	2700		ug/kg	770	240	5
Benzo(b)fluoranthene	3700		ug/kg	580	160	5
Benzo(k)fluoranthene	880		ug/kg	580	150	5
Chrysene	2500		ug/kg	580	100	5
Acenaphthylene	520	J	ug/kg	770	150	5
Anthracene	610		ug/kg	580	190	5
Benzo(ghi)perylene	1900		ug/kg	770	110	5
Fluorene	120	J	ug/kg	970	94.	5
Phenanthrene	2300		ug/kg	580	120	5
Dibenzo(a,h)anthracene	440	J	ug/kg	580	110	5
Indeno(1,2,3-cd)pyrene	1900		ug/kg	770	130	5
Pyrene	4300		ug/kg	580	96.	5
Biphenyl	ND		ug/kg	2200	220	5
4-Chloroaniline	ND		ug/kg	970	180	5
2-Nitroaniline	ND		ug/kg	970	190	5
3-Nitroaniline	ND		ug/kg	970	180	5
4-Nitroaniline	ND		ug/kg	970	400	5
Dibenzofuran	98	J	ug/kg	970	91.	5
2-Methylnaphthalene	150	J	ug/kg	1200	120	5
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	970	100	5
Acetophenone	ND		ug/kg	970	120	5
2,4,6-Trichlorophenol	ND		ug/kg	580	180	5
p-Chloro-m-cresol	ND		ug/kg	970	140	5
2-Chlorophenol	ND		ug/kg	970	110	5
2,4-Dichlorophenol	ND		ug/kg	870	160	5
2,4-Dimethylphenol	ND		ug/kg	970	320	5
2-Nitrophenol	ND		ug/kg	2100	360	5
4-Nitrophenol	ND		ug/kg	1400	390	5
2,4-Dinitrophenol	ND		ug/kg	4600	450	5
4,6-Dinitro-o-cresol	ND		ug/kg	2500	460	5
Pentachlorophenol	ND		ug/kg	770	210	5
Phenol	ND		ug/kg	970	140	5
2-Methylphenol	ND		ug/kg	970	150	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	1400	150	5

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-07 D	Date Collected:	10/01/20 12:30
Client ID:	B-5 (0-2')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	970	180	5
Benzoic Acid	ND		ug/kg	3100	980	5
Benzyl Alcohol	ND		ug/kg	970	300	5
Carbazole	200	J	ug/kg	970	94.	5
1,4-Dioxane	ND		ug/kg	140	44.	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		25-120
Phenol-d6	68		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	72		30-120
2,4,6-Tribromophenol	84		10-136
4-Terphenyl-d14	74		18-120

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-08	Date Collected:	10/01/20 12:29
Client ID:	B-5 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270D	Extraction Date:	10/04/20 05:33
Analytical Date:	10/05/20 14:08		
Analyst:	EK		
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	26	J	ug/kg	160	21.	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	23.	1
Hexachlorobenzene	ND		ug/kg	120	23.	1
Bis(2-chloroethyl)ether	ND		ug/kg	180	27.	1
2-Chloronaphthalene	ND		ug/kg	200	20.	1
1,2-Dichlorobenzene	ND		ug/kg	200	36.	1
1,3-Dichlorobenzene	ND		ug/kg	200	35.	1
1,4-Dichlorobenzene	ND		ug/kg	200	35.	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	54.	1
2,4-Dinitrotoluene	ND		ug/kg	200	40.	1
2,6-Dinitrotoluene	ND		ug/kg	200	35.	1
Fluoranthene	23	J	ug/kg	120	23.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	200	22.	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	31.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	240	34.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	220	20.	1
Hexachlorobutadiene	ND		ug/kg	200	30.	1
Hexachlorocyclopentadiene	ND		ug/kg	580	180	1
Hexachloroethane	ND		ug/kg	160	33.	1
Isophorone	ND		ug/kg	180	26.	1
Naphthalene	ND		ug/kg	200	25.	1
Nitrobenzene	ND		ug/kg	180	30.	1
NDPA/DPA	ND		ug/kg	160	23.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	200	31.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	200	70.	1
Butyl benzyl phthalate	ND		ug/kg	200	51.	1
Di-n-butylphthalate	ND		ug/kg	200	38.	1
Di-n-octylphthalate	ND		ug/kg	200	69.	1

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-08	Date Collected:	10/01/20 12:29
Client ID:	B-5 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	200	19.	1
Dimethyl phthalate	ND		ug/kg	200	42.	1
Benzo(a)anthracene	ND		ug/kg	120	23.	1
Benzo(a)pyrene	ND		ug/kg	160	49.	1
Benzo(b)fluoranthene	ND		ug/kg	120	34.	1
Benzo(k)fluoranthene	ND		ug/kg	120	32.	1
Chrysene	ND		ug/kg	120	21.	1
Acenaphthylene	ND		ug/kg	160	31.	1
Anthracene	ND		ug/kg	120	39.	1
Benzo(ghi)perylene	ND		ug/kg	160	24.	1
Fluorene	27	J	ug/kg	200	20.	1
Phenanthrene	29	J	ug/kg	120	25.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	23.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	160	28.	1
Pyrene	22	J	ug/kg	120	20.	1
Biphenyl	ND		ug/kg	460	47.	1
4-Chloroaniline	ND		ug/kg	200	37.	1
2-Nitroaniline	ND		ug/kg	200	39.	1
3-Nitroaniline	ND		ug/kg	200	38.	1
4-Nitroaniline	ND		ug/kg	200	84.	1
Dibenzofuran	ND		ug/kg	200	19.	1
2-Methylnaphthalene	ND		ug/kg	240	24.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	200	21.	1
Acetophenone	ND		ug/kg	200	25.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	38.	1
p-Chloro-m-cresol	ND		ug/kg	200	30.	1
2-Chlorophenol	ND		ug/kg	200	24.	1
2,4-Dichlorophenol	ND		ug/kg	180	32.	1
2,4-Dimethylphenol	ND		ug/kg	200	67.	1
2-Nitrophenol	ND		ug/kg	440	76.	1
4-Nitrophenol	ND		ug/kg	280	82.	1
2,4-Dinitrophenol	ND		ug/kg	970	94.	1
4,6-Dinitro-o-cresol	ND		ug/kg	530	97.	1
Pentachlorophenol	ND		ug/kg	160	44.	1
Phenol	ND		ug/kg	200	30.	1
2-Methylphenol	ND		ug/kg	200	31.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	290	32.	1

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-08	Date Collected:	10/01/20 12:29
Client ID:	B-5 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	200	39.	1
Benzoic Acid	ND		ug/kg	660	200	1
Benzyl Alcohol	ND		ug/kg	200	62.	1
Carbazole	ND		ug/kg	200	20.	1
1,4-Dioxane	ND		ug/kg	30	9.3	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		25-120
Phenol-d6	79		10-120
Nitrobenzene-d5	76		23-120
2-Fluorobiphenyl	72		30-120
2,4,6-Tribromophenol	87		10-136
4-Terphenyl-d14	68		18-120

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041810
Report Date: 10/12/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/05/20 08:59
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 10/04/20 05:33

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG1417869-1					
Acenaphthene	ND		ug/kg	130	17.
1,2,4-Trichlorobenzene	ND		ug/kg	160	19.
Hexachlorobenzene	ND		ug/kg	98	18.
Bis(2-chloroethyl)ether	ND		ug/kg	150	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
1,2-Dichlorobenzene	ND		ug/kg	160	29.
1,3-Dichlorobenzene	ND		ug/kg	160	28.
1,4-Dichlorobenzene	ND		ug/kg	160	28.
3,3'-Dichlorobenzidine	ND		ug/kg	160	43.
2,4-Dinitrotoluene	ND		ug/kg	160	33.
2,6-Dinitrotoluene	ND		ug/kg	160	28.
Fluoranthene	ND		ug/kg	98	19.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	17.
4-Bromophenyl phenyl ether	ND		ug/kg	160	25.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	28.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	16.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	470	150
Hexachloroethane	ND		ug/kg	130	26.
Isophorone	ND		ug/kg	150	21.
Naphthalene	ND		ug/kg	160	20.
Nitrobenzene	ND		ug/kg	150	24.
NDPA/DPA	ND		ug/kg	130	19.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	25.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	56.
Butyl benzyl phthalate	ND		ug/kg	160	41.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	56.
Diethyl phthalate	ND		ug/kg	160	15.

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

Method Blank Analysis
Batch Quality Control

Analytical Method:	1,8270D	Extraction Method:	EPA 3546
Analytical Date:	10/05/20 08:59	Extraction Date:	10/04/20 05:33
Analyst:	IM		

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG1417869-1					
Dimethyl phthalate	ND		ug/kg	160	34.
Benzo(a)anthracene	ND		ug/kg	98	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	98	28.
Benzo(k)fluoranthene	ND		ug/kg	98	26.
Chrysene	ND		ug/kg	98	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	98	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	98	20.
Dibenzo(a,h)anthracene	ND		ug/kg	98	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	98	16.
Biphenyl	ND		ug/kg	370	38.
4-Chloroaniline	ND		ug/kg	160	30.
2-Nitroaniline	ND		ug/kg	160	32.
3-Nitroaniline	ND		ug/kg	160	31.
4-Nitroaniline	ND		ug/kg	160	68.
Dibenzofuran	ND		ug/kg	160	15.
2-Methylnaphthalene	ND		ug/kg	200	20.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	17.
Acetophenone	ND		ug/kg	160	20.
2,4,6-Trichlorophenol	ND		ug/kg	98	31.
p-Chloro-m-cresol	ND		ug/kg	160	24.
2-Chlorophenol	ND		ug/kg	160	19.
2,4-Dichlorophenol	ND		ug/kg	150	26.
2,4-Dimethylphenol	ND		ug/kg	160	54.
2-Nitrophenol	ND		ug/kg	350	61.

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

Method Blank Analysis
Batch Quality Control

Analytical Method:	1,8270D	Extraction Method:	EPA 3546
Analytical Date:	10/05/20 08:59	Extraction Date:	10/04/20 05:33
Analyst:	IM		

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG1417869-1					
4-Nitrophenol	ND		ug/kg	230	67.
2,4-Dinitrophenol	ND		ug/kg	780	76.
4,6-Dinitro-o-cresol	ND		ug/kg	420	78.
Pentachlorophenol	ND		ug/kg	130	36.
Phenol	ND		ug/kg	160	25.
2-Methylphenol	ND		ug/kg	160	25.
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	26.
2,4,5-Trichlorophenol	ND		ug/kg	160	31.
Benzoic Acid	ND		ug/kg	530	160
Benzyl Alcohol	ND		ug/kg	160	50.
Carbazole	ND		ug/kg	160	16.
1,4-Dioxane	ND		ug/kg	24	7.5

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		25-120
Phenol-d6	72		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	69		30-120
2,4,6-Tribromophenol	75		10-136
4-Terphenyl-d14	78		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041810
Report Date: 10/12/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1417869-2 WG1417869-3								
Acenaphthene	55		72		31-137	27		50
1,2,4-Trichlorobenzene	52		69		38-107	28		50
Hexachlorobenzene	60		81		40-140	30		50
Bis(2-chloroethyl)ether	55		73		40-140	28		50
2-Chloronaphthalene	52		71		40-140	31		50
1,2-Dichlorobenzene	55		70		40-140	24		50
1,3-Dichlorobenzene	55		69		40-140	23		50
1,4-Dichlorobenzene	55		70		28-104	24		50
3,3'-Dichlorobenzidine	50		66		40-140	28		50
2,4-Dinitrotoluene	55		75		40-132	31		50
2,6-Dinitrotoluene	56		78		40-140	33		50
Fluoranthene	54		76		40-140	34		50
4-Chlorophenyl phenyl ether	54		73		40-140	30		50
4-Bromophenyl phenyl ether	56		76		40-140	30		50
Bis(2-chloroisopropyl)ether	41		54		40-140	27		50
Bis(2-chloroethoxy)methane	56		73		40-117	26		50
Hexachlorobutadiene	53		70		40-140	28		50
Hexachlorocyclopentadiene	44		61		40-140	32		50
Hexachloroethane	52		66		40-140	24		50
Isophorone	57		76		40-140	29		50
Naphthalene	54		72		40-140	29		50
Nitrobenzene	53		70		40-140	28		50
NDPA/DPA	55		75		36-157	31		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Lab Number: L2041810
Project Number: 135597-002
Report Date: 10/12/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1417869-2 WG1417869-3								
n-Nitrosodi-n-propylamine	57		75		32-121	27		50
Bis(2-ethylhexyl)phthalate	59		82		40-140	33		50
Butyl benzyl phthalate	58		82		40-140	34		50
Di-n-butylphthalate	59		84		40-140	35		50
Di-n-octylphthalate	57		79		40-140	32		50
Diethyl phthalate	56		75		40-140	29		50
Dimethyl phthalate	54		74		40-140	31		50
Benzo(a)anthracene	54		74		40-140	31		50
Benzo(a)pyrene	54		74		40-140	31		50
Benzo(b)fluoranthene	53		83		40-140	44		50
Benzo(k)fluoranthene	58		71		40-140	20		50
Chrysene	53		74		40-140	33		50
Acenaphthylene	59		78		40-140	28		50
Anthracene	58		81		40-140	33		50
Benzo(ghi)perylene	57		80		40-140	34		50
Fluorene	55		73		40-140	28		50
Phenanthrene	56		78		40-140	33		50
Dibenzo(a,h)anthracene	60		83		40-140	32		50
Indeno(1,2,3-cd)pyrene	57		78		40-140	31		50
Pyrene	55		76		35-142	32		50
Biphenyl	58		78		37-127	29		50
4-Chloroaniline	**33**	Q	43		40-140	26		50
2-Nitroaniline	56		79		47-134	34		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Lab Number: L2041810
Project Number: 135597-002
Report Date: 10/12/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1417869-2 WG1417869-3								
3-Nitroaniline	49		62		26-129	23		50
4-Nitroaniline	52		72		41-125	32		50
Dibenzofuran	55		74		40-140	29		50
2-Methylnaphthalene	53		69		40-140	26		50
1,2,4,5-Tetrachlorobenzene	58		80		40-117	32		50
Acetophenone	56		76		14-144	30		50
2,4,6-Trichlorophenol	55		78		30-130	35		50
p-Chloro-m-cresol	57		76		26-103	29		50
2-Chlorophenol	59		79		25-102	29		50
2,4-Dichlorophenol	59		78		30-130	28		50
2,4-Dimethylphenol	61		82		30-130	29		50
2-Nitrophenol	58		78		30-130	29		50
4-Nitrophenol	55		76		11-114	32		50
2,4-Dinitrophenol	49		68		4-130	32		50
4,6-Dinitro-o-cresol	53		74		10-130	33		50
Pentachlorophenol	52		73		17-109	34		50
Phenol	52		72		26-90	32		50
2-Methylphenol	58		80		30-130.	32		50
3-Methylphenol/4-Methylphenol	58		77		30-130	28		50
2,4,5-Trichlorophenol	57		77		30-130	30		50
Benzoic Acid	54		67		10-110	21		50
Benzyl Alcohol	57		77		40-140	30		50
Carbazole	58		80		54-128	32		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET

Project Number: 135597-002

Lab Number: L2041810

Report Date: 10/12/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1417869-2 WG1417869-3								
1,4-Dioxane	43		50		40-140	15		50

Surrogate	*LCS %Recovery*	*Qual*	*LCSD %Recovery*	*Qual*	*Acceptance Criteria*
2-Fluorophenol	68		89		25-120
Phenol-d6	64		85		10-120
Nitrobenzene-d5	61		78		23-120
2-Fluorobiphenyl	59		79		30-120
2,4,6-Tribromophenol	70		97		10-136
4-Terphenyl-d14	67		95		18-120

PCBS

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-01	Date Collected:	10/01/20 10:05
Client ID:	B-1 (3-5')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8082A	Extraction Date:	10/04/20 04:51
Analytical Date:	10/05/20 10:07	Cleanup Method:	EPA 3665A
Analyst:	JM	Cleanup Date:	10/04/20
Percent Solids:	82%	Cleanup Method:	EPA 3660B
		Cleanup Date:	10/05/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	40.6	3.61	1	A
Aroclor 1221	ND		ug/kg	40.6	4.07	1	A
Aroclor 1232	ND		ug/kg	40.6	8.61	1	A
Aroclor 1242	17.7	J	ug/kg	40.6	5.48	1	A
Aroclor 1248	ND		ug/kg	40.6	6.09	1	A
Aroclor 1254	9.77	J	ug/kg	40.6	4.44	1	B
Aroclor 1260	ND		ug/kg	40.6	7.51	1	A
Aroclor 1262	ND		ug/kg	40.6	5.16	1	A
Aroclor 1268	ND		ug/kg	40.6	4.21	1	A
PCBs, Total	27.5	J	ug/kg	40.6	3.61	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	50		30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-02
Client ID: B-1 (10-12')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 10:10
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 10/05/20 10:14
Analyst: JM
Percent Solids: 79%

Extraction Method: EPA 3546
Extraction Date: 10/04/20 04:51
Cleanup Method: EPA 3665A
Cleanup Date: 10/04/20
Cleanup Method: EPA 3660B
Cleanup Date: 10/05/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	41.7	3.70	1	A
Aroclor 1221	ND		ug/kg	41.7	4.18	1	A
Aroclor 1232	ND		ug/kg	41.7	8.84	1	A
Aroclor 1242	ND		ug/kg	41.7	5.62	1	A
Aroclor 1248	ND		ug/kg	41.7	6.25	1	A
Aroclor 1254	ND		ug/kg	41.7	4.56	1	A
Aroclor 1260	ND		ug/kg	41.7	7.70	1	A
Aroclor 1262	ND		ug/kg	41.7	5.29	1	A
Aroclor 1268	ND		ug/kg	41.7	4.32	1	A
PCBs, Total	ND		ug/kg	41.7	3.70	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
Decachlorobiphenyl	76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	56		30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-03
Client ID: B-3 (1-3')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 10:47
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 10/05/20 10:21
Analyst: JM
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 10/04/20 04:51
Cleanup Method: EPA 3665A
Cleanup Date: 10/04/20
Cleanup Method: EPA 3660B
Cleanup Date: 10/05/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	38.2	3.39	1	A
Aroclor 1221	ND		ug/kg	38.2	3.83	1	A
Aroclor 1232	ND		ug/kg	38.2	8.10	1	A
Aroclor 1242	ND		ug/kg	38.2	5.15	1	A
Aroclor 1248	ND		ug/kg	38.2	5.73	1	A
Aroclor 1254	ND		ug/kg	38.2	4.18	1	A
Aroclor 1260	ND		ug/kg	38.2	7.06	1	A
Aroclor 1262	ND		ug/kg	38.2	4.85	1	A
Aroclor 1268	ND		ug/kg	38.2	3.96	1	A
PCBs, Total	ND		ug/kg	38.2	3.39	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	46		30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-04	Date Collected:	10/01/20 10:45
Client ID:	B-3 (13-15')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8082A	Extraction Date:	10/04/20 04:51
Analytical Date:	10/05/20 10:27	Cleanup Method:	EPA 3665A
Analyst:	JM	Cleanup Date:	10/04/20
Percent Solids:	84%	Cleanup Method:	EPA 3660B
		Cleanup Date:	10/05/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	38.1	3.39	1	A
Aroclor 1221	ND		ug/kg	38.1	3.82	1	A
Aroclor 1232	ND		ug/kg	38.1	8.09	1	A
Aroclor 1242	ND		ug/kg	38.1	5.14	1	A
Aroclor 1248	ND		ug/kg	38.1	5.72	1	A
Aroclor 1254	ND		ug/kg	38.1	4.17	1	A
Aroclor 1260	ND		ug/kg	38.1	7.05	1	A
Aroclor 1262	ND		ug/kg	38.1	4.84	1	A
Aroclor 1268	ND		ug/kg	38.1	3.95	1	A
PCBs, Total	ND		ug/kg	38.1	3.39	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		30-150	A
Decachlorobiphenyl	98		30-150	A
2,4,5,6-Tetrachloro-m-xylene	81		30-150	B
Decachlorobiphenyl	71		30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-05	Date Collected:	10/01/20 12:10
Client ID:	B-4 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8082A	Extraction Date:	10/04/20 04:51
Analytical Date:	10/05/20 10:34	Cleanup Method:	EPA 3665A
Analyst:	JM	Cleanup Date:	10/04/20
Percent Solids:	89%	Cleanup Method:	EPA 3660B
		Cleanup Date:	10/05/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	36.6	3.25	1	A
Aroclor 1221	ND		ug/kg	36.6	3.66	1	A
Aroclor 1232	ND		ug/kg	36.6	7.75	1	A
Aroclor 1242	ND		ug/kg	36.6	4.93	1	A
Aroclor 1248	ND		ug/kg	36.6	5.48	1	A
Aroclor 1254	ND		ug/kg	36.6	4.00	1	A
Aroclor 1260	ND		ug/kg	36.6	6.76	1	A
Aroclor 1262	ND		ug/kg	36.6	4.64	1	A
Aroclor 1268	ND		ug/kg	36.6	3.79	1	A
PCBs, Total	ND		ug/kg	36.6	3.25	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
Decachlorobiphenyl	66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	51		30-150	B
Decachlorobiphenyl	61		30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-06
Client ID: B-4 (10-12')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 12:09
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 10/05/20 10:41
Analyst: JM
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 10/04/20 04:51
Cleanup Method: EPA 3665A
Cleanup Date: 10/04/20
Cleanup Method: EPA 3660B
Cleanup Date: 10/05/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.7	3.35	1	A
Aroclor 1221	ND		ug/kg	37.7	3.78	1	A
Aroclor 1232	ND		ug/kg	37.7	7.99	1	A
Aroclor 1242	ND		ug/kg	37.7	5.08	1	A
Aroclor 1248	ND		ug/kg	37.7	5.65	1	A
Aroclor 1254	ND		ug/kg	37.7	4.12	1	A
Aroclor 1260	ND		ug/kg	37.7	6.97	1	A
Aroclor 1262	ND		ug/kg	37.7	4.79	1	A
Aroclor 1268	ND		ug/kg	37.7	3.90	1	A
PCBs, Total	ND		ug/kg	37.7	3.35	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	60		30-150	A
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	44		30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-07	Date Collected:	10/01/20 12:30
Client ID:	B-5 (0-2')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8082A	Extraction Date:	10/04/20 04:51
Analytical Date:	10/05/20 10:48	Cleanup Method:	EPA 3665A
Analyst:	JM	Cleanup Date:	10/04/20
Percent Solids:	85%	Cleanup Method:	EPA 3660B
		Cleanup Date:	10/05/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.9	3.36	1	A
Aroclor 1221	ND		ug/kg	37.9	3.80	1	A
Aroclor 1232	ND		ug/kg	37.9	8.03	1	A
Aroclor 1242	ND		ug/kg	37.9	5.11	1	A
Aroclor 1248	ND		ug/kg	37.9	5.68	1	A
Aroclor 1254	159		ug/kg	37.9	4.14	1	B
Aroclor 1260	97.6		ug/kg	37.9	7.00	1	A
Aroclor 1262	ND		ug/kg	37.9	4.81	1	A
Aroclor 1268	31.5	J	ug/kg	37.9	3.92	1	A
PCBs, Total	288	J	ug/kg	37.9	3.36	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	59		30-150	B
Decachlorobiphenyl	60		30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-08	Date Collected:	10/01/20 12:29
Client ID:	B-5 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8082A	Extraction Date:	10/04/20 04:51
Analytical Date:	10/05/20 10:55	Cleanup Method:	EPA 3665A
Analyst:	JM	Cleanup Date:	10/04/20
Percent Solids:	81%	Cleanup Method:	EPA 3660B
		Cleanup Date:	10/05/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	40.5	3.60	1	A
Aroclor 1221	ND		ug/kg	40.5	4.06	1	A
Aroclor 1232	ND		ug/kg	40.5	8.59	1	A
Aroclor 1242	ND		ug/kg	40.5	5.46	1	A
Aroclor 1248	ND		ug/kg	40.5	6.08	1	A
Aroclor 1254	ND		ug/kg	40.5	4.43	1	A
Aroclor 1260	ND		ug/kg	40.5	7.49	1	A
Aroclor 1262	ND		ug/kg	40.5	5.15	1	A
Aroclor 1268	ND		ug/kg	40.5	4.20	1	A
PCBs, Total	ND		ug/kg	40.5	3.60	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	81		30-150	A
2,4,5,6-Tetrachloro-m-xylene	64		30-150	B
Decachlorobiphenyl	60		30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 10/04/20 10:19
Analyst: JAW

Extraction Method: EPA 3546
Extraction Date: 10/03/20 11:18
Cleanup Method: EPA 3665A
Cleanup Date: 10/03/20
Cleanup Method: EPA 3660B
Cleanup Date: 10/04/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-08 Batch: WG1417721-1						
Aroclor 1016	ND		ug/kg	32.7	2.90	A
Aroclor 1221	ND		ug/kg	32.7	3.28	A
Aroclor 1232	ND		ug/kg	32.7	6.93	A
Aroclor 1242	ND		ug/kg	32.7	4.41	A
Aroclor 1248	ND		ug/kg	32.7	4.90	A
Aroclor 1254	ND		ug/kg	32.7	3.58	A
Aroclor 1260	ND		ug/kg	32.7	6.04	A
Aroclor 1262	ND		ug/kg	32.7	4.15	A
Aroclor 1268	ND		ug/kg	32.7	3.39	A
PCBs, Total	ND		ug/kg	32.7	2.90	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	54		30-150	A
2,4,5,6-Tetrachloro-m-xylene	82		30-150	B
Decachlorobiphenyl	67		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041810
Report Date: 10/12/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-08 Batch: WG1417721-2 WG1417721-3									
Aroclor 1016	66		68		40-140	3		50	A
Aroclor 1260	53		57		40-140	7		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		65		30-150	A
Decachlorobiphenyl	54		52		30-150	A
2,4,5,6-Tetrachloro-m-xylene	75		75		30-150	B
Decachlorobiphenyl	63		66		30-150	B

PESTICIDES

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-01
Client ID: B-1 (3-5')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 10:05
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 10/07/20 22:37
Analyst: SM
Percent Solids: 82%

Extraction Method: EPA 3546
Extraction Date: 10/07/20 05:51
Cleanup Method: EPA 3620B
Cleanup Date: 10/07/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.88	0.368	1	A
Lindane	ND		ug/kg	0.782	0.350	1	A
Alpha-BHC	ND		ug/kg	0.782	0.222	1	A
Beta-BHC	ND		ug/kg	1.88	0.712	1	A
Heptachlor	ND		ug/kg	0.939	0.421	1	A
Aldrin	ND		ug/kg	1.88	0.661	1	A
Heptachlor epoxide	ND		ug/kg	3.52	1.06	1	A
Endrin	ND		ug/kg	0.782	0.321	1	A
Endrin aldehyde	30.4		ug/kg	2.35	0.821	1	B
Endrin ketone	ND		ug/kg	1.88	0.483	1	A
Dieldrin	3.04		ug/kg	1.17	0.587	1	B
4,4'-DDE	10.5		ug/kg	1.88	0.434	1	A
4,4'-DDD	7.38		ug/kg	1.88	0.670	1	A
4,4'-DDT	15.4		ug/kg	3.52	1.51	1	A
Endosulfan I	ND		ug/kg	1.88	0.444	1	A
Endosulfan II	2.70	IP	ug/kg	1.88	0.627	1	A
Endosulfan sulfate	ND		ug/kg	0.782	0.372	1	A
Methoxychlor	ND		ug/kg	3.52	1.10	1	A
Toxaphene	ND		ug/kg	35.2	9.86	1	A
cis-Chlordane	ND		ug/kg	2.35	0.654	1	A
trans-Chlordane	ND		ug/kg	2.35	0.619	1	A
Chlordane	ND		ug/kg	15.6	6.22	1	A

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-01	Date Collected:	10/01/20 10:05
Client ID:	B-1 (3-5')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80		30-150	A
Decachlorobiphenyl	53		30-150	A
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	110		30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-02	Date Collected:	10/01/20 10:10
Client ID:	B-1 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8081B	Extraction Date:	10/07/20 05:51
Analytical Date:	10/07/20 22:48	Cleanup Method:	EPA 3620B
Analyst:	SM	Cleanup Date:	10/07/20
Percent Solids:	79%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.97	0.386	1	A
Lindane	ND		ug/kg	0.822	0.368	1	A
Alpha-BHC	ND		ug/kg	0.822	0.234	1	A
Beta-BHC	ND		ug/kg	1.97	0.748	1	A
Heptachlor	ND		ug/kg	0.987	0.442	1	A
Aldrin	ND		ug/kg	1.97	0.695	1	A
Heptachlor epoxide	ND		ug/kg	3.70	1.11	1	A
Endrin	ND		ug/kg	0.822	0.337	1	A
Endrin aldehyde	ND		ug/kg	2.47	0.864	1	A
Endrin ketone	ND		ug/kg	1.97	0.508	1	A
Dieldrin	ND		ug/kg	1.23	0.617	1	A
4,4'-DDE	ND		ug/kg	1.97	0.456	1	A
4,4'-DDD	ND		ug/kg	1.97	0.704	1	A
4,4'-DDT	ND		ug/kg	3.70	1.59	1	A
Endosulfan I	ND		ug/kg	1.97	0.466	1	A
Endosulfan II	ND		ug/kg	1.97	0.660	1	A
Endosulfan sulfate	ND		ug/kg	0.822	0.391	1	A
Methoxychlor	ND		ug/kg	3.70	1.15	1	A
Toxaphene	ND		ug/kg	37.0	10.4	1	A
cis-Chlordane	ND		ug/kg	2.47	0.688	1	A
trans-Chlordane	ND		ug/kg	2.47	0.651	1	A
Chlordane	ND		ug/kg	16.4	6.54	1	A

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-02	Date Collected:	10/01/20 10:10
Client ID:	B-1 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	33		30-150	A
2,4,5,6-Tetrachloro-m-xylene	59		30-150	B
Decachlorobiphenyl	49		30-150	B

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-03	Date Collected:	10/01/20 10:47
Client ID:	B-3 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8081B	Extraction Date:	10/07/20 05:51
Analytical Date:	10/07/20 23:00	Cleanup Method:	EPA 3620B
Analyst:	SM	Cleanup Date:	10/07/20
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.82	0.356	1	A
Lindane	ND		ug/kg	0.757	0.338	1	A
Alpha-BHC	ND		ug/kg	0.757	0.215	1	A
Beta-BHC	ND		ug/kg	1.82	0.689	1	A
Heptachlor	ND		ug/kg	0.908	0.407	1	A
Aldrin	ND		ug/kg	1.82	0.640	1	A
Heptachlor epoxide	ND		ug/kg	3.41	1.02	1	B
Endrin	ND		ug/kg	0.757	0.310	1	A
Endrin aldehyde	ND		ug/kg	2.27	0.795	1	A
Endrin ketone	ND		ug/kg	1.82	0.468	1	A
Dieldrin	1.41		ug/kg	1.14	0.568	1	B
4,4'-DDE	0.478	JIP	ug/kg	1.82	0.420	1	B
4,4'-DDD	0.764	JIP	ug/kg	1.82	0.648	1	B
4,4'-DDT	7.53		ug/kg	3.41	1.46	1	A
Endosulfan I	ND		ug/kg	1.82	0.429	1	A
Endosulfan II	ND		ug/kg	1.82	0.607	1	A
Endosulfan sulfate	ND		ug/kg	0.757	0.360	1	A
Methoxychlor	ND		ug/kg	3.41	1.06	1	A
Toxaphene	ND		ug/kg	34.1	9.54	1	A
cis-Chlordane	0.929	J	ug/kg	2.27	0.633	1	A
trans-Chlordane	2.12	JIP	ug/kg	2.27	0.599	1	A
Chlordane	ND		ug/kg	15.1	6.02	1	A

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-03	Date Collected:	10/01/20 10:47
Client ID:	B-3 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	39		30-150	A
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	82		30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-04
Client ID: B-3 (13-15')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 10:45
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 10/07/20 23:11
Analyst: SM
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 10/07/20 05:51
Cleanup Method: EPA 3620B
Cleanup Date: 10/07/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.86	0.365	1	A
Lindane	ND		ug/kg	0.776	0.347	1	A
Alpha-BHC	ND		ug/kg	0.776	0.220	1	A
Beta-BHC	ND		ug/kg	1.86	0.706	1	A
Heptachlor	ND		ug/kg	0.931	0.417	1	A
Aldrin	ND		ug/kg	1.86	0.656	1	A
Heptachlor epoxide	ND		ug/kg	3.49	1.05	1	A
Endrin	ND		ug/kg	0.776	0.318	1	A
Endrin aldehyde	ND		ug/kg	2.33	0.815	1	A
Endrin ketone	ND		ug/kg	1.86	0.479	1	A
Dieldrin	ND		ug/kg	1.16	0.582	1	A
4,4'-DDE	ND		ug/kg	1.86	0.430	1	A
4,4'-DDD	ND		ug/kg	1.86	0.664	1	A
4,4'-DDT	ND		ug/kg	3.49	1.50	1	A
Endosulfan I	ND		ug/kg	1.86	0.440	1	A
Endosulfan II	ND		ug/kg	1.86	0.622	1	A
Endosulfan sulfate	ND		ug/kg	0.776	0.369	1	A
Methoxychlor	ND		ug/kg	3.49	1.09	1	A
Toxaphene	ND		ug/kg	34.9	9.78	1	A
cis-Chlordane	ND		ug/kg	2.33	0.648	1	A
trans-Chlordane	ND		ug/kg	2.33	0.614	1	A
Chlordane	ND		ug/kg	15.5	6.17	1	A

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-04	Date Collected:	10/01/20 10:45
Client ID:	B-3 (13-15')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	46		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	47		30-150	B

Project Name: 89-93 GERRY STREET
Lab Number: L2041810
Project Number: 135597-002
Report Date: 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-05
Client ID: B-4 (1-3')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 12:10
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 10/07/20 23:23
Analyst: SM
Percent Solids: 89%

Extraction Method: EPA 3546
Extraction Date: 10/07/20 05:51
Cleanup Method: EPA 3620B
Cleanup Date: 10/07/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.77	0.346	1	A
Lindane	ND		ug/kg	0.736	0.329	1	A
Alpha-BHC	ND		ug/kg	0.736	0.209	1	A
Beta-BHC	ND		ug/kg	1.77	0.670	1	A
Heptachlor	ND		ug/kg	0.884	0.396	1	A
Aldrin	ND		ug/kg	1.77	0.622	1	A
Heptachlor epoxide	1.76	JIP	ug/kg	3.31	0.994	1	B
Endrin	ND		ug/kg	0.736	0.302	1	A
Endrin aldehyde	ND		ug/kg	2.21	0.773	1	A
Endrin ketone	ND		ug/kg	1.77	0.455	1	A
Dieldrin	ND		ug/kg	1.10	0.552	1	A
4,4'-DDE	2.64	IP	ug/kg	1.77	0.409	1	B
4,4'-DDD	ND		ug/kg	1.77	0.630	1	A
4,4'-DDT	ND		ug/kg	3.31	1.42	1	A
Endosulfan I	ND		ug/kg	1.77	0.418	1	A
Endosulfan II	8.87	IP	ug/kg	1.77	0.590	1	A
Endosulfan sulfate	ND		ug/kg	0.736	0.350	1	A
Methoxychlor	ND		ug/kg	3.31	1.03	1	A
Toxaphene	ND		ug/kg	33.1	9.28	1	A
cis-Chlordane	ND		ug/kg	2.21	0.616	1	A
trans-Chlordane	1.92	JIP	ug/kg	2.21	0.583	1	A
Chlordane	ND		ug/kg	14.7	5.85	1	A

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-05	Date Collected:	10/01/20 12:10
Client ID:	B-4 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	141		30-150	A
2,4,5,6-Tetrachloro-m-xylene	52		30-150	B
Decachlorobiphenyl	**558**	Q	30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-06	Date Collected:	10/01/20 12:09
Client ID:	B-4 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8081B	Extraction Date:	10/07/20 05:51
Analytical Date:	10/08/20 10:38	Cleanup Method:	EPA 3620B
Analyst:	SM	Cleanup Date:	10/07/20
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.83	0.358	1	A
Lindane	ND		ug/kg	0.761	0.340	1	A
Alpha-BHC	ND		ug/kg	0.761	0.216	1	A
Beta-BHC	ND		ug/kg	1.83	0.693	1	A
Heptachlor	ND		ug/kg	0.914	0.410	1	A
Aldrin	ND		ug/kg	1.83	0.643	1	A
Heptachlor epoxide	ND		ug/kg	3.42	1.03	1	A
Endrin	ND		ug/kg	0.761	0.312	1	A
Endrin aldehyde	ND		ug/kg	2.28	0.799	1	A
Endrin ketone	ND		ug/kg	1.83	0.470	1	A
Dieldrin	ND		ug/kg	1.14	0.571	1	A
4,4'-DDE	ND		ug/kg	1.83	0.422	1	A
4,4'-DDD	ND		ug/kg	1.83	0.652	1	A
4,4'-DDT	ND		ug/kg	3.42	1.47	1	A
Endosulfan I	ND		ug/kg	1.83	0.432	1	A
Endosulfan II	ND		ug/kg	1.83	0.610	1	A
Endosulfan sulfate	ND		ug/kg	0.761	0.362	1	A
Methoxychlor	ND		ug/kg	3.42	1.06	1	A
Toxaphene	ND		ug/kg	34.2	9.59	1	A
cis-Chlordane	ND		ug/kg	2.28	0.636	1	A
trans-Chlordane	ND		ug/kg	2.28	0.603	1	A
Chlordane	ND		ug/kg	15.2	6.05	1	A

