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Site Characterization Work Plan

for

1810 Cropsey Ave LLC

**1810-1818 Cropsey Avenue,
Brooklyn, NY 11214**

Block: 6463, Lot:137

NYSDEC Site No.: 224320

NYSDEC Spill No.: 2007751

Prepared For:

New York State Department of Environmental Conservation

Division of Environmental Remediation

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Certification

I, Theodore Yen, P.E., am a Qualified Environmental Professional, as defined in RCNY § 43-1402(ar). I have primary direct responsibility for implementation of the Remedial Investigation for 1810-1818 Cropsey Avenue, Brooklyn, NY 11214 (NYSDEC Site No. 224320). I am responsible for the content of this Site Characterization Work Plan (SCWP), have reviewed its contents and certify that this SCWP is accurate to the best of my knowledge and contains all available environmental information and data regarding the property.

Theodore Yen, P.E.

Qualified Environmental Professional

Date

Signature



1.0 Introduction:

RSK Environmental Group, LLC (RSK) has prepared this *Site Characterization Work Plan* (SCWP) to summarize the proposed investigation designed to delineate the full extent of the contamination from dry-cleaning solvents and offsite petroleum spills to soil and groundwater beneath the site located at 1810-1818 Cropsey Avenue in Brooklyn, New York (Site No. 224320); hereafter referred to as the “Site”. The contamination was originally identified by RSK during investigations that are documented in a Phase-II Site Investigation Report dated September 21, 2020.

An Administrative Consent Order was executed between the potential purchaser, 1810 Cropsey Ave LLC, and the New York State Department of Environmental Conservation (“NYSDEC”) to address contamination beneath the Site (Order on Consent Index # CO2-20210315-158).

The proposed investigation described in this SCWP is consistent with the procedures defined in the NYSDEC’s *Technical Guidance for Site Investigation and Remediation* (DER-10) and complies with all applicable standards, criteria, and guidance. This project has been assigned Spill No. 2007751 by the NYSDEC Region 2 office which was a result of the findings from a Phase-II Environmental Site Investigation (Phase-II) as part of a real estate transaction. Results of the Phase-II identified impacted groundwater and sub-slab vapors beneath the building. Review of the Phase-II report by the NYSDEC confirmed that further delineation of groundwater, and vapor mitigation are required.

1.1 Site Location and Description:

The Site is also identified as Block: 6463, Lot: 137, and is located south of Cropsey Avenue (a.k.a. Victor V. Allegretti Way), north of Shore Parkway, east of 18th Avenue and west of Bay 19th Street which is situated within a mixed-use neighborhood in the Bensonhurst neighborhood of Kings County in Brooklyn, NY. A Site Location Map is provided as **Figure 1**. The Site is approximately 7,798-square feet in size and is developed with a one-story commercial building with a full cellar which has a total area of approximately 4,680-square feet. The building is supplied by public potable water supply and municipal sanitary sewer system. A Site survey is provided as **Figure 2**.

1.2 Site Use and History:

The primary zoning for the Site is R-5 designated district, which are mapped for residential use, with a C1-2 commercial overlay. The surrounding properties to the Site consist mainly of mixed-use residential and commercial properties. The surrounding properties to the east of the Site consists mainly of commercial properties, to the west and south of the Site are residential properties, and to the North of

the Site are detached commercial buildings utilized as car dealers (Ultra Auto Inc. and Bay Ridge Subaru Service). Review of the historical data from EDR City Directory and Sanborn Maps, depicted the historical use of a part of the Site (1812 Cropsey Avenue) was a former dry cleaner, circa 1960 to at least 1976. The Site is currently vacant with no activities. A surrounding land use map is provided as **Figure 3**.

The Site is currently in a real estate contract for sale and the potential purchaser is planning to renovate the existing building utilizing the cellar for storage of merchandise and the first floor for offices.

1.3 Geological Conditions:

The Site is primarily flat with some slight sloping. RSK's investigations identified fine, dark brown sand with small stones beneath the 4-inch-thick concrete slab of the building. Some coarse, dark brown sand were observed in the boreholes, which were advanced to 10 feet below the concrete slab.

Based on RSK's investigation, groundwater is expected to be encountered at a depth between 15.00-ft to 16.00-feet bgs. Groundwater in the area of the Site is not used for drinking purposes and residents are connected to the New York City Public Water Supply System. The nearest body of water is the Gravesend Bay, which is located approximately 1,020-feet south of the Site. Groundwater flow is generally south-southeast.

2.0 Description of Previous Investigations:

2.1 Records Search/Risk Assessment (RSRA):

A Records Search/ Risk Assessment (RSRA) was conducted for the Site by Bison Environmental LLC (BE) dated August 31, 2020, where the property was considered to be of a high environmental risk. BE concluded the presence of a dry cleaner at 1812 Cropsey Avenue from at least 1960 through 1983, and recommended a Phase-I investigation to determine any indications of a discharge onsite and if the dry-cleaner might have been a drop-off location only.

2.2 Phase-I Environmental Site Assessment:

A Phase-I Environmental Site Assessment was performed by RSK Environmental Group for the Site dated September 14, 2020, to address the risk mentioned by BE in the RSRA. As part of the Site history research, two (2) Recognized Environmental Conditions (RECs) and four (4) Business Environmental Risks (BERs) were identified for the Site. The Sanborn Maps and City Directory search for the Site depicted the presence of a dry-cleaning facility on-site using the address as 1812 Cropsey Avenue from 1960 to at least 1976. The EDR Radius Map review depicted various spills that occurred on the north-northwest and northeast section of the property at a higher elevation. These offsite spills were suspected to have impacted the subsurface quality beneath the Site due to its proximity and elevation, and warranted a Phase-II subsurface investigation.

RSK performed a follow-up site inspection on January 25, 2022, to assess the current condition of the Site. The Site did not depict any changes other than the drum previously identified on the first floor was no longer present at the Site.

2.3 Phase-II Environmental Site Investigation:

A Phase-II Environmental Subsurface Investigation was conducted by RSK Environmental Group at the Site on September 21, 2020, to address the suspected subsurface impacts by the historic usage as a dry-cleaning facility on-site and offsite spills. Soil, soil vapors and groundwater were sampled to determine the presence and extent of the contamination from dry-cleaning solvents and offsite petroleum spills. As part of the Phase-II, a total of four (4) soil samples, four (4) groundwater samples and four (4) air samples were collected for laboratory analysis. Four (4) soil borings (SB-1 through SB-4) were installed in the corners of the cellar at a depth of 10-feet below cellar grade and retrieved every 2-feet. The four soil borings were converted into temporary groundwater wells for sampling (GW-1 through GW-4). High PID readings were observed for the retrieved groundwater samples. A total of four (4) air samples

were taken from the Site; one (1) sub-slab sample (SI-1) from beneath the cellar; two (2) indoor air samples (the 1st floor (IA-1) and cellar (IA-2)), and one outdoor sample (OA-1). Analytical results did not identify contamination in the soil samples, or the results were well below the NYSDEC UUSCOs. Groundwater analysis depicted a consistency of petroleum-related contaminants in all four (4) samples (GW-1 through GW-4), predominately GW-1, GW-3, and GW-4 where eleven (11) VOCs, four (4) SVOCs and three (3) RCRA metals exceeded NYSDEC Groundwater Quality Standards. Soil Vapor Analytical results identified petroleum-related and chlorinated solvent contamination in the sub slab air samples for thirteen (13) VOCs, and consistent contamination in all four (4) air samples (SI-1, IA-1, IA-2, OA-1) for four (4) VOCs which exceed the NYSDOH Background standards for Indoor Air (please see the Phase-II Report attached as **Appendix A**). Based on these findings and results, a NYSDEC spill number (2007751) was generated for the Site and a review of the Phase-I ESA and Phase-II SIR was conducted by the state.

3.0 Site Characterization Work Plan

All remedial work performed under this plan will be in full compliance with governmental requirements, including site and worker safety requirements mandated by Federal OSHA. As well as RSK's Corporate Health and Safety Policy and a site-specific HASP (**Appendix B**). Modifications to the work plan will be made in consultation with, and under approval of, the NYSDEC. The sampling procedures of this investigation will be performed in accordance with the NYSDEC Technical Guidance for Site Investigation and Remediation DER-10.

The scope of the field investigation activities includes the installation of soil borings, monitoring wells, and sub-slab vapor probes in order to delineate and monitor the extent of the suspected contamination from dry-cleaning solvents and offsite petroleum spills. A minimum of thirteen (13) soil borings will be completed at the Site (SC-1 through SC-13) (see proposed sampling plan as **Figure 4**). At a minimum, a total of twenty-eight (28) discrete soil samples will be collected from the thirteen (13) soil borings. Sample locations SC-1 through SC-7 will be installed on the exterior of the building where two (2) sets of soil samples will be collected from each boring, one (1) at the soil and groundwater interface, and the second beneath the groundwater table. Sample locations SC-8 through SC-11 will be installed within the cellar where three (3) sets of soil samples will be collected from each boring, a shallow sample at 4-ft. below the cellar slab, a second at the soil and groundwater interface, and the third beneath the groundwater table. Sample locations SC-12 and SC-13 will be collected from interval 0-4-ft. below cellar grade (bcg), parallel with the sewer drain in the building in the section of the former drycleaner (1812 Cropsey Avenue) see **Figure 5** that depicts the location of the sewer line in the cellar of the building. A minimum of eleven (11) groundwater samples (SC-1/GWMW-1 through SC-7/GWMW-7 and SC-8/GW-8, SC-10/GW-9, SC-11/GW-10, and SC-13/GW-11) will be collected from the eleven (11) wells. A total of eight (8) air samples will be collected from the site. Four (4) sub-slab soil vapor samples (SS-1 through SS-4) will be collected from within the cellar, and one (1) soil vapor sample will be collected from the northeastern portion of the Site, two (2) indoor air samples will be collected besides the existing sewer drain and in the southwestern section of the building first floor (IA-1 and IA-2 respectively), and one (1) outdoor air sample will be collected from the southwestern section of the lot (OA-1). Each sample point location at the Site will be accurately measured to fixed benchmarks (i.e., select property lines, adjacent structures, etc.) or by a precision GPS that is capable of coordinating a fixed point within +/- 1 foot. Please see **Figure 6** depicting the overview and timeline of the Project duration.

See the below table indicating the specifics of the proposed sampling plan for the Site:

Sample ID	Location of Sample	Media	Sample Depth	Number of Samples per Location	Total Number of Samples per Media	Analytical Method
<u>ON BUILDING PERIMETER</u>						
SV-1	Outside the building (NW corner)	Air	12-ft. to 14-ft. below grade surface (bgs)	1	1	TO-15 (for VOCs)
OA-1	Outside the building (SW corner)	Air	3-ft. above grade (at breathing level)	1	1	TO-15 (for VOCs)
SC-1 through SC-7	On the building perimeter outside	Soil	One sample collected from soil-groundwater (GW) interface. One sample collected beyond GW table. One deeper sample collected, if contamination encountered on-field	2 (3, if contamination encountered)	14 (up to 21, if contamination encountered)	EPA Method 8260 (VOCs) EPA method 8270 (SVOCs) Pesticides/PCBs by EPA Method 8081/8082 TAL metals by EPA Method 6010 and 7471.
SC-1, SC-4, SC-5 and SC-7	On the building perimeter outside	Soil	One shallow sample collected at 0-ft. to 4-ft. bgs One deeper sample collected at soil-GW Interface	2	8	PFAS by EPA Method 537.1, 1,4-Dioxane by EPA Method 8270 SIM.
SC-1/GWMW-1 through SC-7/GWMW-7	On the building perimeter outside	Ground-water	To be determined onsite.	1	7	EPA Method 8260 (VOCs) EPA method 8270 (SVOCs) Pesticides/PCBs by EPA Method 8081/8082 TAL metals by EPA Method 6010 and 7471.
SC-1/GWMW-1, SC-4/GWMW-4, SC-5/GWMW-5 and SC-7/GWMW-7	On the building perimeter outside	Ground-water	To be determined onsite.	1	4	PFAS by EPA Method 537.1, 1,4-Dioxane by EPA Method 8270 SIM.
<u>WITHIN BUILDING CELLAR</u>						
SS-1	Within the cellar (former dry-cleaning facility)	Air	18-inches below cellar slab	1	1	TO-15 (for VOCs)
SS-2 through SS-4	Within the cellar	Air	18-inches below cellar slab	1	3	TO-15 (for VOCs)

IA-1 and IA-2	Within the cellar	Air	3-ft. above grade (at breathing level)	1	2	TO-15 (for VOCs)
SC-8 through SC-11	Within the cellar	Soil	One sample collected 4-ft. below cellar slab. One sample collected at soil-GW interface One sample collected beyond GW table.	3	12	EPA Method 8260 (VOCs) EPA method 8270 (SVOCs) Pesticides/PCBs by EPA Method 8081/8082 TAL metals by EPA Method 6010 and 7471.
SC-8 and SC-10	Within the cellar	Soil	One shallow sample collected at 0-ft. to 4-ft. bgs One deeper sample collected at soil-GW Interface	2	4	PFAS by EPA Method 537.1, 1,4-Dioxane by EPA Method 8270 SIM.
SC-12 and SC-13	Within the cellar (former dry-cleaning facility)	Soil	One sample collected 4-ft. below cellar slab	1	2	EPA Method 8260 (VOCs) EPA method 8270 (SVOCs) Pesticides/PCBs by EPA Method 8081/8082 TAL metals by EPA Method 6010 and 7471, PFAS by EPA Method 537.1, 1,4-Dioxane by EPA Method 8270 SIM
SC-8/GW-8, SC-10/GW-9, SC-11/GW-10, SC-13/GW-11	Within the cellar	Ground-water	To be determined onsite.	1	4	EPA Method 8260 (VOCs) EPA method 8270 (SVOCs) Pesticides/PCBs by EPA Method 8081/8082 TAL metals by EPA Method 6010 and 7471.
SC-8/GW-8 and SC-10/GW-9	Within the cellar	Ground-water	To be determined onsite.	1	2	PFAS by EPA Method 537.1, 1,4-Dioxane by EPA Method 8270 SIM.