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-06	Date Collected:	10/01/20 12:09
Client ID:	B-4 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	97		30-150	B

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-07	Date Collected:	10/01/20 12:30
Client ID:	B-5 (0-2')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8081B	Extraction Date:	10/07/20 05:51
Analytical Date:	10/07/20 23:45	Cleanup Method:	EPA 3620B
Analyst:	SM	Cleanup Date:	10/07/20
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.83	0.359	1	A
Lindane	ND		ug/kg	0.764	0.342	1	A
Alpha-BHC	ND		ug/kg	0.764	0.217	1	A
Beta-BHC	ND		ug/kg	1.83	0.695	1	A
Heptachlor	ND		ug/kg	0.917	0.411	1	A
Aldrin	ND		ug/kg	1.83	0.646	1	A
Heptachlor epoxide	1.98	JIP	ug/kg	3.44	1.03	1	B
Endrin	ND		ug/kg	0.764	0.313	1	A
Endrin aldehyde	ND		ug/kg	2.29	0.802	1	A
Endrin ketone	ND		ug/kg	1.83	0.472	1	A
Dieldrin	6.08	IP	ug/kg	1.15	0.573	1	B
4,4'-DDE	69.9		ug/kg	1.83	0.424	1	A
4,4'-DDD	22.6		ug/kg	1.83	0.654	1	A
4,4'-DDT	125		ug/kg	3.44	1.47	1	A
Endosulfan I	ND		ug/kg	1.83	0.433	1	A
Endosulfan II	1.36	JIP	ug/kg	1.83	0.613	1	A
Endosulfan sulfate	ND		ug/kg	0.764	0.364	1	A
Methoxychlor	ND		ug/kg	3.44	1.07	1	A
Toxaphene	ND		ug/kg	34.4	9.63	1	A
cis-Chlordane	32.6		ug/kg	2.29	0.639	1	A
trans-Chlordane	25.0	IP	ug/kg	2.29	0.605	1	A
Chlordane	180		ug/kg	15.3	6.08	1	A

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-07	Date Collected:	10/01/20 12:30
Client ID:	B-5 (0-2')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	54		30-150	B
Decachlorobiphenyl	146		30-150	B

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-08	Date Collected:	10/01/20 12:29
Client ID:	B-5 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8081B	Extraction Date:	10/07/20 05:51
Analytical Date:	10/07/20 23:57	Cleanup Method:	EPA 3620B
Analyst:	SM	Cleanup Date:	10/07/20
Percent Solids:	81%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.91	0.374	1	A
Lindane	ND		ug/kg	0.796	0.356	1	A
Alpha-BHC	ND		ug/kg	0.796	0.226	1	A
Beta-BHC	ND		ug/kg	1.91	0.725	1	A
Heptachlor	ND		ug/kg	0.956	0.428	1	A
Aldrin	ND		ug/kg	1.91	0.673	1	A
Heptachlor epoxide	ND		ug/kg	3.58	1.08	1	A
Endrin	ND		ug/kg	0.796	0.326	1	A
Endrin aldehyde	ND		ug/kg	2.39	0.836	1	A
Endrin ketone	ND		ug/kg	1.91	0.492	1	A
Dieldrin	ND		ug/kg	1.19	0.597	1	A
4,4'-DDE	ND		ug/kg	1.91	0.442	1	A
4,4'-DDD	ND		ug/kg	1.91	0.682	1	A
4,4'-DDT	ND		ug/kg	3.58	1.54	1	A
Endosulfan I	ND		ug/kg	1.91	0.452	1	A
Endosulfan II	ND		ug/kg	1.91	0.639	1	A
Endosulfan sulfate	ND		ug/kg	0.796	0.379	1	A
Methoxychlor	ND		ug/kg	3.58	1.11	1	A
Toxaphene	ND		ug/kg	35.8	10.0	1	A
cis-Chlordane	ND		ug/kg	2.39	0.666	1	A
trans-Chlordane	ND		ug/kg	2.39	0.631	1	A
Chlordane	ND		ug/kg	15.9	6.33	1	A

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-08	Date Collected:	10/01/20 12:29
Client ID:	B-5 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	35		30-150	A
2,4,5,6-Tetrachloro-m-xylene	62		30-150	B
Decachlorobiphenyl	49		30-150	B

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

Method Blank Analysis
Batch Quality Control

Analytical Method:	1,8081B	Extraction Method:	EPA 3546
Analytical Date:	10/07/20 05:29	Extraction Date:	10/06/20 20:08
Analyst:	BM	Cleanup Method:	EPA 3620B
		Cleanup Date:	10/07/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-08 Batch: WG1418872-1						
Delta-BHC	ND		ug/kg	1.58	0.310	A
Lindane	ND		ug/kg	0.660	0.295	A
Alpha-BHC	ND		ug/kg	0.660	0.188	A
Beta-BHC	ND		ug/kg	1.58	0.601	A
Heptachlor	ND		ug/kg	0.793	0.355	A
Aldrin	ND		ug/kg	1.58	0.558	A
Heptachlor epoxide	ND		ug/kg	2.97	0.892	A
Endrin	ND		ug/kg	0.660	0.271	A
Endrin aldehyde	ND		ug/kg	1.98	0.694	A
Endrin ketone	ND		ug/kg	1.58	0.408	A
Dieldrin	ND		ug/kg	0.991	0.495	A
4,4'-DDE	ND		ug/kg	1.58	0.366	A
4,4'-DDD	ND		ug/kg	1.58	0.565	A
4,4'-DDT	ND		ug/kg	2.97	1.27	A
Endosulfan I	ND		ug/kg	1.58	0.374	A
Endosulfan II	ND		ug/kg	1.58	0.530	A
Endosulfan sulfate	ND		ug/kg	0.660	0.314	A
Methoxychlor	ND		ug/kg	2.97	0.925	A
Toxaphene	ND		ug/kg	29.7	8.32	A
cis-Chlordane	ND		ug/kg	1.98	0.552	A
trans-Chlordane	ND		ug/kg	1.98	0.523	A
Chlordane	ND		ug/kg	13.2	5.25	A

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

Method Blank Analysis
Batch Quality Control

Analytical Method:	1,8081B	Extraction Method:	EPA 3546
Analytical Date:	10/07/20 05:29	Extraction Date:	10/06/20 20:08
Analyst:	BM	Cleanup Method:	EPA 3620B
		Cleanup Date:	10/07/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-08 Batch: WG1418872-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	55		30-150	B
Decachlorobiphenyl	52		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041810
Report Date: 10/12/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-08 Batch: WG1418872-2 WG1418872-3									
Delta-BHC	71		65		30-150	9		30	A
Lindane	68		64		30-150	6		30	A
Alpha-BHC	73		69		30-150	6		30	A
Beta-BHC	66		62		30-150	6		30	A
Heptachlor	68		63		30-150	8		30	A
Aldrin	58		56		30-150	4		30	A
Heptachlor epoxide	64		62		30-150	3		30	A
Endrin	71		66		30-150	7		30	A
Endrin aldehyde	39		41		30-150	5		30	A
Endrin ketone	57		53		30-150	7		30	A
Dieldrin	69		65		30-150	6		30	A
4,4'-DDE	63		62		30-150	2		30	A
4,4'-DDD	75		70		30-150	7		30	A
4,4'-DDT	65		64		30-150	2		30	A
Endosulfan I	57		56		30-150	2		30	A
Endosulfan II	66		61		30-150	8		30	A
Endosulfan sulfate	48		46		30-150	4		30	A
Methoxychlor	63		62		30-150	2		30	A
cis-Chlordane	62		57		30-150	8		30	A
trans-Chlordane	64		62		30-150	3		30	A

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-08 Batch: WG1418872-2 WG1418872-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		70		30-150	A
Decachlorobiphenyl	50		47		30-150	A
2,4,5,6-Tetrachloro-m-xylene	65		64		30-150	B
Decachlorobiphenyl	67		71		30-150	B

METALS

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-01	Date Collected:	10/01/20 10:05
Client ID:	B-1 (3-5')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Percent Solids:	82%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	10600		mg/kg	9.52	2.57	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Antimony, Total	1.11	J	mg/kg	4.76	0.362	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Arsenic, Total	6.74		mg/kg	0.952	0.198	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Barium, Total	102		mg/kg	0.952	0.166	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Beryllium, Total	0.219	J	mg/kg	0.476	0.031	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Cadmium, Total	1.11		mg/kg	0.952	0.093	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Calcium, Total	35400		mg/kg	9.52	3.33	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Chromium, Total	30.9		mg/kg	0.952	0.091	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Cobalt, Total	5.05		mg/kg	1.90	0.158	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Copper, Total	162		mg/kg	0.952	0.246	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Iron, Total	15700		mg/kg	4.76	0.859	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Lead, Total	93.0		mg/kg	4.76	0.255	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Magnesium, Total	3970		mg/kg	9.52	1.46	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Manganese, Total	216		mg/kg	0.952	0.151	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Mercury, Total	0.219		mg/kg	0.077	0.050	1	10/06/20 11:15	10/06/20 17:42	EPA 7471B	1,7471B	AL
Nickel, Total	21.5		mg/kg	2.38	0.230	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Potassium, Total	999		mg/kg	238	13.7	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Selenium, Total	ND		mg/kg	1.90	0.246	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Silver, Total	ND		mg/kg	0.952	0.269	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Sodium, Total	528		mg/kg	190	3.00	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Thallium, Total	ND		mg/kg	1.90	0.300	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Vanadium, Total	57.5		mg/kg	0.952	0.193	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV
Zinc, Total	257		mg/kg	4.76	0.279	2	10/06/20 10:30	10/11/20 17:58	EPA 3050B	1,6010D	BV

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-02	Date Collected:	10/01/20 10:10
Client ID:	B-1 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	8150		mg/kg	9.89	2.67	2	10/06/20 10:30	10/11/20 19:31	EPA 3050B	1,6010D	BV
Antimony, Total	1.43	J	mg/kg	4.95	0.376	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Arsenic, Total	2.39		mg/kg	0.989	0.206	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Barium, Total	23.1		mg/kg	0.989	0.172	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Beryllium, Total	0.247	J	mg/kg	0.495	0.033	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Cadmium, Total	0.396	J	mg/kg	0.989	0.097	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Calcium, Total	958		mg/kg	9.89	3.46	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Chromium, Total	17.5		mg/kg	0.989	0.095	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Cobalt, Total	5.32		mg/kg	1.98	0.164	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Copper, Total	12.4		mg/kg	0.989	0.255	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Iron, Total	12900		mg/kg	4.95	0.893	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Lead, Total	4.08	J	mg/kg	4.95	0.265	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Magnesium, Total	1600		mg/kg	9.89	1.52	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Manganese, Total	86.8		mg/kg	0.989	0.157	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Mercury, Total	ND		mg/kg	0.079	0.052	1	10/06/20 11:15	10/06/20 17:45	EPA 7471B	1,7471B	AL
Nickel, Total	9.72		mg/kg	2.47	0.239	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Potassium, Total	601		mg/kg	247	14.2	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Selenium, Total	ND		mg/kg	1.98	0.255	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Silver, Total	ND		mg/kg	0.989	0.280	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Sodium, Total	89.7	J	mg/kg	198	3.12	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Thallium, Total	ND		mg/kg	1.98	0.312	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Vanadium, Total	33.3		mg/kg	0.989	0.201	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV
Zinc, Total	24.6		mg/kg	4.95	0.290	2	10/06/20 10:30	10/11/20 18:24	EPA 3050B	1,6010D	BV

Project Name: 89-93 GERRY STREET
Lab Number: L2041810
Project Number: 135597-002
Report Date: 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-03
Date Collected: 10/01/20 10:47
Client ID: B-3 (1-3')
Date Received: 10/01/20
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	8030		mg/kg	9.14	2.47	2	10/06/20 10:30	10/11/20 19:36	EPA 3050B	1,6010D	BV
Antimony, Total	0.804	J	mg/kg	4.57	0.347	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Arsenic, Total	4.62		mg/kg	0.914	0.190	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Barium, Total	77.1		mg/kg	0.914	0.159	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Beryllium, Total	0.292	J	mg/kg	0.457	0.030	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Cadmium, Total	0.676	J	mg/kg	0.914	0.090	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Calcium, Total	21300		mg/kg	9.14	3.20	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Chromium, Total	14.8		mg/kg	0.914	0.088	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Cobalt, Total	5.68		mg/kg	1.83	0.152	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Copper, Total	42.6		mg/kg	0.914	0.236	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Iron, Total	15400		mg/kg	4.57	0.825	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Lead, Total	124		mg/kg	4.57	0.245	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Magnesium, Total	1970		mg/kg	9.14	1.41	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Manganese, Total	223		mg/kg	0.914	0.145	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Mercury, Total	0.413		mg/kg	0.074	0.048	1	10/06/20 11:15	10/06/20 17:48	EPA 7471B	1,7471B	AL
Nickel, Total	11.3		mg/kg	2.28	0.221	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Potassium, Total	991		mg/kg	228	13.2	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Selenium, Total	ND		mg/kg	1.83	0.236	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Silver, Total	ND		mg/kg	0.914	0.259	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Sodium, Total	143	J	mg/kg	183	2.88	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Thallium, Total	ND		mg/kg	1.83	0.288	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Vanadium, Total	23.0		mg/kg	0.914	0.186	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV
Zinc, Total	159		mg/kg	4.57	0.268	2	10/06/20 10:30	10/11/20 18:29	EPA 3050B	1,6010D	BV

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-04	Date Collected:	10/01/20 10:45
Client ID:	B-3 (13-15')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Percent Solids:	84%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	3660		mg/kg	9.27	2.50	2	10/06/20 10:30	10/11/20 19:40	EPA 3050B	1,6010D	BV
Antimony, Total	ND		mg/kg	4.63	0.352	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Arsenic, Total	0.602	J	mg/kg	0.927	0.193	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Barium, Total	15.6		mg/kg	0.927	0.161	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Beryllium, Total	0.083	J	mg/kg	0.463	0.031	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Cadmium, Total	0.167	J	mg/kg	0.927	0.091	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Calcium, Total	386		mg/kg	9.27	3.24	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Chromium, Total	9.30		mg/kg	0.927	0.089	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Cobalt, Total	2.37		mg/kg	1.85	0.154	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Copper, Total	10.9		mg/kg	0.927	0.239	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Iron, Total	5460		mg/kg	4.63	0.837	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Lead, Total	1.76	J	mg/kg	4.63	0.248	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Magnesium, Total	994		mg/kg	9.27	1.43	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Manganese, Total	54.5		mg/kg	0.927	0.147	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Mercury, Total	ND		mg/kg	0.074	0.049	1	10/06/20 11:15	10/06/20 17:52	EPA 7471B	1,7471B	AL
Nickel, Total	6.06		mg/kg	2.32	0.224	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Potassium, Total	345		mg/kg	232	13.3	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Selenium, Total	ND		mg/kg	1.85	0.239	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Silver, Total	ND		mg/kg	0.927	0.262	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Sodium, Total	87.0	J	mg/kg	185	2.92	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Thallium, Total	ND		mg/kg	1.85	0.292	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Vanadium, Total	10.8		mg/kg	0.927	0.188	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV
Zinc, Total	13.3		mg/kg	4.63	0.272	2	10/06/20 10:30	10/11/20 18:33	EPA 3050B	1,6010D	BV

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-05	Date Collected:	10/01/20 12:10
Client ID:	B-4 (1-3')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Percent Solids:	89%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	6580		mg/kg	8.78	2.37	2	10/06/20 10:30	10/11/20 19:44	EPA 3050B	1,6010D	BV
Antimony, Total	0.896	J	mg/kg	4.39	0.334	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Arsenic, Total	9.32		mg/kg	0.878	0.183	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Barium, Total	101		mg/kg	0.878	0.153	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Beryllium, Total	0.263	J	mg/kg	0.439	0.029	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Cadmium, Total	0.764	J	mg/kg	0.878	0.086	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Calcium, Total	13600		mg/kg	8.78	3.07	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Chromium, Total	14.6		mg/kg	0.878	0.084	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Cobalt, Total	5.26		mg/kg	1.76	0.146	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Copper, Total	37.8		mg/kg	0.878	0.226	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Iron, Total	18100		mg/kg	4.39	0.793	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Lead, Total	204		mg/kg	4.39	0.235	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Magnesium, Total	3640		mg/kg	8.78	1.35	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Manganese, Total	484		mg/kg	0.878	0.140	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Mercury, Total	1.44		mg/kg	0.070	0.046	1	10/06/20 11:15	10/06/20 17:55	EPA 7471B	1,7471B	AL
Nickel, Total	10.9		mg/kg	2.19	0.212	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Potassium, Total	984		mg/kg	219	12.6	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Selenium, Total	0.246	J	mg/kg	1.76	0.226	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Silver, Total	ND		mg/kg	0.878	0.248	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Sodium, Total	281		mg/kg	176	2.76	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Thallium, Total	ND		mg/kg	1.76	0.276	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Vanadium, Total	20.9		mg/kg	0.878	0.178	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV
Zinc, Total	126		mg/kg	4.39	0.257	2	10/06/20 10:30	10/11/20 18:38	EPA 3050B	1,6010D	BV

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-06	Date Collected:	10/01/20 12:09
Client ID:	B-4 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	4240		mg/kg	9.36	2.53	2	10/06/20 10:30	10/11/20 20:29	EPA 3050B	1,6010D	BV
Antimony, Total	ND		mg/kg	4.68	0.356	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Arsenic, Total	1.57		mg/kg	0.936	0.195	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Barium, Total	12.2		mg/kg	0.936	0.163	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Beryllium, Total	0.140	J	mg/kg	0.468	0.031	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Cadmium, Total	0.271	J	mg/kg	0.936	0.092	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Calcium, Total	537		mg/kg	9.36	3.28	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Chromium, Total	9.96		mg/kg	0.936	0.090	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Cobalt, Total	3.22		mg/kg	1.87	0.155	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Copper, Total	8.79		mg/kg	0.936	0.241	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Iron, Total	8800		mg/kg	4.68	0.845	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Lead, Total	2.40	J	mg/kg	4.68	0.251	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Magnesium, Total	999		mg/kg	9.36	1.44	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Manganese, Total	51.2		mg/kg	0.936	0.149	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Mercury, Total	ND		mg/kg	0.074	0.048	1	10/06/20 11:15	10/06/20 18:05	EPA 7471B	1,7471B	AL
Nickel, Total	6.53		mg/kg	2.34	0.226	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Potassium, Total	310		mg/kg	234	13.5	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Selenium, Total	ND		mg/kg	1.87	0.241	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Silver, Total	ND		mg/kg	0.936	0.265	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Sodium, Total	98.8	J	mg/kg	187	2.95	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Thallium, Total	ND		mg/kg	1.87	0.295	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Vanadium, Total	13.3		mg/kg	0.936	0.190	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV
Zinc, Total	15.9		mg/kg	4.68	0.274	2	10/06/20 10:30	10/11/20 18:42	EPA 3050B	1,6010D	BV

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-07	Date Collected:	10/01/20 12:30
Client ID:	B-5 (0-2')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Soil		
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	7280		mg/kg	9.07	2.45	2	10/06/20 10:30	10/11/20 20:33	EPA 3050B	1,6010D	BV
Antimony, Total	4.53	J	mg/kg	4.54	0.345	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Arsenic, Total	12.2		mg/kg	0.907	0.189	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Barium, Total	245		mg/kg	0.907	0.158	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Beryllium, Total	0.290	J	mg/kg	0.454	0.030	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Cadmium, Total	1.76		mg/kg	0.907	0.089	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Calcium, Total	8870		mg/kg	9.07	3.18	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Chromium, Total	18.2		mg/kg	0.907	0.087	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Cobalt, Total	5.78		mg/kg	1.81	0.151	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Copper, Total	60.7		mg/kg	0.907	0.234	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Iron, Total	33600		mg/kg	4.54	0.819	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Lead, Total	449		mg/kg	4.54	0.243	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Magnesium, Total	2380		mg/kg	9.07	1.40	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Manganese, Total	215		mg/kg	0.907	0.144	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Mercury, Total	5.56		mg/kg	0.370	0.241	5	10/06/20 11:15	10/06/20 21:39	EPA 7471B	1,7471B	AL
Nickel, Total	15.8		mg/kg	2.27	0.220	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Potassium, Total	650		mg/kg	227	13.1	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Selenium, Total	0.245	J	mg/kg	1.81	0.234	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Silver, Total	0.608	J	mg/kg	0.907	0.257	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Sodium, Total	246		mg/kg	181	2.86	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Thallium, Total	ND		mg/kg	1.81	0.286	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Vanadium, Total	30.0		mg/kg	0.907	0.184	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV
Zinc, Total	347		mg/kg	4.54	0.266	2	10/06/20 10:30	10/11/20 18:47	EPA 3050B	1,6010D	BV

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

SAMPLE RESULTS

Lab ID:	L2041810-08	Date Collected:	10/01/20 12:29
Client ID:	B-5 (10-12')	Date Received:	10/01/20
Sample Location:	89-93 GERRY STREET, BROOKLYN, NY	Field Prep:	Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	6120		mg/kg	9.43	2.55	2	10/06/20 10:30	10/11/20 20:37	EPA 3050B	1,6010D	BV
Antimony, Total	ND		mg/kg	4.72	0.358	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Arsenic, Total	2.45		mg/kg	0.943	0.196	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Barium, Total	36.3		mg/kg	0.943	0.164	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Beryllium, Total	0.236	J	mg/kg	0.472	0.031	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Cadmium, Total	0.340	J	mg/kg	0.943	0.092	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Calcium, Total	928		mg/kg	9.43	3.30	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Chromium, Total	16.8		mg/kg	0.943	0.091	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Cobalt, Total	7.61		mg/kg	1.89	0.156	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Copper, Total	10.4		mg/kg	0.943	0.243	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Iron, Total	10000		mg/kg	4.72	0.852	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Lead, Total	6.24		mg/kg	4.72	0.253	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Magnesium, Total	1840		mg/kg	9.43	1.45	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Manganese, Total	87.2		mg/kg	0.943	0.150	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Mercury, Total	ND		mg/kg	0.078	0.051	1	10/06/20 11:15	10/06/20 18:14	EPA 7471B	1,7471B	AL
Nickel, Total	10.4		mg/kg	2.36	0.228	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Potassium, Total	566		mg/kg	236	13.6	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Selenium, Total	ND		mg/kg	1.89	0.243	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Silver, Total	ND		mg/kg	0.943	0.267	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Sodium, Total	97.7	J	mg/kg	189	2.97	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Thallium, Total	ND		mg/kg	1.89	0.297	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Vanadium, Total	24.5		mg/kg	0.943	0.191	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV
Zinc, Total	30.2		mg/kg	4.72	0.276	2	10/06/20 10:30	10/11/20 18:51	EPA 3050B	1,6010D	BV

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810

Project Number: 135597-002 **Report Date:** 10/12/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-08 Batch: WG1418538-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Antimony, Total	0.292	J	mg/kg	2.00	0.152	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Arsenic, Total	ND		mg/kg	0.400	0.083	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Barium, Total	ND		mg/kg	0.400	0.070	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Beryllium, Total	ND		mg/kg	0.200	0.013	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Cadmium, Total	ND		mg/kg	0.400	0.039	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Calcium, Total	ND		mg/kg	4.00	1.40	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Chromium, Total	ND		mg/kg	0.400	0.038	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Cobalt, Total	ND		mg/kg	0.800	0.066	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Copper, Total	ND		mg/kg	0.400	0.103	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Iron, Total	ND		mg/kg	2.00	0.361	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Lead, Total	ND		mg/kg	2.00	0.107	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Magnesium, Total	ND		mg/kg	4.00	0.616	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Manganese, Total	ND		mg/kg	0.400	0.064	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Nickel, Total	ND		mg/kg	1.00	0.097	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Potassium, Total	ND		mg/kg	100	5.76	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Selenium, Total	ND		mg/kg	0.800	0.103	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Silver, Total	ND		mg/kg	0.400	0.113	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Sodium, Total	ND		mg/kg	80.0	1.26	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Thallium, Total	ND		mg/kg	0.800	0.126	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Vanadium, Total	ND		mg/kg	0.400	0.081	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV
Zinc, Total	ND		mg/kg	2.00	0.117	1	10/06/20 10:30	10/11/20 16:23	1,6010D	BV

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-08 Batch: WG1418541-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	10/06/20 11:15	10/06/20 16:32	1,7471B	AL

Project Name:	89-93 GERRY STREET	**Lab Number:**	L2041810
Project Number:	135597-002	**Report Date:**	10/12/20

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041810
Report Date: 10/12/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 Batch: WG1418538-2 SRM Lot Number: D109-540								
Aluminum, Total	102		-		50-150	-		
Antimony, Total	124		-		19-250	-		
Arsenic, Total	115		-		70-130	-		
Barium, Total	107		-		75-125	-		
Beryllium, Total	106		-		75-125	-		
Cadmium, Total	103		-		75-125	-		
Calcium, Total	101		-		73-128	-		
Chromium, Total	106		-		70-130	-		
Cobalt, Total	104		-		75-125	-		
Copper, Total	108		-		75-125	-		
Iron, Total	116		-		35-165	-		
Lead, Total	108		-		72-128	-		
Magnesium, Total	108		-		62-138	-		
Manganese, Total	105		-		74-126	-		
Nickel, Total	102		-		70-130	-		
Potassium, Total	104		-		59-141	-		
Selenium, Total	107		-		68-132	-		
Silver, Total	113		-		68-131	-		
Sodium, Total	108		-		35-165	-		
Thallium, Total	103		-		68-131	-		
Vanadium, Total	110		-		59-141	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET

Project Number: 135597-002

Lab Number: L2041810

Report Date: 10/12/20

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 Batch: WG1418538-2 SRM Lot Number: D109-540					
Zinc, Total	111	-	70-130	-	
Total Metals - Mansfield Lab Associated sample(s): 01-08 Batch: WG1418541-2 SRM Lot Number: D109-540					
Mercury, Total	95	-	60-140	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041810
Report Date: 10/12/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1418538-3 QC Sample: L2041794-01 Client ID: MS Sample												
Aluminum, Total	9890	176	14900	**2850**	Q	-	-		75-125	-		20
Antimony, Total	0.475J	43.9	21.7	**49**	Q	-	-		75-125	-		20
Arsenic, Total	2.98	10.5	16.2	125		-	-		75-125	-		20
Barium, Total	141	176	361	125		-	-		75-125	-		20
Beryllium, Total	0.688	4.39	4.87	95		-	-		75-125	-		20
Cadmium, Total	0.637J	4.48	4.52	101		-	-		75-125	-		20
Calcium, Total	4850	878	27900	**2620**	Q	-	-		75-125	-		20
Chromium, Total	13.4	17.6	30.6	98		-	-		75-125	-		20
Cobalt, Total	13.0	43.9	43.8	**70**	Q	-	-		75-125	-		20
Copper, Total	21.2	22	44.2	105		-	-		75-125	-		20
Iron, Total	18300	87.8	23100	**5460**	Q	-	-		75-125	-		20
Lead, Total	12.8	44.8	49.3	81		-	-		75-125	-		20
Magnesium, Total	2860	878	6520	**417**	Q	-	-		75-125	-		20
Manganese, Total	302	43.9	820	**1180**	Q	-	-		75-125	-		20
Nickel, Total	37.2	43.9	56.1	**43**	Q	-	-		75-125	-		20
Potassium, Total	959	878	2250	**147**	Q	-	-		75-125	-		20
Selenium, Total	ND	10.5	8.91	84		-	-		75-125	-		20
Silver, Total	ND	26.3	22.7	86		-	-		75-125	-		20
Sodium, Total	145J	878	1090	124		-	-		75-125	-		20
Thallium, Total	ND	10.5	7.02	**67**	Q	-	-		75-125	-		20
Vanadium, Total	12.8	43.9	53.2	92		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041810
Report Date: 10/12/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1418538-3 QC Sample: L2041794-01 Client ID: MS Sample										
Zinc, Total	59.4	43.9	97.6	87		-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1418541-3 QC Sample: L2041794-01 Client ID: MS Sample										
Mercury, Total	0.109	0.141	0.356	**176**	Q	-	-	80-120	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041810
Report Date: 10/12/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1418538-4 QC Sample: L2041794-01 Client ID: DUP Sample						
Aluminum, Total	9890	10700	mg/kg	8		20
Antimony, Total	0.475J	ND	mg/kg	NC		20
Arsenic, Total	2.98	6.60	mg/kg	**76**	Q	20
Barium, Total	141	181	mg/kg	**25**	Q	20
Beryllium, Total	0.688	0.899	mg/kg	**27**	Q	20
Cadmium, Total	0.637J	0.855J	mg/kg	NC		20
Calcium, Total	4850	58300	mg/kg	**169**	Q	20
Chromium, Total	13.4	14.0	mg/kg	4		20
Cobalt, Total	13.0	11.2	mg/kg	15		20
Copper, Total	21.2	24.4	mg/kg	14		20
Iron, Total	18300	21800	mg/kg	17		20
Lead, Total	12.8	16.9	mg/kg	**28**	Q	20
Magnesium, Total	2860	9040	mg/kg	**104**	Q	20
Manganese, Total	302	645	mg/kg	**72**	Q	20
Nickel, Total	37.2	24.3	mg/kg	**42**	Q	20
Potassium, Total	959	1100	mg/kg	14		20
Selenium, Total	ND	ND	mg/kg	NC		20
Silver, Total	ND	ND	mg/kg	NC		20
Sodium, Total	145J	239	mg/kg	NC		20

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2041810
Report Date: 10/12/20

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1418538-4 QC Sample: L2041794-01 Client ID: DUP Sample						
Thallium, Total	ND	ND	mg/kg	NC		20
Vanadium, Total	12.8	16.2	mg/kg	**23**	Q	20
Zinc, Total	59.4	56.6	mg/kg	5		20
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1418541-4 QC Sample: L2041794-01 Client ID: DUP Sample						
Mercury, Total	0.109	0.068J	mg/kg	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041810
Report Date: 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-01
Client ID: B-1 (3-5')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 10:05
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.9		%	0.100	NA	1	-	10/02/20 09:57	121,2540G	RI

Project Name: 89-93 GERRY STREET
Project Number: 135597-002
Lab Number: L2041810
Report Date: 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-02
Client ID: B-1 (10-12')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY
Date Collected: 10/01/20 10:10
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.9		%	0.100	NA	1	-	10/02/20 09:57	121,2540G	RI

Project Name: 89-93 GERRY STREET | **Lab Number:** L2041810
Project Number: 135597-002 | **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-03
Client ID: B-3 (1-3')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY
Date Collected: 10/01/20 10:47
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.8		%	0.100	NA	1	-	10/02/20 09:57	121,2540G	RI

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041810
Report Date: 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-04
Client ID: B-3 (13-15')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 10:45
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.3		%	0.100	NA	1	-	10/02/20 10:41	121,2540G	RI

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-05 Date Collected: 10/01/20 12:10
Client ID: B-4 (1-3') Date Received: 10/01/20
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.4		%	0.100	NA	1	-	10/02/20 09:57	121,2540G	RI

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-06
Client ID: B-4 (10-12')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 12:09
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.8		%	0.100	NA	1	-	10/02/20 09:57	121,2540G	RI

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041810
Report Date: 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-07
Client ID: B-5 (0-2')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY

Date Collected: 10/01/20 12:30
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.7		%	0.100	NA	1	-	10/02/20 09:57	121,2540G	RI

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

SAMPLE RESULTS

Lab ID: L2041810-08
Client ID: B-5 (10-12')
Sample Location: 89-93 GERRY STREET, BROOKLYN, NY
Date Collected: 10/01/20 12:29
Date Received: 10/01/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.8		%	0.100	NA	1	-	10/02/20 10:41	121,2540G	RI

Lab Duplicate Analysis
Batch Quality Control

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041810
Report Date: 10/12/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03,05-07 QC Batch ID: WG1417246-1 QC Sample: L2041728-01 Client ID: DUP Sample						
Solids, Total	81.2	82.2	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 04,08 QC Batch ID: WG1417248-1 QC Sample: L2041729-01 Client ID: DUP Sample						
Solids, Total	91.0	91.2	%	0		20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2041810-01A	Vial MeOH preserved	A	NA		3.3	Y	Absent		NYTCL-8260HLW(14)
L2041810-01B	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-01C	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-01D	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2041810-01E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),NI-TI(180),TL-TI(180),AL-TI(180),CR-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CU-TI(180),CO-TI(180),V-TI(180),MN-TI(180),HG-T(28),MG-TI(180),FE-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L2041810-01F	Glass 250ml/8oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(14)
L2041810-02A	Vial MeOH preserved	A	NA		3.3	Y	Absent		NYTCL-8260HLW(14)
L2041810-02B	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-02C	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-02D	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2041810-02E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TL-TI(180),AL-TI(180),NI-TI(180),PB-TI(180),SB-TI(180),ZN-TI(180),SE-TI(180),CU-TI(180),CO-TI(180),V-TI(180),MN-TI(180),MG-TI(180),HG-T(28),FE-TI(180),CD-TI(180),K-TI(180),CA-TI(180),NA-TI(180)
L2041810-02F	Glass 250ml/8oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(14)
L2041810-03A	Vial MeOH preserved	A	NA		3.3	Y	Absent		NYTCL-8260HLW(14)
L2041810-03B	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-03C	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-03D	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2041810-03E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),SE-TI(180),CU-TI(180),SB-TI(180),PB-TI(180),ZN-TI(180),V-TI(180),CO-TI(180),MG-TI(180),MN-TI(180),FE-TI(180),HG-T(28),CD-TI(180),K-TI(180),NA-TI(180),CA-TI(180)
L2041810-03F	Glass 250ml/8oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(14)
L2041810-04A	Vial MeOH preserved	A	NA		3.3	Y	Absent		NYTCL-8260HLW(14)
L2041810-04B	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-04C	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-04D	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),TL-TI(180),NI-TI(180),PB-TI(180),CU-TI(180),ZN-TI(180),SE-TI(180),SB-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),K-TI(180),CA-TI(180),CD-TI(180),NA-TI(180)
L2041810-04F	Glass 250ml/8oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),TS(7),NYTCL-8081(14),NYTCL-8082(14)
L2041810-05A	Vial MeOH preserved	A	NA		3.3	Y	Absent		NYTCL-8260HLW(14)
L2041810-05B	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-05C	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-05D	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2041810-05E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),AL-TI(180),NI-TI(180),TL-TI(180),SB-TI(180),ZN-TI(180),PB-TI(180),SE-TI(180),CU-TI(180),CO-TI(180),V-TI(180),MG-TI(180),MN-TI(180),FE-TI(180),HG-T(28),CA-TI(180),K-TI(180),CD-TI(180),NA-TI(180)
L2041810-05F	Glass 250ml/8oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(14)
L2041810-06A	Vial MeOH preserved	A	NA		3.3	Y	Absent		NYTCL-8260HLW(14)
L2041810-06B	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-06C	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-06D	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2041810-06E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),TL-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),CU-TI(180),SB-TI(180),V-TI(180),CO-TI(180),FE-TI(180),MN-TI(180),MG-TI(180),HG-T(28),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)

*Values in parentheses indicate holding time in days

Serial_No:10122015:12

Project Name: 89-93 GERRY STREET
Project Number: 135597-002

Lab Number: L2041810
Report Date: 10/12/20

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2041810-06F	Glass 250ml/8oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(14)
L2041810-07A	Vial MeOH preserved	A	NA		3.3	Y	Absent		NYTCL-8260HLW(14)
L2041810-07B	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-07C	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-07D	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2041810-07E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),AL-TI(180),SB-TI(180),PB-TI(180),SE-TI(180),CU-TI(180),ZN-TI(180),V-TI(180),CO-TI(180),HG-T(28),MN-TI(180),FE-TI(180),MG-TI(180),CA-TI(180),K-TI(180),NA-TI(180),CD-TI(180)
L2041810-07F	Glass 250ml/8oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(14)
L2041810-08A	Vial MeOH preserved	A	NA		3.3	Y	Absent		NYTCL-8260HLW(14)
L2041810-08B	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-08C	Vial water preserved	A	NA		3.3	Y	Absent	02-OCT-20 04:57	NYTCL-8260HLW(14)
L2041810-08D	Plastic 2oz unpreserved for TS	A	NA		3.3	Y	Absent		TS(7)
L2041810-08E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),NI-TI(180),AL-TI(180),CR-TI(180),TL-TI(180),ZN-TI(180),CU-TI(180),SB-TI(180),SE-TI(180),PB-TI(180),V-TI(180),CO-TI(180),HG-T(28),MN-TI(180),MG-TI(180),FE-TI(180),CA-TI(180),K-TI(180),CD-TI(180),NA-TI(180)
L2041810-08F	Glass 250ml/8oz unpreserved	A	NA		3.3	Y	Absent		NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(14)

*Values in parentheses indicate holding time in days

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

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

Terms

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

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

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

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

Data Qualifiers

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

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

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

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

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

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

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

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

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

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

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

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

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Data Qualifiers

the identification is based on a mass spectral library search.