3.1 Geophysical Survey

In support of the soil investigation, a geophysical survey will be performed using Ground Penetrating Radar (GPR) in accessible areas of the Site. The geophysical survey will be conducted utilizing a cart-mounted GPR unit, Geophysical Survey Systems Inc. (model SIR-4000) with a 350 MHz antenna, a precision utility locator, Radio Detection (model RD7100) and a pipe and cable locator. The objectives of this survey will be to assess the location of possible underground utilities for boring clearance as well as identify the presence of buried anomalies at the Site. The geophysical survey will be the first field task completed during the Site characterization.

3.2 Soil Investigation

A geologist/engineer/QEP will screen the soil samples during borehole advancement for organic vapors with a photo-ionization detector (PID) and evaluated for visual and olfactory impacts prior to collecting environmental samples. All field work will be recorded in a field log. A drilling rig capable of advancing a borehole using direct push drilling methods via a Geoprobe® track-mounted drill rig equipped with a concrete core barrel or similar method i.e., portable coring machine together with hand-driven augers with appropriate tooling will be used and if necessary, more advanced drilling technology will be used to complete the Site investigation. Sample locations SC-1 through SC-7 will be installed continuously every 4-feet from site grade on the exterior of the building where two (2) sets of soil samples will be collected from each boring, one (1) at the soil and groundwater interface, and the second beneath the groundwater table. Sample locations SC-8 through SC-11 will be installed within the cellar where three (3) sets of soil samples will be collected from each boring, a shallow sample at 4-ft. below the cellar slab, a second at the soil and groundwater interface, and the third beneath the groundwater table. One (1) set of soil samples will be collected from interval 0-4-ft. below cellar grade (bcg), at locations SC-12 and SC-13, parallel with the sewer drain in the building in the section of the former drycleaner (1812 Cropsey Avenue). Discrete (grab) samples will be taken from the aforementioned sampling intervals.

An additional soil sample may be collected from each or several test boring(s) if 1) elevated PID readings and/or visual and olfactory observations are noted during borehole advancement and/or 2) field observations identify an upper fill layer underlain by native material the additional soil sample from the upper zone of the native layer will help delineate the vertical migration of impacts (if any), as well as determine a more detailed remedy and potentially provide a cost savings for disposal options. Prior to installation, all utilities will be located and marked out.

3.3 Groundwater Investigation

A total of eleven (11) groundwater samples will be collected from the Site. Soil boring locations SC-1 through SC-7 (exterior perimeter of Site) will be converted into permanent Groundwater Monitoring Wells SC-1/GWMW-1 through SC-7/GWMW-7 for groundwater sampling. Sampling will be conducted in accordance with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and Sampling Guidelines and Protocols, dated March 1991. Seven (7) 2-inch diameter permanent groundwater monitoring wells will be installed on the perimeter of the building. The newly installed monitoring wells will be developed no sooner than 24 hours after construction has been completed. Groundwater sampling conducted as part of the Phase-II was done via temporary well points; therefore, it is anticipated to install test wells during this SC. Four (4) soil boring locations SC-8, SC-10, SC-11, and SC-13 within the cellar, will be converted into temporary groundwater test wells for sampling (SC-8/GW-8, SC-10/GW-9, SC-11/GW-10 and SC-13/GW-11). Four (4) 1-inch diameter test wells will be installed within the cellar of the building.

Representative groundwater samples will be collected using low-flow sampling techniques. Properly sized screen and silica sand pack will be used for noted Site conditions. A representative groundwater sample will be collected from each well with a peristaltic pump and dedicated tubing. Groundwater wells will be gauged with a water level meter to record a depth to groundwater reading (1/100 foot), and if necessary, an interface meter to determine the thickness of LNAPL or DNAPL. The well casings will be surveyed by a trained QEP and/or NYS licensed surveyor to facilitate preparation of a groundwater contour map and determine the direction of groundwater flow.

3.4 Sub-slab Vapor Investigation

The sub-slab vapor investigation will be performed for the 2021 – 2022 heating season per the request of the NYSDEC to evaluate the potential for soil vapor intrusion. There are currently no proposed redevelopment plans for the Site. Per the potential purchaser, the intentions are to renovate the existing building on the Site during the remedial phase and occupy the building post remediation activities.

Sub-slab vapor samples will be collected in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH October 2006). Conditions in the field may require adjustment of sampling locations. Four (4) sub-slab vapor implants (SS-1 through SS-4) will be installed in the cellar of the building inhabiting the Site. Sub-slab implants will be set to a depth of approximately 18-inches beneath the existing concrete slab within the cellar. The sub-slab implant will be installed by drilling a ½-inch diameter hole through the existing concrete slab with a handheld hammer

drill and inserting a ¼-inch polyethylene tubing attached to a vapor sampling implant (¼" barb 6"), which will be extended approximately 18-inches beyond the surface as needed to reach the canister. The tubing will be capped with a ¼-inch plastic end to prevent infiltration of foreign particles into the tube. The tubing will be sealed, with a hydrated granular bentonite, to the surface. Two (2) indoor air samples will be collected besides the sewer drain (IA-1) and one in the southwestern section of the building cellar (IA-2) and one (1) outdoor air sample will be collected from the southwestern section of the lot (OA-1). Samples will be collected in seven (7) 6-liter Summa canisters equipped with 2-hour flow controllers that have been certified clean by the laboratory and samples will be analyzed using EPA Method TO-15. Flow rate for both purging and sampling will not exceed 0.2 L/min. 24-hours following sub-slab vapor probe, one to three implant volumes shall be purged prior to the collection of any samples.

Soil Vapor Investigation

Soil vapor samples will be collected in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH October 2006). Conditions in the field may require adjustment of sampling locations. Groundwater is expected to be encountered at a depth between 15.00-ft to 16.00-feet bgs.

A former off-site spill (Spill # 98123611) at 1785 Cropsey Avenue underwent an extensive remediation of groundwater due to BTEX contamination. Based on the groundwater flow in the area, the Site was consequently impacted. Hence, one (1) soil vapor sample (SV-1) will be collected from within the northeastern portion of the Site at an upgradient location. Soil vapor implants will be set at a depth of approximately 12-14 feet bgs or 1-2 feet above the groundwater interface, whichever is encountered first. Sample will be collected in a 6-Liter Summa canister equipped with 2-hour flow controllers 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. 24-hours following soil vapor probe installation, one to three implant volumes shall be purged prior to the collection of any soil-vapor 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.

3.5 Sample Analysis

Soil, groundwater, and soil vapor samples will be submitted to a NYSDOH Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for full analysis.

Soil and groundwater samples will be analyzed using:

- Volatile Organic Compounds by EPA Method 8260;
- Semi-volatile Organic Compounds by EPA method 8270;
- Pesticides/PCBs by EPA Method 8081/8082; and
- Target Analyte List metals by EPA Method 6010 and 7471 (All Groundwater samples will be analyzed for both filtered (dissolved) and unfiltered (total) metals).

In addition, twelve (12) selective soil samples from the 0'-4' depth interval and deepest dry sample (SC-1, SC-4, SC-5, SC-7, SC-8, and SC-10) and six (6) groundwater samples (SC-1/GWMW-1, SC-4/GWMW-4, SC-5/GWMW-5, SC-7/GWMW-7, SC-8/GW-8 and SC-10/GW-9) will also be analyzed for PFAS (NYSDC Analyte List) by LC-MS/MS via EPA 537.1 and 1,4-Dioxane via EPA Method 8270 SIM. Sampling will be performed in accordance with the *NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substance (PFAS)*, dated October 2020.

Air samples will be analyzed using:

- Volatile Organic Compounds by USEPA Method TO-15.

The analytical methods above should include all compounds included in NYSDEC Part 375-6.8 and CP-51 for soil, NYSDEC Part 703 Groundwater Quality Standards (class GA) or division of Water Technical and Operational Guidance (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) for groundwater, and NYSDOH October 2006 Final Guidance for Evaluating Soil Vapor Intrusion Matrices for soil vapor.

3.6 Investigative-Derived Waste

Investigation-derived wastes (i.e., grossly-contaminated soil cuttings and purge water) will be containerized and staged on-site in DOT-Approved 55-gallon drums which will be labeled appropriately, pending proper disposal at an off-site facility. Cuttings may be disposed at the Site within the borehole that generated them to within 24 inches of the surface unless:

- Free product or grossly contaminated soil are present in the cuttings.
- The borehole has penetrated an aquitard, aquiclude or other confining layer; or extends significantly into bedrock.
- Backfilling the borehole with cuttings will create a significant path for vertical movement of contaminants. Soil additives (bentonite) may be added to the cuttings to reduce permeability.

- The soil cannot fit into the borehole.
- Purged water from groundwater monitoring well development and purging.

All waste needing to be managed on-site will be containerized in properly labeled DOT approved 55-gallon drums for future off-site disposal at a permitted facility. All boreholes which require drill cuttings disposal would ultimately be filled with bentonite chip (hydrated) and asphalt/concrete capping. Disposable sampling equipment including spoons, gloves, bags, paper towels, etc. that came in contact with environmental media will be double bagged and disposed as municipal trash in a facility trash dumpster as non-hazardous trash.

3.7 Community Air Monitoring Plan

In accordance with DER-10, a Community Air Monitoring Plan (**Appendix C**) will be implemented at the Site during all ground-intrusive activities, such as, but not limited to drilling of boreholes and installation of monitoring wells.

4.0 Quality Assurance Project Plan

This section discusses the quality assurance procedures that will be followed during sample collection and analysis.

4.1 Field Activities

As illustrated in **Figure 4**, up to thirteen (13) boreholes will be advanced at the Site. The performance of several of these borings and the collection of samples is contingent on the field observations and PID reading obtained from the initial borings. The seven (7) boreholes on the perimeter of the Site will be converted to monitoring wells and sampled to delineate the on-site extent of the contamination from dry-cleaning solvents and offsite petroleum spills.

4.1.1 Soil Sampling

Samples will be managed by field personnel wearing the proper PPE to eliminate the potential for cross-contamination. The samples will be transferred into laboratory-provided containers and sent to the laboratory as soon as practicable, but no later than 48 hours after sample collection, under standard chain-of-custody procedures. The collection of environmental samples during the investigation will adhere to the appropriate sampling methods, sample preservation requirements, sample holding times, and decontamination procedure for field equipment.

4.1.2 Monitoring Well Installation

Seven (7) permanent groundwater monitoring wells (GWMW-1 through GWMW-7) will be installed on the exterior of the building inhabiting the Site and four (4) temporary groundwater test wells (SC-8/GW-8, SC-10/GW-9, SC-11/GW-10, and SC-13/GW-11) will be installed within the cellar of the building (Figure 4). Permanent well borings will be advanced using a 2-inch diameter, 5-foot-long sampler with dedicated liner which will be advanced ahead of the proposed wells and test well borings will be advanced using a 1-inch diameter, 5-foot-long sampler with dedicated liner which will be advanced ahead of the proposed wells. Recovered samples will be examined by qualified RSK personnel and characterized in accordance with ASTM Method D2488, Standard Practice for description and Identification of Soils (visual-Manual Procedure), scanned for total VOCs with a calibrated PID equipped with 10.6eV lamp (or equivalent), and characterized for impacts via visual and/or olfactory observations. All non-dedicated drilling tools and equipment will be decontaminated between boring location using potable tap water and a phosphate-free detergent.

Subsequent to boring completion, each monitoring well will be constructed of 1-inch and 2-inch I.D. flush-joints, Schedule 40 PVC soiled riser, and machine slotted screen (0.020-inch slot size). The monitoring well screen will be approximately 10-feet in length. Approximately 2-inches of silica sand will be placed at the bottom of each boring as a base for the well screen and as part of the sand pack. The well screen and attached riser will be placed within the borehole on top of the 2-inch sand layer and the remainder of the sand pack will be installed within the borehole annulus to a level of about 3-feet above the top of the well screen. A bentonite seal (2-feet thick) will be installed immediately above the sand layer. The bentonite seal will be constructed with 3/8-inch bentonite pellets or medium bentonite chips and allowed to hydrate sufficiently to mitigate the potential for down-hole grout contamination. The top of the well riser pipe will be fitted with a lockable J-plug and secured flush to existing grade surface with an 8-inch steel manhole road box on the building exterior only. The four (4) test wells will protrude the cellar slab making it accessible for sampling.

Provided that each of the wells yields sufficient water, groundwater samples will be collected from each of the wells using low flow sampling methods. The total depth of the wells is expected to be within 25-feet of the ground surface and 15-feet of the cellar surface.

4.1.3 Well Development

The newly installed monitoring wells will be developed no sooner than 24-hours after construction has been completed. The development procedure will require purging of the groundwater and periodically surging the water in the well to loosen and remove suspended fines from the well screen and sand pack.

Measurements of the water volume removed, and water quality parameters will be recorded at regular intervals through the development process. Development will continue until water quality measurements stabilize to within 10 percent of the previous measurement.

4.1.4 Monitoring Well Sampling

Groundwater will be collected from each well using low flow sampling techniques (typically less than 0.1 L/min) via dedicated plastic flex tubing and a peristaltic pump. If low-flow sampling is not feasible due to insufficient groundwater recharge rates, new and dedicated disposable bailers may be used to collect the groundwater samples. If sufficient groundwater volume is available, each well will be sampled for full suite analysis, and selective wells SC-1/GWMW-1, SC-4/GWMW-4, SC-5/GWMW-5, SC-7/GWMW-7, SC-8/GW-8 and SC-10/GW-9 will additionally be sampled for emerging contaminants.

Field measurements for groundwater level as well as visual and olfactory field observations will be periodically recorded and monitored during well purging prior to sampling. Purging will be considered complete when water stabilizes between 10 percent of field measurements.

The collection of groundwater samples during the investigation will adhere to the appropriate sampling methods, sample preservation requirements, sample holding times, and decontamination procedure for field equipment.

4.1.5 Air Sample Collection

As part of the vapor intrusion evaluation, tracer gas will be used in accordance with NYSDOH protocols to serve as a QA/QC device and to verify the integrity of the soil vapor probe seal. A container (plastic pail) will be placed to keep the tracer gas in contact with the probe and seal during testing. A portable monitoring device (multi-gas meter) will be used to analyze soil vapor samples for the tracer gas prior to sampling.

4.1.6 Equipment Calibration

The PID used during the investigation will be calibrated before use and checked in the field with isobutylene at the beginning of the day to 100 parts per million (ppm). If a reading is suspect, the PID's response will be rechecked, and if necessary, recalibrated.

Prior to groundwater sampling, the equipment and instruments will be checked to ensure they are working properly. The groundwater quality meters will be calibrated using the EPA's Calibration of Field Instruments (temperature, pH, dissolved oxygen, conductivity/specific conductance, oxidation/reduction [ORP], and turbidity), March 23, 2017, or latest version or from one of the methods listed in 40CFR136, 40CFR141 and SW-846.

4.1.7 Equipment Decontamination

Re-usable equipment employed during the investigation will undergo decontamination procedures to reduce the potential for cross-contamination. Between each borehole, the sampling equipment will be rinsed with an Alconox soap and deionized water solution, wiped clean with paper towels, and then rinsed with deionized water.

4.2 Quality Assurance/Quality Control

4.2.1 QA/QC Procedure

QA/QC procedures will be used to provide performance information with regard to accuracy, precision, sensitivity, representation, completeness, and compatibility 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 samples will also include field duplicates, matrix spikes, matrix spike duplicates, field blanks and trip blanks, appropriately at a frequency of 1 per 20 samples.

4.2.2 Field QA/QC

Field QA/QC will include the following procedures:

- Calibration of field equipment, including PID, on a daily basis.
- Use of dedicated and/or disposable field sampling equipment.
- Proper sample handling and preservation.
- Proper sample chain of custody documentation; and
- Completion of report logs.

The above procedures will be executed as follows:

- Disposable sampling equipment, including acetate sleeves, latex gloves, and disposable bailers (or sample tubing), will be used to minimize cross-contamination between samples.
- For each of the parameters analyzed, a sufficient sample volume will be collected to adhere to the specific analytical protocol, and provide sufficient sample for reanalysis if necessary.
- Because plasticizers and other organic compounds inherent in plastic containers may contaminate samples requiring organic analysis, samples will be collected in glass containers, with the exception of the nitrate-preserved groundwater sample for metals analysis.
- Appropriate sample preservation techniques, including cold temperature storage at 4° C, will be utilized to ensure that the analytical parameters concentrations do not change between the time of sample collection and analysis: and

- Samples will be analyzed prior to the expiration of the respective holding time for each analytical parameter to ensure the integrity of the analytical results.

4.2.3 Sample Custody

Sample handling in the field will conform to appropriate sample custody procedures. Field custody procedures include proper sample identification, chain-of-custody forms, and packaging and shipping procedures. Sample labels will be attached to all sampling bottles before field activities begin to ensure proper sample identification. Each label will identify the site and sample location. Styrofoam or bubble wrap will be used to absorb shock and prevent breakage of sample containers. Ice or ice packs will be placed in between the plastic bags for sample preservation purposes.

After each sample is collected and appropriately identified, the following information will be entered into the chain-of-custody form:

- Site name and address.
- Sampler(s)' name(s) and signature(s).
- Names and signatures of persons involved in the chain of possession of samples.
- Sample number.
- Number of containers.
- Sample location.
- Date and time of collection.
- Type of sample, sample matrix and analyses requested.
- Preservation used (if any); and
- Any pertinent field data collected (pH, temperature, conductivity, Dissolved Oxygen [DO])

The sampler will sign and date the “Relinquished” blank space prior to removing one copy of the custody form and sealing the remaining copies of the form, in a Ziploc plastic bag taped to the underside of the sample cooler lid. The sample will be sealed with tape prior to delivery or shipment to laboratory.

4.2.4 Report Logs

Field logs and boring logs will be completed during the course of this investigation. A field log will be completed on a daily basis which will describe all field activities including:

- Project number, name, manager, and address.
- The date and time.

- The weather conditions.
- On-site personnel and associated affiliations.
- Description of field activities; and
- Pertinent sample collection information including sample identification numbers, description of samples, location of sampling points, number of samples taken, method of sample collection, and any factors that may affect its quality, time of sample collection, name of collector, and field screening results.

A boring log will be completed for each boring and will include the following information:

- Project number, name, manager, and location.
- The date and time.
- Drilling company and method used.
- Boring number.
- Total boring depth and water table depths; and
- Pertinent soil sample information including sample number, interval, depth, amount recovered, color, composition, percent moisture, visual and olfactory observations of contamination, and PID readings.

4.2.5 Laboratory QA/QC

An ELAP-certified laboratory will be used for all sample analyses. All samples will be delivered to the laboratory within 24 hours of sample collection. Samples will be received by laboratory personnel, who will inspect the sample cooler(s) to check the integrity of the custody seals. The cooler(s) will then be opened, the samples unpackaged, and the information on the chain-of-custody form examined. If the shipped samples match those described on the chain-of-custody form, the laboratory custodian will sign the form and record problems in the “Remarks” box. The custodian will then immediately notify the Project Manager so appropriate follow-up steps can be implemented on a timely basis.

A record of the information detailing the handling of a particular sample through each stage of analysis will be maintained by the laboratory. The record will include:

- Job reference, sample matrix, sample number, and date sampled.
- Date and time received by laboratory, holding conditions, and analytical parameters.
- Extraction date, time, and extractor’s initials (if applicable), analysis date, time, and analyst’s initials; and
- QA batch number, date reviewed, and reviewer’s initials.

4.3 Laboratory Analysis

The samples will be transported under standard chain-of-custody protocol to a New York State Department of Health Environmental Laboratory Approval Program (ELAP)-approved laboratory for analysis. Laboratory analyses will be conducted in accordance with EPA SW-8746 methods and NYSDEC Analytical Services Protocol (ASP). All data will be submitted in NYSDEC's environmental information management system format for EDDs.

The labs will provide a full category B deliverable. The samples will be analyzed by an environmental laboratory certified by ELAP to use EPA method 537. The analytical results will be subjected to data validation. Laboratory data packages will be reviewed for quality control parameters including, but not limited to, custody documentation, holding times, reporting limits, surrogate and matrix spike recoveries, duplicate correlation, calibration standard and blank performance, instrument performance, blank contamination, matrix interferences, and method compliance.

5.0 Reporting

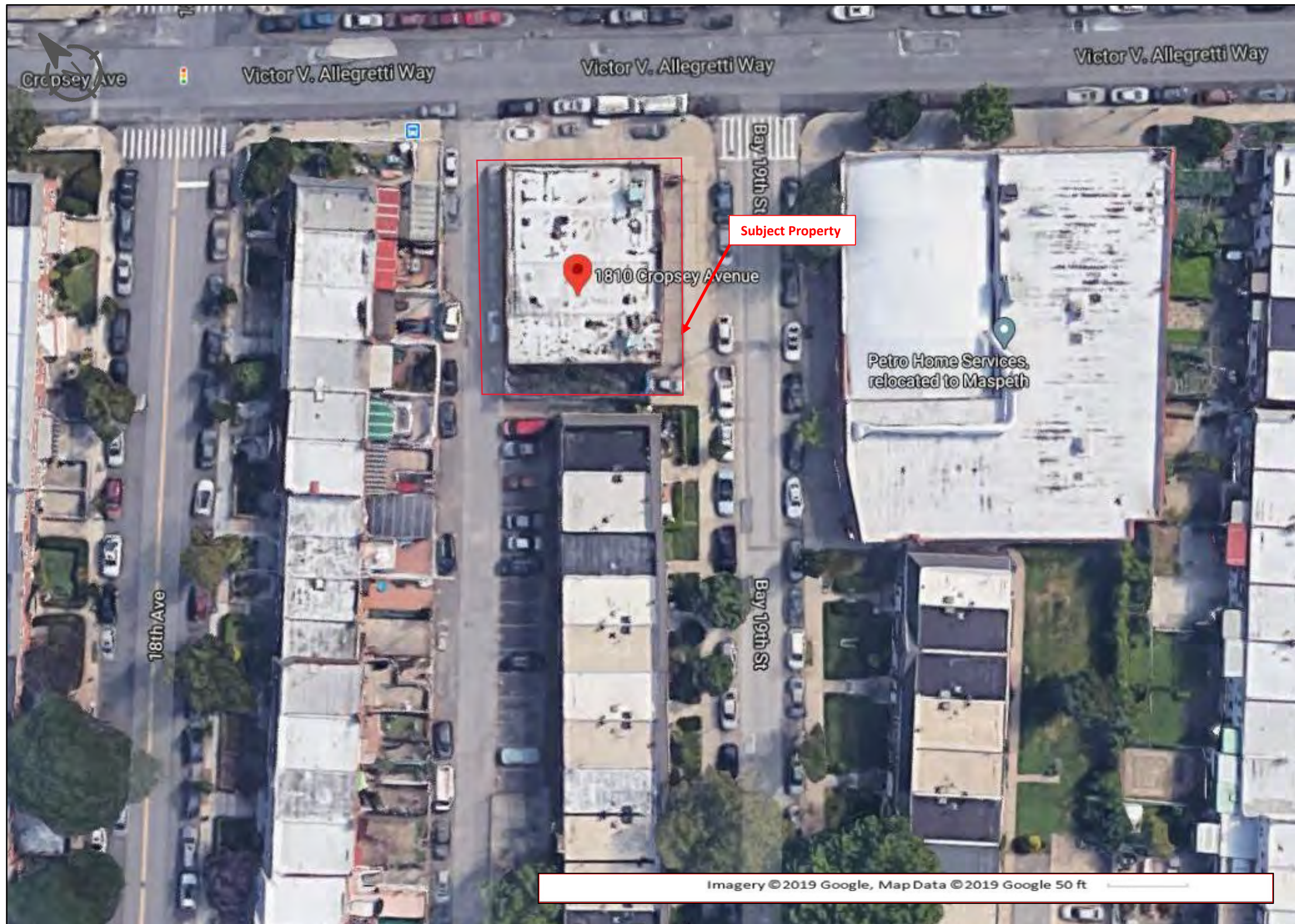
A Site Characterization Report (SCR) will be prepared following completion of the field activities and receipt of the laboratory data. The report will provide detailed summaries of the investigative findings. Soil analytical results will be compared to the NYSDEC Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives, appropriate Part 375-6.8(b) Restricted Soil Cleanup Objectives and supplemental cleanup objectives in NYSDEC CP-51 Soil Cleanup Guidance. Groundwater analytical results will be compared to NYSDEC Part 703 Groundwater Quality Standards (GQS) (class GA) or Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS). Soil vapor and analytical results will be compared to NYSDOH October 2006 Final Guidance for Evaluating Soil Vapor Intrusion Matrices, updated May 2017. All data will be submitted as Electronic Data Deliverables (EDDs) to NYSDEC for inclusion in the State's EquIS database.

The report will include an updated sampling plan, spider diagrams, analytical data tables for all reported constituent compounds (including non-detectable concentrations) and remedial recommendations, as warranted. In the SCR, all applicable documentation (site map, conceptual building plans, soil boring and groundwater monitoring well construction logs, and sampling intervals) will be prepared from a single grade reference point as well as in terms of elevation.

The report will also include all sampling logs and photos taken during the investigation.