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Project Name: 89-93 GERRY STREET **Lab Number:** L2041810
Project Number: 135597-002 **Report Date:** 10/12/20

REFERENCES

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

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

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

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA

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

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

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

Page 1 of 1

Date Rec'd in Lab: 10/2/20

ALPHA Job #: L2041810

Project Information

Project Name: 89-93 Gerry Street
Project Location: 89-93 Gerry Street, Brooklyn, NY
Project #: 135597-002
(Use Project name as Project #) ☐
Project Manager: Marc Conlon
ALPHAQuote #:

Client Information

Client: Haley & Aldrich of NY
Address: 237 West 35th Street Floor 16, New York, NY 10123
Phone:
Fax:
Email: MConlon@haleyaldrich.com

Turn-Around Time

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

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☑ Other PDF + Excel

Billing Information

☑ Same as Client Info
PO #

Regulatory Requirement

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

Disposal Site Information

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL VOCs 8260	TCL SVOCs 8270D	TCL Pesticides 8081B	TCL PCBs 8082A	TAL Metals 6010D				Sample Specific Comments	Total Bottles
41810 -01	B-1 (3-5')	10-1-20	1005	S	SC	X	X	X	X	X					5
-02	B-1 (10-12')	10-1-20	1010	S	SC	X	X	X	X	X					5
-03	B-3 (1-3')	10-1-20	~~1042~~ 1047	S	SC	X	X	X	X	X					5
-04	B-3 (13-15')	10-1-20	1045	S	SC	X	X	X	X	X					5
-05	B-4 (1-3')	10-1-20	1210	S	SC	X	X	X	X	X					5
-06	B-4 (10-12')	10-1-20	1209	S	SC	X	X	X	X	X					5
-07	B-5 (0-2')	10-1-20	1230	S	SC	X	X	X	X	X					5
-08	B-5 (10-12')	10-1-20	1229	S	SC	X	X	X	X	X					5
					Container Type	V	A	A	A	A					
					Preservative	F	A	A	A	A					

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
Mark Simmel	10-1-2020 / 1600	[illegible] (AAL)	10/1/2020 1600
[illegible] (AAL)	10/1/2020 / 1945	[illegible] AAL	10/1/20 2200
[illegible] AAL	10/2/2020 02	[illegible]	10/02/20 00:30

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

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

ATTACHMENT B

SOIL BORING LOGS

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. **B-1**

Page 1 of 1

PROJECT	89-93 Gerry Street	H&A FILE NO.	135597-002
LOCATION	89-93 Gerry Street, Brooklyn, NY	PROJECT MGR.	Mari Conlon
CLIENT	Waterfront Management New York	FIELD REP.	S. Commisso/Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	10/1/2020
DRILLER	P. Slavin	DATE FINISHED	10/1/2020

Elevation ft. Datum NAVD-88 Boring Location Rear of Lot 41

Item	Casing	Sampler	Core Barrel	Rig Make & Model: 6610DT		Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck ☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV ☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track ☐ Air Track	☐ Roller Bit	☐ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid ☐	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (ft.)	Client ID	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	2.5	B-1(3-5')	5	G	**0-5'** Urban fill material, concrete and brick pieces, unconsolidated	0.3
					A 2-3" lense of blue crystallized material was observed at 5'	0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
5	3.5		5-10	G	**5-10'** Brown to light brown, fine SAND with clay, tight, moist, no odor, no PID readings	0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
10	5	B-1(10-12')	10-15	G	**10-15'** Brown to light brown, medium SAND, fatty texture, wet, no odor, no PID readings	0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
15						

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	0
Number of Samples	2
BORING NO.	B-1

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. **B-2**

PROJECT	89-93 Gerry Street	**H&A FILE NO.**	135597-002
LOCATION	89-93 Gerry Street, Brooklyn, NY	**PROJECT MGR.**	Mari Conlon
CLIENT	Waterfront Management New York	**FIELD REP.**	S. Commisso/Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	10/1/2020
DRILLER	P. Slavin	**DATE FINISHED**	10/1/2020

Elevation ft. **Datum** NAVD-88 **Boring Location** Rear of Lot 41

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ ______ ☐ Cutting Head

Hammer Type	Drilling Mud	Casing Advance Type Method Depth
☐ Safety	☐ Bentonite	Direct Push
☐ Doughnut	☐ Polymer	
☑ Automatic	☑ None	

Drilling Notes:

Depth (ft.)	Recovery (ft.)	Client ID	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	2.5	B-2(0-2')	5	G	**0-5'** Urban fill material, brick and concrete pieces, mps 0.5", no odor	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
5	4		5-10	G	**5-10'** Brown to light brown fine SAND with silt, trace clay, moist, no odor, no PID readings	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
10	5	B-1(10-12')	10-15	G	**10-15'** Brown to light brown medium to slightly coarse SAND with some SILT, wet, no odor, no PID readings	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
15						

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	0
Number of Samples	2
BORING NO.	**B-2**

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

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TEST BORING REPORT

BORING NO. **B-3**

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PROJECT	89-93 Gerry Street	H&A FILE NO.	135597-002
LOCATION	89-93 Gerry Street, Brooklyn, NY	PROJECT MGR.	Mari Conlon
CLIENT	Waterfront Management New York	FIELD REP.	S.Commisso/Z.Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	10/1/2020
DRILLER	P. Slavin	DATE FINISHED	10/1/2020

Elevation ft. Datum NAVD-88 Boring Location

Item	Casing	Sampler	Core Barrel	Rig Make & Model: 6610DT			Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (ft.)	Client ID	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	2.5	B-3(1-3')	0-5	G	**0-3'** Urban fill material, concrete and brick pieces	0.0
					3-5' Brown to dark brown fine SAND with clay and silt, dry, no odor, tight	0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
5	3		5-10	G	**5-10'** Brown fine SAND with clay and silt, moist, tight, no odor, no PID readings	0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
10	4.5	B-3 (13-15')	10-15	G	**10-15'** Brown to orange brown, medium to coarse SAND with silt, loose, wet, PID 0.1-2.6 from 14-15'	0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.1
						1.2
						2.6
15						

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	0
Number of Samples	2
BORING NO.	B-3

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

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TEST BORING REPORT

BORING NO. **B-4**

Page 1 of 1

PROJECT	89-93 Gerry Street	H&A FILE NO.	135597-002
LOCATION	89-93 Gerry Street, Brooklyn, NY	PROJECT MGR.	Mari Conlon
CLIENT	Waterfront Management New York	FIELD REP.	S.Commisso/Z.Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	10/1/2020
DRILLER	P. Slavin	DATE FINISHED	10/1/2020

Elevation ft. Datum NAVD-88 Boring Location Central of Lot 40

Item	Casing	Sampler	Core Barrel	Rig Make & Model: 6610DT			Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (ft.)	Client ID	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	3	B-4(1-3')	0-2	G	**0-8'** Urban fill material, brick and concrete pieces, PID 0.3, loose, dry	0.3, 0.3, 0.3, 0.3, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
5	3		5-10	G	**5-10'** Brown to light brown CLAY with silt, tight, moist, no odor, no PID readings	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
10	5	B-4(10-12')	10-15	G	**10-15'** Brown to light brown, medium to coarse SAND with silt, wet, slightly tight, some pebbles, trace clays	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
15						

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	0
Number of Samples	2
BORING NO.	B-4

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

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TEST BORING REPORT

BORING NO. **B-5**

Page 1 of 1

PROJECT	89-93 Gerry Street	**H&A FILE NO.**	135597-002
LOCATION	89-93 Gerry Street, Brooklyn, NY	**PROJECT MGR.**	Mari Conlon
CLIENT	Waterfront Management New York	**FIELD REP.**	S.Commisso/Z.Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	10/1/2020
DRILLER	P. Slavin	**DATE FINISHED**	10/1/2020

Elevation ft. **Datum** NAVD-88 **Boring Location** Rear of Lot 39 near trailer

Item	Casing	Sampler	Core Barrel	Rig Make & Model	6610DT		Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)				☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (ft.)	Client ID	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	3	B-5 (0-2')	0-5	G	**0-5'** Urban fill material, brick, concrete and glass pieces	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
5	3.5		5-10	G	**5-10'** Dark brown to light brown CLAY, very tight, plastic, moist, no odor, no PID readings	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
10	4.5	B-5 (10-12')	10-15	G	**10-15'** Brown to light brown medium SAND with silt, wet, no odor, no PID readings	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
15						

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	0
Number of Samples	2
BORING NO.	**B-5**

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

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TEST BORING REPORT

BORING NO. **B-6**

Page 1 of 1

PROJECT	89-93 Gerry Street	H&A FILE NO.	135597-002
LOCATION	89-93 Gerry Street, Brooklyn, NY	PROJECT MGR.	Mari Conlon
CLIENT	Waterfront Management New York	FIELD REP.	S.Commisso/Z.Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	10/1/2020
DRILLER	P. Slavin	DATE FINISHED	10/1/2020

Elevation ft. | Datum NAVD-88 | Boring Location: Front of trailer

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ ____ ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (ft.)	Client ID	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	2	B-6 (0-2')	0-5	G	**0-5'** Urban fill material, concrete, brick and glass pieces, no odor, no PID reading	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
5	2.5		5-10'	G	**5-10'** Brown to light brown, fine SAND with silt, moist, trace clay, no odor, no PID readings	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
10	4.5	B-6 (10-12')	10-15	G	**10-15'** Brown to light brown fine to medium SAND, some silt, no odor, wet, no PID readings	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0
15						

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	0
Number of Samples	2
BORING NO.	B-6

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

APPENDIX B

Field Sampling Plan

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FIELD SAMPLING PLAN
89-91 GERRY STREET
BROOKLYN, NEW YORK

by
Haley & Aldrich of New York
New York, New York

for
Gerry Gardens LLC
Brooklyn, New York

File No. 135597-002
February 2021

Table of Contents

Table of Contents

1. Introduction

This Field Sampling Plan (FSP) has been prepared as a component of the Remedial Investigation Work Plan (RIWP) for the subject Site located at 89-91 Gerry Street in Brooklyn, New York. This document was prepared to establish field procedures for field data collection to be performed in support of the RIWP for the Site.

The RIWP includes this Field Sampling Plan, a Quality Assurance Project Plan (QAPP), Health and Safety Plan (HASP), and Community Air Monitoring Plan (CAMP), which are included as part of this plan by reference.

The standard operating procedures (SOP) included as components of this plan will provide the procedures necessary to meet the project objectives. The SOPs will be used as reference for the methods to be employed for field sample collection and handling and the management of field data collected in the execution of the approved RIWP. The SOPs include numerous methods to execute the tasks of the RIWP. The Project Manager will select the appropriate method as required by field conditions and/or the objective the respective project task at the time of sample collection. Field procedures will be conducted in general accordance with the New York State Department of Conservation (NYSDEC) Technical Guidance for Site Investigation and Remediation (DER-10) and the Sampling, Analysis and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) under NYSDEC Part 375 Remedial Program when applicable.

2. Field Program

This FSP provides the general purpose of sampling as well as procedural information. The RIWP contains the details on sampling and analysis (locations, depths, frequency, analyte lists, etc.).

The field program has been designed to acquire the necessary data to comply with the RIWP, and includes the following tasks:

- Soil sampling;
- Groundwater sampling;
- Soil vapor sampling;
- Sampling of investigation of derived wastes (IDW) as needed for disposal.

A Limited Phase II Environmental Site Investigation (ESI) was performed at the Site in October 2020 to investigate the anticipated contaminants of concern identified based on the Site's current and former uses. The Limited Phase II ESI has determined the nature and extent of volatile organic compound (VOC), semi-volatile organic compound (SVOC), polychlorinated biphenyl (PCB), pesticide, and metal contaminants. The site characterization did not identify a source of contamination on the Site, therefore additional targeted soil, groundwater, and soil vapor sampling is proposed.

These SOPs presented herein may be changed as required, dependent on-site conditions, or equipment limitations, at the time of sample collection. If the procedures employed differ from the SOP, the deviations will be documented in the associated sampling report.

3. Utility Clearance

Invasive remedial activities such as excavation or remedial construction activities require location of underground utilities prior to initiating work. Such clearance is sound practice in that it minimizes the potential for damage to underground facilities and more importantly, is protective of the health and safety of personnel. Under no circumstances will invasive activities be allowed to proceed without obtaining proper utility clearance by the appropriate public agencies and/or private entities. This clearance requirement applies to all work on both public and private property, whether located in a dense urban area or a seemingly out-of-the-way rural location.

The drilling contractor performing the work will be responsible for obtaining utility clearance.

Utility clearance is required by law, and obtaining clearance includes contacting a public or private central clearance agency via a "one-call" telephone service and providing the proposed exploration location information. It is important to note that public utility agencies may not, and usually do not have information regarding utility locations on private property.

Before beginning subsurface work at any proposed exploration locations, it is critical that all readily-available information on underground utilities and structures be obtained. This includes publicly available information as well as information in the possession of private landowners. Any drawings obtained must be reviewed in detail for information pertaining to underground utilities.

Using the information obtained, the site should be viewed in detail for physical evidence of buried lines or structures, including pavement cuts and patches, variation in or lack of vegetation, variations in grading, etc. Care must also be taken to avoid overhead utilities as well. Presence of surface elements of buried utilities should be documented, such as manholes, gas or water service valves, catch basins, monuments or other evidence.

Overhead utility lines must be considered when choosing exploration and excavation locations. Most states require a minimum of 10 ft of clearance between equipment and energized wires. Such separation requirements may also be voltage-based and may vary depending on state or municipality regulations. In evaluating clearance from overhead lines, the same restrictions may apply to "drops", or wires on a utility pole connecting overhead and underground lines.

Using the information obtained and observations made, proposed exploration or construction locations should be marked in the field. Marking locations can be accomplished using spray paint on the ground, stakes, or other means. All markings of proposed locations should be made in white, in accordance with the generally-accepted universal color code for facilities identification (AWMA 4/99):

- White: Proposed Excavation or Drilling location
- Pink: Temporary Survey Markings
- Red: Electrical Power Lines, Cables, Conduit and Lighting Cables
- Yellow: Gas, Oil, Steam, Petroleum or Gaseous Materials
- Orange: Communication, Alarm or Signal Lines, Cables or Conduits
- Blue: Potable Water
- Purple: Reclaimed Water, Irrigation and Slurry Lines

- Green: Sewers and Drain Lines

In order to effectively evaluate the proposed locations with these entities, detailed, accurate measurements between the proposed locations and existing surface features should be obtained. Such features can be buildings, street intersections, utility poles, guardrails, etc.

Obtaining the utility clearance generally involves the designated "One-Call" underground facilities protection organization for the area and the landowner and one or both following entities:

- A third-party utility locator company will be utilized to locate underground utilities outside of the public right-of-way; and/or
- "Soft dig" excavation techniques to confirm or deny the presence of underground utilities in the area.

The proposed locations should be evaluated in light of information available for existing underground facilities. The detailed measurement information described above will be required by the "one call" agency. The owners of the applicable, participating underground utilities are obligated to mark their respective facilities at the site in the colors described above. Utility stake-out activities will typically not commence for approximately 72 hours after the initial request is made.

The public and private utility entities generally only mark the locations of their respective underground facilities within public rights-of-way. Determination of the locations of these facilities on private property will be the responsibility of the property owner or Contractor. If available information does not contain sufficient detail to locate underground facilities with a reasonable amount of confidence, alternate measures may be appropriate, as described below. In some cases, the memory of a long-time employee of a facility on private property may be the best or only source of information. It is incumbent on the Consultant or Contractor to exercise caution and use good judgement when faced with uncertainty.

Note: It is important to note that not all utilities are participants in the "one-call" agency or process. As such, inquiries must be made with the "one-call" agency to determine which entities do not participate, so they can be contacted independently.

Most utility stakeouts have a limited time period for which they remain valid, typically two to three weeks. It is critical that this time period be considered to prevent expiration of clearance prior to completion of the invasive activities, and the need to repeat the stake-out process.

Care must be exercised to document receipt of notice from the involved agencies of the presence or absence of utilities in the vicinity of the proposed locations.

Most agencies will generally provide a telephone or fax communication indicating the lack of facilities in the project area. If contact is not made by all of the agencies identified by the "one-call" process, do not assume that such utilities are not present. Re-contact the "one-call" agency to determine the status.

For complicated sites with multiple proposed locations and multiple utilities, it is advisable to arrange an on-site meeting with utility representatives. This will minimize the potential for miscommunication amongst the involved parties.

Completion of the utility stake out process is not a guarantee that underground facilities will not be encountered in excavations or boreholes; in fact, most "one-call" agencies and individual utilities do not offer guarantees, nor do they accept liability for damage that might occur. In areas outside the public right-of-way, a utility locating service may be utilized to locate underground utilities. It is advisable that any invasive activities proceed with extreme caution in the upper four to five feet in the event the clearance has failed to identify an existing facility. This may necessitate hand-excavation or probing to confirm potential presence of shallow utilities. If uncertainty exists for any given utility, extra activities can be initiated to solve utility clearance concerns. These options include:

- Screening the proposed work areas with utility locating devices, and/or hiring a utility locating service to perform this task.
- Hand digging, augering or probing to expose or reveal shallow utilities and confirm presence and location. In northern climates, this may require advancing to below frost line, typically at least four feet.
- Using "soft dig" techniques that utilize specialized tools and compressed air to excavate soils and locate utilities. This technique is effective in locating utilities to a depth of four to five feet.

Equipment/Materials:

- White Spray paint
- Wooden stakes, painted white or containing white flagging
- Color-code key
- Available drawings

4. Field Data Recording

This procedure describes protocol for documenting the investigation activities in the field. Field data serves as the cornerstone for an environmental project, not only for site characterization but for additional phases of investigation or remedial design. Producing defensible data includes proper and appropriate recording of field data as it is obtained in a manner to preserve the information for future use. This procedure provides guidelines for accurate, thorough collection and preservation of written and electronic field data.

Field data to be recorded during the project generally includes, but is not limited to, the following:

- general field observations;
- numeric field measurements and instrument readings;
- quantity estimates;
- sample locations and corresponding sample numbers;
- relevant comments and details pertaining to the samples collected;
- documentation of activities, procedures and progress achieved;
- contractor pay item quantities;
- weather conditions;
- a listing of personnel involved in site-related activities;
- a log of conversations, site meetings and other communications; and,
- field decisions and pertinent information associated with the decisions.

4.1 Written Field Data

Written field data will be collected using a standardized, pre-printed field log form. In general, use of a field log form is preferable as it prompts field personnel to make appropriate observations and record data in a standardized format. This promotes completeness and consistency from one person to the next. Otherwise, electronic data collection using a handheld device produces equal completeness and consistency using a preformatted log form.

In the absence of an appropriate pre-printed form, the data should be recorded in an organized and structured manner in a dedicated project field log book. Log books must be hard cover, bound so that pages cannot be added or removed, and should be made from high-grade 50% rag paper with a water-resistant surface.

The following are guidelines for use of field log forms and log books:

1. Information must be factual and complete.
2. All entries will be made in black indelible ink with a ballpoint pen and will be written legibly. Do not use “rollerball” or felt tip-style pens, since the water-soluble ink can run or smear in the presence of moisture.
3. Field log forms should be consecutively numbered.
4. Each day’s work must start a new form/page.
5. At the end of each day, the current log book page or forms must be signed and dated by the field personnel making the entries.

6. Make data entries immediately upon obtaining the data. Do not make temporary notes in other locations for later transfer; this only increases the potential for error or loss of data.
7. Entry errors are to be crossed out with a single line and initialed by the person making the correction.
8. Do not leave blanks on log forms, if no entry is applicable for a given data field, indicate so with "NA" or a dash ("--").
9. At the earliest practical time, photocopies or typed versions of log forms and log book pages should be made and placed in the project file as a backup in the event the book or forms are lost or damaged.
10. Log books should be dedicated to one project only, i.e., do not record data from multiple projects in one log book.

4.2 Electronic Data

Electronic data recording involves electronic measurement of field information through the use of monitoring instruments, sensors, gauges, and equipment controls. The following is a list of guidelines for proper recording and management of electronic field data:

1. Field data management should follow requirements of a project-specific data management plan (DMP), if applicable.
2. Use only instruments that have been calibrated in accordance with manufacturer's recommendations.
3. Usage of instruments, controls and computers for the purpose of obtaining field data should only be performed by personnel properly trained and experienced in the use of the equipment and software.
4. Use only fully-licensed software on personal computers and laptops.
5. Loss of electronic files may mean loss of irreplaceable data. Every effort should be made to back up electronic files obtained in the field as soon as practical. A backup file placed on the file server will minimize the potential for loss.
6. Electronic files, once transferred from field instruments or laptops to office computers, should be protected if possible, to prevent unwanted or inadvertent manipulation or modification of data. Several levels of protection are usually available for spreadsheets, including making a file "read-only" or assigning a password to access the file.
7. Protect CD disks from exposure to moisture, excessive heat or cold, magnetic fields, or other potentially damaging conditions.
8. Remote monitoring is often used to obtain stored electronic data from site environmental systems. A thorough discussion of this type of electronic field data recording is beyond the scope of this Section. Such on-site systems are generally capable of storing a limited amount of data as a comma-delimited or spreadsheet file. Users must remotely access the monitoring equipment files via modem or other access and download the data. In order to minimize the potential for loss of data, access and downloading of data should be performed frequently enough to ensure the data storage capacity of the remote equipment is not exceeded.

Equipment/Materials:

- Appropriate field log forms, or iPad® or equivalent with preformatted log forms.
- Indelible ball point pen (do not use "rollerball" or felt-tip style pens);
- Straight edge;

- Pocket calculator; and
- Laptop computer (if required).

5. Aquifer Characterization

This procedure describes measurement of water levels in groundwater monitoring.

A synoptic gauging round will be completed to obtain water levels in monitoring wells. Water levels will be acquired in a manner that provides accurate data that can be used to calculate vertical and horizontal hydraulic gradients and other hydrogeologic parameters. Accuracy in obtaining the measurements is critical to ensure the usability of the data.

5.1 Procedure

In order to provide reliable data, water level monitoring events should be collected over as short a period of time as practical. Barometric pressure can affect groundwater levels and, therefore, observation of significant weather changes during the period of water level measurements must be noted. Rainfall events and groundwater pumping can also affect groundwater level measurements. Personnel collecting water level data must note if any of these controls are in effect during the groundwater level collection period. Due to possible changes during the groundwater level collection period, it is imperative that the time of data collection at each station be accurately recorded. Water levels will also be collected prior to any sample collection that day.

The depth to groundwater will be measured with an electronic depth-indicating probe. Prior to obtaining a measurement, a fixed reference point on the well casing will be established for each well to be measured. Unless otherwise established, the reference point is typically established and marked on the north side of the well casing. Do not use protective casings or flush-mounted road boxes as a reference, due to the potential for damage or settlement. The elevation of the reference point shall be obtained by accepted surveying methods, to the nearest 0.01 ft.

The water level probe will be lowered into the well until the meter indicates (via indicator light or tone) the water is reached. The probe will be raised above water level and slowly lowered again until water is indicated. The cable will be held against the side of the inner protective casing at the point designated for water level measurements and a depth reading taken. This procedure will be followed three times or until a consistent value is obtained. The value will be recorded to the nearest 0.01 feet on the Groundwater Level Monitoring Report form.

Upon completion, the probe will be raised to the surface and together with the amount of cable that entered the well casing, will be decontaminated in accordance with methods described in Equipment Decontamination Procedure.

Equipment/Materials:

- Battery-operated, non-stretch electronic water level probe with permanent markings at 0.01 ft. increments, such as the Solinst Model 101 or equivalent.
- The calibrated cable on the depth indicator will be checked against a surveyor's steel tape once per quarter year. A new cable will be installed if the cable has changed by more than 0.01% (0.01 feet for a 100-foot cable). See also the Field Instruments – Use and Calibration Procedure.
- Groundwater Level Monitoring Report form.

6. Sample Collection for Laboratory Analysis

6.1 SOIL SAMPLE COLLECTION FOR LABORATORY ANALYSIS

The following procedure is an introduction to soil sampling techniques and an outline of field staff responsibilities. All samples will be collected with dedicated sampling equipment.

6.1.1 Preparatory Requirements

Prior to the beginning of any remedial investigation or remedial measures activities, staff must attend a project briefing for the purpose of reviewing the project work plan, site and utility plans, drawings, applicable regulations, sampling location, depth, and criteria, site contacts, and other related documents. Health and safety concerns will be documented in a site-specific Health & Safety Plan.

A file folder for the field activities should be created and maintained such that all relevant documents and log forms likely to be useful for the completion of field activities by others are readily available in the event of personnel changes.

6.1.2 Soil Classification

The stratigraphic log is a factual description of the soil at the borehole location and is relied upon to interpret the soil characteristics, and their influence and significance in the subsurface environment. The accuracy of the stratigraphic log is to be verified by the person responsible for interpreting subsurface conditions. An accurate description of the soil stratigraphy is essential for a reasonable understanding of the subsurface conditions. Confirmation of the field description by examination of representative soil samples by the project geologist, hydrogeologist, or geotechnical engineer (whenever practicable) is recommended.

The ability to describe and classify soil correctly is a skill that is learned from a person with experience and by systematic training and comparison of laboratory results to field descriptions.

6.1.2.1 Data Recording

Several methods for classifying and describing soils or unconsolidated sediments are in relatively widespread use. The Unified Soil Classification System (USCS) is the most common. With the USCS, a soil is first classified according to whether it is predominantly coarse-grained or fine-grained.

The description of fill soil is similar to that of natural undisturbed soil except that it is identified as fill and not classified by USCS group, relative density, or consistency. Those logging soils must attempt to distinguish between soils that have been placed (i.e., fill) and not naturally present; or soils that have been naturally present but disturbed (i.e., disturbed native).

It is necessary to identify and group soil samples consistently to determine the subsurface pattern or changes and non-conformities in soil stratigraphy in the field at the time of drilling. The stratigraphy in each borehole during drilling is to be compared to the stratigraphy found at the previously completed boreholes to ensure that pattern or changes in soil stratigraphy are noted and that consistent terminology is used.

Visual examination, physical observations and manual tests (adapted from ASTM D2488, visual-manual procedures) are used to classify and group soil samples in the field and are summarized in this subsection. ASTM D2488 should be reviewed for detailed explanations of the procedures. Visual-manual procedures used for soil identification and classification include:

- visual determination of grain size, soil gradation, and percentage fines;
- dry strength, dilatancy, toughness, and plasticity (thread or ribbon test) tests for identification of inorganic fine-grained soil (e.g., CL, CH, ML, or MH); and
- soil compressive strength and consistency estimates based on thumb indent and pocket penetrometer (preferred) methods.

Soil characteristics like plasticity, strength and dilatancy should be determined using the Haley & Aldrich Soil Identification Field Form.

6.1.2.2 Field Sample Screening

Upon the collection of soil samples, the soil is screened with a photoionization detector (PID) for the presence of organic vapor. This is accomplished by running the PID across the soil sample. The highest reading and sustained readings are recorded.

Note: The PID measurement must be done upwind of the excavating equipment or any running engines so that exhaust fumes will not affect the measurements.

Another method of field screening is head space measurements. This consists of placing a portion of the soil sample in a sealable glass jar, placing aluminum foil over the jar top, and tightening the lid. Alternatively, plastic sealable bags may be utilized for field screen in lieu of glass containers. The jar should only be partially filled. Shake the jar and set aside for at least 30 minutes. After the sample has equilibrated, the lid of the jar can be opened; the foil is punctured with the PID probe and the air (headspace) above the soil sample is monitored. This headspace reading on the field form or in the field book is recorded. All head space measurements must be completed under similar conditions to allow comparability of results. Soil classification and PID readings will be recorded in the daily field report.

Equipment/Materials:

- Pocket knife or small spatula
- Small handheld lens
- Stratigraphic Log (Overburden) (Form 2001)
- Tape Measure
- When sampling for PFAS, acceptable materials for sampling include stainless steel, high density polyethylene (HDPE), PVC, silicone, acetate, and polypropylene.

6.1.3 Soil Sampling

Soil samples will be collected from acetate liners installed by a track-mounted direct push drill rig (Geoprobe®) operated by a licensed operator. Soil samples will be collected using a stainless-steel trowel or sampling spoon into laboratory provided sample containers. If it is necessary to relocate any proposed sampling location due to terrain, utilities, access, etc., the Project Manager must be notified, and an alternate location will be selected.

Prior to use and between each sampling location at an environmental site, the sampling equipment must be decontaminated. All decontamination must be conducted in accordance with the project specific plans or the methods presented in SOP 7.0.

6.1.4 Sampling Techniques

The following procedure describes typical soil sample collection methods for submission of samples to a laboratory for chemical analysis. The primary goal of soil sampling is to collect representative samples for examination and chemical analysis (if required).

Environmental soil samples obtained for chemical analyses are collected with special attention given to the rationale behind determining the precise zone to sample, the specifics of the method of soil extraction and the requisite decontamination procedures. Preservation, handling and glassware for environmental soil samples varies considerably depending upon several factors including the analytical method to be conducted, and the analytical laboratory being used.

6.1.4.1 Grab Versus Composite Samples

A grab sample is collected to identify and quantify conditions at a specific location or interval. The sample is comprised of the minimum amount of soil necessary to make up the volume of sample dictated by the required sample analyses. Composite samples may be obtained from several locations or along a linear trend (in a test pit or excavation). Sampling may occur within or across stratification.

6.2 GROUNDWATER SAMPLE COLLECTION FOR LABORATORY ANALYSIS

The following section describes two techniques for groundwater sampling: "Low Stress/Low Flow Methods" and "Typical Sampling Methods."

"Low Stress/Low Flow" methods will be employed when collecting groundwater samples for the evaluation of volatile constituents (i.e. dissolved oxygen (DO)) or in fine-grained formations where sediment/colloid transport is possible. Analyses typically sensitive to colloidal transport issues include polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons (PAHs) and metals.

The "Typical Sampling Methods" will be employed where the collection of parameters less sensitive to turbidity/sediment issues are being collected (general chemistry, pesticides and other semi-volatile organic compounds (SVOCs)).

NOTE: If non-aqueous phase liquids (NAPL) (light or dense) are detected in a monitoring well, groundwater sample collection will not be conducted, and the Project Manager must be contacted to determine a course of action.

6.2.1 Preparatory Requirements

- Verify well identification and location using borehole log details and location layout figures. Note the condition of the well and record any necessary repair work required.

- Prior to opening the well cap, measure the breathing space above the well casing with a handheld organic vapor analyzer to establish baseline breathing space VOC levels. Repeat this measurement once the well cap is opened. If either of these measurements exceeds the air quality criteria in the HASP, field personnel should adjust their PPE accordingly.

- Prior to commencing the groundwater purging/sampling, a water level must be obtained to determine the well volume for hydraulic purposes. In some settings, it may be necessary to allow the water level time to equilibrate. This condition exists if a water tight seal exists at the well cap and the water level has fluctuated above the top of screen; creating a vacuum or pressurized area in this air space. Three water level checks will verify static water level conditions have been achieved.

- Calculate the volume of water in the well. Typically overburden well volumes consider only the quantity of water standing in the well screen and riser; bedrock well volumes are calculated on the quantity of water within the open core hole and within the overburden casing.

6.2.2 Well Development

Well development is completed to remove fine grained materials from the well but in such a manner as to not introduce fines from the formation into the sand pack. Well development continues until the well responds to water level changes in the formation (i.e., a good hydraulic connection is established between the well and formation) and the well produces clear, sediment-free water to the extent practical.

- Attach appropriate pump and lower tubing into well.
- Gauge well and calculate one well volume. Turn on pump. If well runs dry, shut off pump and allow to recover.
- Surging will be performed by raising and lowering the pump several times to pull fine-grained material from the well. Periodically measure turbidity level using a La Motte turbidity reader.
- The second and third steps will be repeated until turbidity is less than 50 nephelometric turbidity units (NTU) or when 10 well volumes have been removed.
- All water generated during cleaning and development procedures will be collected and contained on site in 55-gallon drums for future analysis and appropriate disposal.

Equipment:

- Appropriate health and safety equipment
- Knife
- Power source (generator)
- Field book
- Well Development Form (Form 3006)
- Well keys
- Graduated pails
- Pump and tubing

- Cleaning supplies (including non-phosphate soap, buckets, brushes, laboratory-supplied distilled/deionized water, tap water, cleaning solvent, aluminum foil, plastic sheeting, etc.) Water level meter

6.2.3 Well Purging and Stabilization Monitoring (Low Stress/Low Flow Method)

The preferred method for groundwater sampling will be the low stress/low flow method described below.

- Slowly lower the pump, safety cable, tubing and electrical lines into the well to the depth specified by the project requirements. The pump intake must be at the midpoint of the well screen to prevent disturbance and resuspension of any sediment in the screen base.

- Before starting the pump, measure the water level again with the pump in the well leaving the water level measuring device in the well when completed.

- Purge the well at 100 to a maximum of 500 milliliters per minute (mL/min). During purging, the water level should be monitored approximately every 5 minutes, or as appropriate. A steady flow rate should be maintained that results in drawdown of 0.3 feet or less. The rate of pumping should not exceed the natural flow rate conditions of the well. Care should be taken to maintain pump suction and to avoid entrainment of air in the tubing. Record adjustments made to the pumping rates and water levels immediately after each adjustment.

- During the purging of the well, monitor and record the field indicator parameters (pH, temperature, conductivity, oxidation-reduction (redox) reaction potential (ORP), dissolved oxygen (DO), and turbidity) approximately every five minutes. Stabilization is considered to be achieved when the final groundwater flow rate is achieved, and three consecutive readings for each parameter are within the following limits:

  - pH: 0.1 pH units of the average value of the three readings;
  - Temperature: 3 percent of the average value of the three readings;
  - Conductivity: 0.005 milliSiemen per centimeter (mS/cm) of the average value of the three readings for conductivity <1 mS/cm and 0.01 mS/cm of the average value of the three readings for conductivity >1 mS/cm;
  - ORP: 10 millivolts (mV) of the average value of the three readings;
  - DO: 10 percent of the average value of the three readings; and
  - Turbidity: 10 percent of the average value of the three readings, or a final value of less than 50 nephelometric turbidity units (NTU).

- The pump must not be removed from the well between purging and sampling.

6.2.4 Sampling Techniques

- If an alternate pump is utilized, the first pump discharge volumes should be discarded to allow the equipment a period of acclimation to the groundwater.

- Samples are collected directly from the pump with the groundwater being discharged directly into the appropriate sample container. Avoid handling the interior of the bottle or bottle cap and don new gloves for each well sampled to avoid contamination of the sample.

- Order of sample collection:

  - Polyfluoroalkyl substances (PFAS)
  - Volatile organic compounds (VOC)
  - 1,4-Dioxane
  - Semi-volatile organic compounds (SVOC)
  - Total Analyte List (TAL) metals

- No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including plumbers tape and sample bottle cap liners with a PTFE layer.

- For low stress/low flow sampling, samples should be collected at a flow rate between 100 and 500 mL/min and such that drawdown of the water level within the well does not exceed the maximum allowable drawdown of 0.3 feet.

- The pumping rate used to collect a sample for VOC should not exceed 100 mL/min. Samples should be transferred directly to the final container 40 mL glass vials completely full and topped with a Teflon cap. Once capped the vial must be inverted and tapped to check for headspace/air presence (bubbles). If air is present, the sample will be discarded, and recollected until free of air.

- All samples must be labeled with:

  - A unique sample number
  - Date and time
  - Parameters to be analyzed
  - Project Reference ID
  - Samplers initials

- Labels should be written in indelible ink and secured to the bottle with clear tape.

Equipment/Materials:

- pH meter, conductivity meter, DO meter, ORP meter, nephelometer, temperature gauge
- Field filtration units (if required)
- Purging/sampling equipment
  - Peristaltic Pump
- Water level probe
- Sampling materials (containers, log book/forms, coolers, chain of custody)
- Work Plan
- Health and Safety Plan

- When sampling for PFAS, acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene.

Note: Peristaltic pump use for VOC collection is not acceptable on NYSDEC/EPA/RCRA sites; this technique has gained acceptance in select areas where it is permissible to collect VOCs using a peristaltic pump at a low flow rate (e.g. Michigan).

Note: 1,4-Dioxane and PFAS purge and sample techniques will be conducted following the NYSDEC guidance documents (see Appendix C of the RIWP). Acceptable groundwater pumps include stainless steel inertia pump with HDPE tubing, peristaltic pump equipped with HDPE tubing and silicone tubing, stainless steel bailer with stainless steel ball or bladder pump (identified as PFAS-free) with HDPE tubing.