FIGURE 1
Site Location Map





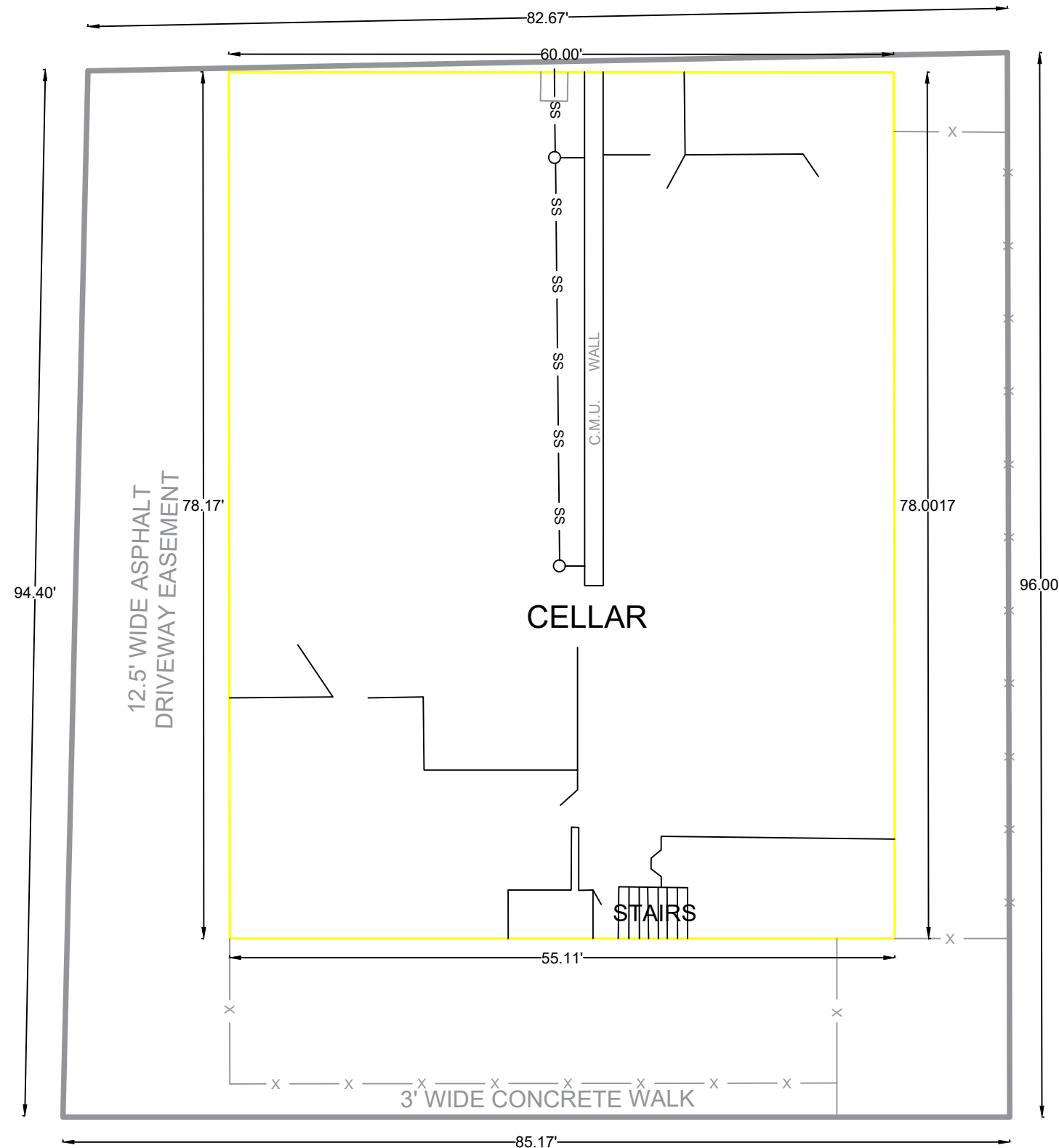
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RSK ENVIRONMENTAL LLC 132-02 89TH AVE, SUITE #222 RICHMOND HILL, NY 11418 (T) 718-438-2200			
PREPARED FOR:			
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1810 CROPSEY AVENUE BROOKLYN, NY 11214			
DRAWING TITLE:			
FIGURE 1: SITE LOCATION MAP			
SEAL & SIGNATURE:	DRAWING DATA:		
	DATE: 10/19/2021		
	PROJECT NO: 224320		
	DRAWING BY: BM		
	CHECK BY: DS		

FIGURE 2
Site Survey





CROPSEY AVENUE



LEGEND	
— x —	FENCE
—	BUILDING LINE
—	PROPERTY LINE
— SS —	SANITARY SEWER PIPE

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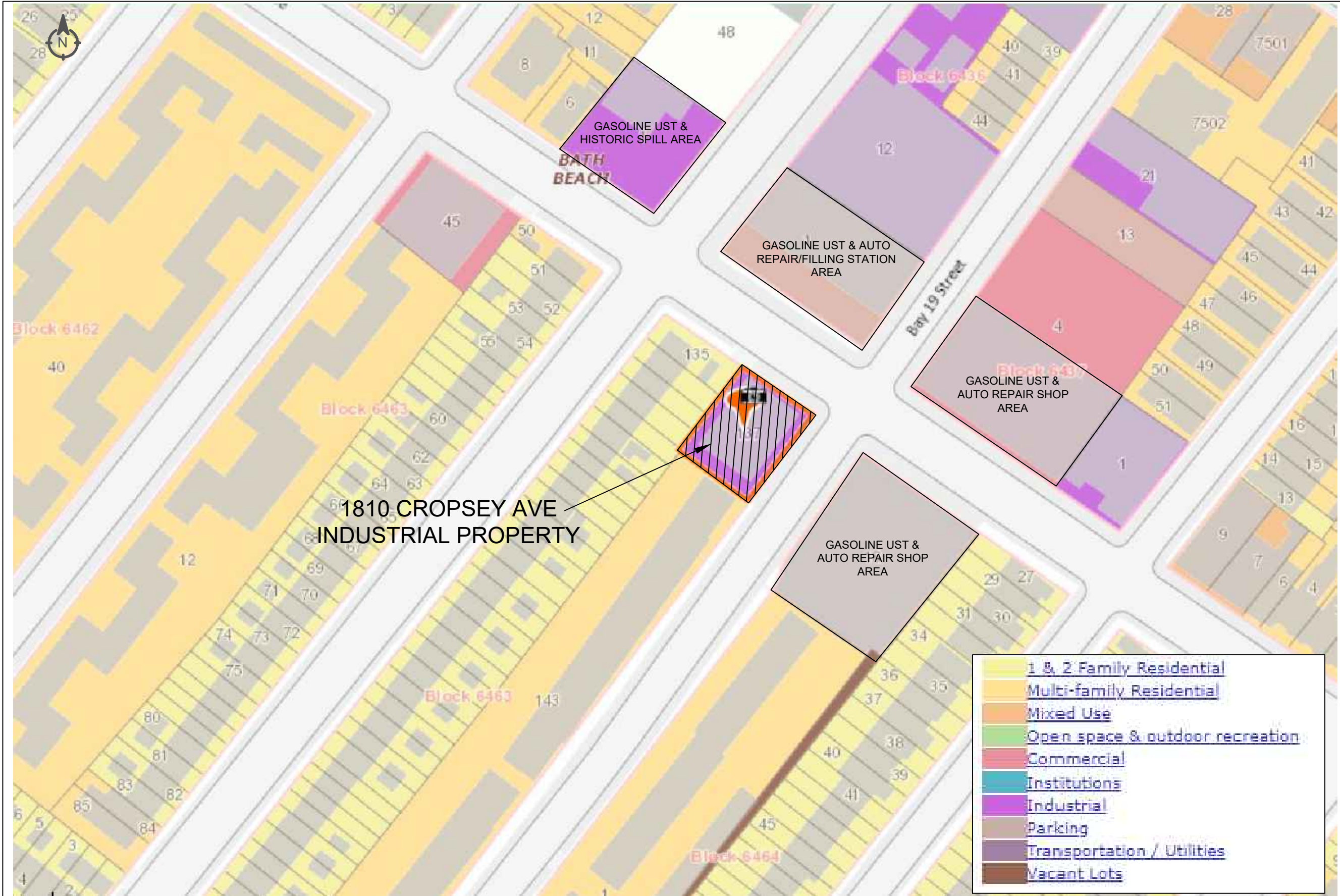
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**FIGURE 2:
 SITE SURVEY**

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FIGURE 3
Surrounding Land Use





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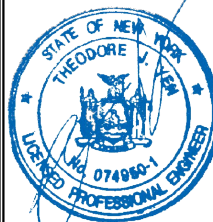
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**FIGURE 3:
 SURROUNDING LAND USE**

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	PROJECT NO: 224320
	DRAWING BY: BM
	CHECK BY: DS

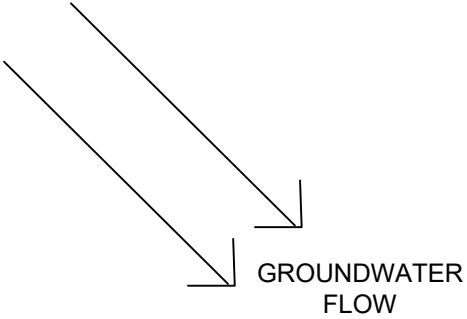
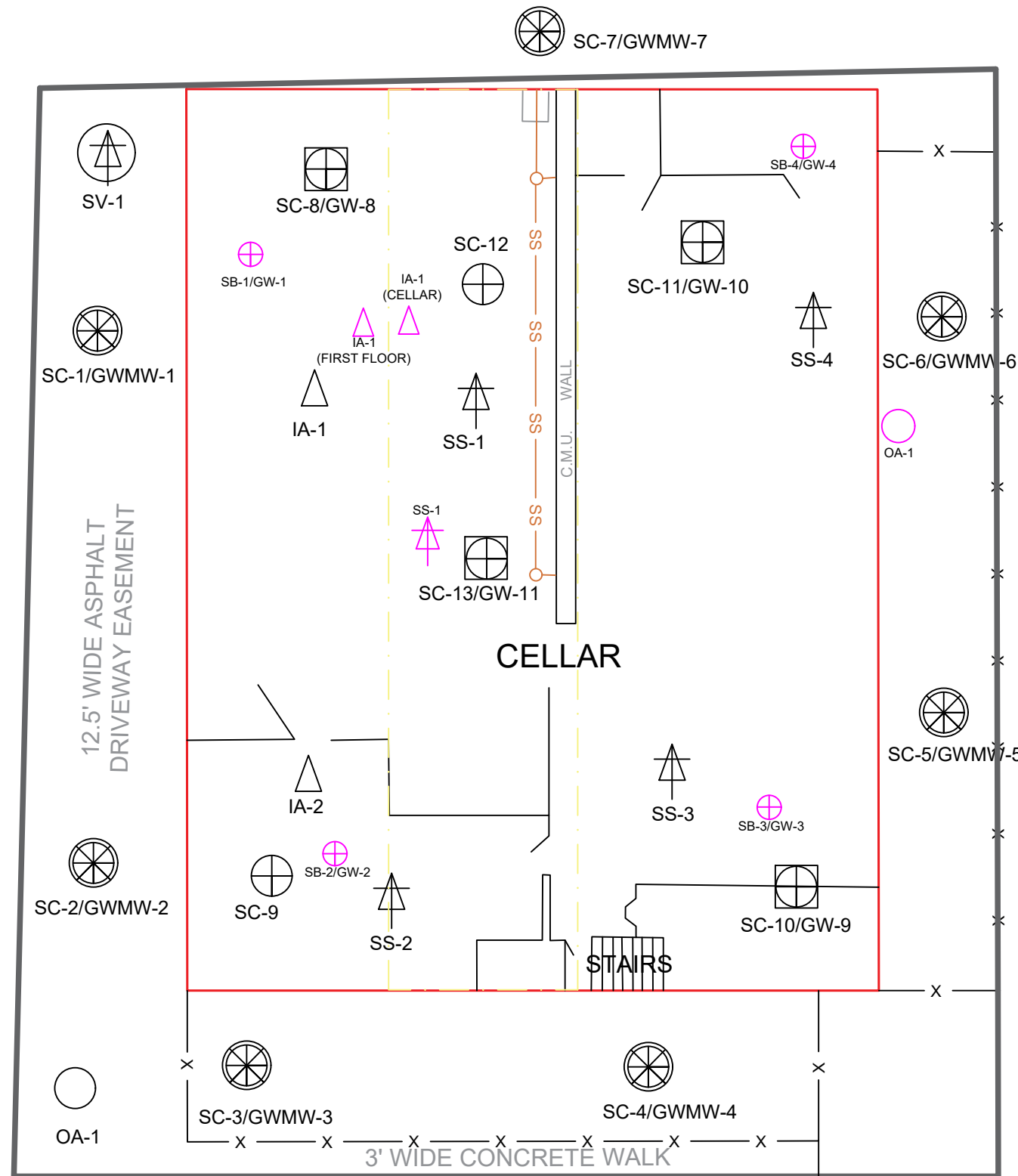
- 1 & 2 Family Residential
- Multi-family Residential
- Mixed Use
- Open space & outdoor recreation
- Commercial
- Institutions
- Industrial
- Parking
- Transportation / Utilities
- Vacant Lots

FIGURE 4
Proposed Sampling Plan
Location





CROPSEY AVENUE



BAY 19TH STREET

LEGEND

- PROPOSED SITE CHARACTERIZATION (SC) SOIL SAMPLE LOCATION
- PROPOSED SUB-SLAB VAPOR SAMPLE LOCATION
- PROPOSED OUTDOOR AIR SAMPLE LOCATION
- PROPOSED INDOOR AIR SAMPLE LOCATION
- PROPOSED GROUNDWATER TEST WELL
- PROPOSED GROUNDWATER MONITORING WELL
- PROPOSED SOIL VAPOR SAMPLE LOCATION
- FENCE
- BUILDING LINE
- BOUNDARY LINE
- FORMER DRY-CLEANING FACILITY
- SANITARY SEWER PIPE
- SOIL BORING/GROUNDWATER SAMPLE LOCATION (SEPTEMBER 2020)
- SUB-SLAB VAPOR SAMPLE LOCATION (SEPTEMBER 2020)
- OUTDOOR AIR SAMPLE LOCATION (SEPTEMBER 2020)
- INDOOR AIR SAMPLE LOCATION (SEPTEMBER 2020)

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**FIGURE 4:
 PROPOSED SAMPLING LOCATION PLAN**

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		PROJECT NO: 224320
		DRAWING BY: BM
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CROPSEY AVENUE



Compound	NYSDEC GQS	GW-4/SB-4
VOCs (ug/L)		
1,2,4-Trimethylbenzene	5	3,200
1,3,5-Trimethylbenzene	5	470
Cyclohexane	NS	140
Ethyl Benzene	NS	650
Isopropylbenzene	5	120
Methylcyclohexane	NS	280
n-Butylbenzene	5	94
n-Propylene	5	360
sec-Butylbenzene	5	24
p&m Xylenes	5	36
p-Isopropyltoluene	NS	18
SVOCs (ug/L)		
1,1' - Biphenyl	5	6.53
2-Methylnapthalene	NS	827
Benzo(a)anthracene	0	0.0923
Benzo(f)fluoranthene	0	0.0513
Bis(2-ethylhexyl)phthalate	5	5.57
Napthalene	10	756
RCRA Metals (ug/L)		
Arsenic	25	39.4
Chromium	50	388
Lead	25	242