Field Notes:

- Field notes must document all the events, equipment used, and measurements collected during the sampling activities. Section 2.0 describes the data/recording procedure for field activities.
- The log book should document the following for each well sampled:
  - Identification of well
  - Well depth
  - Static water level depth and measurement technique
  - Sounded well depth
  - Presence of immiscible layers and detection/collection method
  - Well yield – high or low
  - Purge volume and pumping rate
  - Time well purged
  - Measured field parameters
  - Purge/sampling device used
  - Well sampling sequence
  - Sampling appearance
  - Sample odors
  - Sample volume
  - Types of sample containers and sample identification
  - Preservative(s) used
  - Parameters requested for analysis
  - Field analysis data and method(s)
  - Sample distribution and transporter
  - Laboratory shipped to
  - Chain of custody number for shipment to laboratory
  - Field observations on sampling event
  - Name collector(s)
  - Climatic conditions including air temperature
  - Problems encountered and any deviations made from the established sampling protocol.

A standard log form for documentation and reporting groundwater purging and sampling events are presented on the Groundwater Sampling Record, Low Flow Groundwater Sampling Form, and Low Flow Monitored Natural Attenuation (MNA) Field Sampling Form. Refer to Appendix A for example field forms.

Groundwater/Decon Fluid Disposal:

- Groundwater disposal methods will vary on a case-by-case basis but may range from:
  - Off-site treatment at private treatment/disposal facilities or public owned treatment facilities
  - On-site treatment at Facility operated facilities
  - Direct discharge to the surrounding ground surface, allowing groundwater infiltration to the underlying subsurface regime
- Decontamination fluids should be segregated and collected separately from wash waters/groundwater containers.

6.3 SOIL VAPOR SAMPLING

The following procedure is an introduction to soil vapor sampling techniques and an outline of field staff responsibilities.

6.3.1 Preparatory Requirements

Prior to collecting the field sample, ensure the stainless steel oil vapor probe has been installed to the desired depth and sealed completely to the surface using a material such as bentonite. As part of the vapor intrusion evaluation, a tracer gas should be used in accordance with NYSDOH protocols to serve as a quality assurance/quality control (QA/QC) device to verify the integrity of the soil vapor probe seal. A container (box, plastic pail, etc.) will serve to keep the tracer gas in contact with the probe during testing. A portable monitoring device will be used to analyze a sample of soil vapor for the tracer gas prior to sampling. If the tracer sample results show a significant presence of the tracer, the probe seals will be adjusted to prevent infiltration. At the conclusion of the sampling round, tracer monitoring should be performed a second time to confirm the integrity of the probe seals.

6.3.2 Sampling Techniques

Samples will be collected in appropriate sized Summa canisters that have been certified clean by the laboratory and samples will be analyzed by using USEPA Method TO-15. Flow rate for both purging and sampling will not exceed 0.2 L/min. One to three implant volumes shall be purged prior to the collection of any soil-gas samples. A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, sampling depth, identity of samplers, sampling methods and devices, soil vapor purge volumes, volume of the soil vapor extracted, vacuum of canisters before and after the samples are collected, apparent moisture content of the sampling zone, and chain of custody protocols.

6.4 SAMPLE HANDLING AND SHIPPING

Sample management is the continuous care given to each sample from the point of collection to receipt at the analytical laboratory. Good sample management ensures that samples are properly recorded, properly labeled, and not lost, broken, or exposed to conditions which may affect the sample's integrity.

All sample submissions must be accompanied with a chain of custody (COC) document to record sample collection and submission. Personnel performing sampling tasks must check the sample preparation and preservation requirements to ensure compliance with the Quality Assurance Project Plan.

The following sections provide the minimum standards for sample management.

6.4.1 Sample Handling

Prior to entering the field area where sampling is to be conducted, especially at sites with defined exclusion zones, the sampler should ensure that all materials necessary to complete the sampling are on hand. If samples must be maintained at a specified temperature after collection, dedicated coolers and ice must be available for use. Conversely, when sampling in cold weather, proper protection of water samples, trip blanks, and field blanks must be considered. Sample preservation will involve pH adjustment, cooling to 4°C, and sample filtration and preservation.

6.4.2 Sample Labeling

Samples must be properly labeled immediately upon collection.

Note that the data shown on the sample label is the minimum data required. The sample label data requirements are listed below for clarity.

- Project name
- Sample name/number/unique identifier
- Sampler's initials
- Date of sample collection
- Time of sample collection
- Analysis required
- Preservatives

To ensure that samples are not confused, a clear notation should be made on the container with a permanent marker. If the containers are too soiled for marking, the container can be put into a "zip lock" bag which can then be labeled.

All sample names will be as follows:

- Sample unique identifier: Enter the sample name or number. There should be NO slashes, spaces or periods in the date.
- Date: Enter the six-digit date when the sample was collected. Note that for one-digit days, months, and/or years, add zeros so that the format is MMDDYY (050210). There should be NO slashes, dashes, or periods in the date.

The QA/QC samples will be numbered consecutively as collected with a sample name, date and number of sample collected throughout the day (i.e. when multiple QA/QC samples are collected in one day).

Examples of this naming convention are as follows:

Sample Name:	Comments
TB-050202-0001	TRIP BLANK

TB-050202-0002	TRIP BLANK
FD-050202-0001	FIELD DUPLICATE
FD-050202-0002	FIELD DUPLICATE

NOTE: The QA/QC Sample # resets to 0001 EACH DAY, this will avoid having to look back to the previous day for the correct sequential number.

6.4.3 Field Code

The field code will be written in the 'Comments' field on the chain of custody for EVERY sample but will not be a part of the actual sample name. Enter the one/two-character code for type of sample (must be in CAPITALS):

N	Normal Field Sample
FD	Field Duplicate (note sample number (i.e. 0001) substituted for time)
TB	Trip Blank (note sample number (i.e. 0001) substituted for time)
EB	Equipment Blank (note sample number (i.e. 0001) substituted for time)
FB	Field Blank (note sample number (i.e. 0001) substituted for time)
KD	Known Duplicate
FS	Field Spike Sample
MS	Matrix Spike Sample (note on ‘Comments’ field of COC – laboratory to spike matrix.
MD	Matrix Spike Duplicate Sample (note on ‘Comments’ field of COC – laboratory to spike matrix.
RM	Reference Material

The sample labeling – both chain and sample bottles must be EXACTLY as detailed above. In addition, the Field Sample Key for each sample collected must be filled out.

6.4.4 Packaging

Sample container preparation and packing for shipment should be completed in a well-organized and clean area, free of any potential cross contamination. The following is a list of standard guidelines which must be followed when packing samples for shipment.

- Double bag ice in "Zip Lock" bags.
- Double check to ensure trip and temperature blanks have been included for all shipments containing VOCs, or where otherwise specified in the QAPP.
- Enclose the Chain of Custody form in a "Zip Lock" bag.
- Ensure custody seals (two, minimum) are placed on each cooler. Coolers with hinged lids should have both seals placed on the opening edge of the lid. Coolers with "free" lids should have seals placed on opposite diagonal corners of the lid. Place clear tape over custody seals.
- Containers should be wiped clean of all debris/water using paper towels (paper towels must be disposed of with other contaminated materials).
- Clear, wide packing tape should be placed over the sample label for protection.
- Do not bulk pack. Each sample must be individually padded.
- Large glass containers (1 liter and up) require much more space between containers.
- Ice is not a packing material due to the reduction in volume when it melts.

Note: Never store sterile sample containers in enclosures containing equipment which use any form of fuel or volatile petroleum-based product. When conducting sampling in freezing conditions at sites without a heated storage area (free of potential cross contaminants), unused trip blanks should be isolated from coolers immediately after receipt. Trip blanks should be double bagged and kept from freezing.

6.4.5 Chain-of-Custody Records

Chain of custody (COC) forms will be completed for all samples collected. The form documents the transfer of sample containers. The COC record, completed at the time of sampling, will contain, but not be limited to, the sample number, date and time of sampling, and the name of the sampler. The COC document will be signed and dated by the sampler when transferring the samples.

Each sample cooler being shipped to the laboratory will contain a COC form. The cooler will be sealed properly for shipment. The laboratory will maintain a copy for their records. One copy will be returned with the data deliverables package.

The following list provides guidance for the completion and handling of all COCs:

- COCs used should be a Haley & Aldrich standard form or supplied by the analytical laboratory.
- COCs must be completed in black ball point ink only.
- COCs must be completed neatly using printed text.
- If a simple mistake is made, cross out the error with a single line and initial and date the correction.
- Each separate sample entry must be sequentially numbered.
- If numerous repetitive entries must be made in the same column, place a continuous vertical arrow between the first entry and the next different entry.
- When more than one COC form is used for a single shipment, each form must be consecutively numbered using the "Page ___ of ___" format.
- If necessary, place additional instructions directly onto the COC in the Comment Section. Do not enclose separate instructions.
- Include a contact name and phone number on the COC in case there is a problem with the shipment.
- Before using an acronym on a COC, define clearly the full interpretation of your designation [i.e., polychlorinated biphenyls (PCBs)].

6.4.6 Shipment

Prior to the start of the field sampling, the carrier should be contacted to determine if pickup will be at the field site location. If pick-up is not available at the Site, the nearest pick-up or drop off location should be determined. Sample shipments must not be left at unsecured drop locations.

Copies of all shipment manifests must be maintained in the field file.

7. Field Instruments – Use and Calibration

A significant number of field activities involve usage of electronic instruments to monitor for environmental conditions and health and safety purposes. It is imperative the instruments are used and maintained properly to optimize their performance and minimize the potential for inaccuracies in the data obtained. This section provides guidance on the usage, maintenance and calibration of electronic field equipment.

- All monitoring equipment will be in proper working order and operated in accordance with manufacturer's recommendations.

- Field personnel will be responsible for ensuring that the equipment is maintained and calibrated in the field in accordance with manufacturer's recommendations.

- Instruments will be operated only by personnel trained in the proper usage and calibration.

- Personnel must be aware of the range of conditions such as temperature and humidity for instrument operation. Usage of instruments in conditions outside these ranges will only proceed with approval of the Project Manager and/or Health and Safety Officer as appropriate.

- Instruments that contain radioactive source material, such as x-ray fluorescence (XRF) analyzers or moisture-density gauges require specific transportation, handling and usage procedures that are generally associated with a license from the Nuclear Regulatory Commission (NRC) or an NRC-Agreement State. Under no circumstance will operation of such instruments be allowed on site unless by properly authorized and trained personnel, using the proper personal dosimetry badges or monitoring instruments.

7.1 GENERAL PROCEDURE DISCUSSION

Care must be taken to minimize the potential for transfer of contaminated materials to the ground or onto other materials. Regardless of the size or nature of the equipment being decontaminated, the process will utilize a series of steps that involve removal of gross material (dirt, grease, oil etc.), washing with a detergent, and multiple rinsing steps. In lieu of a series of washes and rinse steps, steam cleaning with low-volume, high-pressure equipment (i.e., steam cleaner) is acceptable.

Exploration equipment, and all monitoring equipment in contact with the sampling media must be decontaminated prior to initiating site activities, in between exploration locations to minimize cross-contamination, and prior to mobilizing off site after completion of site work.

The following specific decontamination procedure is recommended for sampling equipment and tools:

- Brush loose soil off equipment;
- Wash equipment with laboratory grade detergent (i.e., Alconox or equivalent);
- Rinse with tap water;
- Rinse equipment with distilled water;
- Allow water to evaporate before reusing equipment; and

- Wrap equipment in aluminum foil when not being used.

7.2 DECONTAMINATION OF MONITORING EQUIPMENT

Because monitoring equipment is difficult to decontaminate, care should be exercised to prevent contamination. Sensitive monitoring instruments should be protected when they are at risk of exposure to contaminants. This may include enclosing them in plastic bags allowing an opening for the sample intake. Ventilation ports should not be covered.

If contamination does occur, decontamination of the equipment will be required; however, immersion in decontamination fluids is not possible. As such, care must be taken to wipe the instruments down with detergent-wetted wipes or sponges, and then with de-ionized water-wetted wipes or sponges.

7.3 DISPOSAL OF WASH SOLUTIONS AND CONTAMINATED EQUIPMENT

All contaminated wash water, rinses, solids and materials used in the decontamination process that cannot be effectively decontaminated (such as polyethylene sheeting) will be containerized and disposed of in accordance with applicable regulations. All containers will be labeled with an indelible marker as to contents and date of placement in the container, and any appropriate stickers required (such as PCBs). Storage of decontamination wastes on site will not exceed 90 days under any circumstances.

Equipment/Materials:

Decontamination equipment and solutions are generally selected based on ease of decontamination and disposability.

- Polyethylene sheeting;
- Metal racks to hold equipment;
- Soft-bristle scrub brushes or long-handle brushes for removing gross contamination and scrubbing with wash solutions;
- Large galvanized wash tubs, stock tanks, or wading pools for wash and rinse solutions;
- Plastic buckets or garden sprayers for rinse solutions;
- Large plastic garbage cans or other similar containers lined with plastic bags can be used to store contaminated clothing;
- Contaminated liquids and solids should be segregated and containerized in DOT-approved plastic or metal drums, appropriate for offsite shipping/disposal if necessary.

8. Investigation Derived Waste Disposal

8.1 RATIONALE/ASSUMPTIONS

This procedure applies to the disposition of investigation derived waste (IDW) including soils and/or groundwater. IDW is dealt with the following "Best Management Practices" and is not considered a listed waste due to the lack of generator knowledge concerning chemical source, chemical origin, and timing of chemical introduction to the subsurface.

Consequently, waste sampling and characterization is performed to determine if the wastes exhibit a characteristic of hazardous waste. The disposal of soil cuttings, test pit soils and/or purged groundwater will be reviewed on a case by case basis prior to initiation of field activities. Two scenarios typically exist:

- When no information is available in the area of activity or investigation, and impacted media/soils are identified. Activities such as new construction and /or maintenance below grade may encounter environmental conditions that were unknown.
- Disposal Required/Containerization Required – When sufficient Site information regarding the investigative Site conditions warrant that all materials handled will be contained and disposed.

If a known listed hazardous and/or characteristically hazardous waste/contaminated environmental media is being handled, then handling must be performed in accordance with RCRA Subtitle C (reference 2, Part V, Section 1(a),(b),(c)).

The following outlines the waste characterization procedures to be employed when IDW disposal is required.

The following procedure describes the techniques for characterization of IDW for disposal purposes. IDW may consist of soil cuttings (augering, boring, well installation soils, test pit soils), rock core or rock flour (from coring, reaming operations), groundwater (from well development, purging and sampling activities), decontamination fluids, personal protective equipment (PPE), and disposal equipment (DE).

8.2 PROCEDURE

The procedures for handling and characterization of field activity generated wastes are:

A.) Soil Cuttings - Soils removed from boring activities will be contained within an approved container, suitable for transportation and disposal.

- Once placed into the approved container, any free - liquids (i.e., groundwater) will be removed for disposal as waste fluids or solidified within the approved container using a solidification agent such as Speedy Dri (or equivalent).
- Contained soils will be screened for the presence of Volatile Organic Compounds (VOCs), using a Photo ionization detector (PID); this data will be logged for future reference.
- Once screened, full and closed; the container will be labeled and placed into the container storage area. At a minimum, the following information will be shown on each container

label: date of filling/generation, Site name, source of soils (i.e., borehole or well), and contact.
- Prior to container closure, representative samples from the containers will be collected for waste characterization purposes and submitted to the project laboratory.
- Typically, at a location where an undetermined site-specific parameter group exists, sampling and analysis may consist of the full RCRA Waste Characterization (ignitability, corrosivity, reactivity, toxicity), or a subset of the above based upon data collected, historical information, and generator knowledge.

B.) Groundwater - purging, and sampling groundwater, which requires disposal, will be contained.

- Containment may be performed in 55-gallon drums, tanks suitable for temporary storage (i.e., Nalgene tanks 500 to 1,000 gallons) or if large volumes of groundwater are anticipated, tanker trailer (5,000 to 10,000 gallons ±), or drilling "Frac" tanks may be utilized (20,000 gallons ±). In all cases the container/tank used for groundwater storage must be clean before use such that cross contamination does not occur.

C.) Decon Waters/Decon Fluids - Decon waters and/or fluids will be segregated, contained, and disposed accordingly.

- Decon waters may be disposed of with the containerized groundwater once analytical results have been acquired.

D.) PPE/DE – A number of disposal options exists for spent PPE/DE generated from investigation tasks. The options typically employed are:

- Immediately disposed of within on-Site dumpster/municipal trash; or
- If known to be contaminated with RCRA hazardous waste, dispose off-Site at a RCRA Subtitle C facility.
- Spent Solvent/Acid Rinses - The need for sampling must be determined in consultation with the waste management organization handling the materials. If known that only the solvent and/or acids are present, then direct disposal/treatment using media specific options may be possible without sampling (i.e., incineration).
- PPE/DE – Typically not sampled and included with the disposal of the solid wastes.

Equipment/Materials:

- Sample spoons, trier, auger,
- Sample mixing bowl,
- Sampling bailer, or pump,
- Sample glassware.

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24. USEPA (1988), Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, OSWER-9950.1.
25. USEPA RCRA - Guidance and Policies: Management of Remediation Waste Under RCRA (October 1998).
26. USEPA RCRA - Management of Contaminated Media (October 1998).
27. USEPA CERCLA Guidance (Options Relevant to RCRA Facilities): Guide to Management of Investigation - Derived Wastes (January 1992).
28. USEPA: Low-flow (Minimal Drawdown) Groundwater Sampling Procedures (EPA/540/S-95/504)
29. USEPA: RCRA Groundwater Monitoring: Draft Technical guidance (EPA/530 R 93 001)
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APPENDIX A
Field Forms

HALEY ALDRICH

EQUIPMENT CALIBRATION LOG

Project: ____________________

Location: ____________________

Model Name: ____________________

Model Number: ____________________ **Serial Number:** ____________________

Cal. Standards: ____________________

____

____

Instruments will be calibrated in accordance with manufacturer's recommendations at least once per day.

Date	Time	Calibration Satandard Solution	Calibration Result	Calibrated by

Other Comments: ____________________

Groundwater Field Sampling Form

Location:

Job Number: ____________________

Well ID: ____________________

Field Sampling Crew: ____________

Date: ________________________

Start Time: ________________________

Finished Time: ________________________

Initial Depth to Water: ____________________

Well Depth: ____________________

Depth to top of screen: ____________________

Depth to bottom of screen: ____________________

Depth of Pump Intake: ____________________

Purging Device: ________________

Tubing present in well? __________

Tubing type: __________________

Time Elapsed (24 hour)	Depth to Water (from casing)	Pump Setting (ml/min or gal/min)	Purge Rate (ml/min or gal/min)	Cumulative Purge Volume (liters or gallons)	Temperature (degrees Celsius)	pH	Conductivity us/cm	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments

Comments:

HALEY ALDRICH

SAMPLE IDENTIFICATION KEY

Page of

PROJECT ____________________ **H&A FILE NO.** ____________________

LOCATION ____________________ **PROJECT MGR.** ____________________

CLIENT ____________________

CONTRACTOR ____________________

Sample ID	Parent Sample ID	Location ID	Sample Date	Sample Time (military)	Sample Type Code	Filtered (Water Only T/D/N)	Composite Y/N	Soil Type	Depth To Top Of Sample	Depth To Bottom Of Sample	C.O.C. Number	Notes	Collected By

Notes:

Common Sample Type Codes:

N Normal Environmental Samp WG Groundwater WS Surface Water SO Soil GS Soil Gas SE Sediment

WQ Water for Quality Control FD Field Duplicate EB Equipment Blank TB Trip Blank MS Matris Spike MSD Matrix Spike Duplicate

see Memorandum dated 08/08/05 from Melanie Satanek "Sample Labeling for Submission to Analytical Laboratory" for less common codes

HALEY ALDRICH

DAILY FIELD REPORT

Page of

Project		**Report No.**	
Location		**Date**	
Client		**Page**	of
Contractor		**File No.**	
Weather		**Temperature**	

Field Representative(s)	Time on site	Report/Travel/Other	Total hours

Distribution:

Haley & Aldrich, Inc.

Form 4004

GEOPROBE BORING REPORT

BORING NO.

Page 1 of

PROJECT			
LOCATION		PROJECT MGR.	
CLIENT		FIELD REP.	
CONTRACTOR		DATE STARTED	
DRILLER		DATE FINISHED	

Elevation ft.	Datum	Boring Location				
Item	**Casing**	**Sampler**	**Core Barrel**	**Rig Make & Model**	**Hammer Type**	**Drilling Mud**	**Casing Advance**
Type				☐ Truck ☐ Tripod ☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)				☐ ATV ☐ Geoprobe ☐ Winch	☐ Doughnut	☐ Polymer	
Hammer Weight (lb.)				☐ Track ☐ Air Track ☐ Roller Bit	☐ Automatic	☐ None	
Hammer Fall (in.)				☐ Skid ☐ ______ ☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Casing Blows	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft)	Elev./ Depth (ft)	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)

Water Level Data					
			Depth in feet to:		
Date	Time	Elapsed Time (hr.)	Bottom of Casing	Bottom of Hole	Water
Date					

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft.) ______
Rock Cored (Linear ft.) ______
Number of Samples ______

BORING NO.

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification

Form #3000

APPENDIX C

Quality Assurance and Performance Plan

www.haleyaldrich.com

QUALITY ASSURANCE PROJECT PLAN
89-91 GERRY STREET
BROOKLYN, NEW YORK

by
Haley & Aldrich of New York
New York, New York

for
Gerry Gardens LLC
Brooklyn, New York

File No. 135597-002
February 2021

Executive Summary

This Quality Assurance Project Plan (QAPP) outlines the scope of the quality assurance and quality control (QA/QC) activities associated with the site monitoring activities associated with the Remedial Investigation Work Plan (RIWP) for 89-91 Gerry Street (Site) in Brooklyn, New York.

Protocols for sample collection, sample handling and storage, chain-of-custody procedures, and laboratory and field analyses are described herein or specifically referenced to related project documents.

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List of Tables

1. Project Description

This Quality Assurance Project Plan (QAPP) has been prepared as a component of the RIWP for the 89-91 Gerry Street Site in Brooklyn, New York.

1.1 PROJECT OBJECTIVES

The primary objective for data collection activities is to collect sufficient data necessary to monitor the nature of any remaining groundwater and soil impacts.

1.2 SITE DESCRIPTION AND HISTORY

The general Site description and Site history is provided in the Site Description and History Summary that accompanies the RIWP appended to the Brownfield Cleanup Program application for the Site and incorporated herein by reference.

1.3 LABORATORY PARAMETERS

The laboratory parameters for soil include:

- Target Compound List volatile organic compounds (VOCs) using EPA method 8260B
- Target Compound List semi-volatile organic compounds (SVOCs) using EPA method 8270C
- Total Analyte List (TAL) Metals using EPA method 6010
- Polychlorinated biphenyls (PCBs) using EPA method 8082
- Pesticides using EPA 8081
- Per- and polyfluoroalkyl substances (PFAS) using EPA method 537
- 1,4-Dioxane using EPA method 8260B

Select soil samples will also be analyzed for parameters including:

- RCRA Metals using ICP-AES/ICP-MS
- TCLP Metals using EPA method 1311/6010C/7470A

The laboratory parameters for groundwater include:

- Target Compound List VOCs using EPA method 8260C
- Target Compound List SVOCs using EPA method 8270C
- Total Analyte List (TAL) Metals using EPA method 6010
- Per- and polyfluoroalkyl substances (PFAS) using EPA method 537
- 1,4-Dioxane using EPA method 8260B

Note: 1,4-Dioxane and PFAS sampling techniques will be conducted following the NYSDEC Collection of Groundwater Samples for Per- and Polyfluoroalkyl Substances (PFAS) from Monitoring Wells Sample Protocol.

During the collection of groundwater samples, pH, specific conductivity, temperature, dissolved oxygen (DO), and oxidation/reduction potential (ORP) will be measured until stabilized.

The laboratory parameter for soil vapor includes:

- VOCs using EPA method TO-15

Laboratory parameters for disposal samples will be determined by the disposal facility after an approved facility has been determined.

1.4 SAMPLING LOCATIONS

The RIWP provides the locations of soil samples and groundwater monitoring wells that will be sampled.

2. Project Organization and Responsibilities

This section defines the roles and responsibilities of the individuals who will perform the RIWP monitoring activities. A NYSDOH certified analytical laboratory will perform the analyses of environmental samples collected at the Site.

2.1 MANAGEMENT RESPONSIBILITIES

The Project Manager is responsible for managing the implementation of the RIWP and monitoring and coordinating the collection of data. The Project Manager is responsible for technical quality control and project oversight. The Project Manager responsibilities include the following:

- Acquire and apply technical and corporate resources as needed to ensure performance within budget and schedule restraints;
- Review work performed to ensure quality, responsiveness, and timeliness;
- Communicate with the client point of contact concerning the progress of the monitoring activities;
- Assure corrective actions are taken for deficiencies cited during audits of RIWP monitoring activities; and
- Overall Site health and safety plan compliance.

2.2 QUALITY ASSURANCE RESPONSIBILITIES

The Quality Assurance team will consist of a Quality Assurance Officer and the Data Validation staff. Quality Assurance responsibilities are described as follows:

2.2.1 Quality Assurance (QA) Officer

The QA Officer reports directly to the Project Manager and will be responsible for overseeing the review of field and laboratory data. Additional responsibilities include the following:

- Assure the application and effectiveness of the QAPP by the analytical laboratory and the project staff;
- Provide input to the Project Manager as to corrective actions that may be required as a result of the above-mentioned evaluations;
- Prepare and/or review data validation and audit reports.

The QA Officer will be assisted by the data validation staff in the evaluation and validation of field and laboratory generated data.

2.2.2 Data Validation Staff

The data validation staff will be independent of the laboratory and familiar with the analytical procedures performed. The validation will include a review of each validation criterion as prescribed by the guidelines presented in Section 9.2 of this document and be presented in a Data Usability Summary Report (DUSR) for submittal to the QA Officer.

2.3 LABORATORY RESPONSIBILITIES

Laboratory services in support of the RIWP monitoring include the following personnel:

2.3.1 Laboratory Project Manager

The Laboratory Project Manager will report directly to the QA Officer and Project Manager and will be responsible for ensuring all resources of the laboratory are available on an as-required basis. The Laboratory Project Manager will also be responsible for the approval of the final analytical reports.

2.3.2 Laboratory Operations Manager

The Laboratory Operations Manager will report to the Laboratory Project Manager and will be responsible for coordinating laboratory analysis, supervising in-house chain-of-custody reports, scheduling sample analyses, overseeing data review and overseeing preparation of analytical reports.

2.3.3 Laboratory QA Officer

The Laboratory QA Officer will have sole responsibility for review and validation of the analytical laboratory data. The Laboratory QA Officer will provide Case Narrative descriptions of any data quality issues encountered during the analyses conducted by the laboratory. The QA Officer will also define appropriate QA procedures, overseeing QA/QC documentation.

2.3.4 Laboratory Sample Custodian

The Laboratory Sample Custodian will report to the Laboratory Operations Manager and will be responsible for the following:

- Receive and inspect the incoming sample containers;
- Record the condition of the incoming sample containers;
- Sign appropriate documents;
- Verify chain-of-custody and its correctness;
- Notify the Project Manager and Operations Manager of sample receipt and inspection;
- Assign a unique identification number and enter each into the sample receiving log;
- Initiate transfer of samples to laboratory analytical sections; and
- Control and monitor access/storage of samples and extracts.

2.3.5 Laboratory Technical Personnel

The laboratory technical staff will have the primary responsibility in the performance of sample analysis and the execution of the QA procedures developed to determine the data quality. These activities will include the proper preparation and analysis of the project samples in accordance with the laboratory's Quality Assurance Manual (QAM) and associated Standard Operating Procedures (SOP).

2.4 FIELD RESPONSIBILITIES

2.4.1 Field Coordinator

The Field Coordinator is responsible for the overall operation of the field team and reports directly to the Project Manager. The Field Coordinator works with the project Health & Safety Officer (HSO) to conduct operations in compliance with the project Health & Safety Plan (HASP). The Field Coordinator will facilitate communication and coordinate efforts between the Project Manager and the field team members.

Other responsibilities include the following:

- Develop and implement field-related work plans, ensuring schedule compliance, and adhering to management-developed project requirements;
- Coordinate and manage field staff;
- Perform field system audits;
- Oversee quality control for technical data provided by the field staff;
- Prepare and approve text and graphics required for field team efforts;
- Coordinate and oversee technical efforts of subcontractors assisting the field team;
- Identify problems in the field; resolve difficulties in consultation with the Project QAO, and Project Manager; implement and document corrective action procedures; and,
- Participate in preparation of the final reports.

2.4.2 Field Team Personnel

Field Team Personnel will be responsible for the following:

- Perform field activities as detailed in the RIWP and in compliance with the Field Sampling Plan (FSP) and QAPP.
- Immediately report any accidents and/or unsafe conditions to the Site Health & Safety Officer and take reasonable precautions to prevent injury.

3. Sampling Procedures

The FSP provides the SOPs for sampling required by the RIWP. Sampling will be conducted in general accordance with the New York State Department of Conservation (NYSDEC) Technical Guidance for Site Investigation and Remediation (DER-10) and the Sampling, Analysis and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) under NYSDEC Part 375 Remedial Program when applicable.

3.1 SAMPLE CONTAINERS

Sample containers for each sampling task will be provided by the laboratory performing the analysis. The containers will be cleaned by the manufacturer to meet or exceed the analyte specifications established in the U.S. EPA, "Specifications and Guidance for Obtaining Contaminant-Free Sample Containers", April 1992, OSWER Directive #9240.0-0.5A. Certificates of analysis for each lot of sample containers used will be maintained by the laboratory.

The appropriate sample containers, preservation method, maximum holding times, and handling requirements for each sampling task are provided in Table I.

3.2 SAMPLE LABELING

Each sample will be labeled with a unique sample identifier that will facilitate tracking and cross-referencing of sample information. Equipment rinse blank and field duplicate samples also will be numbered with a unique sample identifier to prevent analytical bias of field QC samples.

Refer to the FSP for the sample labeling procedures.

3.3 FIELD QC SAMPLE COLLECTION

3.3.1 Field Duplicate Sample Collection

3.3.1.1 Water Samples

Field duplicate samples will be collected by filling the first sample container to the proper level and sealing and then repeated for the second set of sample container.

1. The samples are properly labeled as specified in Section 3.2.
2. Steps 1 through 4 are repeated for the bottles for each analysis. The samples are collected in order of decreasing analyte volatility as detailed in Section 3.3.1.
3. Chain-of-custody documents are executed.
4. The samples will be handled as specified in Table I.

3.3.1.2 Soil Samples

Soil field duplicates will be collected as specified in the following procedure:

1. Soils will be sampling directly from acetate liners.

2. Soil for VOC analysis will be removed from the sampling device as specified in the FSP.
3. Soil for non-VOC analysis will be removed from the sampling device and collected into clean laboratory provided containers.

4. Custody Procedures

Sample custody is addressed in three parts: field sample collection, laboratory analysis and final project files. Custody of a sample begins when it is collected by or transferred to an individual and ends when that individual relinquishes or disposes of the sample.

A sample is under custody if:

1. The item is in actual possession of a person;
2. The item is in the view of the person after being in actual possession of the person;
3. The item was in actual possession and subsequently stored to prevent tampering; or
4. The item is in a designated and identified secure area.

4.1 FIELD CUSTODY PROCEDURES

Field personnel will keep written records of field activities on applicable preprinted field forms or in a bound field notebook to record data collecting activities. These records will be written legibly in ink and will contain pertinent field data and observations. Entry errors or changes will be crossed out with a single line, dated, and initialed by the person making the correction. Field forms and notebooks will be periodically reviewed by the Field Coordinator.

The beginning of each entry in the logbook or preprinted field form will contain the following information:

- Date
- Start time
- Weather
- Names of field personnel (including subcontractors)
- Level of personal protection used at the Site
- Names of all visitors and the purpose of their visit.

For each measurement and sample collected, the following information will be recorded:

- Detailed description of sample location,
- Equipment used to collect sample or make measurement and the date equipment was calibrated,
- Time sample was collected,
- Description of the sample conditions,
- Depth sample was collected (if applicable),
- Volume and number of containers filled with the sample; and,
- Sampler's identification.

4.1.1 Field Procedures

The following procedure describes the process to maintain the integrity of the samples:

- Upon collection samples are placed in the proper containers. In general, samples collected for organic analysis will be placed in pre-cleaned glass containers and samples collected for inorganic analysis will be placed in pre-cleaned plastic (polyethylene) bottles. Refer to the FSP for sample packaging procedures.

- Samples will be assigned a unique sample number and will be affixed to a sample label. Refer to the FSP for sample labeling procedures.

- Samples will be properly and appropriately preserved by field personnel in order to minimize loss of the constituent(s) of interest due to physical, chemical or biological mechanisms.

- Appropriate volumes will be collected to ensure that the appropriate reporting limits can be successfully achieved and that the required QC sample analyses can be performed.

4.1.2 Transfer of Custody and Shipment Procedures

- A chain-of-custody (COC) record will be completed at the time of sample collection and will accompany each shipment of project samples to the laboratory. The field personnel collecting the samples will be responsible for the custody of the samples until the samples are relinquished to the laboratory. Sample transfer will require the individuals relinquishing and receiving the samples to sign, date and note the time of sample transfer on the COC record.

- Samples will be shipped or delivered in a timely fashion to the laboratory so that holding times and/or analysis times as prescribed by the methodology can be met.

- Samples will be transported in containers (coolers) which will maintain the refrigeration temperature for those parameters for which refrigeration is required in the prescribed preservation protocols.

- Samples will be placed in an upright position and limited to one layer of samples per cooler. Additional bubble wrap or packaging material will be added to fill the cooler. Shipping containers will be secured with strapping tape and custody tape for shipment to the laboratory.

- When samples are split with the NYSDEC representatives, a separate chain-of-custody will be prepared and marked to indicate with whom the samples are shared. The person relinquishing the samples will require the representative's signature acknowledging sample receipt.

- If samples are sent by a commercial carrier, a bill of lading will be used. A copy of the bill of lading will be retained as part of the permanent record. Commercial carriers will not sign the custody record as long as the custody record is sealed inside the sample cooler and the custody tape remains intact.

- Samples will be picked up by a laboratory courier or transported to the laboratory the same day they are collected unless collected on a weekend or holiday. In these cases, the samples will be stored in a secure location until delivery to the laboratory. Additional ice will be added to the cooler as needed to maintain proper preservation temperatures.

4.2 LABORATORY CHAIN-OF-CUSTODY PROCEDURES

A sample custodian will be designated by the laboratory and will have the responsibility to receive all incoming samples. Once received, the custodian will document if the sample is received in good condition (i.e., unbroken, cooled, etc.) and that the associated paperwork, such as chain-of-custody forms have been completed. The custodian will sign the chain-of-custody forms.

The custodian will also document if sufficient sample volume has been received to complete the analytical program. The sample custodian will then place the samples into secure, limited access storage (refrigerated storage, if required). The sample custodian will assign a unique number to each incoming sample for use in the laboratory. The unique number will then be entered into the sample-receiving log with the verified time and date of receipt also noted.

Consistent with the analyses requested on the chain-of-custody form, analyses by the laboratory's analysts will begin in accordance with the appropriate methodologies. Samples will be removed from secure storage with internal chain-of-custody sign-out procedures followed.

4.3 STORAGE OF SAMPLES

Empty sample bottles will be returned to secure and limited access storage after the available volume has been consumed by the analysis. Upon completion of the entire analytical work effort, samples will be disposed of by the sample custodian. The length of time that samples are held will be at least thirty (30) days after reports have been submitted. Disposal of remaining samples will be completed in compliance with all Federal, State and local requirements.

4.4 FINAL PROJECT FILES CUSTODY PROCEDURES

The final project files will be the central repository for all documents with information relevant to sampling and analysis activities as described in this QAPP. The Haley & Aldrich Project Manager will be the custodian of the project file. The project files including all relevant records, reports, logs, field notebooks, pictures, subcontractor reports and data reviews will be maintained in a secured, limited access area and under custody of the Project Director or his designee.

The final project file will include the following:

- Project plans and drawings
- Field data records
- Sample identification documents and soil boring/monitoring well logs
- All chain-of-custody documentation
- Correspondence
- References, literature
- Laboratory data deliverables
- Data validation and assessment reports
- Progress reports, QA reports
- Final report

The laboratory will be responsible for maintaining analytical logbooks, laboratory data and sample chain of custody documents. Raw laboratory data files and copies of hard copy reports will be inventoried and maintained by the laboratory for a period of six (6) years at which time the laboratory will contact the Haley & Aldrich Project Manager regarding the disposition of the project related files.

5. Calibration Procedures and Frequency

5.1 FIELD INSTRUMENT CALIBRATION PROCEDURES

Several field instruments will be used for both on-site screening of samples and for health and safety monitoring, as described in the Health and Safety Plan (HASP). On-site air monitoring for health and safety purposes may be accomplished using a vapor detection device, such as a Photo-ionization Detector (PID).

Field instruments will be calibrated at the beginning of each day and checked during field activities to verify performance. Instrument specific calibration procedures will be performed in accordance with the instrument manufacturer's requirements.