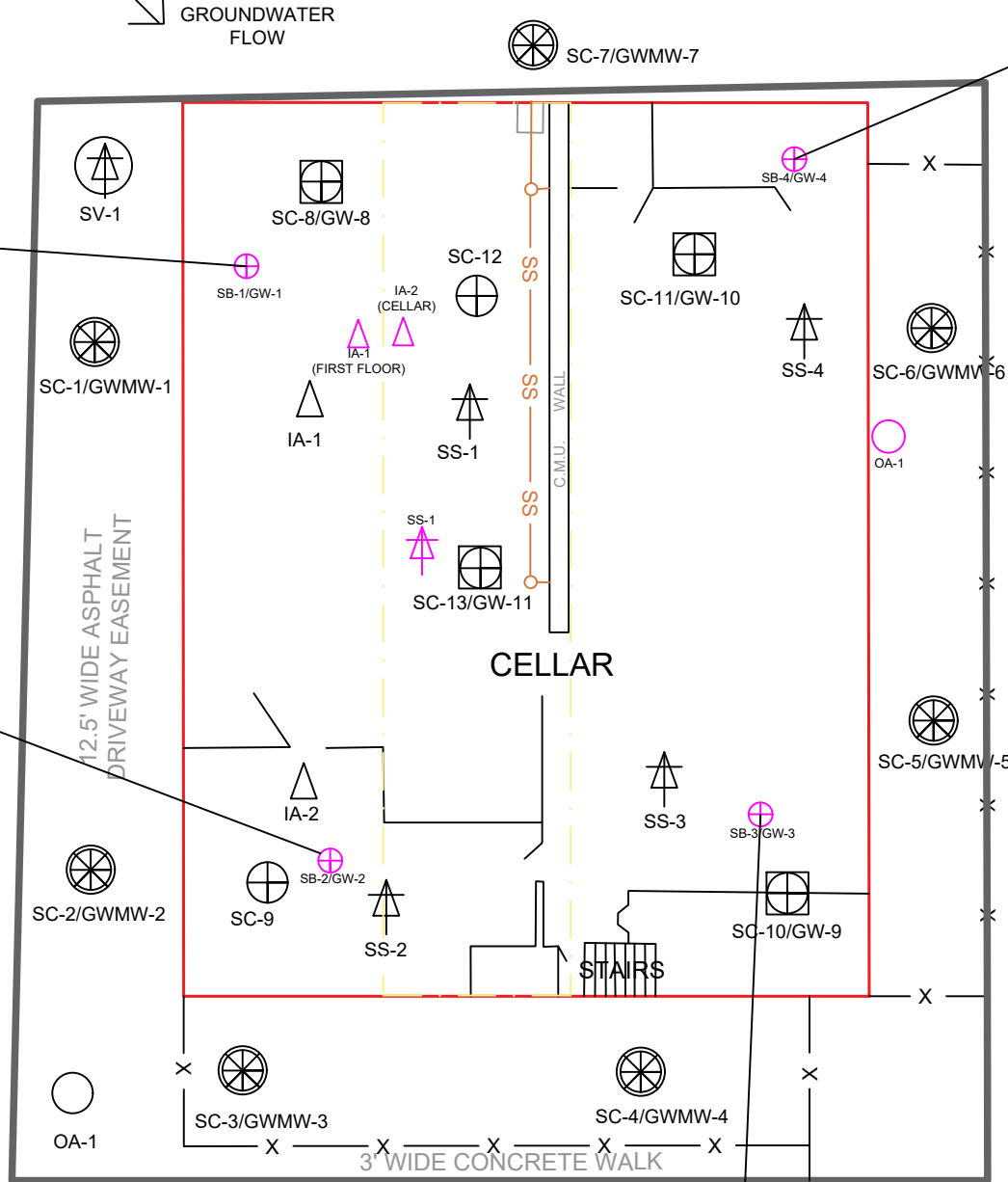
LEGEND

- PROPOSED SITE CHARACTERIZATION (SC) SOIL SAMPLE LOCATION
- PROPOSED SUB-SLAB VAPOR SAMPLE LOCATION
- PROPOSED OUTDOOR AIR SAMPLE LOCATION
- PROPOSED INDOOR AIR SAMPLE LOCATION
- PROPOSED GROUNDWATER TEST WELL
- PROPOSED GROUNDWATER MONITORING WELL
- PROPOSED SOIL VAPOR SAMPLE LOCATION
- FENCE
- BUILDING LINE
- BOUNDARY LINE
- FORMER DRY-CLEANING FACILITY
- SANITARY SEWER PIPE
- SOIL BORING/GROUNDWATER SAMPLE LOCATION (SEPTEMBER 2020)
- SUB-SLAB VAPOR SAMPLE LOCATION (SEPTEMBER 2020)
- OUTDOOR AIR SAMPLE LOCATION (SEPTEMBER 2020)
- INDOOR AIR SAMPLE LOCATION (SEPTEMBER 2020)

Compound	NYSDEC GQS	GW-1/SB-1
VOCs (ug/L)		
1,2,4-Trimethylbenzene	5	12,000
1,3,5-Trimethylbenzene	5	1600
Cyclohexane	NS	210
Ethyl Benzene	NS	1900
Isopropylbenzene	5	240
Methylcyclohexane	NS	330
n-Butylbenzene	5	290
n-Propylene	5	760
sec-Butylbenzene	5	51
p&m Xylenes	5	260
p-Isopropyltoluene	NS	37
SVOCs (ug/L)		
2-Methylnapthalene	NS	5030
Napthalene	10	5210
RCRA Metals (ug/L)		
Chromium	50	404
Lead	25	319

Compound	NYSDEC GQS	GW-2/SB-2
VOCs (ug/L)		
1,2,4-Trimethylbenzene	5	140
1,3,5-Trimethylbenzene	5	150
Ethyl Benzene	NS	110
Isopropylbenzene	5	38
n-Butylbenzene	5	48
n-Propylene	5	130
sec-Butylbenzene	5	11
p&m Xylenes	5	71
SVOCs (ug/L)		
2-Methylnapthalene	NS	551
Benzo(a)anthracene	0	0.0556
Napthalene	10	698
RCRA Metals (ug/L)		
Lead	25	51.4

Compound	NYSDEC GQS	GW-3/SB-3
VOCs (ug/L)		
1,2,4-Trimethylbenzene	5	19
1,3,5-Trimethylbenzene	5	77
Cyclohexane	NS	170
Ethyl Benzene	NS	1000
Isopropylbenzene	5	100
Methylcyclohexane	NS	170
n-Butylbenzene	5	41
n-Propylene	5	280
sec-Butylbenzene	5	14
Toluene	5	23
p&m Xylenes	5	42
SVOCs (ug/L)		
2-Methylnapthalene	NS	164
Napthalene	10	604
RCRA Metals (ug/L)		
Chromium	50	65.1



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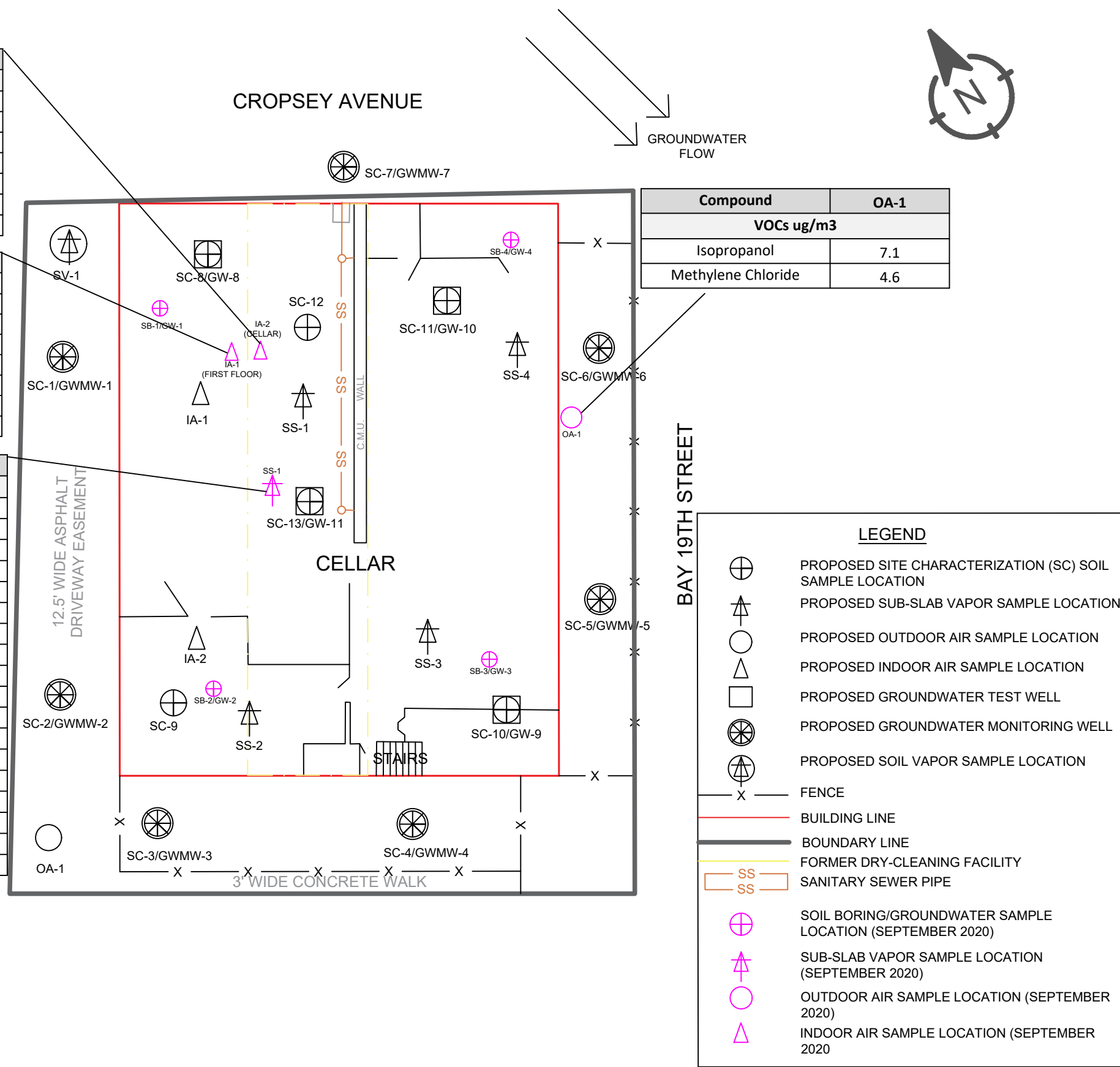
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FIGURE 4A:
SEPTEMBER 2020 EXCEEDANCES
IN GROUNDWATER

SEAL & SIGNATURE: 	DRAWING DATA: DATE: 1/21/2022 PROJECT NO: 224320 DRAWING BY: BM CHECK BY: DS
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Compound	IA-2 (Cellar)
VOCs ug/m3	
1,3,5-Trimethylbenzene	2.1
n-Heptane	4.3
n-Hexane	2.9
Isopropanol	18
Methylene Chloride	5.3
Tetrachloroethylene (PERC)	19
p&m Xylenes	1.1

Compound	IA-1 (1st Floor)
VOCs ug/m3	
Acetone	16
2-Butanone	1.4
Isopropanol	56
Methylene Chloride	10
Methyl Methacrylate	1
Tetrachloroethylene (PERC)	2
p&m Xylenes	1

Compound	SS-1 (Cellar)
VOCs ug/m3	
1,2,4-Trimethylbenzene	120
1,2-Dichloroethane	3.9
1,2-Dichloroethane(cis)	110
1,3,5-Trimethylbenzene	43
Acetone	69
Benzene	58
2-Butanone	6
Cyclohexane	24
Ethyl Benzene	62
n-Heptane	41
n-Hexane	56
Isopropanol	29
Tetrachloroethylene (PERC)	330
Toluene	630
Trichloroethylene (TCE)	24
o-Xylene	94
p&m Xylenes	220
p-Ethyltoluene	93



Compound	OA-1
VOCs ug/m3	
Isopropanol	7.1
Methylene Chloride	4.6

LEGEND

- PROPOSED SITE CHARACTERIZATION (SC) SOIL SAMPLE LOCATION
- PROPOSED SUB-SLAB VAPOR SAMPLE LOCATION
- PROPOSED OUTDOOR AIR SAMPLE LOCATION
- PROPOSED INDOOR AIR SAMPLE LOCATION
- PROPOSED GROUNDWATER TEST WELL
- PROPOSED GROUNDWATER MONITORING WELL
- PROPOSED SOIL VAPOR SAMPLE LOCATION
- FENCE
- BUILDING LINE
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- FORMER DRY-CLEANING FACILITY
- SANITARY SEWER PIPE
- SOIL BORING/GROUNDWATER SAMPLE LOCATION (SEPTEMBER 2020)
- SUB-SLAB VAPOR SAMPLE LOCATION (SEPTEMBER 2020)
- OUTDOOR AIR SAMPLE LOCATION (SEPTEMBER 2020)
- INDOOR AIR SAMPLE LOCATION (SEPTEMBER 2020)

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**FIGURE 4B:
 SEPTEMBER 2020 EXCEEDANCES
 IN AIR SAMPLES**

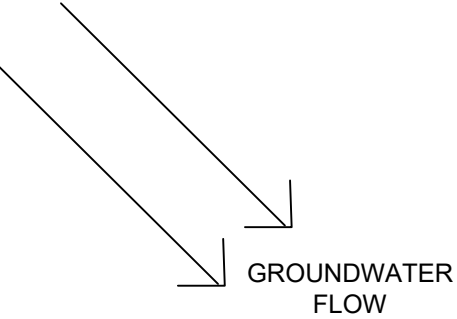
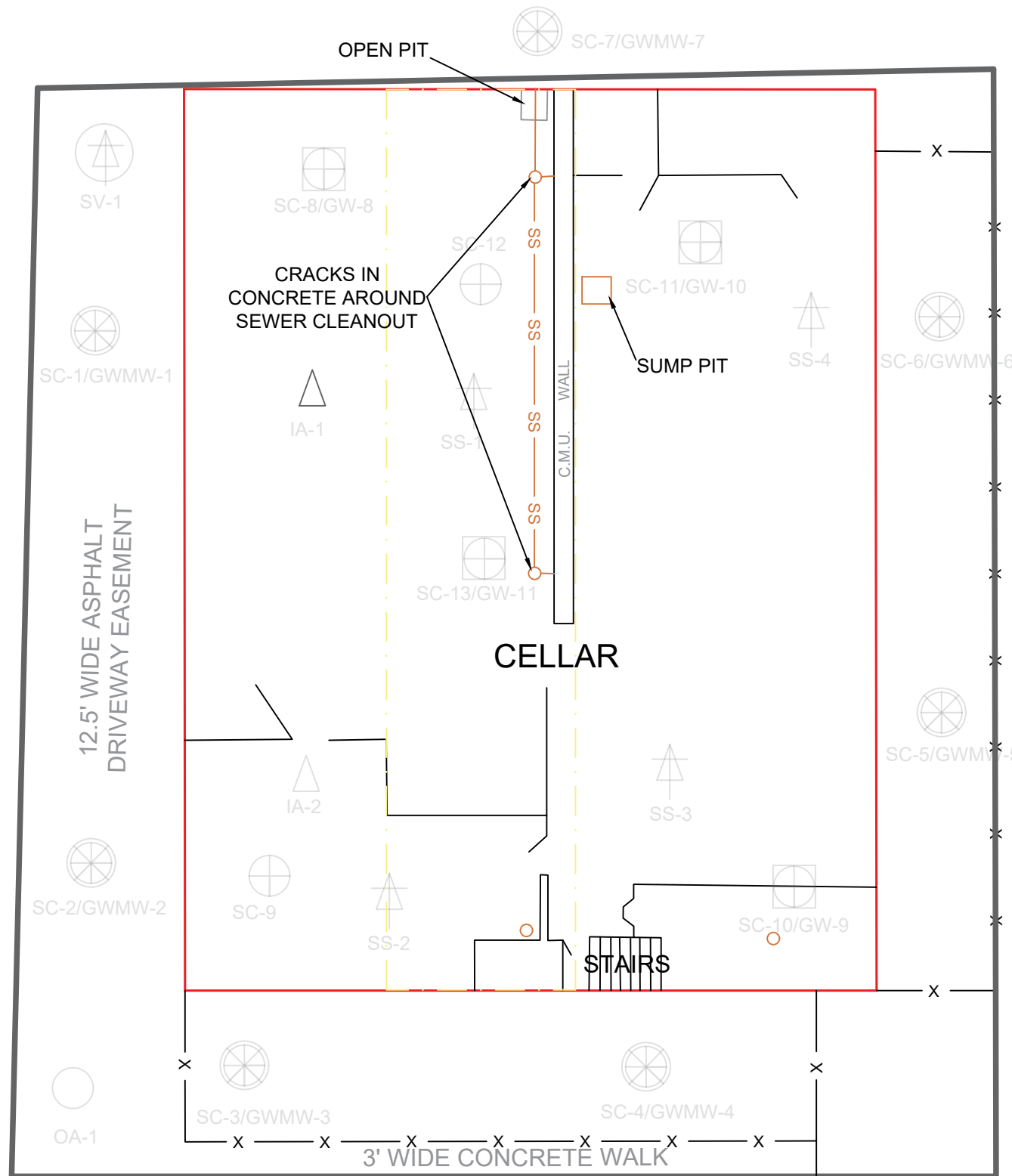
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FIGURE 5
Site Features Map





CROPSEY AVENUE



BAY 19TH STREET

LEGEND

	PROPOSED SITE CHARACTERIZATION (SC) SOIL SAMPLE LOCATION
	PROPOSED SUB-SLAB VAPOR SAMPLE LOCATION
	PROPOSED OUTDOOR AIR SAMPLE LOCATION
	PROPOSED INDOOR AIR SAMPLE LOCATION
	PROPOSED GROUNDWATER TEST WELL
	PROPOSED GROUNDWATER MONITORING WELL
	PROPOSED SOIL VAPOR SAMPLE LOCATION
	FENCE
	BUILDING LINE
	BOUNDARY LINE
	FORMER DRY-CLEANING FACILITY
	SANITARY SEWER PIPE
	SANITARY SEWER CLEANOUT

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PROJECT NAME:
1810 CROPSEY AVENUE
BROOKLYN, NY 11214

DRAWING TITLE:
**FIGURE 5:
 SITE FEATURES MAP**

SEAL & SIGNATURE:	DRAWING DATA:
	DATE: 1/21/2022
	PROJECT NO: 224320
	DRAWING BY: BM
	CHECK BY: DS

FIGURE 6
Project Schedule



Figure 6: Projected Project Schedule

Year	2022						
Month	Jan	Feb	Mar	Apr	May	Jun	Jul
Task							
NYSDEC							
1) NYSDEC Approves Site Characterization Work Plan							
2) NYSDEC Approves Site Characterization Report							
3) NYSDEC Approves Remedial Design/Remedial Action Work Plan							
SOIL							
1) RSK implements NYSDEC Requested Soil Delineation							
2) RSK implements NYSDEC Requested Groundwater Investigation							
3) Submission of Site Characterization Report							
VAPOR							
1) Submission of Remedial Design/Remedial Action Work Plan							
2) Diagnostic Testing and Designing of Sub Slab Depressurization System							
3) Installation of Sub Slab Depressurization System							
4) Submission of Site Management Plan							

APPENDIX A – September 2020 Phase-II Report

**PHASE-II
Site Investigation Report**

for



**1810-1818 Cropsey Avenue,
Brooklyn, NY 11214
Block: 6463, Lot: 137**

September 21, 2020

PHASE-II
Site Investigation Report

SITE ADDRESS: 1810-1818 Cropsey Avenue,
(A.k.a. 232 Bay 19th Street)
Brooklyn, NY 11214
Block: 6463, Lot: 137
(A one-story commercial building with cellar).

PREPARED FOR: Ontime Watch Inc.
1762 Benson Avenue,
Brooklyn, NY 11214
Attn: Mr. Eli Hoffman

PREPARED BY: RSK Environmental Group, LLC.
132-02 89th Ave. Suite #211
Richmond Hill, NY 11418
Tel: (718) 438-2200

DATE: September 21, 2020



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September 21, 2020

Introduction:

RSK Environmental Group, LLC (RSK) was retained by Mr. Eli Hoffman D.b.a. Ontime Watch Inc. (OMI) to conduct an environmental subsurface investigation and prepare this Phase-II Site Investigation Report (Phase-II) for the property located at 1810-1818 Cropsey Avenue, Brooklyn, NY 11214 (Block: 6463, Lot: 137); hereafter referred to as the “Site”. All work conducted at the Site was completed in accordance with recommendations of the American Society of Testing Materials (ASTM) Practice 1903-11, NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, Spill Prevention Operations Technology Series Memo #14 (SPOTS #14), NYSDEC Part 375 Environmental Remediation Programs for site unrestricted and restricted residential use soil cleanup objectives and NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

Site Location and Current Use:

The Site is located south of Cropsey Avenue (A.k.a. Victor V. Allegretti Way), north of Shore Parkway, east of 18th Avenue and west of Bay 19th Street which is situated within a mixed-use neighborhood in the Bensonhurst neighborhood of Kings County in Brooklyn, NY, a Site Location Map is provided as **Figure 1**. The Site is approximately 7,798-square feet in size and is developed with a one-story commercial building with a full cellar which has a total area of approximately 4,680-square feet. At the time of our inspection, the building was vacant with no activities for the past four (4) years. The building is supplied by public potable water supply and municipal sanitary sewer system.

Redevelopment Plans:

There are no proposed redevelopment plans for the Site.

Purpose:

This Phase-II was completed based on the findings and recommendations of a Records Search/Risk Assessment (RSRA) report prepared for the Site by Bison Environmental LLC (BE) and dated August 21, 2020, and a Phase-I Environmental Site Assessment (Phase-I) report prepared for the Site by RSK and dated September 14, 2020.

Previous Environmental Reports:

Records Search/Risk Assessment (RSRA):

A RSRA conducted for the Site by BE and dated August 21, 2020 identified the following:

- Based on the findings of the RSRA activities described herein, the property is of high environmental risk. This conclusion is based on the presence of a dry cleaner at 1812 Cropsey Avenue from at least 1960 through at least 1983. BE recommends that a Phase 1 Environmental Site Assessment is needed to attempt to determine if there are any indications of a discharge, and if the drycleaners might have been a drop off location only. Any need for further investigation would be dependent on the results of the Phase 1 ESA.

Phase-I Environmental Site Assessment (Phase-I):

A Phase-I conducted for the Site by RSK and dated September 14, 2020 identified the following:

- Two (2) RECs in conjunction with the Site:
 - Review of the historical data from EDR City Directory and Sanborn Maps, depicted the historical use of part of the Site as a former dry cleaner circa 1960 to at least 1976. The former use as a dry cleaner is suspected to have impacted the subsurface quality beneath the Site and is considered a REC at this time which warrants a Phase-II.
 - Review of the historical data from EDR Radius Map depicted several spills that occurred north-northwest, northeast and at a higher elevation to the Site. The spill cases offsite is suspected to have impacted the subsurface quality beneath the Site and is considered a REC at this time which warrants a Phase-II.

The assessment also revealed evidence of Business Environmental Risk (BERs) in connection with the Site:

- A 55-gallon steel drum labeled as containing extra duty motor oil was identified on the first floor of the building, should be removed from the Site and disposed of legally.
- During the investigation of the interior of the building, mold and water stained areas on the ceiling were observed. There were several indications of mold growth noted during the inspection.
- The building inhabiting the Site constructed circa to 1931, and RSK identified visual signs of what may be asbestos-containing material in the window caulking and ceiling of the building on the subject property. Due to this and the age of the building, ACM material may be present in the building.
- The building inhabiting the Site was constructed circa 1931, and there were visual signs of chipped and/or flaking paint throughout the building on the subject property. Due to this, and the age of the building, lead-based paint material may be present in the building.

Copies of previous environmental reports are attached as **Appendix A**.

Phase-II Work Plan Scope:

Geophysical Survey

A geophysical survey was not performed as part of this Phase-II.

Sampling Summary

An environmental investigation of the subsurface soil, groundwater and a vapor intrusion assessment were proposed to address the environmental concerns from historic usage as a drycleaner and offsite contamination at the Site. The proposed investigative work and sampling areas were coordinated with the respective parties involved. RSK developed and implemented a soil boring location plan in the field based on site accessibility.

Field Activities – Subsurface Soil Investigation

On September 11, 2020 RSK mobilized onsite to perform the requested subsurface investigation work within the Site. All sampling areas were accessible without any deviations, the temperature within the building was 70°F and the outdoor weather conditions was 75°F and sunny.

Soil Sampling

A total of four (4) soil borings (SB-1 through SB-4) were installed within the four corners of the cellar of the building. Each soil boring was installed using portable Geoprobe™ soil sampling equipment with a non-disposable macro-core sampler equipped with disposable macro-core liners for soil collection. At each soil boring location, a 4-inch diameter coring was installed in the concrete floor. Soil borings were performed and soil samples were retrieved continuously every 2-feet from site grade to a termination depth of 10-feet below grade surface (bgs) of the cellar. Groundwater was encountered at 9-feet bgs during the soil boring installation. All soil samples retrieved were field screened by olfactory methods and by utilizing a portable Photoionization Detector (PID) for the presence of Volatile Organic Compounds (VOCs). No contamination was observed visually and PID readings were not detected in parts per million response units (PPMRUs). A copy of the soil boring logs is attached as **Appendix B**.

With no visual contamination of PID readings identified, the deepest dry soil samples between 8-feet to 10-feet were kept for laboratory analysis. The soil samples kept for laboratory analysis were placed into laboratory certified glassjars, labeled SB-1/S3 (8'-10') through SB-4/S3 (8'-10'), documented on a Chain of Custody form, packed into a cooler filled with ice and submitted to a NYSDOH certified laboratory, York Analytical Laboratories, Inc. (YAL) in Richmond Hill, NY for chemical analysis.

Groundwater Sampling

The four (4) soil boring locations were converted into temporary groundwater wells for sampling. A total of four (4) groundwater samples were collected from the temporary wells (GW-1/SB-1 through GW-4/SB-4). Groundwater was encountered at a depth ranging from 7.55-ft to 8.47-ft during the site investigation. During the sampling of the groundwater, high levels of petroleum contamination was encountered utilizing a portable PID which ranged from 2.1ppm to 1,050ppm. Four (4) groundwater samples kept for laboratory analysis were placed into laboratory certified glassjars, labeled GW-1/SB-1 (8.47'), GW-2/SB-2 (8.05'), GW-3/SB-3 (7.70') and GW-4/SB-4 (7.55'), documented on a Chain of Custody form, packed into a cooler filled with ice and submitted to a NYSDOH certified laboratory, York Analytical Laboratories, Inc. (YAL) in Richmond Hill, NY for chemical analysis.

Upon completion of the soil borings, excess soil was backfilled into their respective bore holes and the corings were sealed with a cement mix to match existing site grade and prevent any surface contamination.

Field Activities – Vapor Intrusion Assessment

On September 14, 2020 RSK mobilized onsite to perform the requested vapor intrusion assessment (VIA) within the Site. All sampling areas were accessible without any deviations, the temperature within the building was 71°F and the outdoor weather conditions was 67°F and sunny.