5.2 LABORATORY INSTRUMENT CALIBRATION PROCEDURES

Reference materials of known purity and quality will be utilized for the analysis of environmental samples. The laboratory will carefully monitor the preparation and use of reference materials including solutions, standards, and reagents through well-documented procedures.

All solid chemicals and acids/bases used by the laboratory will be rated as "reagent grade" or better. All gases will be "high" purity or better. All Standard Reference Materials (SRMs) or Performance Evaluation (PE) materials will be obtained from approved vendors of the National Institute of Standards and Technology (formerly National Bureau of Standards), the U.S. EPA Environmental Monitoring Support Laboratories (EMSL), or reliable Cooperative Research and Development Agreement (CRADA) certified commercial sources.

6. Analytical Procedures

Analytical procedures to be utilized for analysis of environmental samples will be based on referenced USEPA analytical protocols and/or project specific SOP.

6.1 FIELD ANALYTICAL PROCEDURES

Field analytical procedures include the measurement of pH, temperature, ORP, DO and specific conductivity during sampling of groundwater, and the qualitative measurement of Volatile Organic Compounds (VOC) during the collection of soil samples.

6.2 LABORATORY ANALYTICAL PROCEDURES

Laboratory analyses will be based on the U.S. EPA methodology requirements promulgated in:

- "Test Methods for Evaluating Solid Waste," SW-846 EPA, Office of Solid Waste, and promulgated updates, 1986.

6.2.1 List of Project Target Compounds and Laboratory Detection Limits

The laboratory reporting limits (RLs) and associated method detection limits (MDLs) for the target analytes and compounds for the environmental media to be analyzed are presented in Table I. MDLs have been experimentally determined by the project laboratory using the method provided in 40 CFR, Part 136 Appendix B.

Laboratory parameters for soil samples are listed in the RIWP. Laboratory parameters for disposal samples will be determined by the disposal facility after an approved facility has been determined.

6.2.2 List of Method Specific Quality Control (QC) Criteria

The laboratory SOPs include a section that presents the minimum QC requirements for the project analyses. Section 7.0 references the frequency of the associated QC samples for each sampling effort and matrix.

7. Internal Quality Control Checks

This section presents the internal quality control checks that will be employed for field and laboratory measurements.

7.1 FIELD QUALITY CONTROL

7.1.1 Field Blanks

Internal quality control checks will include analysis of field blanks to validate equipment cleanliness. Whenever possible, dedicated equipment will be employed to reduce the possibility of cross-contamination of samples.

7.1.2 Trip Blanks

Trip blanks samples will be prepared by the project laboratory using ASTM Type II or equivalent water placed within pre-cleaned 40 milliliter (ml) VOC vials equipped with Teflon septa. Trip blanks will accompany each sample delivery group (SDG) of environmental samples collected for analysis of VOCs.

Trip blank samples will be placed in each cooler that stores and transports project samples that are to be analyzed for VOCs.

7.2 LABORATORY PROCEDURES

Procedures which contribute to maintenance of overall laboratory quality assurance and control include appropriately cleaned sample containers, proper sample identification and logging, applicable sample preservation, storage, and analysis within prescribed holding times, and use of controlled materials.

7.2.1 Field Duplicate Samples

The precision or reproducibility of the data generated will be monitored through the use of field duplicate samples. Field duplicate analysis will be performed at a frequency of 1 in 20 project samples.

Precision will be measured in terms of the absolute value of the relative percent difference (RPD) as expressed by the following equation:

$$RPD = [|R1-R2|/[(R1+R2)/2]] \times 100\%$$

Acceptance criteria for duplicate analyses performed on solid matrices will be 100% and aqueous matrices will be 35%. RPD values outside these limits will require an evaluation of the sampling and/or analysis procedures by the project QA Officer and/or laboratory QA Director. Corrective actions may include re-analysis of additional sample aliquots and/or qualification of the data for use.

7.2.2 Matrix Spike Samples

Ten percent of each project sample matrix for each analytical method performed will be spiked with known concentrations of the specific target compounds/analytes.

The amount of the compound recovered from the sample compared to the amount added will be expressed as a percent recovery. The percent recovery of an analyte is an indication of the accuracy of an analysis within the site-specific sample matrix. Percent recovery will be calculated for MS/MSD using the following equation.

$$\% \ Recovery = \frac{Spiked\ Sample - Background}{Known\ Value\ of\ Spike} \times 100\%$$

If the quality control value falls outside the control limits (UCL or LCL) due to sample matrix effects, the results will be reported with appropriate data qualifiers. To determine the effect a non-compliant MS recovery has on the reported results, the recovery data will be evaluated as part of the validation process.

7.2.3 Laboratory Control Sample (LCS) Analyses

The laboratory will perform LCS analyses prepared from Standard Reference Materials (SRMs). The SRMs will be supplied from an independent manufacturer and traceable to NIST materials with known concentrations of each target analyte to be determined by the analytical methods performed. In cases where an independently supplied SRM is not available, the LCS may be prepared by the laboratory from a reagent lot other than that used for instrument calibration.

The laboratory will evaluate LCS analyses in terms of percent recovery using the most recent laboratory generated control limits.

LCS recoveries that do not meet acceptance criteria will be deemed invalid. Analysis of project samples will cease until an acceptable LCS analysis has been performed. If sample analysis is performed in association with an out-of-control LCS sample analysis, the data will be deemed invalid.

Corrective actions will be initiated by the Haley & Aldrich QA Officer and/or Laboratory QA Officer to investigate the problem. After the problem has been identified and corrected, the solution will be noted in the instrument run logbook and re-analysis of project samples will be performed, if possible.

The analytical anomaly will be noted in the sample delivery group (SDG) Case Narrative and reviewed by the data validator. The data validator will confirm that appropriate corrective actions were implemented and recommend the applicable use of the affected data.

7.2.4 Surrogate Compound/Internal Standard Recoveries

For VOCs, surrogates will be added to each sample prior to analysis to establish purge and trap efficiency. Quantitation will be accomplished via internal standardization techniques.

The recovery of surrogate compounds and internal standards will be monitored by laboratory personnel to assess possible site-specific matrix effects on instrument performance.

For semi-volatile organics analyses, surrogates will be added to the raw sample to assess extraction efficiency. Internal standards will be added to all sample extracts and instrument calibration standard immediately before analysis for quantitation via internal standardization techniques.

Method specific quality control (QC) limits are provided in the attached laboratory method SOPs. Surrogate compound/internal standard recoveries that do not fall within accepted QC limits for the analytical methodology performed will have the analytical results flagged with data qualifiers as appropriate by the laboratory and will not be noted in the laboratory report Case Narrative.

To ascertain the effect non-compliant surrogate compound/internal standard recoveries may have on the reported results, the recovery data will be evaluated as part of the validation process. The data validator will provide recommendations for corrective actions including but not limited to additional data qualification.

7.2.5 Calibration Verification Standards

Calibration verification (CV) standards will be utilized to confirm instrument calibrations and performance throughout the analytical process. CV standards will be prepared as prescribed by the respective analytical protocols. Continuing calibration will be verified by compliance with method-specific criteria prior to additional analysis of project samples.

Non-compliant analysis of CV standards will require immediate corrective action by the project laboratory QA officer and/or designated personnel. Corrective action may include re-analysis of each affected project sample, a detailed description of the problem, the corrective action undertaken, the person who performed the action, and the resolution of the problem.

7.2.6 Laboratory Method Blank Analyses

Method blank sample analysis will be performed as part of each analytical batch for each methodology performed. If target compounds are detected in the method blank samples, the reported results will be flagged by the laboratory in accordance with standard operating procedures. The data validator will provide recommendations for corrective actions including but not limited to additional data qualification.

8. Data Quality Objectives

Sampling that will be performed as described in the RIWP is designed to produce data of the quality necessary to achieve the minimum standard requirements of the field and laboratory analytical objectives described below. These data are being obtained with the primary objective to assess levels of contaminants of concern associated with the Site.

The overall project data quality objective (DQO) is to implement procedures for field data collection, sample collection, handling, and laboratory analysis and reporting that achieve the project objectives. The following section is a general discussion of the criteria that will be used to measure achievement of the project DQO.

8.1 PRECISION

8.1.1 Definition

Precision is defined as a quantitative measure of the degree to which two or more measurements are in agreement. Precision will be determined by collecting and analyzing field duplicate samples and by creating and analyzing laboratory duplicates from one or more of the field samples. The overall precision of measurement data is a mixture of sampling and analytical factors. The analytical results from the field duplicate samples will provide data on sampling precision. The results from duplicate samples created by the laboratory will provide data on analytical precision. The measurement of precision will be stated in terms of relative percent difference (RPD).

8.1.2 Field Precision Sample Objectives

Field precision will be assessed through collection and measurement of field duplicate samples at a rate of 1 duplicate per 20 investigative samples. The RPD criteria for the project field duplicate samples will be +/- 100% for soil, +/- 35 % for groundwater for parameters of analysis detected at concentrations greater than 5 times (5X) the laboratory reporting limit (RL).

8.1.3 Laboratory Precision Sample Objectives

Laboratory precision will be assessed through the analysis of laboratory control and laboratory control duplicate samples (LCS/LCSD) and matrix spike and matrix spike duplicate (MS/MSD) samples for groundwater and soil samples and the analysis of laboratory duplicate samples for air and soil vapor samples. Air and soil vapor laboratory duplicate sample analyses will be performed by analyzing the same SUMMA canister twice. The RPD criteria for the air/soil vapor laboratory duplicate samples will be +/- 35 % for parameters of analysis detected at concentrations greater than 5 times (5X) the laboratory reporting limit (RL).

8.2 ACCURACY

8.2.1 Definition

Accuracy relates to the bias in a measurement system. Bias is the difference between the observed and the "true" value. Sources of error are the sampling process, field contamination, preservation techniques, sample handling, sample matrix, sample preparation and analytical procedure limitations.

8.2.2 Field Accuracy Objectives

Sampling bias will be assessed by evaluating the results of field equipment rinse and trip blanks. Equipment rinse and trip blanks will be collected as appropriate based on sampling and analytical methods for each sampling effort.

If non-dedicated sampling equipment is used, equipment rinse blanks will be collected by passing ASTM Type II water over and/or through the respective sampling equipment utilized during each sampling effort. One equipment rinse blank will be collected for each type of non-dedicated sampling equipment used for the sampling effort. Equipment rinse blanks will be analyzed for each target parameter for the respective sampling effort for which environmental media have been collected. (Note: If dedicated or disposable sampling equipment is used, equipment rinse samples will not be collected as part of that field effort.)

Trip blank samples will be prepared by the laboratory and provided with each shipping container that includes containers for the collection of groundwater samples for the analysis of VOC. Trip blank samples will be analyzed for each VOC for which groundwater samples have been collected for analysis.

8.3 LABORATORY ACCURACY OBJECTIVES

Analytical bias will be assessed through the use of laboratory control samples (LCS) and Site-specific matrix spike (MS) sample analyses. LCS analyses will be performed with each analytical batch of project samples to determine the accuracy of the analytical system.

One (1) set of MS/MSD analyses will be performed with each batch of 20 project samples collected for analysis to assess the accuracy of the identification and quantification of analytes within the Site-specific sample matrices. Additional sample volume will be collected at sample locations selected for the preparation of MS/MSD samples so that the standard laboratory reporting limits (RLs) are achieved.

The accuracy of analyses that include a sample extraction procedure will be evaluated through the use of system monitoring or surrogate compounds. Surrogate compounds will be added to each sample, standard, blank, and QC sample prior to sample preparation and analysis. Surrogate compound percent recoveries will provide information on the effect of the sample matrix on the accuracy of the analyses.

8.4 REPRESENTATIVENESS

8.4.1 Definition

Representativeness expresses the degree to which sample data represent a characteristic of a population, a parameter variation at a sampling point or an environmental condition. Representativeness is a qualitative parameter that is dependent upon the design of the sampling program. The representativeness criterion is satisfied through the proper selection of sampling locations, the quantity of samples and the use of appropriate procedures to collect and analyze the samples.

8.4.2 Measures to Ensure Representativeness of Field Data

Representativeness will be addressed by prescribing sampling techniques and the rationale used to select sampling locations. Sampling locations may be biased (based on existing data, instrument surveys, observations, etc.) or unbiased (completely random or stratified-random approaches).

8.5 COMPLETENESS

8.5.1 Definition

Completeness is a measure of the amount of valid (usable) data obtained from a measuring system compared to the total amount of the anticipated to be obtained. The completeness goal for all data uses is that a sufficient amount of valid data be generated so that determinations can be made related to the intended data use with a sufficient degree of confidence.

8.5.2 Field Completeness Objectives

Completeness is a measure of the amount of valid measurements obtained from measurements taken in this project versus the number planned. Field completeness objective for this project will be greater than (>) 90%.

8.5.3 Laboratory Completeness Objectives

Laboratory data completeness objective is a measure of the amount of valid data obtained from laboratory measurements. The evaluation of the data completeness will be performed at the conclusion of each sampling and analysis effort.

The completeness of the data generated will be determined by comparing the amount of valid data, based on independent validation, with the total laboratory data set. The completeness goal will be >90%.

8.6 COMPARABILITY

8.6.1 Definition

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another.

8.6.2 Measures to Ensure Comparability of Laboratory Data

Comparability of laboratory data will be measured from the analysis of Standard Reference Materials (SRM) obtained from either EPA Cooperative Research and Development Agreement (CRADA) suppliers or the National Institute of Standards and Technology (NIST). The reported analytical data will also be presented in standard units of mass of contaminant within a known volume of environmental media. The standard units for various sample matrices are as follows:

- Solid Matrices – mg/kg of media (Dry Weight).
- Aqueous Matrices – ng/L for PFAS analyses, ug/L of media for organic analyses, and mg/L for inorganic analyses.

8.7 LEVEL OF QUALITY CONTROL EFFORT

If non-dedicated sampling equipment is used, equipment rinse blanks will be prepared by field personnel and submitted for analysis of target parameters. Equipment rinse blank samples will be analyzed to check for potential cross-contamination between sampling locations that may be introduced during the investigation. One (1) equipment rinse blank will be collected per sampling event to the extent that non-dedicated sampling equipment is used.

If necessary, A separate equipment rinse blank sample will be collected for PFAS using the sample collection procedure described in Section 8.1.1 of the NYSDEC-approved Avangrid Field Sampling Plan. (Note: If dedicated or disposable sampling equipment is used, equipment rinse samples will not be collected as part of that field effort.)

Trip blanks will be used to assess the potential for contamination during sample storage and shipment. Trip blanks will be provided with the sample containers to be used for the collection of groundwater samples for the analysis of VOC. Trip blanks will be preserved and handled in the same manner as the project samples. One (1) trip blank will be included along with each shipping container containing project samples to be analyzed for VOC.

Method blank samples will be prepared by the laboratory and analyzed concurrently with all project samples to assess potential contamination introduced during the analytical process.

Field duplicate samples will be collected and analyzed to determine sampling and analytical reproducibility. One (1) field duplicate will be collected for every 20 or fewer investigative samples collected for off-Site laboratory analysis.

Matrix spikes will provide information to assess the precision and accuracy of the analysis of the target parameters within the environmental media collected. One (1) matrix spike/matrix spike duplicate (MS/MSD) will be collected for every 20 or fewer investigative samples per sample matrix.

(Note: Soil MS/MSD samples require triple sample volume for VOC only. Aqueous MS/MSD samples require triple the normal sample volume for VOC analysis and double the volume for the remaining parameters.)

9. Data Reduction, Validation and Reporting

Data generated by the laboratory operation will be reduced and validated prior to reporting in accordance with the following procedures:

9.1 DATA REDUCTION

9.1.1 Field Data Reduction Procedures

Field data reduction procedures will be minimal in scope compared to those implemented in the laboratory setting. The pH, conductivity, temperature, turbidity, DO, ORP and breathing zone VOC readings collected in the field will be generated from direct read instruments. The data will be written into field logbooks immediately after measurements are taken. If errors are made, data will be legibly crossed out, initialed and dated by the field member, and corrected in a space adjacent to the original entry.

9.1.2 Laboratory Data Reduction Procedures

Laboratory data reduction procedures are provided by the appropriate chapter of USEPA, "Test Methods for Evaluating Solid Waste", SW-846, Third Edition. Errors will be noted; corrections made with the original notations crossed out legibly. Analytical results for soil samples will be calculated and reported on a dry weight basis.

9.1.3 Quality Control Data

Quality control data (e.g., laboratory duplicates, surrogates, matrix spikes, and matrix spike duplicates) will be compared to the method acceptance criteria. Data determined to be acceptable will be entered into the laboratory information management system.

Unacceptable data will be appropriately qualified in the project report. Case narratives will be prepared which will include information concerning data that fell outside acceptance limits and any other anomalous conditions encountered during sample analysis.

9.2 DATA VALIDATION

Data validation procedures of the analytical data will be performed by the Haley & Aldrich QA Officer or designee using the following documents as guidance for the review process:

- "U.S. EPA National Functional Guidelines for Organic Data Review", and the "U.S. EPA National Functional Guidelines for Inorganic Data Review".

- The specific data qualifiers used will be applied to the reported results as presented and defined in the EPA National Functional Guidelines. Validation will be performed by qualified personnel at the direction of the Haley & Aldrich QAO.

- The completeness of each data package will be evaluated by the Data Validator. Completeness checks will be administered on all data to determine that the deliverables are consistent with the NYSDEC Analytical Services Protocol (ASP) Category A and Category B data package requirements. The validator will determine whether the required items are present and request copies of missing deliverables (if necessary) from the laboratory.

9.3 DATA REPORTING

Data reporting procedures will be carried out for field and laboratory operations as indicated below:

- Field Data Reporting: Field data reporting will be conducted principally through the transmission of report sheets containing tabulated results of measurements made in the field and documentation of field calibration activities.

- Laboratory Data Reporting: The laboratory data reporting package will enable data validation based on the protocols described above. The final laboratory data report format will include the QA/QC sample analysis deliverables to enable the development of a data usability summary report (DUSR) based on Department DER-10 Appendix 2B.

10. Performance and System Audits

A performance audit is an independent quantitative comparison with data routinely obtained in the field or the laboratory. Performance audits include two separate, independent parts: internal and external audits.

10.1 FIELD PERFORMANCE AND SYSTEM AUDITS

10.1.1 Internal Field Audit Responsibilities

Internal audits of field activities will be initiated at the discretion of the Project Manager and will include the review of sampling and field measurements. The audits will verify that all procedures are being followed. Internal field audits will be conducted periodically during the project. The audits will include examination of the following:

- Field sampling records, screening results, instrument operating records
- Sample collection
- Handling and packaging in compliance with procedures
- Maintenance of QA procedures
- Chain-of-custody reports

10.1.2 External Field Audit Responsibilities

External audits may be conducted by the Project Coordinator at any time during the field operations. These audits may or may not be announced and are at the discretion of the NYSDEC. The external field audits can include (but are not limited to) the following:

- Sampling equipment decontamination procedures
- Sample bottle preparation procedures
- Sampling procedures
- Examination of health and safety plans
- Procedures for verification of field duplicates
- Field screening practices

10.2 LABORATORY PERFORMANCE AND SYSTEM AUDITS

10.2.1 Internal Laboratory Audit Responsibilities

The laboratory system audits are typically conducted by the laboratory QA Officer or designee on an annual basis. The system audit will include an examination of laboratory documentation including sample receiving logs, sample storage, chain-of-custody procedures, sample preparation and analysis and instrument operating records.

At the conclusion of internal system audits, reports will be provided to the laboratory's operating divisions for appropriate comment and remedial/corrective action where necessary. Records of audits and corrective actions will be maintained by the Laboratory QA Officer.

10.2.2 External Laboratory Audit Responsibilities

External audits will be conducted as required, by the NYSDOH or designee. External audits may include any of the following:

- Review of laboratory analytical procedures
- Laboratory on-site visits
- Submission of performance evaluation samples for analysis

Failure of any of the above audit procedures can lead to laboratory de-certification. An audit may consist of but not limited to:

- Sample receipt procedures
- Custody, sample security and log-in procedures
- Review of instrument calibration logs
- Review of QA procedures
- Review of log books
- Review of analytical SOPs
- Personnel interviews

A review of a data package from samples recently analyzed by the laboratory can include (but not be limited to) the following:

- Comparison of resulting data to the SOP or method
- Verification of initial and continuing calibrations within control limits
- Verification of surrogate recoveries and instrument timing results
- Review of extended quantitation reports for comparisons of library spectra to instrument spectra, where applicable
- Assurance that samples are run within holding times

11. Preventive Maintenance

11.1 FIELD INSTRUMENT PREVENTIVE MAINTENANCE

The field equipment preventive maintenance program is designed to ensure the effective completion of the sampling effort and to minimize equipment down time. Program implementation is concentrated in three areas:

- Maintenance responsibilities
- Maintenance schedules
- Inventory of critical spare parts and equipment

The maintenance responsibilities for field equipment will be assigned to the task leaders in charge of specific field operations. Field personnel will be responsible for daily field checks and calibrations and for reporting any problems with the equipment. The maintenance schedule will follow the manufacturer's recommendations. In addition, the field personnel will be responsible for determining that an inventory of spare parts will be maintained with the field equipment. The inventory will primarily contain parts that are subject to frequent failure, have limited useful lifetimes and/or cannot be obtained in a timely manner.

11.2 LABORATORY INSTRUMENT PREVENTIVE MAINTENANCE

Analytical instruments at the laboratory will undergo routine and/or preventive maintenance. The extent of the preventive maintenance will be a function of the complexity of the equipment.

Generally, annual preventive maintenance service will involve cleaning, adjusting, inspecting and testing procedures designed to deduce instrument failure and/or extend useful instrument life. Between visits, routine operator maintenance and cleaning will be performed according to manufacturer's specifications by laboratory personnel.

12. Specific Routine Procedures Used to Assess Data Precision, Accuracy, and Completeness

12.1 FIELD MEASUREMENTS

Field generated information will be reviewed by the Field Coordinator and typically include evaluation of bound logbooks/forms, data entry and calculation checks. Field data will be assessed by the Project Coordinator who will review the field results for compliance with the established QC criteria that are specified in Section 7.0 of this QAPP. The accuracy of pH and specific conductance will be assessed using daily instrument calibration, calibration check, and blank data. Accuracy will be measured by determining the percent recovery (% R) of calibration check standards. Precision of the pH and specific conductance measurements will be assessed on the basis of the reproducibility of duplicate readings of a field sample and will be measured by determining the relative percent difference (RPD). Accuracy and precision of the soil VOC screening will be determined using duplicate readings of calibration checks. Field data completeness will be calculated using the following equation:

$$\text{Completeness} = \frac{\text{Valid (usable) Data Obtained}}{\text{Total Data Planned}} \times 100$$

12.2 LABORATORY DATA

Surrogate, internal standard and matrix spike recoveries will be used to evaluate data quality. The laboratory quality assurance/quality control program will include the following elements:

- Precision, in terms of relative percent difference (RPD), will be determined by relative sample analysis at a frequency of one duplicate analysis for each batch of ten project samples or a frequency of 10 percent (10%). RPD is defined as the absolute difference of duplicate measurements divided by the mean of these analyses normalized to percentage.

- Accuracy, in terms of percent recovery (recovery of known constituent additions or surrogate recoveries), will be determined by the analysis of spiked and unspiked samples. MS/MSD will be used to determine analytical accuracy. The frequency of MS/MSD analyses will be one project sample MS/MSD per set of 20 project samples.

- One method blank will be prepared and analyzed with each batch of project samples. The total number of method blank sample analyses will be determined by the laboratory analytical batch size.

- Standard Reference Materials (SRMs) will be used for each analysis. Sources of SRM's include the U.S. EPA, commercially available material from CRADA certified vendors and/or laboratory produced solutions. SRMs, when available and appropriate, will be processed and analyzed on a frequency of one per set of samples.

- Completeness is the evaluation of the amount of valid data generated versus the total set of data produced from a particular sampling and analysis event. Valid data is determined by independent confirmation of compliance with method-specific and project-specific data quality objectives. The calculation of data set completeness will be performed by the following equation.

$$\frac{Number\ of\ Valid\ Sample\ Results}{Total\ Number\ of\ Samples\ Planned}\ X\ 100 = \%\ Complete$$

13. Quality Assurance (QA) Reports

Critically important to the successful implementation of the QA Plan is a reporting system that provides the means by which the program can be reviewed, problems identified, and programmatic changes made to improve the plan.

QA reports to management can include:

- Audit reports, internal and external audits with responses
- Performance evaluation sample results; internal and external sources
- Daily QA/QC exception reports/corrective actions

QA/QC corrective action reports will be prepared by the Haley & Aldrich QA Officer when appropriate and presented to the project and/or laboratory management personnel so that performance criteria can be monitored for all analyses from each analytical department. The updated trend/QA charts prepared by the laboratory QA personnel will be distributed and reviewed by various levels of the laboratory management.

References

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TABLES

TABLE I
SUMMARY OF ANALYSIS METHOD, PRESERVATION METHOD, HOLDING TIME, SAMPLE SIZE REQUIREMENTS AND SAMPLE CONTAINERS
89-91 Gerry Street
Brooklyn, NY

Analysis/Method	Sample Type	Preservation	Holding Time	Volume/Weight	Container
Volatile Organic Compounds/8260C	Soil	1 - 1 Vial MeOH/2 Vial Water, Cool, 4 ± 2 °C	14 days[1]	120 mL	3 - 40ml glass vials
Semivolatile Organic Compounds/8270D	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
Pesticides/8081B	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
Polychlorinated Biphenyls/8082A	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
Metals/6010D	Soil	Cool, 4 ± 2 °C	180 days	60 mL	1 - 2 oz Glass
PFAS 537	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
1,4-Dioxane 8270	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
Volatile Organic Compounds/8260C	Groundwater	HCl, Cool, 4 ± 2 ^{o}C	14 days	120 mL	3 - 40ml glass vials
Semivolatile Organic Compounds/8270D	Groundwater	Cool, 4 ± 2 °C	7 days	500 mL	2 - 250 mL amber glass
TAL Metals 6020	Groundwater	HNO_3Cool, 4 ± 2 ^{o}C	180 days	500 mL	1 - 500 mL plastic bottle
PFAS 537	Groundwater	H2O Cool, 4 ± 2 °C	14 days	500 mL	2 - teflon free 250 ml plastic containers
1,4-Dioxane 8270	Groundwater	Cool, 4 ± 2 °C	7 days	500 mL	1 - 500 mL plastic bottle
Volatile Organic Compounds/TO-15	Soil Vapor	N/A	30 days	2.7 - 6 L	1 2.7 or 6 L Summa Canister

Notes:
1. Terracores and encores must be frozen within 48 hours of collection
2. Refer to text for additional information.

APPENDIX D

NYSDEC Emerging Contaminant Field Sampling Guidance

NEW YORK
STATE OF
OPPORTUNITY.

Department of
Environmental
Conservation

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Under NYSDEC's Part 375 Remedial Programs

January 2021

www.dec.ny.gov

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January 2021

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

ERRATA SHEET for

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) Under NYSDEC's Part 375 Remedial Programs Issued January 17, 2020

Citation and Page Number	Current Text	Corrected Text	Date
Title of Appendix I, page 32	Appendix H	Appendix I	2/25/2020
Document Cover, page 1	Guidelines for Sampling and Analysis of PFAS	Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs	9/15/2020
Routine Analysis, page 9	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1 or ISO 25101."	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1, ISO 25101, or Method 533."	9/15/2020
Additional Analysis, page 9, new paragraph regarding soil parameters	None	"In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (EPA Method 9060), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils."	9/15/2020
Data Assessment and Application to Site Cleanup Page 10	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFAS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Target levels for cleanup of PFAS in other media, including biota and sediment, have not yet been established by the DEC.	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Water Sample Results Page 10	PFAS should be further assessed and considered as a potential contaminant of concern in groundwater or surface water (…) If PFAS are identified as a contaminant of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water (…) If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	9/15/2020
Soil Sample Results, page 10	"The extent of soil contamination for purposes of delineation and remedy selection should be determined by having certain soil samples tested by Synthetic Precipitation Leaching Procedure (SPLP) and the leachate analyzed for PFAS. Soil exhibiting SPLP results above 70 ppt for either PFOA or PFOS (individually or combined) are to be evaluated during the cleanup phase."	"Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values. " [Interim SCO Table] "PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP. As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf. "	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Testing for Imported Soil Page 11	Soil imported to a site for use in a soil cap, soil cover, or as backfill is to be tested for PFAS in general conformance with DER-10, Section 5.4(e) for the PFAS Analyte List (Appendix F) using the analytical procedures discussed below and the criteria in DER-10 associated with SVOCs. If PFOA or PFOS is detected in any sample at or above 1 µg/kg, then soil should be tested by SPLP and the leachate analyzed for PFAS. If the SPLP results exceed 10 ppt for either PFOA or PFOS (individually) then the source of backfill should be rejected, unless a site-specific exemption is provided by DER. SPLP leachate criteria is based on the Maximum Contaminant Levels proposed for drinking water by New York State's Department of Health, this value may be updated based on future Federal or State promulgated regulatory standards. Remedial parties have the option of analyzing samples concurrently for both PFAS in soil and in the SPLP leachate to minimize project delays. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable. PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Footnotes	None	[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances. [2] The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the soil cleanup objective for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	9/15/2020
Additional Analysis, page 9	In cases… soil parameters, such as Total Organic Carbon (EPA Method 9060), soil…	In cases… soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil…	1/8/2021
Appendix A, General Guidelines, fourth bullet	List the ELAP-approved lab(s) to be used for analysis of samples	List the ELAP- certified lab(s) to be used for analysis of samples	1/8/2021
Appendix E, Laboratory Analysis and Containers	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by ISO Method 25101.	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101	1/8/2021

Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs

Objective

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) performs or oversees sampling of environmental media and subsequent analysis of PFAS as part of remedial programs implemented under 6 NYCRR Part 375. To ensure consistency in sampling, analysis, reporting, and assessment of PFAS, DER has developed this document which summarizes currently accepted procedures and updates previous DER technical guidance pertaining to PFAS.

Applicability

All work plans submitted to DEC pursuant to one of the remedial programs under Part 375 shall include PFAS sampling and analysis procedures that conform to the guidelines provided herein.

As part of a site investigation or remedial action compliance program, whenever samples of potentially affected media are collected and analyzed for the standard Target Analyte List/Target Compound List (TAL/TCL), PFAS analysis should also be performed. Potentially affected media can include soil, groundwater, surface water, and sediment. Based upon the potential for biota to be affected, biota sampling and analysis for PFAS may also be warranted as determined pursuant to a Fish and Wildlife Impact Analysis. Soil vapor sampling for PFAS is not required.

Field Sampling Procedures

DER-10 specifies technical guidance applicable to DER's remedial programs. Given the prevalence and use of PFAS, DER has developed "best management practices" specific to sampling for PFAS. As specified in DER-10 Chapter 2, quality assurance procedures are to be submitted with investigation work plans. Typically, these procedures are incorporated into a work plan, or submitted as a stand-alone document (e.g., a Quality Assurance Project Plan). Quality assurance guidelines for PFAS are listed in Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS.

Field sampling for PFAS performed under DER remedial programs should follow the appropriate procedures outlined for soils, sediments or other solids (Appendix B), non-potable groundwater (Appendix C), surface water (Appendix D), public or private water supply wells (Appendix E), and fish tissue (Appendix F).

QA/QC samples (e.g. duplicates, MS/MSD) should be collected as specified in DER-10, Section 2.3(c). For sampling equipment coming in contact with aqueous samples only, rinsate or equipment blanks should be collected. Equipment blanks should be collected at a minimum frequency of one per day per site or one per twenty samples, whichever is more frequent.

Analysis and Reporting

As of October 2020, the United States Environmental Protection Agency (EPA) does not have a validated method for analysis of PFAS for media commonly analyzed under DER remedial programs (non-potable waters, solids). DER has developed the following guidelines to ensure consistency in analysis and reporting of PFAS.

The investigation work plan should describe analysis and reporting procedures, including laboratory analytical procedures for the methods discussed below. As specified in DER-10 Section 2.2, laboratories should provide a full Category B deliverable. In addition, a Data Usability Summary Report (DUSR) should be prepared by an independent, third party data validator. Electronic data submissions should meet the requirements provided at: https://www.dec.ny.gov/chemical/62440.html.

DER has developed a *PFAS Analyte List* (Appendix F) for remedial programs to understand the nature of contamination at sites. It is expected that reported results for PFAS will include, at a minimum, all the compounds listed. If lab and/or matrix specific issues are encountered for any analytes, the DER project manager, in consultation with the DER chemist, will make case-by-case decisions as to whether certain analytes may be temporarily or permanently discontinued from analysis at each site. As with other contaminants that are analyzed for at a site, the *PFAS Analyte List* may be refined for future sampling events based on investigative findings.

Routine Analysis

Currently, New York State Department of Health's Environmental Laboratory Approval Program (ELAP) does not offer certification for PFAS in matrices other than finished drinking water. However, laboratories analyzing environmental samples for PFAS (e.g., soil, sediments, and groundwater) under DER's Part 375 remedial programs need to hold ELAP certification for PFOA and PFOS in drinking water by EPA Method 537, 537.1, ISO 25101, or Method 533. Laboratories should adhere to the guidelines and criteria set forth in the DER's laboratory guidelines for PFAS in non-potable water and solids (Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids). Data review guidelines were developed by DER to ensure data comparability and usability (Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids).

LC-MS/MS analysis for PFAS using methodologies based on EPA Method 537.1 is the procedure to use for environmental samples. Isotope dilution techniques should be utilized for the analysis of PFAS in all media. Reporting limits for PFOA and PFOS in aqueous samples should not exceed 2 ng/L. Reporting limits for PFOA and PFOS in solid samples should not exceed 0.5 µg/kg. Reporting limits for all other PFAS in aqueous and solid media should be as close to these limits as possible. If laboratories indicate that they are not able to achieve these reporting limits for the entire *PFAS Analyte List*, site-specific decisions regarding acceptance of elevated reporting limits for specific PFAS can be made by the DER project manager in consultation with the DER chemist.

Additional Analysis

Additional laboratory methods for analysis of PFAS may be warranted at a site, such as the Synthetic Precipitation Leaching Procedure (SPLP) and Total Oxidizable Precursor Assay (TOP Assay).

In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils.

SPLP is a technique used to determine the mobility of chemicals in liquids, soils and wastes, and may be useful in determining the need for addressing PFAS-containing material as part of the remedy. SPLP by EPA Method 1312 should be used unless otherwise specified by the DER project manager in consultation with the DER chemist.

Impacted materials can be made up of PFAS that are not analyzable by routine analytical methodology. A TOP Assay can be utilized to conceptualize the amount and type of oxidizable PFAS which could be liberated in the environment, which approximates the maximum concentration of perfluoroalkyl substances that could be generated if all polyfluoroalkyl substances were oxidized. For example, some polyfluoroalkyl substances may degrade or transform to form perfluoroalkyl substances (such as PFOA or PFOS), resulting in an increase in perfluoroalkyl substance concentrations as contaminated groundwater moves away from a source. The TOP Assay converts, through oxidation, polyfluoroalkyl substances (precursors) into perfluoroalkyl substances that can be detected by routine analytical methodology.[1]

Commercial laboratories have adopted methods which allow for the quantification of targeted PFAS in air and biota. The EPA's Office of Research and Development (ORD) is currently developing methods which allow for air emissions characterization of PFAS, including both targeted and non-targeted analysis of PFAS. Consult with the DER project manager and the DER chemist for assistance on analyzing biota/tissue and air samples.

Data Assessment and Application to Site Cleanup

Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.

Water Sample Results

PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water if PFOA or PFOS is detected in any water sample at or above 10 ng/L (ppt) and is determined to be attributable to the site, either by a comparison of upgradient and downgradient levels, or the presence of soil source areas, as defined below. In addition, further assessment of water may be warranted if either of the following screening levels are met:

a. any other individual PFAS (not PFOA or PFOS) is detected in water at or above 100 ng/L; or
b. total concentration of PFAS (including PFOA and PFOS) is detected in water at or above 500 ng/L

If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.

Soil Sample Results

Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values.

Guidance Values for Anticipated Site Use	PFOA (ppb)	PFOS (ppb)
Unrestricted	0.66	0.88
Residential	6.6	8.8
Restricted Residential	33	44
Commercial	500	440
Industrial	600	440
Protection of Groundwater[2]	1.1	3.7

[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances.
[2] The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).

PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP.

As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf.

Testing for Imported Soil

Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable.

PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.

Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS

The following guidelines (general and PFAS-specific) can be used to assist with the development of a QAPP for projects within DER involving sampling and analysis of PFAS.