Soil Vapor and Air Sampling

A total of four (4) air samples were collected for the Site utilizing 6-Liter Summa canisters. One (1) sub-slab sample identified as SI-1 (Cellar) was collected from beneath the slab of the cellar of the one-story building known as 1812 Cropsey Avenue; two (2) indoor air samples identified as IA-1 (1st Floor) and IA-2 (Cellar) were collected from the one-story building, and one (1) outdoor air sample (identified as OA-1 (Outside)) was collected from the front exterior of the Site along Cropsey Avenue. See site boring/sampling location plan attached as **Figure 2**.

The sub-slab implant was set at a depth of approximately 18-inches beneath the existing concrete slab within the cellar. The sub-slab implant was installed by drilling a ½-inch diameter hole through the existing concrete slab with a handheld hammer drill and inserting a ¼-inch polyethylene tubing attached to a vapor sampling implant (1/4" barb 6") which was extended approximately 18-inches beyond the surface needed to reach the canister above the surface. The tubing was capped with a ¼-inch plastic end to prevent infiltration of foreign particles into the tube. The tubing was sealed with a hydrated granular bentonite to the surface. As part of the vapor intrusion evaluation, tracer gas was used in accordance with NYSDOH protocols to serve as a quality assurance/quality control (QA/QC) device and to verify the integrity of the soil vapor probe seal. A container (plastic pail) was placed to keep the tracer gas in contact with the probe and seal during testing. A portable monitoring device (multi-gas meter) was used to analyze a sample of soil vapor for the tracer gas prior to sampling. The tracer sample results showed no significant presence of the tracer and RSK proceeded with the air sampling. The indoor air (cellar and first floor) and outdoor air samples were placed approximately 3-feet above each surface within range of the breathing zone. The four (4) air samples collected on September 14, 2020 was done in a contemporaneous manner utilizing four (4) 6-Liter Summa canisters which were all equipped with 8-hour flow controllers. The four (4) samples collected were documented on a Chain of Custody form and were submitted to York Analytical Laboratories, Inc. (YAL) in Richmond Hill, NY for chemical analysis. Upon completion of sub-slab samples collection, the bore holes were sealed with a cement mix to match existing site grade and prevent any surface contamination.

Inventory and Questionnaire Summary

At the time of this VIA, the building spaces assessed appeared to be airtight with minimal infiltration. The building is currently vacant with recent activities of excavation within the cellar to repair plumbing lines. The cellar in the building spaces was damp and mold was observed. Ambient air within the building cellar and first-floor space was field-screened utilizing a portable Photoionization Detector (PID) for the presence of Volatile Organic Compounds (VOCs). No VOCs were detected in parts per million response units (PPMRUs).

The Inventory Inspection performed noted the presence of the following list in **Table 1**.

Table 1. Product Inventory Form
1810-1818 Cropsey Avenue, Brooklyn, NY

Location	Product Description	Qty.	Size	Condition*			Near Sample Location	Photo Y/N
				Unopened	Used	Deteriorated		
First Floor	55-gallon drum with extra duty motor oil	1	55 Gallon			x	IA-1	Y
First Floor	5-gallon bucket of Super Hide paint	2	5-gallon		x		IA-1	Y
First Floor	5-gallon bucket of All Purpose joint compound	2	5-gallon		x		IA-1	Y
First Floor	5-gallon bucket of Benjamin Moore paint	2	5-gallon		x		IA-1	Y
First Floor	1-gallon pail of paint	1	1-gallon		x		IA-1	Y
Cellar	5-gallon bucket containing soil (from an open excavation)	5	5-gallon		x		IA-2	Y
Cellar	55-gallon bin containing soil (from an open excavation)	1	55-gallon		x		IA-2	Y
Cellar	5-gallon bucket containing debris (from an open excavation)	1	5-gallon		x		IA-2	Y
Cellar	Hartz ph5 Cat Litter bags	40	25-lb			x	IA-2	Y

*Describes the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

Sampling Chemical Analysis

The four (4) soil samples, four (4) groundwater samples, and four (4) air samples were submitted to YAL a NYSDOH/ Environmental Laboratory Accreditation Program (ELAP)-certified laboratory.

The four (4) soil samples collected were analyzed for Target Compound List (TCL) analysis:

- Volatile Organic Compounds (VOCs) by EPA Test Method 8260 (Full List)
- Semi-Volatile Organic Compounds (SVOCs) by EPA Test Method 8270 (Full List)

The four (4) groundwater samples collected were analyzed for Target Compound List (TCL) analysis:

- Volatile Organic Compounds (VOCs) by EPA Test Method 8260 (Full List)
- Semi-Volatile Organic Compounds (SVOCs) by EPA Test Method 8270 (Full List)
- RCRA Metals by EPA Test Method

The four (4) air samples were analyzed for Volatiles (VOCs) analysis:

- Volatile Organic Compounds (VOCs) by EPA Test Method TO-15.

Analytical Data

Evaluation of Laboratory Analytical Results - Soil

Laboratory analytical results of the four (4) soil samples did not detect any contaminants above regulatory levels as compared with the NYSDEC's Unrestricted Use Soil Cleanup Objectives (UUSCOs).

Analytical data were compared with NYSDEC Part 375 guidance values as document on **Table 5** and **Table 6** and laboratory analytical reports are attached as **Appendix C**.

Evaluation of Laboratory Analytical Results - Groundwater

Laboratory analytical results of the four (4) groundwater samples detected eleven (11) exceeding VOCs {1,2,4-Trimethylbenzene ranging from 19ug/L to 12,000ug/L; 1,3,5-Trimethylbenzene ranging from 77ug/L to 1,600ug/L; Cyclohexane ranging from 170ug/L to 210ug/L; Ethyl Benzene ranging from 110ug/L to 1,900ug/L; Isopropylbenzene ranging from 38ug/L to 240ug/L; Methylcyclohexane ranging from 170ug/L to 330ug/L; n-Butylbenzene ranging from 41ug/L to 290ug/L; n-Propylbenzene ranging from 130ug/L to 760ug/L; sec-Butylbenzene ranging from 11ug/L to 51ug/L; Toluene at 23ug/L; p&m-Xylene ranging from 7.1ug/L to 260ug/L; and p-Isopropyltoluene ranging from 18ug/L to 37ug/L}; six (6) exceeding SVOCs {1,1'-Biphenyl at 6.53ug/L; 2-Methylnaphthalene ranging from 164ug/L to 5,030ug/L; Benzo(a)anthracene ranging from 0.0556ug/L to 0.0923ug/L; Benzo(b)fluoranthene at 0.0513ug/L; Bis(2-ethylhexyl) phthalate at 5.57ug/L; and Naphthalene ranging from 604ug/L to 5,210ug/L}; and three (3) RCRA Metals {Arsenic at 39ug/L; Chromium ranging from 65.1ug/L to 404ug/L; and Lead ranging from 51.4ug/L to 319ug/L}. The exceeded contaminants in the groundwater samples were compared with the NYSDEC's Groundwater Quality Standards (GWS).

Analytical data were compared with NYSDEC Part 375 guidance values as document on **Table 7** through **9** and laboratory analytical reports are attached as **Appendix C**.

Evaluation of Laboratory Analytical Results - Air

Laboratory analytical results of the air samples collected and analyzed identified a consistency of contaminants; Dichlorodifluoromethane (Freon 12) ranging from 1.7 ug/m³ to 2.8 ug/m³, Trichlorofluoromethane (Freon 11) ranging from 1.5 ug/m³ to 2.4 ug/m³, 1,2,4-Trimethylbenzene ranging from 0.76 ug/m³ to 120 ug/m³, Acetone ranging from 6.1 ug/m³ to 69 ug/m³, Benzene ranging from 0.36 ug/m³ to 58 ug/m³, 2-Butanone ranging from 0.36 ug/m³ to 6.9 ug/m³, Ethyl Benzene ranging from 0.40 ug/m³ to 62 ug/m³, n-Heptane ranging from 0.56 ug/m³ to 41 ug/m³, n-Hexane ranging from 0.46 ug/m³ to 56 ug/m³, Isopropanol¹ ranging from 7.1 ug/m³ to 56 ug/m³, Tetrachloroethylene (perc) ranging from 2.0 ug/m³ to 330 ug/m³, Toluene ranging from 1.9 ug/m³ to 630 ug/m³, o-Xylene ranging from 0.38 ug/m³ to 94 ug/m³, and p & m- Xylene ranging from 1.1 ug/m³ to 220 for ug/m³.

The laboratory data reviewed depicted exceeding concentrations of contaminants above their respective guidance values. Tetrachloroethylene (perc) exceeded in the indoor air concentrations as compared with NYSDOH Matrix B and requires that the source(s) is identified and mitigation is performed.

Analytical data were compared with NYSDOH values as document on **Table 10** and laboratory analytical reports are attached as **Appendix C**.

Conclusions & Recommendations

Conclusions

On September 11, 2020 and September 14, 2020, RSK completed this Phase-II SIR in order to determine if the Site was impacted from the historical usage as a drycleaner and an offsite gasoline spill. Based upon the results of this Phase-II SIR, RSK concluded the following:

- The vapor intrusion assessment (VIA) completed identified several contaminants which were consistent with chlorinated and petroleum contaminants beneath the cellar slab and within the indoor air of the building at exceeding concentrations. The contaminants detected in the sub-slab samples which are consistent with the indoor air samples requires a mitigation program as compared with the NYSDOH Soil Vapor Intrusion Matrix B.
- The groundwater assessment completed identified several contaminants which impacted the groundwater and were consistent with gasoline constituents and is assumed to be associated with the historic gasoline spill (documented as spill no. 9812361) which occurred at the former Getty Service Station located at 1785 Cropsey Avenue, Brooklyn, NY.

Recommendations

Based on the contaminants identified as part of the VIA, RSK recommends that an active sub-slab depressurization system (SSDS) together with a vapor barrier/retarder of 20-mils or better should be installed. In addition to the SSDS system, RSK recommends that a copy of this report should be submitted to the NYS Dept. of Environmental Conservation (NYSDEC) for their review and documentation. The state may require further investigation and/or remediation to address the impacted groundwater. Such remedial and investigation including engineering controls cost can range from \$200,000.00 to \$250,000.00.

Prepared by:



Drumita Dmello
Environmental Scientist

Reviewed by:



Dhanraj Singh
Sr. Project Manager

Submitted by:



Sam Rosenbaum

Reviewed by:



Theodore Yen
Professional Engineer

FIGURE 1
Site Location Map

1810-1818 CROPSEY AVENUE a.k.a. BAY 19TH STREET, BROOKLYN, NY 11214

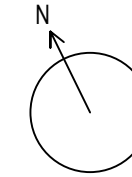


Figure 1. Site Location Map
1818-1810 Cropsey Avenue,
a.k.a. Bay 19th Street
Brooklyn, NY 11214
Block: 6463 Lot: 137

PREPARED BY:
RSK ENVIRONMENTAL GROUP LLC
132-02 89TH AVENUE, STE. 211,
QUEENS, NY 11418
T: (718) 438-2200

PREPARED FOR:
ONTIME WATCH INC.
1762 BENSON AVENUE,
BROOKLYN, NY 11214

REVISION DATA:

REV	DATE	COMMENT	BY

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PROJECT NAME:
**1810-1818 CROPSEY AVENUE,
BROOKLYN, NY 11214**

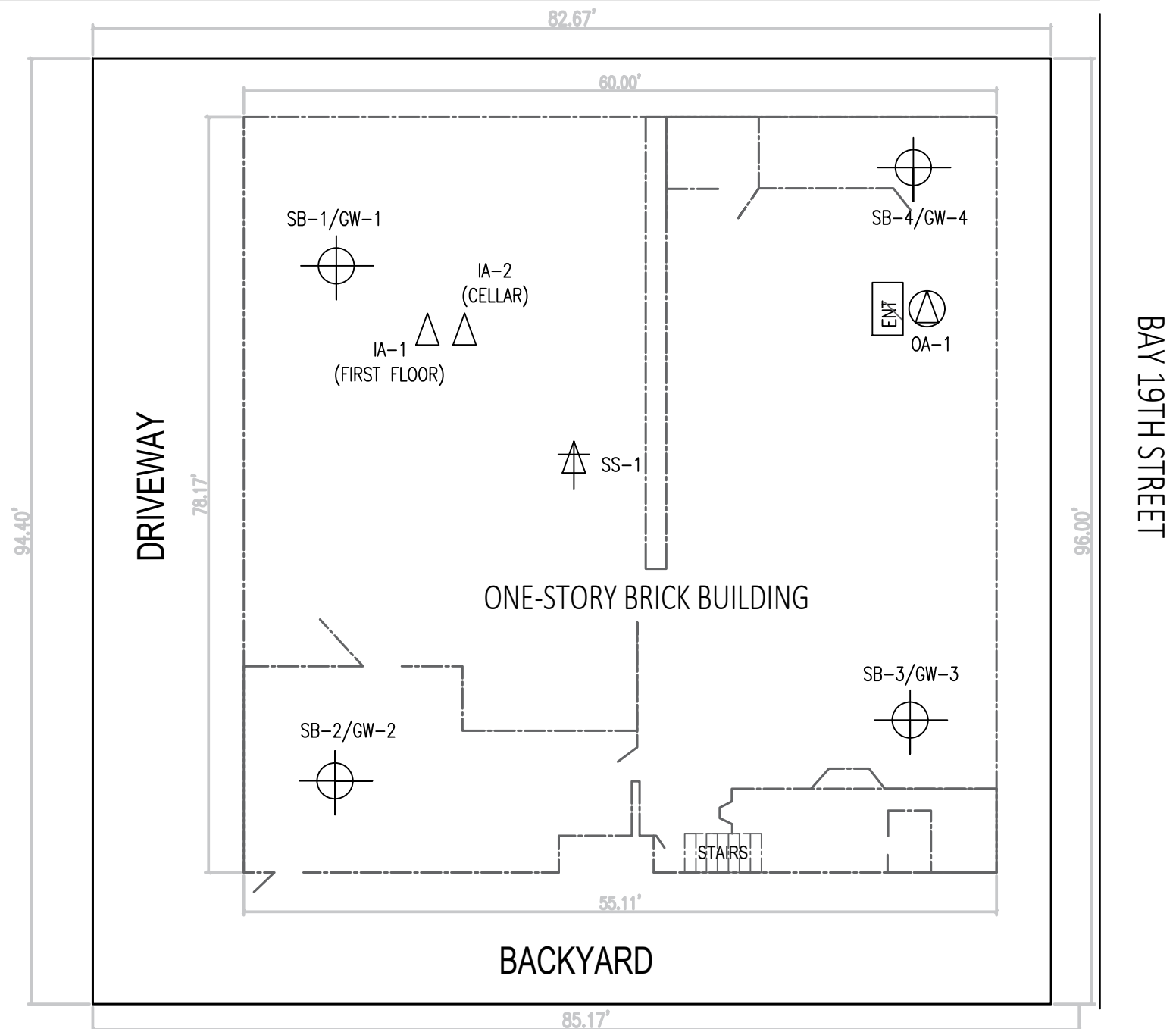
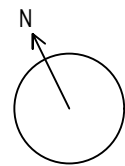
DRAWING TITLE:
**FIGURE 1.
SITE LOCATION MAP**