General Guidelines in Accordance with DER-10

- Document/work plan section title – Quality Assurance Project Plan
- Summarize project scope, goals, and objectives
- Provide project organization including names and resumes of the project manager, Quality Assurance Officer (QAO), field staff, and Data Validator
  - The QAO should not have another position on the project, such as project or task manager, that involves project productivity or profitability as a job performance criterion
- List the ELAP certified lab(s) to be used for analysis of samples
- Include a site map showing sample locations
- Provide detailed sampling procedures for each matrix
- Include Data Quality Usability Objectives
- List equipment decontamination procedures
- Include an “Analytical Methods/Quality Assurance Summary Table” specifying:
  - Matrix type
  - Number or frequency of samples to be collected per matrix
  - Number of field and trip blanks per matrix
  - Analytical parameters to be measured per matrix
  - Analytical methods to be used per matrix with minimum reporting limits
  - Number and type of matrix spike and matrix spike duplicate samples to be collected
  - Number and type of duplicate samples to be collected
  - Sample preservation to be used per analytical method and sample matrix
  - Sample container volume and type to be used per analytical method and sample matrix
  - Sample holding time to be used per analytical method and sample matrix
- Specify Category B laboratory data deliverables and preparation of a DUSR

Specific Guidelines for PFAS

- Include in the text that sampling for PFAS will take place
- Include in the text that PFAS will be analyzed by LC-MS/MS for PFAS using methodologies based on EPA Method 537.1
- Include the list of PFAS compounds to be analyzed (*PFAS Analyte List*)
- Include the laboratory SOP for PFAS analysis
- List the minimum method-achievable Reporting Limits for PFAS
  - Reporting Limits should be less than or equal to:
    - Aqueous – 2 ng/L (ppt)
    - Solids – 0.5 µg/kg (ppb)
- Include the laboratory Method Detection Limits for the PFAS compounds to be analyzed
- Laboratory should have ELAP certification for PFOA and PFOS in drinking water by EPA Method 537, 537.1, EPA Method 533, or ISO 25101
- Include detailed sampling procedures
  - Precautions to be taken
  - Pump and equipment types
  - Decontamination procedures
  - Approved materials only to be used
- Specify that regular ice only will be used for sample shipment
- Specify that equipment blanks should be collected at a minimum frequency of 1 per day per site for each matrix

Appendix B - Sampling Protocols for PFAS in Soils, Sediments and Solids

General

The objective of this protocol is to give general guidelines for the collection of soil, sediment and other solid samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Containers

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in to contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel spoon
- stainless steel bowl
- steel hand auger or shovel without any coatings

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Sampling is often conducted in areas where a vegetative turf has been established. In these cases, a pre-cleaned trowel or shovel should be used to carefully remove the turf so that it may be replaced at the conclusion of sampling. Surface soil samples (e.g. 0 to 6 inches below surface) should then be collected using a pre-cleaned, stainless steel spoon. Shallow subsurface soil samples (e.g. 6 to ~36 inches below surface) may be collected by digging a hole using a pre-cleaned hand auger or shovel. When the desired subsurface depth is reached, a pre-cleaned hand auger or spoon shall be used to obtain the sample.

When the sample is obtained, it should be deposited into a stainless steel bowl for mixing prior to filling the sample containers. The soil should be placed directly into the bowl and mixed thoroughly by rolling the material into the middle until the material is homogenized. At this point the material within the bowl can be placed into the laboratory provided container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A soil log or sample log shall document the location of the sample/borehole, depth of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix C - Sampling Protocols for PFAS in Monitoring Wells

General

The objective of this protocol is to give general guidelines for the collection of groundwater samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including plumbers tape and sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel inertia pump with HDPE tubing
- peristaltic pump equipped with HDPE tubing and silicone tubing
- stainless steel bailer with stainless steel ball
- bladder pump (identified as PFAS-free) with HDPE tubing

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Monitoring wells should be purged in accordance with the sampling procedure (standard/volume purge or low flow purge) identified in the site work plan, which will determine the appropriate time to collect the sample. If sampling using standard purge techniques, additional purging may be needed to reduce turbidity levels, so samples contain a limited amount of sediment within the sample containers. Sample containers that contain sediment may cause issues at the laboratory, which may result in elevated reporting limits and other issues during the sample preparation that can compromise data usability. Sampling personnel should don new nitrile gloves prior to sample collection due to the potential to contact PFAS containing items (not related to the sampling equipment) during the purging activities.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Additional equipment blank samples may be collected to assess other equipment that is utilized at the monitoring well
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A purge log shall document the location of the sample, sampling equipment, groundwater parameters, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix D - Sampling Protocols for PFAS in Surface Water

General

The objective of this protocol is to give general guidelines for the collection of surface water samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel cup

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Where conditions permit, (e.g. creek or pond) sampling devices (e.g. stainless steel cup) should be rinsed with site medium to be sampled prior to collection of the sample. At this point the sample can be collected and poured into the sample container.

If site conditions permit, samples can be collected directly into the laboratory container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A sample log shall document the location of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix E - Sampling Protocols for PFAS in Private Water Supply Wells

General

The objective of this protocol is to give general guidelines for the collection of water samples from private water supply wells (with a functioning pump) for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101. The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials (e.g. plumbers tape), including sample bottle cap liners with a PTFE layer.

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Locate and assess the pressure tank and determine if any filter units are present within the building. Establish the sample location as close to the well pump as possible, which is typically the spigot at the pressure tank. Ensure sampling equipment is kept clean during sampling as access to the pressure tank spigot, which is likely located close to the ground, may be obstructed and may hinder sample collection.

Prior to sampling, a faucet downstream of the pressure tank (e.g., washroom sink) should be run until the well pump comes on and a decrease in water temperature is noted which indicates that the water is coming from the well. If the homeowner is amenable, staff should run the water longer to purge the well (15+ minutes) to provide a sample representative of the water in the formation rather than standing water in the well and piping system including the pressure tank. At this point a new pair of nitrile gloves should be donned and the sample can be collected from the sample point at the pressure tank.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- If equipment was used, collect one equipment blank per day per site and a minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers.
- A field reagent blank (FRB) should be collected at a rate of one per 20 samples. The lab will provide a FRB bottle containing PFAS free water and one empty FRB bottle. In the field, pour the water from the one bottle into the empty FRB bottle and label appropriately.
- Request appropriate data deliverable (Category B) and an electronic data deliverable
- For sampling events where multiple private wells (homes or sites) are to be sampled per day, it is acceptable to collect QC samples at a rate of one per 20 across multiple sites or days.

Documentation

A sample log shall document the location of the private well, sample point location, owner contact information, sampling equipment, purge duration, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate and available (e.g. well construction, pump type and location, yield, installation date). Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appendix F - Sampling Protocols for PFAS in Fish

This appendix contains a copy of the latest guidelines developed by the Division of Fish and Wildlife (DFW) entitled "General Fish Handling Procedures for Contaminant Analysis" (Ver. 8).

Procedure Name: General Fish Handling Procedures for Contaminant Analysis

Number: FW-005

Purpose: This procedure describes data collection, fish processing and delivery of fish collected for contaminant monitoring. It contains the chain of custody and collection record forms that should be used for the collections.

Organization: Environmental Monitoring Section
Bureau of Ecosystem Health
Division of Fish and Wildlife (DFW)
New York State Department of Environmental Conservation (NYSDEC)
625 Broadway
Albany, New York 12233-4756

Version: 8

Previous Version Date: 21 March 2018

Summary of Changes to this Version: Updated bureau name to Bureau of Ecosystem Health. Added direction to list the names of all field crew on the collection record. Minor formatting changes on chain of custody and collection records.

Originator or Revised by: Wayne Richter, Jesse Becker

Date: 26 April 2019

Quality Assurance Officer and Approval Date: Jesse Becker, 26 April 2019

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

GENERAL FISH HANDLING PROCEDURES FOR CONTAMINANT ANALYSES

A. Original copies of all continuity of evidence (i.e., Chain of Custody) and collection record forms must accompany delivery of fish to the lab. A copy shall be directed to the Project Leader or as appropriate, Wayne Richter. All necessary forms will be supplied by the Bureau of Ecosystem Health. Because some samples may be used in legal cases, it is critical that each section is filled out completely. Each Chain of Custody form has three main sections:

1. The top box is to be filled out **and signed** by the person responsible for the fish collection (e.g., crew leader, field biologist, researcher). This person is responsible for delivery of the samples to DEC facilities or personnel (e.g., regional office or biologist).

2. The second section is to be filled out **and signed** by the person responsible for the collections while being stored at DEC, before delivery to the analytical lab. This may be the same person as in (1), but it is still required that they complete the section. Also important is the **range of identification numbers** (i.e., tag numbers) included in the sample batch.

3. Finally, the bottom box is to record any transfers between DEC personnel and facilities. Each subsequent transfer should be **identified, signed, and dated**, until laboratory personnel take possession of the fish.

B. The following data are required on each **Fish Collection Record** form:

1. Project and Site Name.

2. DEC Region.

3. All personnel (and affiliation) involved in the collection.

4. Method of collection (gill net, hook and line, etc.)

5. Preservation Method.

C. The following data are to be taken on each fish collected and recorded on the **Fish Collection Record** form:

1. Tag number - Each specimen is to be individually jaw tagged at time of collection with a unique number. Make sure the tag is turned out so that the number can be read without opening the bag. Use tags in sequential order. For small fish or composite samples place the tag inside the bag with the samples. The Bureau of Ecosystem Health can supply the tags.

2. Species identification (please be explicit enough to enable assigning genus and species). Group fish by species when processing.

3. Date collected.

4. Sample location (waterway and nearest prominent identifiable landmark).

5. Total length (nearest mm or smallest sub-unit on measuring instrument) and weight (nearest g or

smallest sub-unit of weight on weighing instrument). Take all measures as soon as possible with calibrated, protected instruments (e.g. from wind and upsets) and prior to freezing.

6. Sex - fish may be cut enough to allow sexing or other internal investigation, but do not eviscerate. Make any incision on the right side of the belly flap or exactly down the midline so that a left-side fillet can be removed.

D. General data collection recommendations:

1. It is helpful to use an ID or tag number that will be unique. It is best to use metal striped bass or other uniquely numbered metal tags. If uniquely numbered tags are unavailable, values based on the region, water body and year are likely to be unique: for example, R7CAY11001 for Region 7, Cayuga Lake, 2011, fish 1. If the fish are just numbered 1 through 20, we have to give them new numbers for our database, making it more difficult to trace your fish to their analytical results and creating an additional possibility for errors.

2. Process and record fish of the same species sequentially. Recording mistakes are less likely when all fish from a species are processed together. Starting with the bigger fish species helps avoid missing an individual.

3. If using Bureau of Ecosystem Health supplied tags or other numbered tags, use tags in sequence so that fish are recorded with sequential Tag Numbers. This makes data entry and login at the lab and use of the data in the future easier and reduces keypunch errors.

4. Record length and weight as soon as possible after collection and before freezing. Other data are recorded in the field upon collection. An age determination of each fish is optional, but if done, it is recorded in the appropriate "Age" column.

5. For composite samples of small fish, record the number of fish in the composite in the Remarks column. Record the length and weight of each individual in a composite. All fish in a composite sample should be of the same species and members of a composite should be visually matched for size.

6. Please submit photocopies of topographic maps or good quality navigation charts indicating sampling locations. GPS coordinates can be entered in the Location column of the collection record form in addition to or instead for providing a map. These records are of immense help to us (and hopefully you) in providing documented location records which are not dependent on memory and/or the same collection crew. In addition, they may be helpful for contaminant source trackdown and remediation/control efforts of the Department.

7. When recording data on fish measurements, it will help to ensure correct data recording for the data recorder to call back the numbers to the person making the measurements.

E. Each fish is to be placed in its own individual plastic bag. For small fish to be analyzed as a composite, put all of the fish for one composite in the same bag but use a separate bag for each composite. It is important to individually bag the fish to avoid difficulties or cross contamination when processing the fish for chemical analysis. Be sure to include the fish's tag number inside the bag, preferably attached to the fish with the tag number turned out so it can be read. Tie or otherwise secure the bag closed. **The Bureau of Ecosystem Health will supply the bags.** If necessary, food grade bags may be procured from a suitable vendor (e.g., grocery store). It is preferable to redundantly label each bag with a manila tag tied between the knot and the body of the bag. This tag should be labeled with the project name, collection location, tag number, collection date, and fish species. If scales are collected, the scale envelope should be labeled with the same information.

F. Groups of fish, by species, are to be placed in one large plastic bag per sampling location. **The Bureau of Ecosystem Health will supply the larger bags.** Tie or otherwise secure the bag closed. Label the site bag with a manila tag tied between the knot and the body of the bag. The tag should contain: project, collection location, collection date, species and **tag number ranges**. Having this information on the manila tag enables lab staff to know what is in the bag without opening it.

G. Do not eviscerate, fillet or otherwise dissect the fish unless specifically asked to. If evisceration or dissection is specified, the fish must be cut along the exact midline or on the right side so that the left side fillet can be removed intact at the laboratory. If filleting is specified, the procedure for taking a standard fillet (SOP PREPLAB 4) must be followed, including removing scales.

H. Special procedures for PFAS: Unlike legacy contaminants such as PCBs, which are rarely found in day to day life, PFAS are widely used and frequently encountered. Practices that avoid sample contamination are therefore necessary. While no standard practices have been established for fish, procedures for water quality sampling can provide guidance. The following practices should be used for collections when fish are to be analyzed for PFAS:

    No materials containing Teflon.
    No Post-it notes.
    No ice packs; only water ice or dry ice.
    Any gloves worn must be powder free nitrile.
    No Gore-Tex or similar materials (Gore-Tex is a PFC with PFOA used in its manufacture).
    No stain repellent or waterproof treated clothing; these are likely to contain PFCs.
    Avoid plastic materials, other than HDPE, including clipboards and waterproof notebooks.
    Wash hands after handling any food containers or packages as these may contain PFCs. Keep pre-wrapped food containers and wrappers isolated from fish handling.
    Wear clothing washed at least six times since purchase.
    Wear clothing washed without fabric softener.
    Staff should avoid cosmetics, moisturizers, hand creams and similar products on the day of sampling as many of these products contain PFCs (Fujii et al. 2013). Sunscreen or insect repellent should not contain ingredients with “fluor” in their name. Apply any sunscreen or insect repellent well downwind from all materials. Hands must be washed after touching any of these products.

I. All fish must be kept at a temperature <45° F (<8° C) immediately following data processing. As soon as possible, freeze at -20° C ± 5° C. Due to occasional freezer failures, daily freezer temperature logs are required. The freezer should be locked or otherwise secured to maintain chain of custody.

J. In most cases, samples should be delivered to the Analytical Services Unit at the Hale Creek field station. Coordinate delivery with field station staff and send copies of the collection records, continuity of evidence forms and freezer temperature logs to the field station. For samples to be analyzed elsewhere, non-routine collections or other questions, contact Wayne Richter, Bureau of Ecosystem Health, NYSDEC, 625 Broadway, Albany, New York 12233-4756, 518-402-8974, or the project leader about sample transfer. Samples will then be directed to the analytical facility and personnel noted on specific project descriptions.

K. A recommended equipment list is at the end of this document.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF FISH AND WILDLIFE
FISH COLLECTION RECORD

Project and Site Name ____ DEC Region ____________

Collections made by (include all crew) ____

Sampling Method: Electrofishing Gill netting Trap netting Trawling Seining Angling Other ____________________

Preservation Method: Freezing Other ________________ Notes (SWFDB survey number): ____________________

FOR LAB USE ONLY- LAB ENTRY NO.	COLLECTION OR TAG NO.	SPECIES	DATE TAKEN	LOCATION	AGE	SEX &/OR REPROD. CONDIT	LENGTH ( )	WEIGHT ( )	REMARKS

richter: revised 2011, 5/7/15, 10/4/16, 3/20/17; becker: 3/23/17, 4/26/19

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CHAIN OF CUSTODY

I, ______________________________, of ____ collected the
(Print Name) (Print Business Address)

following on ____________________, 20____ from ____
(Date) (Water Body)

in the vicinity of ____
(Landmark, Village, Road, etc.)

Town of _______________________________________, in _________________________________ County.

Item(s) ____

____

Said sample(s) were in my possession and handled according to standard procedures provided to me prior to collection. The sample(s) were placed in the custody of a representative of the New York State Department of Environmental Conservation on ___________________________________, 20______.

____ ___________________________
Signature Date

I, __________________________________, received the above mentioned sample(s) on the date specified and assigned identification number(s) ____ to the sample(s). I have recorded pertinent data for the sample(s) on the attached collection records. The sample(s) remained in my custody until subsequently transferred, prepared or shipped at times and on dates as attested to below.

_______________________________________ ___________________
Signature Date

SECOND RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
THIRD RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
FOURTH RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
RECEIVED IN LABORATORY BY (Print Name)	TIME & DATE	REMARKS
SIGNATURE	UNIT	
LOGGED IN BY (Print Name)	TIME & DATE	ACCESSION NUMBERS
SIGNATURE	UNIT	

NOTICE OF WARRANTY

By signature to the chain of custody (reverse), the signatory warrants that the information provided is truthful and accurate to the best of his/her ability. The signatory affirms that he/she is willing to testify to those facts provided and the circumstances surrounding the same. Nothing in this warranty or chain of custody negates responsibility nor liability of the signatories for the truthfulness and accuracy of the statements provided.

HANDLING INSTRUCTIONS

On day of collection, collector(s) name(s), address(es), date, geographic location of capture (attach a copy of topographic map or navigation chart), species, number kept of each species, and description of capture vicinity (proper noun, if possible) along with name of Town and County must be indicated on reverse.

Retain organisms in manila tagged plastic bags to avoid mixing capture locations. Note appropriate information on each bag tag.

Keep samples as cool as possible. Put on ice if fish cannot be frozen within 12 hours. If fish are held more than 24 hours without freezing, they will not be retained or analyzed.

Initial recipient (either DEC or designated agent) of samples from collector(s) is responsible for obtaining and recording information on the collection record forms which will accompany the chain of custody. This person will seal the container using packing tape and writing his signature, the time and the date across the tape onto the container with indelible marker. Any time a seal is broken, for whatever purpose, the incident must be recorded on the Chain of Custody (reason, time, and date) in the purpose of transfer block. Container then is resealed using new tape and rewriting signature, with time and date.

EQUIPMENT LIST

Scale or balance of appropriate capacity for the fish to be collected.

Fish measuring board.

Plastic bags of an appropriate size for the fish to be collected and for site bags.

Individually numbered metal tags for fish.

Manila tags to label bags.

Small envelops, approximately 2” x 3.5”, if fish scales are to be collected.

Knife for removing scales.

Chain of custody and fish collection forms.

Clipboard.

Pens or markers.

Paper towels.

Dish soap and brush.

Bucket.

Cooler.

Ice.

Duct tape.

Appendix G – PFAS Analyte List

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonates	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanesulfonic acid	PFOS	1763-23-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
Perfluoroalkyl carboxylates	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8
	Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7
Fluorinated Telomer Sulfonates	6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2
	8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4
Perfluorooctane-sulfonamides	Perfluroroctanesulfonamide	FOSA	754-91-6
Perfluorooctane-sulfonamidoacetic acids	N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSAA	2991-50-6

Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) developed the following guidelines for laboratories analyzing environmental samples for PFAS under DER programs. If laboratories cannot adhere to the following guidelines, they should contact DER's Quality Assurance Officer, Dana Barbarossa, at dana.barbarossa@dec.ny.gov prior to analysis of samples.

Isotope Dilution

Isotope dilution techniques should be utilized for the analysis of PFAS in all media.

Extraction

For water samples, the entire sample bottle should be extracted, and the sample bottle rinsed with appropriate solvent to remove any residual PFAS.

For samples with high particulates, the samples should be handled in one of the following ways:

1. Spike the entire sample bottle with isotope dilution analytes (IDAs) prior to any sample manipulation. The sample can be passed through the SPE and if it clogs, record the volume that passed through.
2. If the sample contains too much sediment to attempt passing it through the SPE cartridge, the sample should be spiked with isotope dilution analytes, centrifuged and decanted.
3. If higher reporting limits are acceptable for the project, the sample can be diluted by taking a representative aliquot of the sample. If isotope dilution analytes will be diluted out of the sample, they can be added after the dilution. The sample should be homogenized prior to taking an aliquot.

If alternate sample extraction procedures are used, please contact the DER remedial program chemist prior to employing. Any deviations in sample preparation procedures should be clearly noted in the case narrative.

Signal to Noise Ratio

For all target analyte ions used for quantification, signal to noise ratio should be 3:1 or greater.

Blanks

There should be no detections in the method blanks above the reporting limits.

Ion Transitions

The ion transitions listed below should be used for the following PFAS:

PFOA	413 > 369
PFOS	499 > 80
PFHxS	399 > 80
PFBS	299 > 80
6:2 FTS	427 > 407
8:2 FTS	527 > 507
N-EtFOSAA	584 > 419
N-MeFOSAA	570 > 419

Branched and Linear Isomers

Standards containing both branched and linear isomers should be used when standards are commercially available. Currently, quantitative standards are available for PFHxS, PFOS, NMeFOSAA, and NEtFOSAA. As more standards become available, they should be incorporated in to the method. All isomer peaks present in the standard should be integrated and the areas summed. Samples should be integrated in the same manner as the standards.

Since a quantitative standard does not exist for branched isomers of PFOA, the instrument should be calibrated using just the linear isomer and a technical (qualitative) PFOA standard should be used to identify the retention time of the branched PFOA isomers in the sample. The total response of PFOA branched and linear isomers should be integrated in the samples and quantitated using the calibration curve of the linear standard.

Secondary Ion Transition Monitoring

Quantifier and qualifier ions should be monitored for all target analytes (PFBA and PFPeA are exceptions). The ratio of quantifier ion response to qualifier ion response should be calculated for each target analyte and the ratio compared to standards. Lab derived criteria should be used to determine if the ratios are acceptable.

Reporting

Detections below the reporting limit should be reported and qualified with a J qualifier.

The acid form of PFAS analytes should be reported. If the salt form of the PFAS was used as a stock standard, the measured mass should be corrected to report the acid form of the analyte.

Appendix I - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

These guidelines are intended to be used for the validation of PFAS analytical results for projects within the Division of Environmental Remediation (DER) as well as aid in the preparation of a data usability summary report. Data reviewers should understand the methodology and techniques utilized in the analysis. Consultation with the end user of the data may be necessary to assist in determining data usability based on the data quality objectives in the Quality Assurance Project Plan. A familiarity with the laboratory's Standard Operating Procedure may also be needed to fully evaluate the data. If you have any questions, please contact DER's Quality Assurance Officer, Dana Barbarossa, at dana.barbarossa@dec.ny.gov.

Preservation and Holding Time

Samples should be preserved with ice to a temperature of less than 6°C upon arrival at the lab. The holding time is 14 days to extraction for aqueous and solid samples. The time from extraction to analysis for aqueous samples is 28 days and 40 days for solids.

Temperature greatly exceeds 6ºC upon arrival at the lab*	Use professional judgement to qualify detects and non-detects as estimated or rejected
Holding time exceeding 28 days to extraction	Use professional judgement to qualify detects and non-detects as estimated or rejected if holding time is grossly exceeded

*Samples that are delivered to the lab immediately after sampling may not meet the thermal preservation guidelines. Samples are considered acceptable if they arrive on ice or an attempt to chill the samples is observed.

Initial Calibration

The initial calibration should contain a minimum of five standards for linear fit and six standards for a quadratic fit. The relative standard deviation (RSD) for a quadratic fit calibration should be less than 20%. Linear fit calibration curves should have an R^2 value greater than 0.990.

The low-level calibration standard should be within 50% - 150% of the true value, and the mid-level calibration standard within 70% - 130% of the true value.

%RSD >20%	J flag detects and UJ non detects
R^2 >0.990	J flag detects and UJ non detects
Low-level calibration check <50% or >150%	J flag detects and UJ non detects
Mid-level calibration check <70% or >130%	J flag detects and UJ non detects

Initial Calibration Verification

An initial calibration verification (ICV) standard should be from a second source (if available). The ICV should be at the same concentration as the mid-level standard of the calibration curve.

ICV recovery <70% or >130%	J flag detects and non-detects

Continuing Calibration Verification

Continuing calibration verification (CCV) checks should be analyzed at a frequency of one per ten field samples. If CCV recovery is very low, where detection of the analyte could be in question, ensure a low level CCV was analyzed and use to determine data quality.

CCV recovery <70 or >130%	J flag results

Blanks

There should be no detections in the method blanks above the reporting limits. Equipment blanks, field blanks, rinse blanks etc. should be evaluated in the same manner as method blanks. Use the most contaminated blank to evaluate the sample results.

Blank Result	Sample Result	Qualification
Any detection	<Reporting limit	Qualify as ND at reporting limit
Any detection	>Reporting Limit and >10x the blank result	No qualification
>Reporting limit	>Reporting limit and <10x blank result	J+ biased high

Field Duplicates

A blind field duplicate should be collected at rate of one per twenty samples. The relative percent difference (RPD) should be less than 30% for analyte concentrations greater than two times the reporting limit. Use the higher result for final reporting.

RPD >30%	Apply J qualifier to parent sample

Lab Control Spike

Lab control spikes should be analyzed with each extraction batch or one for every twenty samples. In the absence of lab derived criteria, use 70% - 130% recovery criteria to evaluate the data.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects

Matrix Spike/Matrix Spike Duplicate

One matrix spike and matrix spike duplicate should be collected at a rate of one per twenty samples. Use professional judgement to reject results based on out of control MS/MSD recoveries.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only
RPD >30%	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only

Extracted Internal Standards (Isotope Dilution Analytes)

Problematic analytes (e.g. PFBA, PFPeA, fluorotelomer sulfonates) can have wider recoveries without qualification. Qualify corresponding native compounds with a J flag if outside of the range.

Recovery <50% or >150%	Apply J qualifier
Recovery <25% or >150% for poor responding analytes	Apply J qualifier
Isotope Dilution Analyte (IDA) Recovery <10%	Reject results

Secondary Ion Transition Monitoring

Quantifier and qualifier ions should be monitored for all target analytes (PFBA and PFPeA are exceptions). The ratio of quantifier ion response to qualifier ion response should be calculated from the standards for each target analyte. Lab derived criteria should be used to determine if the ratios are acceptable. If the ratios fall outside of the laboratory criteria, qualify results as an estimated maximum concentration.

Signal to Noise Ratio

The signal to noise ratio for the quantifier ion should be at least 3:1. If the ratio is less than 3:1, the peak is discernable from the baseline noise and symmetrical, the result can be reported. If the peak appears to be baseline noise and/or the shape is irregular, qualify the result as tentatively identified.

Branched and Linear Isomers

Observed branched isomers in the sample that do not have a qualitative or quantitative standard should be noted and the analyte should be qualified as biased low in the final data review summary report. Note: The branched isomer peak should also be present in the secondary ion transition.

Reporting Limits

If project-specific reporting limits were not met, please indicate that in the report along with the reason (e.g. over dilution, dilution for non-target analytes, high sediment in aqueous samples).

Peak Integrations

Target analyte peaks should be integrated properly and consistently when compared to standards. Ensure branched isomer peaks are included for PFAS where standards are available. Inconsistencies should be brought to the attention of the laboratory or identified in the data review summary report.

APPENDIX E

Health and Safety Plan

HALEY & ALDRICH, INC.

SITE-SPECIFIC SAFETY PLAN

FOR

89-93 Gerry Street

Project/File No. 135597-002; 0200663-000

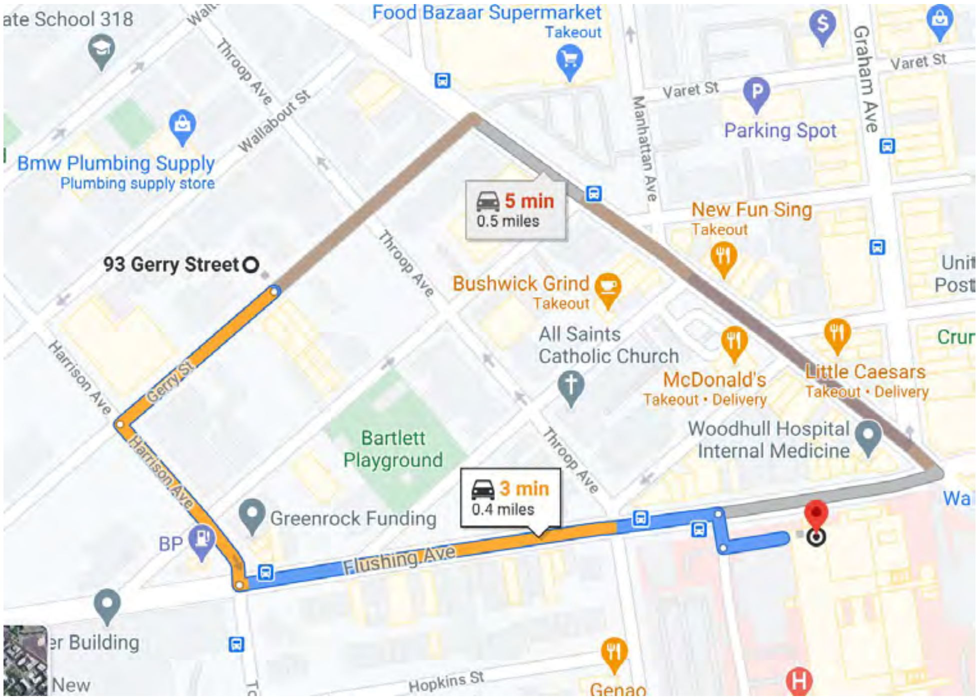
Prepared By: Conlon, Mari	**Date: 02-01-2021**
Revised By:	**Date:**

EMERGENCY INFORMATION

Project Name: 89-93 Gerry Street	**H&A File No:** 135597-002; 0200663-000
Location: **89-93 Gerry Street, Brooklyn, New York**	
Client/Site Contact: Office Phone Number:	Gerry Gardens LLC Karpen, Moses 718.302.3180
Contractor: **Superintendent:** Phone Number:	Eastern Environmental Solutions Hamarich, Scott 631.727.2700
H&A Project Manager: Office Phone Number: Cell Phone Number:	Conlon, Mari Cate 646.277.5688 347.271.1521
Field Safety Manager: Office Phone Number: Cell Phone Number:	Ferguson, Brian 617.886.7439 617.908.2761
Nearest Hospital: Address: (see map on next page) Phone Number:	**NYC Health and Hospitals/Woodhull: Emergency Room** 760 Broadway Brooklyn, NY 11206 718.963.8000
Nearest Occ. Health Clinic: Address: (see map on next page) Phone Number:	**ModernMD Urgent Care- S.E. Williamsburg** 68 Graham Ave Brooklyn, NY 11206 646.604.8120
Liberty Mutual Claim Policy	**WC6-Z11-254100-031**
Other Local Emergency Response Number:	911
Other Ambulance, Fire, Police, or Environmental Emergency Resources:	911

Emergency Hospital

NYC Health and Hospitals/Woodhull: Emergency Room
760 Broadway
Brooklyn, NY 11206
718.963.8000



Head southwest on Gerry St toward Harrison Ave

423 ft

Turn left onto Harrison Ave

423 ft

Turn left onto Flushing Ave

0.2 mi

Turn right

72 ft

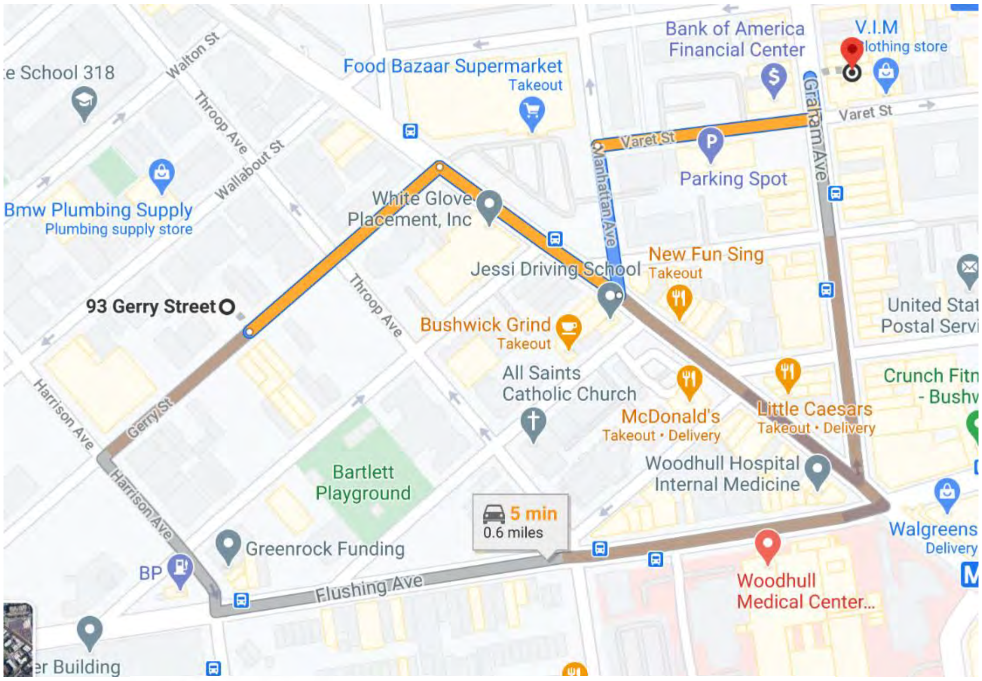
Turn left

125 ft

Woodhull Medical Center- Emergency Room
760 Broadway, Brooklyn, NY 11206

Clinic

ModernMD Urgent Care- S.E. Williamsburg
68 Graham Ave
Brooklyn, NY 11206
646.604.8120



93 Gerry St
Brooklyn, NY 11206

Head northeast on Gerry St toward Throop Ave

0.1 mi

Turn right onto Broadway

482 ft

Turn left onto Manhattan Ave

331 ft

Turn right onto Varet St
Pass by Bank of America Financial Center (on the left)

479 ft

Turn left onto Graham Ave/Ave of Puerto Rico
Destination will be on the right

92 ft

ModernMD Urgent Care - S.E. Williamsburg
68 Graham Ave, Brooklyn, NY 11206

STOP WORK

In accordance with H&A Stop Work Policy (OP1035), any individual has the right to refuse to do work that they believe to be unsafe and they have the obligation and responsibility to stop others from working in an unsafe manner without fear of retaliation. STOP Work Policy is the stop work policy for all personnel and subcontractors on the Site. When work has been stopped due to an unsafe condition, H&A site management (e.g., Project Manager, Site Safety Manager) and the H&A Senior Project Manager will be notified immediately. Reasons for issuing a stop work order include, but are not limited to:

- The belief/perception that injury to personnel or accident causing significant damage to property or equipment is imminent.
- A H&A subcontractor is in breach of site safety requirements and/or their own site HASP.
- Identifying a sub-standard condition (e.g., severe weather) or activity that creates an unacceptable safety risk as determined by a qualified person.

Work will not resume until the unsafe act has been stopped OR sufficient safety precautions have been taken to remove or mitigate the risk to an acceptable degree. Stop work orders will be documented as part of an on-site stop work log, on daily field reports to include the activity(ies) stopped, the duration, person stopping work, person in-charge of stopped activity(ies), and the corrective action agreed to and/or taken. Once work has been stopped, only the H&A SM or SSO can give the order to resume work. H&A senior management is committed to support anyone who exercises his or her “Stop Work” authority.

TABLE OF CONTENTS

ADMINISTRATIVE INFORMATION

Project Name	89-93 Gerry Street	**Project Number**	135597-002; 0200663-000
Project Start Date	2/1/2021	**Project End Date**	2/1/2022
Client Site/Contact: Office Phone Number:	Karpen, Moses 718.302.3180		
H&A Project Manager: Office Phone Number: Cell Phone Number:	Conlon, Mari Cate 646.277.5688 347.271.1521		
H&A Site Safety Officer: Office Phone Number: Cell Phone Number:	Simmel, Zach 646.277.5690 646.787.7669		
Subcontractor: Phone: Emergency Phone number:	Eastern Environmental Solutions 631.727.2700 631.774.9821		

APPROVALS: The following signatures constitute approval of this Health & Safety Plan

Electronic Signature

Mari Cate Conlon

Project Manager – Mari Cate Conlon — 02-03-2021 Date

Field Health & Safety Manager – East – Brian Ferguson — 02-03-2021 Date

This document is valid for a maximum time period of one year after completion. The document must be reviewed if the scope of work or nature of site hazards changes and must be updated as warranted.

PROJECT INFORMATION

Site Overview/History					
Site Classification	Occupied	**Site Status**	Occupied parking lot	**Regulatory Authority**	OSHA

Project Summary

The approximately 5,000 square-foot property located in the Broadway Triangle of Brooklyn is identified as Block 2266, Lots 40 and 41 on the New York City Tax Map. Currently the Site is occupied as an at-grade parking lot.

The project is currently within the New York City E-Designation database under E-238- Broadway Triangle rezoning action (CEQR 19HPD019K). The requirements under the E-Designation program are satisfaction of the requirements for Hazardous Material and Air components with the New York City Office of Environmental Remediation (NYCOER). The air requirement for this E-Designation is to exclusively use natural gas with the stack location 35' from the northern, western, and eastern lot lines. The proposed development will include the construction of two 6-story residential buildings with a one-level cellar on each building encompassing the entire site footprint and extending to approximately 11 feet below current grade.

Scope of Work: Limited Phase II Environmental Site Investigation

Project Tasks

Task 1	**Task Name:** Drilling
Oversee installation of soil borings, permanent groundwater monitoring wells, and soil vapor implants by Eastern Environmental Solutions using a limited access Geoprobe drilling rig. Eastern Environmental Solutions will provide a one call markout prior to drilling.	
Start Date: 2-8-2021	End Date: 2-12-2021
H&A Site Supervisor: Zach Simmel	Subcontractor: Eastern Environmental Solutions
Task 2	**Task Name:** Soil, Soil Vapor & Groundwater Sampling
Collect soil samples, groundwater samples, and soil vapor samples into laboratory provided containers.	
Start Date: 2-8-2021	End Date: 2-12-2021
H&A Site Supervisor: Zach Simmel	Subcontractor: Eastern Environmental Solutions
Task 3	**Task Name: Remedial Oversight**
Perform remedial oversight during implementation of the approved remedy. Task includes soil disposal tracking, confirmation soil sampling and implementation off community air monitoring.	
Start Date: 12-1-2021	End Date: 2-1-2022
H&A Site Supervisor: Zach Simmel	Subcontractor: N/A

HAZARD ASSESSMENT AND CONTROLS

The following site and task specific hazards have been identified. Associated controls have been defined and are also listed below.

Site Chemical Hazards

Potential contaminants of concern at the site include volatile organic compounds (VOCs) and semi volatile organic compounds (SVOCs).

Source of Information: Unknown contaminants/not well characterized, potential for contaminants based on urban fill and site knowledge.

COC	Location/Media	Concentration (Soil)	Concentration (Groundwater)
VOCs	**Groundwater**	**N/A**	**260 µg/L**
SVOCs	**Soil**	**15 mg/kg**	**N/A**
Lead	**Soil**	**449 mg/kg**	**N/A**
Mercury	**Soil**	**5.56 mg/kg**	**N/A**

VOCs/SVOCs

VOCs include all organic compounds (substances made up of predominantly carbon and hydrogen) with boiling temperatures in the range of 50-260 degrees C, excluding pesticides. This means that they are likely to be present as a vapor or gas in normal ambient temperatures. Substances which are included in the VOC category include aliphatic hydrocarbons (such as hexane), aldehydes, aromatic hydrocarbons (such as benzene, toluene, and the xylenes or BTEX), and oxygenated compounds (such as acetone and similar ketones). The term VOC often is used in a legal or regulatory context and in such cases the precise definition is a matter of law.

VOCs are released from oil and gasoline refining, storage and combustion as well as from a wide range of industrial processes. Processes involving fuels, solvents, paints or the use of chemicals are the most significant sources. VOCs may also be emitted from cleaning products, degreasing products, fabrics, carpets, plastic products, glues, printed material, varnishes, wax, disinfectants, and cosmetics.

Typically, VOCs are present in gas or vapor and will enter the body by breathing contaminated air. Higher concentrations of VOCs may occur in areas of poor ventilation.

Lead

General Information - Lead can be used as a pure metal, combined with another metal to form an alloy, or in the form of a chemical compound. The primary use of lead in the U.S. is for automobile lead-acid storage batteries, a type of rechargeable electric battery which uses an almost pure lead alloy. Lead-formed alloys are typically found in ammunition, pipes, cable covering, building material, solder, radiation shielding, collapsible tubes, and fishing weights. Lead is also used in ceramic glazes and as a stabilizer in plastics. Lead was used extensively as a corrosion inhibitor and pigment in paints for residential and public buildings.

Toxicity - Prolonged (chronic) or repeated contact may have effects on the blood, bone marrow, central nervous system, peripheral nervous system, and kidneys. This could result in low blood-iron content, convulsions caused by neural decay, decreased motor function / paralysis, abdominal cramps, and kidney impairment. Lead causes toxicity to human reproduction or development. The substance is probably carcinogenic to humans.

Flammability - Lead is not flammable.

Reactivity - When Lead is heated it forms toxic fumes. Lead reacts with oxidants. It reacts with hot concentrated nitric acid, boiling concentrated hydrochloric acid and sulfuric acid.

First Aid Procedures

Eye: Immediately wash (irrigate) the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention immediately.

Skin: Promptly flush the contaminated skin with water. If this chemical penetrates the clothing, promptly remove the clothing and flush the skin with water. If irritation persists after washing, get medical attention.

Inhalation: move the exposed person to fresh air at once. Other measures are usually unnecessary.

Ingestion: In the event of ingestion rinse exposed individual´s mouth. Do not induce vomiting.

Air Monitoring -Particulate monitoring is required to determine lead concentrations. Monitoring can be specific for lead using integrated sampling or with a direct reading aerosol monitor. When monitoring with the direct reading instrument, dust equivalent action levels must be calculated prior to sampling.

Occupational Exposure Limit(s)

8 Hour TWA - 0.05 mg/m3	**IDLH** - 100 mg/m3

Mercury

General Information - An odorless, silvery metallic liquid. Insoluble in water. Toxic by ingestion, absorption and inhalation of the fumes. Corrosive to aluminum. Used as a catalyst in instruments, boilers, mirror coatings.

Toxicity - Upon heating, toxic fumes are formed. Decomposes on heating. This produces toxic fumes. The substance can be absorbed into the body by inhalation of its vapor and through the skin also as a vapor. The substance is irritating to the skin and inhalation of the vapor may cause pneumonitis. The substance may cause effects on the central nervous system and kidneys. The effects may be delayed. Medical observation is indicated. A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20°C and may have effects on the central nervous system and kidneys, which could result in irritability, emotional instability, tremors, mental and memory disturbances and speech disorders. May cause inflammation and discoloration of gums. Cumulative effects are possible.

Flammability - Mercury itself does not burn but poisonous gases are produced in fire.

Reactivity - MERCURY forms an explosive acelylide when mixed with acetylene. Can form explosive compounds with ammonia (a residue resulting from such a reaction exploded when an attempt was made to clean it off a steel rod. Chlorine dioxide (also other oxidants, such as: chlorine, bromine, nitric acid, performic acid), and mercury explode when mixed. Methyl azide in the presence of mercury is potentially explosive. Ground mixtures of sodium carbide and mercury can react vigorously. Ammonia forms explosive compounds with gold, mercury, or silver.	
First Aid Procedures Eye: Immediately flush with large amounts of water for at least 15 minutes, lifting upper and lower lids. Remove contact lenses, if worn, while flushing. Seek medical attention immediately. Skin: If this chemical contacts the skin, promptly wash the contaminated skin with soap and water. If this chemical penetrates the clothing, promptly remove the clothing and wash the skin with soap and water. Get medical attention promptly. Inhalation: If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. If breathing has stopped, perform mouth-to-mouth resuscitation. Keep the affected person warm and at rest. Get medical attention as soon as possible. Ingestion: If this chemical has been swallowed, get medical attention immediately.	
Air Monitoring - Any mercury reading above 0.0003 mg/m3 [the ambient air guideline] will require pregnant or potentially pregnant staff to leave the area or use appropriate respiratory protection. Personnel should not work for extended periods of time [over 30 minutes] where mercury reading are above 0.0125 mg/m3 (1/2 of the ACGIH TLV of 0.025 mg/m3) without a half-face respirator with cartridges specific for mercury vapor. Mercury reading above 0.025 mg/m3 (1/2 of the NIOSH REL) require personnel to leave the area or a half-face respirator with cartridges specific for mercury vapor. Any exposures over 0.025 mg/m3 should be reported on the Hank Incident Reporting Form.	
Occupational Exposure Limit(s)	
8 Hour TWA - .025 mg/m^3	**STEL** - .05 mg/m^3
Ceiling - .01 mg/m^3	**IDLH** - 10 mg/m^3

Site Hazards and Controls

Site Hazard Summary		
Sun	Slips, Trips, Falls	Urban Fill
Cold Temperature		

SUN

Hazard Information

Acute excessive exposure to solar radiation may cause painful sunburn, and chronic exposure may contribute to eye damage and skin cancer. The average peak intensity of solar ultraviolet (UV) radiation is at midday. Most of the total daily UV is received between 10 AM and 2 PM. UV radiation can reflect off of water, concrete, light colored surfaces, and snow. Cloud cover can reduce UV levels, but overexposure may still occur.

Use the shadow test to determine sun strength: If your shadow is shorter than you are, the sun´s rays are at their peak, and it is important to protect yourself.

Controls

- Wear light-colored, closely woven clothing, which covers as much of the body as practicable.
- Use sunscreens with broad spectrum protection (against both UVA and UVB rays) and sun protection factor (SPF) values of 30 or higher. Ideally, about 1 ounce of sunscreen (about a shot glass or palmful) should be used to cover the arms, legs, neck, and face of the average adult. Sunscreen needs to be reapplied at least every 2 hours to maintain protection.
- Hats should be worn and should be wide brimmed, protecting as much of the face, ears, and neck as possible. Hats should also provide ventilation around the head. Sunscreen should be applied to areas around the head not protected by the hat (ears, lips, neck, etc.).
- Wear sunglasses while working outdoors. Sunglasses should allow no more than 5% of UVA and UVB penetration and must also meet the ANSI Z87.1 standard for safety glasses.
- Use natural or artificial shade, where possible.

URBAN FILL

Hazard Information

Urban Fill consists of historically placed soil materials commonly found in urban areas, and typically comprised of a heterogeneous mixture of granular and fine-grained solids containing various proportions of gravel and cobbles, construction and demolition debris, coal ash, wood ash or other deleterious materials. Urban fill usually contains anthropogenic levels of metals, petroleum hydrocarbons and/or polynuclear aromatic hydrocarbons (PAHs) due to non-point sources and/or which originated prior to placement.

Controls

- Physical Hazards: Urban fill can contain debris such as glass, ceramics, rebar, wire, wood, nails, and other objects that contain sharp edges. Personnel should use caution and wear appropriate gloves (e.g., leather) to prevent cuts associated with handling material containing sharp and abrasive edges.
- Personal Hygiene: Always wash hands prior to and after eating and drinking. Take off work boots prior to getting in your car and going home which will help prevent introducing

potentially contaminated soils to your car and home. Wash work clothing separately from non-work clothes to prevent clothing impacted by soil from urban fill to be cross contaminated with other clothing. Use chemical resistant gloves when handling soil to prevent contact with skin.

- Control the dust from urban fill material. Measures should be taken to prevent dust, such as wetting the material or covering the stockpiles.

SLIPS AND TRIPS

Hazard Information

Slip and trip injuries are the most frequent injuries to workers. Both slips and trips result from some kind of unintended or unexpected change in the contact between the foot and the ground or walking surface. This shows that good housekeeping, quality of walking surfaces (flooring), awareness of surroundings, selection of proper footwear, and appropriate pace of walking are critical to preventing fall accidents.

Site workers will be walking on a variety of irregular surfaces that may affect their balance. Extra care must be taken to walk cautiously near any surfaces that are unfamiliar or may have unseen slip or trip hazards such as rivers because the bottom of the riverbed maybe slick and may not be visible. Rocks, gradient changes, sandy bottoms, and debris may be present but not observable.

Controls

- Take your time and pay attention to where you are going.
- Adjust your stride to a pace that is suitable for the walking surface and the tasks you are doing.
- Check the work area to identify hazards - beware of trip hazards such as wet floors, slippery floors, and uneven surfaces or terrain.
- Establish and utilize a pathway free of slip and trip hazards.
- Choose a safer walking route.
- Carry loads you can see over and are not so heavy as to increase your trip/slip probability.
- Keep work areas clean and free of clutter.
- Communicate hazards to on-site personnel and mitigate hazards as appropriate.

COLD TEMPERATURES

Hazard Information

Cold stress may occur at any time work is being performed during low ambient temperatures and high velocity winds. Because cold stress is common and potentially serious illnesses are associated with outdoor work during cold seasons, regular monitoring and other preventative measures are vital.

Staff members should consult OP1003-Cold Stress for additional information on cold weather hazards.

Cold Stress Conditions

<u>Frostbite</u>: Localized injury resulting from cold is included in the generic term "frostbite. There are several degrees of damage.

Symptoms: Frost nip or incident frostbite; sudden blanching or whitening of the skin.

- Superficial frostbite: Skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient.
- Deep frostbite: Tissues are cold, pale, and solid; extremely serious injury.

Treatment:

- Bring the victim indoors and heat the areas quickly in water between 102° and 105° F.
    - Never place frostbitten tissue in hot water as the area will have a reduced heat awareness and such treatment could result in burns.
- Give the victim a warm drink (not coffee, tea, or alcohol).
    - The victim should not smoke or do anything that will inhibit blood circulation.
- Keep the frozen parts in warm water or covered with warm clothes for 30 minutes even though the tissue will be very painful as it thaws.
    - Elevate the injured area and protect it from injury.
    - Do not allow blisters to be broken. Use sterile, soft, dry material to cover the injured areas.
- Keep victim warm and get medical care immediately following first aid treatment.
- After thawing, the victim should try to move the injured areas slightly, but no more than can be done without assistance.

Do <u>NOT</u>:

- Rub the frostbitten area(s)
- Use ice, snow, gasoline, or anything cold on frostbite
- Use heat lamps or hot water bottles to rewarm the frostbitten area
- Place the frostbitten area near a hot stove

<u>Hypothermia:</u> Significant loss of body heat that is also a potential hazard during cold weather operations. Hypothermia is characterized as "moderate" or "severe".
Symptoms:

- Early hypothermia - Chills, pale skin, cold skin, muscle rigidity, depressed heart rate, and disorientation
- Moderate hypothermia - Any combination of severe shivering, abnormal behavior, slowing of movements, stumbling, weakness, repeated falling, inability to walk, collapse, stupor, or unconsciousness
- Severe hypothermia - Extreme skin coldness, loss of consciousness, faint pulse, and shallow, infrequent, or apparently absent respiration

Death is the ultimate result of untreated hypothermia. The onset of severe shivering signals danger to personnel; exposure to cold shall be immediately terminated for any severely shivering worker.
Treatment: Staff members should seek emergency medical treatment in the event of hypothermia. The following actions can be taken prior to obtaining medical treatment:

- Gently place patients in an environment most favorable to reducing further heat loss from evaporation, radiation, conduction, or convection.
- Remove wet clothing and replace it with dry blankets or sleeping bags.
- Initiate active external rewarming with heat packs (e.g., hot water bottles, chemical packs, etc.) placed in the areas of the armpits, groin, and abdomen.
- Be aware of the risk of causing body surface burns from excessive active external rewarming.

In dire circumstances, rescuers may provide skin-to-skin contact with patients when heat packs are unavailable and such therapy would not delay evacuation.

Controls

- Recognize the environmental and workplace conditions that may be dangerous.
  - When the temperature is below 41° F, workers should be aware that cold stress is a potential hazard.
- Learn signs of cold-induced illnesses and injuries and how to help affected staff members.
  - Observe fellow staff members for signs of cold stress and administer first aid, where necessary.
- Staff members should maintain a clothing level that keeps them warm but dry (not sweating).
  - Staff should wear thermal clothing including gloves and footwear and beneath chemical resistant clothing, when appropriate.
  - Workers should have a spare set of clothing in case work clothes are not warm enough or become wet.
  - If a worker begins to sweat, he/she should remove a layer.
  - If clothing becomes wet and temperatures are below 36° F, clothing must be immediately replaced with dry clothing.
- A warm area for rest breaks should be designated.
  - In cold temperatures, rotate shifts of workers with potential cold stress exposure or take periodic breaks to allow recovery from cold stress.
  - Do not go into the field alone when cold stress could occur.
- Avoid fatigue or exhaustion because energy is needed to keep muscles warm.
- Workers should drink warm liquids (non-alcoholic, non-caffeinated) periodically throughout their shifts so they do not get dehydrated.

Task Specific Hazards

TASK 1

Task 1 – Drilling – Drilling, such as associated with installation of soil borings, monitoring wells, and soil vapor probes is conducted for a range of services. Familiarity with basic drilling safety is an essential component of all drilling projects. Potential hazards related to drilling operations include but are not limited to encountering underground or overhead utilities, traffic, heavy equipment, hoisting heavy tools, steel impacts, open rotation entanglement, and the planned or unexpected encountering of toxic or hazardous substances. While staff members do not operate drilling equipment, they may work in close proximity to operating drilling equipment and may be exposed to many of the same hazards as the subcontractor. It is imperative that staff are aware of emergency stops and establish communication protocols with the drillers prior to the start of work.

See OP 1002 Drilling Safety.

Potential Hazards

Overhead Utilities	Ground Disturbance	Underground Utilities	Noise
Heavy Equipment	Line of Fire	Ergonomics	Generated Waste

Task 2 – Sampling – Soil sampling by H&A staff can be conducted in conjunction with a wide range activities. These activities can include, but are not limited to: drill spoil characterization and management during building foundation element installation, characterization of excavated soils for management/disposal/reuse during earthwork activities, and as part of environmental remedial activities such as delineation and confirmation sampling. Familiarity with basic heavy construction safety, site conditions (geotechnical and environmental), and potential soil contaminants are essential components of soil sampling performed on active sites. Potential hazards related to soil sampling at construction sites include, but are not limited to: encountering site vehicle traffic and heavy equipment operations, manual lifting, generated waste, contact or exposure to impacted soil, and encountering unknown toxic or hazardous substances. Although soil sampling is commonly performed within active excavations, from stockpiles, or within trench excavations, sampling locations and situations will vary depending on site conditions. Care should be taken ensuring that the sampling area is not being actively accessed by construction equipment. Care should also be taken with handling of potentially environmentally impacted soil during sampling, with appropriate PPE identified and used. At no time during classification activities are personnel to reach for debris near machinery that is in operation, place any samples in their mouth, or come in contact with the soils without the use of gloves. Staff will have to carry and use a variety of sampling tools, equipment, containers, and potentially heavy sample bags. It is imperative that staff are aware of emergency / communication protocols with the Contractor prior to the start of work.

Potential Hazards

Line of Fire	Ergonomics	Generated Waste	

Task 3 – Remedial Oversight –Remedial oversight may require working in close proximity to heavy equipment and may be exposed to many of the same hazards as the subcontractor. It is imperative that staff are aware of emergency stops and establish communication protocols with the drillers prior to the start of work. See OP 1002 Drilling Safety.			
Potential Hazards			
Noise	Heavy Equipment	Ergonomics	Line of Fire
Ground Disturbance	SIMOPS	Congested Area	

Top Task Specific Hazards

Overhead Utilities

When work is undertaken near overhead electrical lines, the distance maintained from those lines shall also meet the minimum distances for electrical hazards as defined in Table 1 below. Note: utilities other than overhead electrical utilities need to be considered when performing work

Table 1 Minimal Radial Clearance Distances *

Normal System Voltage Kilovolts (kV)	Required Minimal Radial Clearance Distance (feet/meters)
0 – 50	10/3.05
51 – 100	12/3.66
101 – 200	15/4.57
201 – 300	20/6.1
301 – 500	25/7.62
501 – 750	35/10.67
750 – 1000	45/13.72

* For those locations where the utility has specified more stringent safe distances, those distances shall be observed.

Controls

- To prevent damage, guy wires shall be visibly marked, and work barriers or spotters provided in those areas where work is being conducted.
  - When working around guy wires, the minimum radial clearance distances for electrical power shall be observed.
- The PM shall research and determine if the local, responsible utility or client has more restrictive requirements than those stated in Table 1.
- If equipment cannot be positioned in accordance with the requirements established in Table 1 the lines need to be de-energized.

Ground Disturbance

Ground disturbance is defined as any activity disturbing the ground. Ground disturbance activities include, but are not limited to, excavating, trenching, drilling (either mechanically or by hand), digging, plowing, grading, tunneling and pounding posts or stakes.

Because of the potential hazards associated with striking an underground utility or structure, the operating procedure for underground utility clearance shall be followed prior to performing any ground disturbance activities.
See OP1020 Working Near Utilities

Controls

Prior to performing ground disturbance activities, the following requirements should be applied:

- Confirm all approvals and agreements (as applicable) either verbal or written have been obtained.
- Request for line location has been registered with the applicable One-Call or Dial Before You Dig organization, when applicable
  - Whenever possible, ground disturbance areas should be adequately marked or staked prior to the utility locators site visit.
- Notification to underground facility operator/owner(s) that may not be associated with any known public notification systems such as the One-Call Program regarding the intent to cause ground disturbance within the search zone.
- Notifications to landowners and/or tenant, where deemed reasonable and practicable.
- Proximity and Common Right of Way Agreements shall be checked, if the line locator information is inconclusive.

Underground Utilities

Various forms of underground/overhead utility lines or conveyance pipes may be encountered during site activities. Prior to the start of intrusive operations, utility clearance is mandated, as well as obtaining authorization from all concerned public utility department offices. Should intrusive operations cause equipment to come into contact with utility lines, the SSO, Project Manager, and Regional H&S Manager shall be notified immediately. Work will be suspended until the client and applicable utility agency is contacted and the appropriate actions for the situation can be addressed.

See OP1020 Work Near Utilities for complete information.

Controls

- Obtain as-built drawings for the areas being investigated from the property owner;
- Visually review each proposed soil boring location with the property owner or knowledgeable site representative;
- Perform a geophysical survey to locate utilities;
- Hire a private line locating firm to determine the location of utility lines that are present at the property;
- Identifying a no-drill or dig zone;
- Hand dig or use vacuum excavation in the proposed ground disturbance locations if insufficient data is unavailable to accurately determine the location of the utility lines.

Noise

Working around heavy equipment (drill rigs, excavators, etc.) often creates excessive noise. The effects of noise can include physical damage to the ear, pain, and temporary and/or permanent hearing loss. Workers can also be startled, annoyed, or distracted by noise during critical activities. Noise monitoring data that indicates that work locations within 25 feet of operating heavy equipment (e.g., drill rigs, earthworking equipment) can result in exposure to hazardous levels of noise (levels greater than 85 dBA).

See OP 1031 Hearing Conservation for additional information.

Controls

- Personnel are required to use hearing protection (earplugs or earmuffs) within 25 feet of any operating piece of heavy equipment.
- Limit the amount of time spent at a noise source.
- Move to a quiet area to gain relief from hazardous noise sources.
- Increase the distance from the noise source to reduce exposure.

Heavy Equipment

Staff members must be careful and alert when working around heavy equipment since equipment failure or breakage and limited visibility can lead to accidents and worker injury. Heavy equipment such as cranes, drills, haul trucks, or others can fail during operation increasing the likelihood of worker injury. Equipment of this nature should be visually inspected and checked for proper working order prior to the commencement of field work. Those that operate heavy equipment must meet all of the requirements to operate heavy equipment. Haley & Aldrich, Inc. staff members that supervise projects or are associated with such high risk projects that involve digging or drilling should use due diligence when working with a construction firm.

See OP1052 Heavy Equipment for additional information.

Controls

- Only approach equipment once you have confirmed contact with the operator (e.g., the operator places the bucket on the ground).
- Maintain visual contact with operators at all times and keep out of the strike zone whenever possible.
- Always be alert to the position of the equipment around you.
- Always approach heavy equipment with an awareness of the swing radius and traffic routes of each piece of equipment and never go beneath a hoisted load.
- Avoid fumes created by heavy equipment exhaust.
- Understand the site traffic pattern and position yourself accordingly.

Line of Fire

Line of fire refers to the path an object will travel. Examples of line of fire typically observed on project sites include lifting/hoisting, lines under tension, objects that can fall or roll, pressurized objects, springs or stored energy, work overhead, vehicles, and heavy equipment.

Controls

The following precautions should be observed for tension and pressure:

- Be aware and stay clear of tensioned lines such as cable, chain, and rope.

- Use only correct gripping devices. Select proper equipment based on size and load limit.
- Be cautious of torque stresses that drilling equipment and truck augers can generate. Equipment can rotate unexpectedly long after applied torque force has been stopped.
- Springs come in a variety of shapes and sizes, and can release tremendous energy if compression as tension is suddenly released.
- Ensure tanks are stored upright and are in good condition, and be aware of potential failures or pressurized lines and fittings
- Items under tension and pressure can release tremendous energy if it is suddenly released.

The following precautions should be observed for objects that can fall or roll:

- Not all objects may be overhead; be especially mindful of top-heavy items and items being transported by forklift or flatbed.
- Secure objects that can roll such as tools, cylinders, and pipes.
- Stay well clear of soil cuttings, soil stockpiles generated during drilling operations and excavations, be aware that chunks of dirt, rocks, and debris can fall or roll.
- Establish a drop zone that is free of any tools and/or debris.

The following precautions should be observed for working in proximity to vehicles and heavy equipment:

- Use parking brakes and wheel chocks for any vehicle or equipment parked on an incline.
- When working near moving, heavy equipment such as line trucks and cranes, remain in operator's full view. Obtain operator's attention prior to approaching equipment.
- Vacate the back of the bucket truck when the boom is being moved or cradled. Get the operator's attention if you must get into the back of the truck so he or she can stop boom movement.

Take precautions for all pedestrian and vehicle traffic when positioning vehicles and equipment at a job site.

Posture/Ergonomics

Most Work-related Musculoskeletal Disorders (WMSDs) are caused by Ergonomic Stressors. Ergonomic Stressors are caused by poor workplace practices and/or insufficient design, which may present ergonomic risk factors. These stressors include, but are not limited to, repetition, force, extreme postures, static postures, quick motions, contact pressure, vibration, and cold temperatures.

WMSDs are injuries to the musculoskeletal system, which involves bones, muscles, tendons, ligaments, and other tissues in the system. Symptoms may include numbness, tightness, tingling, swelling, pain, stiffness, fatigue, and/or redness. WMSD are usually caused by one or more Ergonomic Stressors. There may be individual differences in susceptibility and symptoms among employees performing similar tasks. Any symptoms are to be taken seriously and reported immediately.

Controls

Recommended controls, including Administrative, Work Practice, and/or Engineering Controls, will be put in place based on the interview results and/or after an ergonomic assessment. H&S and/or HP will work with staff members and their staff managers to implement Administrative and Work Practice Controls to control risk associated with ergonomic stressors. In addition, simple Engineering Controls may be implemented, such as use of a keyboard and/or mouse tray, replacing a mouse with a more ergonomic model, and/or changing workstation set up.

Generated Waste

Excess sample solids, decontamination materials, rags, brushes, poly sheeting, etc. that are determined to be free of contamination through field or laboratory screening can usually be disposed into client-approved, on-site trash receptacles. Uncontaminated wash water may be discarded onto the ground surface away from surface water bodies in areas where infiltration can occur. Contaminated materials must be segregated into liquids or solids and drummed separately for off-site disposal.

All wastes generated shall be containerized in an appropriate container (i.e. open or closed top 55-gallon drum, roll-off container, poly tote, cardboard box, etc.) as directed by the PM. Prior to putting waste containers into service, the containers should be inspected for damages or defects. Waste containers should be appropriately labeled indicating the contents, date the container was filled, owner of the material (including address) and any unique identification number, if necessary. Upon completion of filling the waste container, the container should be inspected for leaks and an appropriate seal.

Congested Area

- Provide barricades, fencing, warning signs or signals and adequate lighting to protect people while working in or around congested areas.
- Vehicles and heavy equipment with restricted views to the rear should have functioning back-up alarms that are audible above the surrounding noise levels. Whenever possible, use a signaler to assist heavy equipment operators and/or drivers in backing up or maneuvering in congested areas.
- Lay out traffic control patterns to eliminate excessive congestion.
- Workers in congested areas must wear high visibility clothing at all times.
- Be aware of Line of Fire hazards when performing work activities in congested areas.
- Hazards associated with SIMOPs should be discussed daily at Tailgate Safety Meetings.

Simultaneous Operations (SIMOPS)

SIMOPS are described as the potential class of activities which could bring about an undesired event or set of circumstances, e.g., safety, environment, damage to assets, schedule, commercial, financial, etc. SIMOPS are defined as performing two or more operations concurrently.

It is important that SIMOPS are identified at an early stage before operations commence to understand issues such as schedule clashes, physical clashes, maintenance activities, failure impacts, interferences between vessels, contracts and third part interfaces and environmental impacts.

SIMOPS can occur when H&A projects are executed at active facilities (e.g., installing a monitoring well in a parking lot of a manufacturing plant).

Controls

- Coordinate project with site activities.
- Identify and understand the hazards associated with the host/client's activities.
- Integrate site emergency response protocols where appropriate and communicate to all project staff.
- Integrate site communication protocols and communicate to all project staff.

TASK PPE AND SAFETY EQUIPMENT

The personal protective equipment and safety equipment (if listed) is specific to the associated task. The required PPE and equipment listed must be on site during the task being performed. Work shall not commence unless the required PPE is present.

The purpose of PPE is to provide a barrier, which will shield or isolate staff members from the physical, biological, chemical, and/or radiological hazards that may be encountered during task activities.

Required PPE	TASK 1	TASK 2	TASK 3
Hard hat	X	X	X
Safety glasses	X	X	X
Hard-toed Boots	X	X	X
Gloves	X	X	X
Long pants and 4-inch long sleeve shirt	X	X	X
Safety vest (Class 2)	X	X	X
Hearing Protection	X		
Facial Covering	X	X	X
COVID-19 PPE & Supplies	X	X	X

TRAINING REQUIREMENTS

The table below lists the training requirements staff must have respective to their assigned tasks and that required to access the site.

Task Specific Training	
Required Training: OSHA 40-hour HAZWOPER, 8-hour HAZWOPER Refresher, On Site training	**Task 1 and Task 2**
Required Training: OSHA 40-hour HAZWOPER, 8-hour HAZWOPER Refresher, On Site training, 10 hour OSHA Construction Training	**Task 3**

SITE CONTROL

The overall purpose of site control is to minimize potential contamination of workers, protect the public from the site's hazards, and prevent vandalism. Site control is especially important in emergency situations. The degree of site control necessary depends on site characteristics, site size, and the surrounding community. The following information identifies the elements used to control the activities and movements of people and equipment at the project site.

Communication

Internal

H&A site personnel will communicate with other H&A staff member and/or subcontractors or contractors with:

- Face-to-Face Communication at a minimum of 6ft distance

External

H&S site personnel will use the following means to communicate with off-site personnel or emergency services.

- Cell Phones

Visitors

Project Site

Will visitors be required to check-in prior to accessing the project site?

- Yes
- All Visitors shall be briefed on COVID-19 protocols and PPE. Visitors not briefed, or that do not have the appropriate PPE will be asked to leave the site.

Visitor Access

Authorized visitors that require access to the project site need to be provided with known information with respect to the site operations and hazards as applicable to the purpose of their site visit. Authorized visitors must have the required PPE and appropriate training to access the project site.

Zoning

Work Zone

The work zone will be clearly delineated to ensure that the general public or unauthorized worker access is prevented. The following will be used:

- Flagging tape
- Cones
- Proper Signage

Project Site - Access

Work Hours

The following measure(s) will be used to control site entry and exit during site hours.

- Site is gated and fenced

After Hours
The following measure(s) will be used to control site entry and exit during hours that the site is not operating.

- None

Site Traffic Control
Is the work planned to be conducted on a public roadway or a public right-of-way?

- No

Restrooms
Available nearby restrooms include the following (COVID PPE to be worn and hand sanitization to occur before and after use of facilities)

- BP Gas Station, 655 Flushing Ave, Brooklyn, NY 11206
- Bushwick - Brooklyn Public Library, 340 Bushwick Ave, Brooklyn, NY 11206
- Business Center, 2 Skillman Street, Brooklyn, NY 11205

SPILL CONTAINMENT

An evaluation was conducted to determine the potential for hazardous substance spills at this site. This evaluation indicates that there is no potential for a hazardous spill of sufficient size to require containment planning, equipment, and procedures.

DECONTAMINATION

All possible and necessary steps shall be taken to reduce or minimize contact with chemicals and contaminated/impacted materials while performing field activities (e.g., avoid sitting or leaning on, walking through, dragging equipment through or over, tracking, or splashing potential or known contaminated/impacted materials, etc.).

Personal Hygiene Safeguards

The following minimum personal hygiene safeguards shall be adhered to:

1. No smoking or tobacco products on any Hazwoper project.
2. No eating or drinking in the exclusion zone.
3. It is required that personnel present on site wash hands before eating, smoking, taking medication, chewing gum/tobacco, using the restroom, or applying cosmetics and before leaving the site for the day.
4. It is recommended that personnel present on site shower or bathe at home at the end of each day of working on the site.

Personal Decontamination

Outer gloves and boots should be decontaminated periodically as necessary and at the end of the day. Brush off solids with a hard brush and clean with soap and water or other appropriate cleaner whenever possible. Remove inner gloves carefully by turning them inside out during removal. Wash hands and forearms frequently. It is good practice to wear work-designated clothing while on-site which can be removed as soon as possible. Non-disposable overalls and outer work clothing should be bagged onsite prior to laundering. If gross contamination is encountered on-site contact the Project Manager and Regional Health and Safety Manager to discuss proper decontamination procedures.
The steps required for decontamination will depend upon the degree and type of contamination but will generally follow the sequence below.

1. Remove and wipe clean hard hat
2. Rinse boots and gloves of gross contamination
3. Scrub boots and gloves clean
4. Rinse boots and gloves
5. Remove outer boots (if applicable)
6. Remove outer gloves (if applicable)
7. Remove Tyvek coverall (if applicable)
8. Remove respirator, wipe clean and store (if applicable)
9. Remove inner gloves (if out gloves were used)

PPE that is not grossly contaminated can be bagged and disposed in regular trash receptacles.

This decontamination procedure is applicable to Task(s): 1

Small Equipment Decontamination

Pretreatment of heavily contaminated equipment may be conducted as necessary:

1. Remove gross contamination using a brush or wiping with a paper towel.

2. Soak in a solution of Alconox and water (if possible)
3. Wipe off excess contamination with a paper towel

Standard decontamination procedure:

1. Wash using a solution of Alconox and water
2. Rinse with potable water
3. Rinse with methanol
4. Rinse with distilled/deionized water

Inspect the equipment for any remaining contamination and repeat, as necessary.

This decontamination procedure is applicable to Task(s): 1

Standard Disposal Methods for Contaminated Materials

Excess sample solids, decontamination materials, rags, brushes, poly sheeting, etc. that are determined to be free of contamination through field screening can usually be disposed into client-approved, on-site trash receptacles. Contaminated materials must be segregated into liquids or solids and drummed separately for off-site disposal as defined by and in accordance with applicable regulatory requirements.

Standard Disposal Methods for Contaminated Soils

Contaminated soil cuttings and spoils must be drummed for disposal off-site. Soil cuttings and spoils determined to be free of contamination through field screening can usually be returned to the associated boreholes or excavations.

EMERGENCY RESPONSE PLAN

Medical

If there is an injury or illness associated with an H&A staff member on the job-site, stop work, stabilize the situation, and secure the site. Assess the severity of the injury or illness to determine the appropriate course of action as listed below.

First Aid Injury

First aid will be addressed using the on-site first aid kit. H&A employees are not required or expected to administer first aid/CPR to any H&A staff member, Contractor, or Civilian personnel at any time and it is H&A´s position that those who do, are doing it on their behalf, and not as a function of their job.

- Injury or illness requiring clinic/hospital visit **WITHOUT** ambulance service

  Injuries or illnesses requiring hospital service without ambulance services include minor lacerations, minor sprains, etc. The following action will be taken:

  - The H&A SSO will ensure prompt transportation of the injured person to the clinic or hospital identified in the safety plan.
  - Another H&A staff member, or contractor on-site, will always drive the injured staff member to the medical facility and remain at the facility until the staff member has been discharged. Staff members will not self-transport to the clinic or hospital.
  - If the injured staff member is able to return to the job site the same day, he/she will bring with him/her a statement from the doctor containing such information as:

- Date
- Employee´s name
- Diagnosis
- Date he/she is able to return to work, regular or light duty

- Date he/she is to return to doctor for follow-up appointment, if necessary
- Signature and address of doctor

Injury or illness requiring a hospital visit **WITH** ambulance service

Injuries or illnesses requiring hospital service with ambulance services include severe head injuries, severe lacerations, heart attacks, heat stroke, etc. The following steps will be taken immediately:

- Call for ambulance service and notify the H&A SSO.
- Comfort the individual until ambulance service arrives.
- While the injured employee is being transported, the H&A SSO will contact the medical facility to be utilized.
- One designated representative will accompany the injured employee to the medical facility and remain at the facility until final diagnosis and other relevant information is obtained.

Notifications

For all injuries or illnesses notify the SSO and PM who in turn will contact Corporate H&S. Within 24 hours the injured staff member or PM will complete the H&S Reporting Form found on HANK. Minor cuts, scratches, and bruises shall also be reported through the H&S Reporting Form. Notify the client in accordance with their notification protocol. Depending on severity, Human Potential will as promptly as possible following an injury or illness, ensure appropriate notification has been made to the family of the individual involved.

Severe Weather

Where the threat of electrical storms and the hazard of lightning exist, staff shall ensure that there is the ability to detect when lightning is in the near vicinity and when there is a potential for lightning and to notify appropriate site personnel of these conditions. The weather forecast will be checked on a daily basis and communicated at the daily safety tailgate meetings.

When lightning is detected or observed the information will be communicated to all crews in the field for appropriate action. Field supervisors will make the decision to stay put or to leave the work site. A location will be identified to marshal field staff in the event that staff are required to leave the job site. A similar decision process will be used during heavy rain events.

Staff shall seek appropriate shelter and not stay in the open.

Evacuation Alarms

Verbal Communication will be used to communicate the evacuation alarm.

Emergency Services

Cellular phone will be used to contact Emergency Services.

Emergency Evacuation Plan

The site evacuation plan is as follows:

1. Establish a designated meeting area to conduct a head count in the event of an emergency evacuation.
2. If the work area is not near an emergency exit, exit via the closest route and meet at the designated meeting area.
3. Notify emergency response personnel (fire, police, and ambulance) of the number of missing or unaccounted for employees and their suspected location.
4. Administer first aid in the meeting area, as necessary.

Under no circumstances should any personnel re-enter the site area without the approval of the corporate H&S manager, the H&S coordinator, and the fire department official in charge.

ROLES AND RESPONSIBILITIES

FIELD SAFETY MANAGER (FSM)

The Haley & Aldrich FSM, Brian Ferguson, is a full-time Haley & Aldrich staff member, trained as a safety and health professional, who is responsible for the interpretation and approval of this Safety Plan. Modifications to this Safety Plan cannot be undertaken by the PM or the SSO without the approval of the FSM.

Specific duties of the FSM include:

- Approving and amending the Safety Plan for this project
- Advising the PM and SSOs on matters relating to health and safety
- Recommending appropriate personal protective equipment (PPE) and air monitoring instrumentation
- Maintaining regular contact with the PM and SSO to evaluate the conditions at the property and new information which might require modifications to the HASP and
- Reviewing and approving JSAs developed for the site-specific hazards.

PROJECT MANAGER (PM)

The Haley & Aldrich PM, Mari Cate Conlon, is responsible for ensuring that the requirements of this HASP are implemented at that project location. Some of the PM´s specific responsibilities include:

- Assuring that all personnel to whom this HASP applies have received a copy of it;
- Providing the RHSM with updated information regarding environmental conditions at the site and the scope of site work;
- Providing adequate authority and resources to the on-site SSO to allow for the successful implementation of all necessary safety procedures;
- Supporting the decisions made by the SSO;
- Maintaining regular communications with the SSO and, if necessary, the FSM;
- Coordinating the activities of all subcontractors and ensuring that they are aware of the pertinent health and safety requirements for this project;
- Providing project scheduling and planning activities; and
- Providing guidance to field personnel in the development of appropriate Job Safety Analysis (JSA) relative to the site conditions and hazard assessment.

SITE SAFETY OFFICER

The SSO, Zach Simmel, is responsible for field implementation of this HASP and enforcement of safety rules and regulations. SSO functions may include some or all:

- Act as H&A´s liaison for health and safety issues with client, staff, subcontractors, and agencies.
- Verify that utility clearance has been performed by H&A subcontractors.
- Oversee day-to-day implementation of the Safety Plan by H&A personnel on site.
- Interact with subcontractor project personnel on health and safety matters.
- Verify use of required PPE as outlined in the safety plan.
- Inspect and maintain H&A safety equipment, including calibration of air monitoring instrumentation used by H&A.

- Perform changes to HASP and document as needed and notify appropriate persons of changes.
- Investigate and report on-site accidents and incidents involving H&A and its subcontractors.
- Verify that site personnel are familiar with site safety requirements (e.g., the hospital route and emergency contact numbers).
- Report accidents, injuries, and near misses to the H&A PM and Field Safety Manager (FSM) as needed.

The SSO will conduct initial site safety orientations with site personnel (including subcontractors) and conduct toolbox and safety meetings thereafter with H&A employees and H&A subcontractors at regular intervals and in accordance with H&A policy and contractual obligations. The SSO will track the attendance of site personnel at H&A orientations, toolbox talks, and safety meetings.

FIELD PERSONNEL

Haley & Aldrich personnel are responsible for following the health and safety procedures specified in this HASP and for performing their work in a safe and responsible manner. Some of the specific responsibilities of the field personnel are as follows:

- Reading the HASP in its entirety prior to the start of on-site work;
- Submitting a completed Safety Plan Acceptance Form and documentation of medical surveillance and training to the SSO prior to the start of work;
- Attending the pre-entry briefing prior to beginning on-site work;
- Bringing forth any questions or concerns regarding the content of the Safety Plan to the PM or the SSO prior to the start of work;
- Stopping work when it is not believed it can be performed safely;
- Reporting all accidents, injuries and illnesses, regardless of their severity, to the SSO;
- Complying with the requirements of this safety plan and the requests of the SSO; and
- Reviewing the established JSAs for the site-specific hazards on a daily basis and prior to each shift change, if applicable.

VISITORS

Authorized visitors (e.g., Client Representatives, Regulators, Haley & Aldrich management staff, etc.) requiring entry to any work location on the site will be briefed by the Site Supervisor on the hazards present at that location. Visitors will be escorted at all times at the work location and will be responsible for compliance with their employer´s health and safety policies. In addition, this safety plan specifies the minimum acceptable qualifications, training and personal protective equipment which are required for entry to any controlled work area; visitors must comply with these requirements at all times. Unauthorized visitors, and visitors not meeting the specified qualifications, will not be permitted within established controlled work areas.

APPENDICES

Appendix A – COVID-19 Fact Sheets and Forms

APPENDIX A
COVID-19 FACTSHEETS AND FORMS

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INSERT PROJECT NAME

KEY TASK ENTER TASK NUMBER.: ENTER TASK NAME.

Subtask Category	Potential Hazards	Controls
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.
Enter subtask information.	Choose category.	• Enter control(s) for each hazard.

COVID-19 ADDENDUM

ATTACHMENTS

- COVID-19 Policy
- COVID-19 HASP Addendum - Job Hazard Analyses
- Tailgate Meeting Form
- Work and Hygiene Procedures
- What to do If you have been Exposed
- Face Covering
- Sub Contractor Self Declaration
- Field Office/Trailer Use
- Project Shutdown
- Roles and Responsibilities

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COVID 19 Policy
HASP Addendum Instructions

Incorporate the following into the HASP Addendum to protect field staff, business partners, clients, and the general public at project sites:

- COVID-19 is part of H&S planning and will be risk assessed prior to mobilization and approved by the Field Safety Manager.
- If we are not the controlling employer, ensure we understand what the project is doing for COVID-19 mitigation methods prior to mobilization.
- **Most sites have a COVID-19 Plan, it is your duty to obtain a copy of that plan.**

Fit for Duty –

All subcontractors (if subcontracted to H&A), and visitors (if H&A is Controlling Employer) will sign the Self-Declaration form at the start of the project. Everyone must acknowledge the Fit for Duty of the Daily Tailgate form to affirm staff report fit for duty and symptom free each day.

- All employees working on a site controlled by another employer will self-certify to them that they have no COVID-19 symptoms, tested positive, nor have had known "close contact" with an individual who has tested positive and have not been asked to self-isolate by their doctor or local public health official.
- If you can't self-certify, you must leave the site. If others can't self-certify remove them from the site or notify their supervisor to remove them.

ZERO TOLERANCE - Do not come to the site if you are sick, tested positive, or if you have been in close personal contact with someone with symptoms of COVID-19.

If others come to the site while sick, isolate yourself from them and ask them to leave or notify their supervisor.

Limit Potential Exposure –

- Do not enter job trailers or offices if possible. If you do enter, follow all requirements found in the Field Office/Trailer Use policy.
- Do not congregate with others and maintain a minimum distance of 6'. If you can maintain greater distances, please do so.
  - Tailgates should be done at distance
  - Bring food from home if possible and avoid the food truck. Do not congregate with other at breaks and at the food trucks.
- Clean all the surfaces you touch at least twice each day using the recommended disinfectants. This includes desks, tablets, phones, and laptops.
- Do all you can to maintain your good health by getting adequate sleep, eating a healthy diet, avoid alcohol, and consuming plenty of fluids.
- Face coverings are mandatory unless an approved task specific risk assessment has been completed.
- Avoid restaurants and food trucks and do not eat meals in a group.

The risk associated with potential exposure to COVID-19 will be considered as part of the project planning and HASP development cycle.

Have H&S review the HASP.

Business partners for sites managed by H&A (H&A Controlling Employer) will have completed the Self Declaration Form.

Approved and appropriate Personal Protective Equipment and supplies are used as indicated by the HASP.

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COVID 19 Policy
HASP Addendum Instructions

Cleaning/sanitizing/disinfecting

- If a job office/trailer is present, See Field Office/Trailer policy for further guidance.
- Clean and disinfect rental vehicles and hotel spaces (see Fact Sheet).

Personal Hygiene

- Wear gloves at all times. At a minimum cut resistant gloves should be worn at all times while on site.
- Handwashing or hand sanitizing should happen after using restrooms, before and after eating, coming onsite, and going offsite. If handwashing equipment isn't available, hand sanitizing products should be used (see Fact Sheet).
- Wear cloth face covering if there is a potential for staff and/or subcontractors to be within 6 feet of one another. See Fact Sheet for further guidance on Face Cloth Coverings.
- Avoid touching the face area (eyes, nose, mouth) at all times, even when wearing gloves (see Fact Sheet).

❖ **Please complete the following two pages for EACH project prior to beginning work**. Staff shall ensure that a COVID HASP Addendum is completed and reviewed prior to entering the field each day and includes the additions of any new tasks.

COVID 19 Policy
HASP Addendum

HEALTH & SAFETY FACTSHEET

COVID-19 PROJECT SPECIFIC JOB HAZARD ANALYSIS

Does the client or Controlling Employer (if H&A is not controlling employer) have specific requirements related to COVID-19?
If yes, please attach the requirements. ☑ Yes ☐ No

Do we have the necessary supplies on hand? ☑ Yes ☐ No
(Supplies include face coverings, disinfectant, hand washing stations or sanitizer, and PPE.)

The following **must** be onsite(☑ to acknowledge):

- ■ Has the Tailgate Meeting Form been provided?
- ■ Has the Work and Hygiene Procedures Policy been provided?
- ■ Has the What To Do if You Have Been Exposed policy been provided?
- ■ Has the Face Covering policy been provided?
- ■ Has the Sub-Contractor Self Declaration form been completed by all H&A subs? (leave blank if no subs on site)
- ■ Has the Field Office/Trailer Use Policy been provided?
- ■ Has the Project Shutdown/Suspension policy been provided?

Is there staff travel involved with this project? (If yes please answer the following questions) ☐ Yes ☑ No
Has the Travel Procedure policy been provided? ☐ Yes ☐ No
Has the Interstate Travel Form been approved by the BU GM? ☐ Yes ☐ No

❖ Complete the Job Hazard Analysis on the following page and return to H&S for review.

- Be as **detailed as possible** when breaking down the task being performed into individual steps that will be performed.
  - Example Tasks: Traveling to site, Drilling, Sampling, Breaks, Tailgate meetings, Equipment Breakdown etc.
- Identify if any of the steps will require staff or subcontractors to break the 6-foot social distance, and if so, what is the duration of that step.
- Identify what control measures will be implemented for each step to prevent the potential spread of COVID-19. For projects involving numerous tasks, each with several steps, extra space is required to complete a thorough JHA.
  - Example control measure: Sanitize after use, Drive in separate cars, Do not use field trailer, Use gloves when handling, Eat/Drink away from others etc.
- Use blank copies of the following page as needed.
- If staff have any questions or concerns when completing the JHA, please reach out to their Regional Health & Safety Manager or HealthSafetyHelp@HaleyAldrich.com for support.

COVID 19 Policy
HASP Addendum

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HEALTH & SAFETY FACTSHEET

COVID-19 PROJECT SPECIFIC JOB HAZARD ANALYSIS

Task and Associated Steps	6-ft Distance Achieved?	Task Time	What Procedures are going to be put in place?
Travel to and from site	Yes	0.5-1 hr	All staff will take separate personal vehicles to site
Equipment/Bottle Delivery	Yes	0.25 hr	Deliveries will be brought to the site, exterior will be wiped down, hand
			off will be done so 6 ft distance is maintained, gloves and masks will
			be worn by both parties
Safety Tailgate	Yes	0.25 hrs	Maintain 6 ft distance, do not share pens, wear masks, no hand shaking
Drilling Oversight	Yes	All day	Maintain 6 ft distance, gloves and masks will be worn by all parties
Soil Logging	Yes	All day	Set up logging station away from drilling area, maintain 6 ft distance
			gloves and masks will be worn by all parties
Sampling			Maintain 6 ft distance, gloves and masks will be worn by all parties
Sample/Equipment Pickup	Yes	0.25 hrs	Hand off will be done so 6 ft distance is maintained, gloves and masks
			will be worn by both parties, paperwork will be signed using a personal
			pen
Visitors	Yes	N/A	Maintain distance, brief visitors with HASP and review self declaration
			verbally, masks to be worn by all parties
Eating/drinking	Yes	N/A	Use hand sanitizer/wash hands often and before/after eating, maintain
			6 ft distance
Restroom	Yes	N/A	Sanitize areas before and after use/frequently throughout day, if using
			restroom offsite wear gloves, mask and sanitize hands before & after

PM Signature: Mari Cate Conlon **Date:** 02-03-2021

FSM Signature: [signature] **Date:** 02-03-2021

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HALEY ALDRICH

Daily COVID Self-Declaration and H&S Tailgate Meeting Form

Project:	Project No.:
Location:	Project Manager:
Subcontractor(s):	Date:
Site Safety & Health Officer (SSHO):	SSHO Contact Info:

Worker Acknowledgement

By signing here, I am stating the following:

1. I understand the hazards and risk control actions associated with each task I am about to perform.
2. I understand the permit to work requirements pertinent to the work I am about to perform (if applicable).
3. I am aware that no tasks or work that is not risk-assessed is to be performed.
4. I am also aware of my obligation to implement 'Safe Work'.
5. I arrived and departed fit for duty.
6. I am physically and mentally fit for duty.
7. I am not under the influence of any type of medication, drugs, or alcohol that could affect my ability to work safely.
8. I am aware of my responsibility to bring any illness, injury (regardless of where or when it occurred), or fatigue issue I may have to the attention of the SSHO.
9. I signed out uninjured unless I have otherwise informed the SSHO.
10. I acknowledge that in the past 14 days I have not had any COVID related symptoms or illness, nor have I been in close contact with anyone who has or had COVID related symptoms or illness.

Common COVID-19 Symptoms:

- **Fever**
- **Sinus Pain**
- **Cough**
- **Altered smell or taste**
- **Expectoration**
- **Stuffy nose**
- **Chills**
- **Fatigue**
- **Sore Throat**
- **Headache**
- **Difficulty Breathing**
- **Joint or Muscle Pain**
- **Diarrhea**
- **Vomiting**

Name (print)	Company	Initials & Sign In/Out Time	
		In & Fit	Out & Fit

Visitor Log (*Site Visitors not involved in the work activities*)

Name (print)	Company	Initials & Sign In/Out Time	
		In & Fit	Out & Fit

Emergency Procedures

If an emergency occurs, follow procedure outlined in the HASP and contact numbers below. If non-life-threatening injury occurs, contact PM to report the incident. Seek first-aid treatment from the Occupational Health Center, as outlined in the HASP.

Emergency Dispatch phone number if other than 911:	
Local Hospital:	Local Hospital Phone #:
Evacuation/Muster Point:	Alt Evacuation/Muster Point:

Simultaneous Operations (SIMOPS)

SIMOPS or Multi-Crew Activity	☐ Yes	☐ No	If yes, describe SIMOPS:
Has SIMOPS been communicated to all workforce?	☐ Yes	☐ No	
SIMOPS PIC:		**Phone Number:**	

Task Identification

Task	**Responsible Company**	**Task Supervisor**

Required Permits/Forms (*check all that apply*)

☐None	☐Lifting Plan	☐Other:
☐Confined Space Entry Permit	☐Hot Work Permit	☐Other:
☐Lock-out / Tag-out (LOTO)	☐Ground Disturbance Permit	☐Other:
☐Excavation Permit	☐Other:	☐Other:

Discussion of Work Hazards *(check all that apply)*

☐Chemical	☐Hazardous materials (lead, asbestos, etc.)	☐Radiological
☐Confined space	☐Hoisting and rigging	☐Stored energy LOTO
☐Congested work area	☐Hot work	☐Traffic control
☐Elevated work	☐Material handling	☐Weather and/or temp extremes
☐Ergonomics	☐Noise pollution	☐Waste generation
☐Emergency egress	☐Oxygen deficiency	☐Other:

Required PPE *(check all that apply)*

☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Hearing Protection	Safety Eyewear	Hard Hat	Safety Toed Shoes	Leather or Palm Protective	Safety Vest	Protective Clothing	Respiratory Protection	PFD	Face Shield	Fall Protection

Tailgate Topic / Hazard Discussion

Item	Discussion

Management of Change (MoC)

Does the work activity require a MoC? If yes, has it been authorized by applicable management? ☐No ☐Yes
Has the safety information been updated to incorporate any change in product, equipment, material, or process? This information should include how to investigate accidents, audit compliance with safety procedures, and plan for emergency responses. ☐No ☐Yes
Have the procedures for a MoC been reviewed and evaluated? ☐No ☐Yes
Have all affected staff been informed and trained on the new equipment, process, or other changes? Health and safety hazards must be emphasized including processes/procedures in an emergency. The training must occur before any staff is allowed to operate the equipment or perform the job relating to the changes. ☐No ☐Yes
Have written procedures been put into place for the next time there is a change in safety management? ☐No ☐Yes

Best Practice(s) Observed? ☐ Yes ☐ No If yes, describe:	**H&S Observations/ Near Misses/ Incidents Reported?** ☐ Yes ☐ No If yes, describe:
Safe Work Interventions? ☐ Yes ☐ No If yes, describe:	**Have additional hazards and risk controls been identified for future work?** ☐ Yes ☐ No If yes, update appropriate job hazard analysis (JHA).

Site Safety & Health Officer Acknowledgement

At the conclusion of the day, I certify that the work site has been inspected and is being left in a safe and clean condition and any incidents have been properly reported.

Signature Date

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COVID 19 Policy
Work and Hygiene Procedures

HEALTH & SAFETY FACTSHEET

The following must be completed and implemented prior to each time you enter the work environment (office, field, client site, travel or any other place you are to perform work duties):

- **Staff must self-declare through Gensuite each morning before leaving their house to come into work.**
  - Staff must enter a self-declaration each time they enter the office, and
  - Staff must enter a separate self-declaration for project site. Staff may list multiple sites in the text field of the form.
- **Do not come in, if you are sick, have symptoms, or were in close contact with someone with COVID-19.**
- **Isolate others that are sick or have COVID-19 symptoms.** If another person on site does come into work or to the site sick, isolate them, and send them home if Haley & Aldrich is the controlling employer. If Haley & Aldrich is not the controlling employer, isolate yourself from the person, and inform the controlling employer accordingly. Report symptoms, illness, or close contact to COVIDHelp@haleyaldrich.com immediately.
- **Staff must wear a face covering at all times in the work environment** regardless of physical distancing, unless specifically exempted by H&S.
  - Staff shall use Company provided face covering while in our offices.
- **Staff should make every effort to host meetings virtually and avoid in person contact**.
- **All in-person meetings deemed essential must be pre-approved by the Office COVID Leader.** All Staff must always wear face coverings during meetings. Staff shall wear face coverings regardless of whether the meeting takes place in our office or off-site.
- **Staff must keep at least 6' apart at all times.** Floor markings and conference room markings have been put in place to illustrate appropriate distance for areas where employee(s) may congregate (i.e., administrator's desk, printer).
- **H&A staff will not host or participate in gatherings that require staff to remove their masks. Currently, the Company does not allow lunch, dinner, and/or drink meetings.**
- No communal food such as snacks, bagels, coffee, or creamers.
- All Personal Protective Equipment, supplies, and cleaning and disinfectants are ordered through Desmond Crawford.

Gensuite

Employees sign in through Gensuite and self-declare:

- **They have no symptoms:**
  - Fever
  - Cough
  - Sinus pain
  - Reduced or altered sense of smell or taste
  - Expectoration
  - Stuffy nose
  - Chills, repeated shaking with chills
  - Fatigue
  - Sore throat
  - Headache
  - Difficulty breathing, shortness of breath
  - Joint or muscle pain
  - Diarrhea
  - Vomiting
- **They have not been exposed to someone who has symptoms or has tested positive for COVID-19 within the past 14 days.**

All staff are expected to comply with this policy and the Office Specific HASP.

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COVID 19 Policy
Work and Hygiene Procedures

Employ the following good hygiene practices:

- **Practice social distancing.** Stay 6 feet away from other people. If possible, avoid use of shared site/job trailers. If shared spaces need to be utilized see Field Trailer Cleaning and Disinfection Guide.
- **Bring your own food.** If you can, bring your own food to the site. Avoid restaurants and food trucks to reduce potential exposure.
- **Cover your mouth**. Cover your mouth when you cough or sneeze by using a tissue that you immediately discard into a waste container or cough or sneeze into the inside of your elbow.
- **Wash frequently**. Wash your hands routinely with each change of glove or use hand sanitizer with greater than 60% ethanol or 70% isopropanol. Wash hands or use hand sanitizer after each time you cough or sneeze.
- **Don't touch your face, eyes, mouth**. Avoid touching your face throughout the day.
- **Do not reuse single use PPE.** Do not insert single use ear plugs with gloves on. Disinfect hands and then insert ear plugs.
- **Clean and disinfect.** Carry disinfectant from the EPA list with you and wipe down surfaces you touch prior to starting work and routinely throughout the day, including rental cars and hotel spaces as appropriate.
- **Frequently disinfect common touch points**. Clean and disinfect all supplies (pens, clipboards, etc.), tablets, cellphones, reusable equipment (meters, pumps, etc.), and non-disposable PPE (hardhats, safety glasses, earmuffs) at the end of each day.
- **Take care of your face covering.** When using face coverings, carefully remove, contain after use and launder. See Face Covering Fact Sheet.

Office Reopening

- Staff shall not work in offices that are currently deemed closed. Contact Health & Safety if you have a need to work in a closed office.
- All re-opened offices will be audited to ensure adherence.

- Change and discard gloves routinely and after each time you cough or sneeze (see Fact Sheet, Glove Removal).

- Wash hands or use hand sanitizer with more than 60% ethanol or 70% isopropanol immediately after removing gloves.

- Avoid touching your face (eyes, nose, mouth), even when wearing gloves

https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2

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COVID 19 Policy
What to do if you have been exposed

HEALTH & SAFETY FACTSHEET

Per CDC: Look for **emergency warning signs*** (trouble breathing, persistent pain or pressure in the chest, new confusion, inability to wake or stay awake, bluish lips or face) for COVID-19. If someone is showing any of these signs, **seek emergency medical care immediately**

*This list is not all possible symptoms. Please call your medical provider for any other symptoms that are severe or concerning to you.

- **Separate and isolate immediately** - If you are at work when notified or at the time of symptom onset, isolate and leave work immediately.
  - **Close Contact**: someone who was within 6 feet of an infected person for a cumulative total of 15 minutes or more over a 24-hour period starting from 2 days before illness onset (or, for asymptomatic patients, 2 days prior to test specimen collection) until the time the patient is isolated.
  - **Symptoms or illness**: fever, cough, sinus pain, reduced or altered sense of smell or taste, expectoration, stuffy nose, chills, repeated shaking with chills, fatigue, sore throat, headache, difficulty breathing, shortness of breath, joint or muscle pain, diarrhea, vomiting.
  - **Positive Test Result (Asymptomatic):** You have received a positive test result. When you receive the result, you are confirmed positive. The day you receive the result will be considered Day 0.
- Contact COVIDHelp@haleyaldrich.com as soon as it is safe to do so.
- A member of the Health & Safety staff will reach out to you to ask:
  - Specific details about your individual case
  - Who you have been in contact with at work
  - Any contact from state contact tracers
  - Project specific information
  - Other

If your state contact tracers contact you, you are obligated to follow their direction. Please record their direction and make this information available to H&S when they call.

Continue to monitor for symptoms (fever, cough, sinus pain, reduced or altered sense of smell or taste, expectoration, stuffy nose, chills, repeated shaking with chills, fatigue, sore throat, headache, difficulty breathing, shortness of breath, joint or muscle pain, diarrhea, vomiting). Seek medical attention if warranted.

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COVID 19 Policy
What to do if you have been exposed

CDC Guidance for Close Contact

- https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/quarantine.html

CDC Guidance for Symptoms

- https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html

CDC Guidance for Positive Test (Asymptomatic)

- https://www.cdc.gov/coronavirus/2019-ncov/testing/diagnostic-testing.html#who-should-get-tested

H&A Policy for Case Management

- Staff members are required to report any close contact, symptoms, or positive test immediately to COVIDHelp@haleyaldrich.com any time that they have or had plans to enter the work environment during their COVID case (2 days prior to symptoms, positive test results, or close contact and 14 days after such time):
  - Any time staff leave their home for work, e.g., working on a project site, working in an H&A office, traveling for work, meeting with a client, etc.
  - They have been in or will be in contact with other staff, clients, sub-contractors or other work parties.
- Staff members are required to work with Health & Safety to detail their case. It is important that Health & Safety notify all potentially contacted parties as soon as possible.
  - Notification will be completely anonymous per privacy laws.
  - Notification will only be made, if there has been close contact, other potential for infection exists, or as required by site specific COVID protocol.
- Staff members are required to work with Health & Safety to quarantine until such time they are cleared to return to work.
  - Health & Safety will review CDC and State requirements for each case to ensure we provide appropriate direction to the staff member.
  - If the staff member is contacted by their state contact tracing program, they are expected to follow their direction, and to contact Health & Safety to share that direction.
  - Staff member will not return to work until approved by Health & Safety.
- H&A may provide a test kit to staff to expedite testing and to shorten quarantine times. These test kits are PCR saliva test kits.
- Due to the variation in state rules and cases, each case may be different as we ensure we address the person's concerns, the state's requirements, and the nature of the case.

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COVID 19 Policy
Face Covering Requirement

HEALTH & SAFETY FACTSHEET

When entering the work environment, employ the following face covering practices:

- **Face covering is mandatory, unless an approved task specific risk assessment has been done stating it can be removed. 6' of social distancing is also required, the use of face coverings does not preclude you from social distancing.**
- Face coverings are not required when you are alone at your workstation or a task-specific assessment has been completed and approved by H&S.
- If it is a medical mask, ensure the proper side of the disposable covering faces outward. Most disposable coverings have white on the inside and a different color on the outside.
- **Maintain 6 feet social distancing practices**.
- When wearing a face covering, it should:
  - **cover your nose and mouth**
  - **fit snugly** but comfortably against the side of the face
  - **be secured** with ties or ear loops
  - **If it is reusable it should include multiple layers** of fabric
  - **allow for breathing** without restriction
- **Carefully remove face covering.** Be careful not to touch your eyes, nose, and mouth when removing face covering and wash hands immediately after removing.
- **Contain reusable face covering after use**. Have a bag or bin to keep reusable face coverings in until they can be laundered. Disposable face coverings should be disposed after each shift or more frequently if needed.
- **Launder and dry.** Reusable face coverings should be laundered routinely based on frequency of use. Launder in hot water with detergent and dry on a hot cycle.
- **Request reimbursement.** Reusable face coverings are reimbursable for field staff assigned to projects. Disposable face covering are provided in the office or upon request.

- Face coverings are not a substitute for physical distancing, washing hands and staying home when ill.
- Wash hands or use hand sanitizer with more than 60% ethanol or 70% isopropanol immediately after removing face covering.
- Discard face coverings that: No longer cover the nose and mouth; Have stretched out or damaged ties or straps; Cannot stay on the face; Have holes or tears in the fabric.

COVID 19 Policy
Face Covering Requirement

DO

- DO continue to practice social distancing
- DO continue to wash hands routinely
- DO continue to cover your mouth when you sneeze or cough
- DO continue to carry EPA approved disinfectant with you
- DO continue to disinfect pens, tools, clipboards, door handles, cellphones, safety glasses, etc.
- DO use the CDC website as a reference to stay informed and current with COVID-19: https://www.cdc.gov/coronavirus/2019-nCoV/index.html
- DO continue to check on state, local or municipal COVID-19 guidelines and restrictions
- DO continue to check the HANK COVID-19 resource page for updated information: https://hank.haleyaldrich.com/staffcenter/SitePages/COVID-19%20Resources.aspx
- DO contact Health & Safety with questions. Email HealthSafetyHelp@haleyaldrich.com with questions.
- **DO wear your mask to completely cover your nose and mouth.**

DO NOT

- DO NOT come to work if you are sick, have any COVID-19 related symptoms, or have been exposed to someone who is COVID-19 positive or has COVID-19 symptoms in the last 14 days, even if you are wearing a face covering
- DO NOT use the face covering as a replacement for social distancing
- DO NOT forget to clean your reusable face covering after each use or after each day
- DO NOT wear N95 respirators unless you are approved and are up to date with the H&A Respiratory Protection Program
- DO NOT share face coverings, even if cleaned, with another employee
- DO NOT use a face covering as a substitute for a respirator that is required for specific tasks
- DO NOT touch your face or reach under your mask
- **DO NOT wear your face covering on your chin or so that your nose is exposed**
- DO NOT wear an ill-fitting face covering

HALEY ALDRICH

Sub-contractor and Visitor Self-Declaration Form

The safety of our employees, customers, families, and visitors remains Haley & Aldrich's overriding priority. To prevent the spread of COVID-19 and reduce the potential risk of exposure to our employees and others, we are conducting a simple screening questionnaire. Your participation is important to help us take precautionary measures to protect you and everyone at this location.

Haley & Aldrich, Inc. will continue to monitor state and federal requirements and may make updates to our policy as warranted.

Name:	Personal Phone Number (mobile/home):
Company/Organization:	Haley & Aldrich Point of Contact:
Office/Project Site:	

If the answer is "yes" to any of the following questions and question 1a is not checked, access will be denied.

Self-Declaration	
1	Have you tested positive for COVID-19 or has a doctor confirmed you have a case of COVID-19? ☐ Yes ☐ No
1a	If the answer to question 1 is yes, have you been cleared by your doctor to return to work? ☐ I have been cleared to return to work.
2	Have you had close contact with or cared for someone diagnosed with COVID-19 within the last 14 days? ☐ Yes ☐ No
3	Have you experienced any cold or flu-like symptoms (to include fever, cough, sore throat, respiratory illness, difficulty breathing)? If yes, has it been less than 14 days since you experienced those symptoms? ☐ Yes ☐ No

Signature: ______________________________ Date: ______________

Note: If you plan to be at this location or project site for consecutive days, the Self-Declaration Form must be completed each day.

Access to location/project site (check one): ☐ **Approved** ☐ **Denied**

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COVID 19 Policy
Field Office/Trailer Use

HEALTH & SAFETY FACTSHEET

- **H&A Field Staff are not allowed to use a shared field office or trailer if:**
  - The occupancy is over the current State allowed limit.
  - It is not possible to maintain 6’ of separation at all times.
  - The site is not following strict COVID protocol for physical distancing and mask use.
  - There is poor ventilation.
  - There are no sanitation programs or practices. If H&A employees have work areas in a shared field trailer controlled by others, obtain information from controlling employer on sanitation practices.
- The H&A Site Safety Officers are responsible for cleaning all common areas within a field office or trailer space.
- To clean, use disinfectants found on the EPA list. Disinfecting refers to products that kill germs and lowers the risk of spreading infection. If you are not currently using a disinfectant on these surfaces, please purchase them.
- Labels contain instructions for safe and effective use of the product including precautions you should take when applying the product, such as wearing gloves (Personal Protective Equipment) and making sure you have good ventilation during use of the product. Gloves should be discarded after each cleaning and disinfection.
- Provide disposable disinfecting wipes for staff to use on commonly used surfaces (ex. keyboards, desks, etc.), which can be wiped down by staff at their own workstations. Throw disinfecting wipes away after one use.
- Have hand sanitizer available at your common areas for staff use. Post the WHO Hand Rubbing poster near sanitizers.
- If offices/trailers are not controlled by H&A, we recommend staff wear disposable nitrile gloves while accessing commons spaces (ex. opening doors, copy areas, shared desks) to limit potential exposures in areas controlled by others.

Routinely clean (at least once per day) and disinfect all frequently touched surfaces in the workplace such as desktops, refrigerators, microwaves, coffee makers, doorknobs, etc.

Use approved cleaners and disinfectants as directed. Ensure proper personal protective equipment is used. Throw away disposable items after each use such as gloves and disinfecting wipes.

Provide hand sanitizers, soap, and disinfectants to employees, business partners, and visitors for personal use, and encourage everyone to clean their desks, phones, cell phones, chairs, etc.

COVID 19 Policy
Field Office/Trailer Use

- EPA has an approved list of cleaners and disinfectants for the coronavirus that causes COVID-19.
- Many are common cleaners and disinfectants that may already be used in our offices, project sites, and in your homes.
- Check the updated list here:

https://www.epa.gov/pesticide-registration/list-n-disinfectants-coronavirus-covid-19

To assist in managing project office/trailer cleaning and disinfection, we have reserved this space for location specific information.

Hand sanitizer, cleaners, and disinfectants used at this location and where they can be found *(Insert items being used):*

Schedule of cleaning and disinfection practices (*Insert practices for this location*):

Project Shutdown/Suspension Covid-19

To be completed by Project Manager.

Please be sure to include a copy of the contract controlling the project when submitting this form via email.

If your project is shut down and/or suspended please provide the following information.

Reason for project interruption/shut down:

_______ Due to governmental action (e.g., 6 Bay Area counties' "Shelter In Place").

_______ By the client because of Covid-19.

_______ Other, Please describe: ____

Client Name: ____

Project Name and Number: ____

Name of CL and MSL: ____

Names of subcontractors or subconsultants.

Description of the client's method of notification (phone call, email from client, etc.)**.**

Description of the extent of the shutdown or suspension. For example: Is it limited to field work?

Please email this completed form back to Pat McKee (Legal) at pmckee@haleyaldrich.com.

Thank you.

COVID 19 Policy
Roles & Responsibilities

HEALTH & SAFETY FACTSHEET

ALL STAFF MEMBERS

- Accountable for complying with all general COVID policy included in the COVID documents, and for all Office specific requirements identified in the office specific HASP.
- Accountable for submitting a self-declaration form via Gensuite prior to any entry into Haley & Aldrich work environment, office or project site.
- Accountable for cleaning and disinfecting their space at least twice per day and more routinely if necessary.
- Accountable for cleaning and disinfecting common touch points in the office prior to and after using them (e.g., door handles, railings).
- Accountable for helping clean/disinfect common surfaces in the office at least twice per day and more routinely if possible.

COVID RESPONSE LEADER

- Overall accountability for the COVID response within the office.
- Work with H&S to develop an effective Office COVID Health and Safety Plan (HASP) and continue to work with H&S to check and adjust the plan as needed.
- Responsible for monitoring local conditions to identify if local cases begin to rise, if there are changes to government orders, or issues with execution of the Office COVID HASP that would require Haley & Aldrich to consider re-closing the office.
- Work with the COVID Coordinator to identify weaknesses in the plan, the execution, and staff compliance and make corrections as needed.
- Support the COVID Coordinator in correcting staff behavior when necessary.
- Primary liaison with the General Manager and H&S on all COVID issues.
  - Report issues with the plan or the execution of the plan.
  - Report local concerns, changes in government orders, and COVID related case concerns.
  - Work with the GM and H&S to make on-going determinations to move forward in opening the office or step back.
- The COVID Response Leader does not need to be in the office on a daily basis.

To review all HASPs related to COVID-19, go to the HANK Health and Safety page. On the right-hand side, you will find links to the COVID resources.

All Office HASPs can be found by clicking on the "COVID-19" green button and then clicking on the "Click Here" link to the right of the title.

COVID-19
STAFF CENTER RESOURCES

COVID-19

OFFICE HASPS
POLICY DOCUMENTS
LEGAL INFORMATION
FACT SHEETS
POSTING COMMUNICATIONS

Office Health & Safety Plans: Click here

COVID 19 Policy
Roles & Responsibilities

Safety in everything we do

HEALTH & SAFETY FACTSHEET

COVID RESPONSE COORDINATOR

- Overall accountability for the daily execution of the COVID response within the office
- Works with the COVID Response Leader and H&S to develop the Office COVID Health and Safety Plan (HASP) and continue to work with the COVID Response Leader and H&S to check and adjust the plan as needed.
- Responsible for printing, completing and posting all signs and notices identified in the HASP.
- Responsible for checking that staff have filled out the daily self-declaration before entering the office. Staff who have not completed the declaration will not be allowed in the office.
- Responsible for performing the weekly audit to ensure the HASP is being executed properly and staff are compliant with expectations.
- Responsible for daily checks to ensure postings are still up and legible, hand sanitizer is available, and cleaning supplies are sufficiently stocked.
- Responsible for daily checks to ensure the HASP is being executed as planned.
- The COVID Coordinator does need to be in the office at least 3 days per week.

HEALTH & SAFETY PLAN ACKNOWLEDGEMENT FORM

Note: Only H&A employees sign this page.

I hereby acknowledge receipt and briefing on this Health & Safety Plan prior to the start of on-site work and declare that I understand and agree to follow the provisions and procedures set forth herein while working on this site.

PRINTED NAME	SIGNATURE	DATE