SEAL & SIGNATURE:	DRAWING DATA:
	DATE: 09/14/2020 PROJECT NO: 20200909-1810/PH2 DRAWING BY: KN CHECK BY: DS
	DRAWING NO.:
	SLM-001.00
	CAD FILE NO.:
	Z:20200909-1810/PH2
	Page 1 of 1

FIGURE 2
Sampling Location Plan

1810-1818 CROPSEY AVENUE a.k.a. BAY 19TH STREET, BROOKLYN, NY 11214

CROPSEY AVENUE a.k.a. VICTOR V. ALLEGRETTI WAY



- LEGEND**
- SOIL BORING / GROUNDWATER SAMPLE LOCATIONS
 - SUBSLAB SAMPLE LOCATION
 - INDOOR AIR SAMPLE LOCATIONS (CELLAR AND FIRST FLOOR)
 - OUTDOOR AIR SAMPLE LOCATION
 - BUILDING PROPERTY LINE
 - SUBJECT PROPERTY LINE

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REVISION DATA:

REV	DATE	COMMENT	BY

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PROJECT NAME:
**1810-1818 CROPSEY AVENUE,
 BROOKLYN, NY 11214**

DRAWING TITLE:
**FIGURE 2.
 SAMPLE LOCATION PLAN**

SEAL & SIGNATURE:	DRAWING DATA:	
	DATE: 09/14/2020	
	PROJECT NO: 20200909-1810/PH2	
	DRAWING BY: KN CHECK BY: DS	
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SLP-001.00		
CAD FILE NO.:		Page 1 of 1
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TABLES

Table 2

**Soil Sample Information
1810-1818 Cropsey Avenue, Brooklyn, NY**

SAMPLE ID	Date	Total Depth (feet)	Construction Materials
SB1/S3 8'-10'	09/11/2020	8' – 10'	None
SB2/S3 8'-10'	09/11/2020	8' – 10'	None
SB-3/S3 8'-10'	09/11/2020	8' – 10'	None
SB-4/S3 8'-10'	09/11/2020	8' – 10'	None

Table 3

**Groundwater Sample Information
1810-1818 Cropsey Avenue, Brooklyn, NY**

SAMPLE ID	Date	Depth to GW (feet)	Construction Materials
GW-1/SB-1 (8.47')	09/11/2020	8.47'	None
GW-2/SB-2 (8.05')	09/11/2020	8.05'	None
GW-3/SB-3 (7.70')	09/11/2020	7.70'	None
GW-4/SB-4 (7.55')	09/11/2020	7.55'	None

Table 4

**Soil Vapor Sample Information from Site Grade
1810-1818 Cropsey Avenue, Brooklyn, NY**

SAMPLE ID	Date	Air Matrix	Construction Materials
SI-1 (Cellar)	09/14/2020	Soil Vapor	Vapor Implants & tubing
IA-1 (1st Floor)	09/14/2020	Indoor Ambient Air	None
IA-2 (Cellar)	09/14/2020	Indoor Ambient Air	None
OA-1 (Outside)	09/14/2020	Outdoor Ambient Air	None

Table 5

**1810-1818 Cropsey Avenue, Brooklyn, NY
Soil Analytical Results
Volatile Organic Compounds**

COMPOUND	NYSDEC UUSCO	NYDEC RRSCO	NYSDEC CSCO	SB-1/S3 (8'-10') 09/11/20 ug/kg	SB-2/S3 (8'-10') 09/11/20 ug/kg	SB-3/S3 (8'-10') 09/11/20 ug/kg	SB-4/S3 (8'-10') 09/11/20 ug/kg
1,1,1,2 Tetrachloroethane	NS	NS	NS	ND	ND	ND	ND
1,1,1-Trichloroethane	680	100,000	500,000	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	NS	NS	ND	ND	ND	ND
1,1,2-Trichloroethane	NS	NS	NS	ND	ND	ND	ND
1,1-Dichloroethane	270	26,000	240,000	ND	ND	ND	ND
1,1-Dichloroethene	100,000	100,000	500,000	ND	ND	ND	ND
1,1-Dichloroethylene	330	100,000	500,000	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NS	NS	NS	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	52,000	190,000	ND	ND	6.6	5.7
1,2-Dibromo-3-chloropropane	NS	NS	NS	ND	ND	ND	ND
1,2-Dibromoethane	NS	NS	NS	ND	ND	ND	ND
1,2-Dichlorobenzene	1,100	100,000	500,000	ND	ND	ND	ND
1,2-Dichloroethane	20	3,100	30,000	ND	ND	ND	ND
1,2-Dichloropropane	NS	NS	NS	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	52,000	190,000	ND	ND	2.5	2.1
1,3-Dichlorobenzene	2,400	49,000	280,000	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	13,000	130,000	ND	ND	ND	ND
1,4-Dioxane	100	13,000	130,000	ND	ND	ND	ND
4-Methyl-2-pentanone	NS	NS	NS	ND	ND	ND	ND
2-Butanone	NS	NS	NS	ND	ND	ND	ND
Acetone	50	100,000	500,000	ND	ND	ND	ND
Benzene	60	4,800	44,000	ND	ND	ND	ND
Bromochloromethane	NS	NS	NS	ND	ND	ND	ND
Bromodichloromethane	NS	NS	NS	ND	ND	ND	ND
Bromoform	NS	NS	NS	ND	ND	ND	ND
Bromomethane	NS	NS	NS	ND	ND	ND	ND
Butylbenzene	100,000	100,000	500,000	ND	ND	ND	ND
Carbon disulfide	NS	NS	NS	ND	ND	ND	ND
Carbon tetrachloride	760	2,400	22,000	ND	ND	ND	ND
Chlorobenzene	1,100	100,000	500,000	ND	ND	ND	ND

Chloroethane	NS	NS	NS	ND	ND	ND	ND
Chloroform	370	49,000	350,000	ND	ND	ND	ND
Chloromethane	NS	NS	NS	ND	ND	ND	ND
cis-1,2-Dichloroethylene	250	100,000	500,000	ND	ND	ND	ND
cis-1,2-Dichloroethene	59,000	100,000	500,000	ND	ND	ND	ND
cis-1,3-Dichloropropylene	NS	NS	NS	ND	ND	ND	ND
Cyclohexane	NS	NS	NS	ND	ND	ND	ND
Dibromochloromethane	NS	NS	NS	ND	ND	ND	ND
Dibromomethane	NS	NS	NS	ND	ND	ND	ND
Dichlorodifluoromethane	NS	NS	NS	ND	ND	ND	ND
Ethyl Benzene	1,000	41,000	390,000	ND	ND	ND	ND
Hexachlorobenzene	330	1,200	6,000	ND	ND	ND	ND
Isopropylbenzene	NS	NS	NS	ND	ND	ND	ND
Methyl ethyl ketone	100,000	100,000	500,000	ND	ND	ND	ND
Methyl acetate	NS	NS	NS	ND	ND	ND	ND
Methyl tert-butyl ether (MTBE)	930	100,000	500,000	ND	ND	ND	ND
Methylcyclohexane	NS	NS	NS	ND	ND	ND	ND
Methylene chloride	50	100,000	500,000	ND	ND	ND	4.9
n-Propylbenzene	3,900	100,000	500,000	ND	ND	1.5	ND
sec-Butylbenzene	11,000	100,000	500,000	ND	ND	ND	ND
Styrene	NS	NS	NS	ND	ND	ND	ND
tert-Butylbenzene	5,900	100,000	500,000	ND	ND	ND	ND
Tetrachloroethene	1,300	19,000	150,000	ND	ND	ND	ND
Toluene	700	100,000	500,000	ND	ND	ND	ND
trans-1,2-Dichloroethylene	190	100,000	500,000	ND	ND	ND	ND
trans-1,2-Dichloroethene	100,000	100,000	500,000	ND	ND	ND	ND
trans-1,3-Dichloropropylene	NS	NS	NS	ND	ND	ND	ND
Trichloroethene	470	21,000	200,000	ND	ND	ND	ND
Vinyl Chloride	20	9000	13,000	ND	ND	ND	ND

Notes:

- UUSCO - Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006
- RRSCO - Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
- CSCO - Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
- All units are in ug/kg or ppb
- Bold text indicates UUSCO exceedances
- Shaded cell indicates RRSCO exceedances
- ND – Not Detected
- NS (Blank) – No Standard

Table 6

**1810-1818 Cropsey Avenue, Brooklyn, NY
Soil Analytical Results
Semi-Volatile Organic Compounds**

COMPOUND	NYSDEC UUSCO	NYDEC RRSCO	NYSDEC CSCO	SB-1/S3 (8'-10') 09/11/20 ug/kg	SB-2/S3 (8'-10') 09/11/20 ug/kg	SB-3/S3 (8'-10') 09/11/20 ug/kg	SB-4/S3 (8'-10') 09/11/20 ug/kg
1,1'-Biphenyl	NS	NS	NS	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	NS	NS	NS	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NS	NS	NS	ND	ND	ND	ND
1,2-Dichlorobenzene	NS	NS	NS	ND	ND	ND	ND
1,2-Diphenylhydrazine (as Azobenzene)	NS	NS	NS	ND	ND	ND	ND
1,3-Dichlorobenzene	NS	NS	NS	ND	ND	ND	ND
1,4-Dichlorobenzene	NS	NS	NS	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	NS	NS	NS	ND	ND	ND	ND
2,4,5-Trichlorophenol	NS	NS	NS	ND	ND	ND	ND
2,4,6-Trichlorophenol	NS	NS	NS	ND	ND	ND	ND
2,4-Dichlorophenol	NS	NS	NS	ND	ND	ND	ND
2,4-Dimethylphenol	NS	NS	NS	ND	ND	ND	ND
2,4-Dinitrophenol	NS	NS	NS	ND	ND	ND	ND
2,4-Dinitrotoluene	NS	NS	NS	ND	ND	ND	ND
2,6-Dinitrotoluene	NS	NS	NS	ND	ND	ND	ND
2-Chloronaphthalene	NS	NS	NS	ND	ND	ND	ND
2-Chlorophenol	NS	NS	NS	ND	ND	ND	ND
2-Methylnaphthalene	NS	NS	NS	ND	ND	ND	ND
2-Methylphenol	330	100,000	500,000	ND	ND	ND	ND
2-Nitroaniline	NS	NS	NS	ND	ND	ND	ND
2-Nitrophenol	NS	NS	NS	ND	ND	ND	ND
3- & 4- Methylphenols	NS	NS	NS	ND	ND	ND	ND
3,3'-Dichlorobenzidine	NS	NS	NS	ND	ND	ND	ND
3-Nitroaniline	NS	NS	NS	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	NS	NS	NS	ND	ND	ND	ND
4-Bromophenyl phenyl ether	NS	NS	NS	ND	ND	ND	ND
4-Chloro-3-methylphenol	NS	NS	NS	ND	ND	ND	ND
4-Chloroaniline	NS	NS	NS	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	NS	NS	NS	ND	ND	ND	ND

4-Nitroaniline	NS	NS	NS	ND	ND	ND	ND
4-Nitrophenol	NS	NS	NS	ND	ND	ND	ND
Acenaphthene	20,000	100,000	500,000	ND	ND	ND	ND
Acenaphthylene	100,000	100,000	500,000	ND	ND	ND	ND
Acetophenone	NS	NS	NS	ND	ND	ND	ND
Aniline	NS	NS	NS	ND	ND	ND	ND
Anthracene	100,000	100,000	500,000	ND	ND	ND	ND
Atrazine	NS	NS	NS	ND	ND	ND	ND
Benzaldehyde	NS	NS	NS	ND	ND	ND	ND
Benzidine	NS	NS	NS	ND	ND	ND	ND
Benzo(a)anthracene	1,000	1,000	5,600	ND	ND	ND	ND
Benzo(a)pyrene	1,000	1,000	1,000	ND	ND	ND	ND
Benzo(b)fluoranthene	1,000	1,000	5,600	ND	ND	ND	ND
Benzo (g, h, i) perylene	100,000	100,000	500,000	ND	ND	ND	ND
Benzo(k)fluoranthene	800	3,900	56,000	ND	ND	ND	ND
Benzoic acid	NS	NS	NS	ND	ND	ND	ND
Benzyl alcohol	NS	NS	NS	ND	ND	ND	ND
Benzyl butyl phthalate	NS	NS	NS	ND	ND	ND	ND
Bis(2-chloroethoxy) methane	NS	NS	NS	ND	ND	ND	ND
Bis(2-chloroethyl) ether	NS	NS	NS	ND	ND	ND	ND
Bis(2-ethylhexyl) phthalate	NS	NS	NS	ND	ND	ND	ND
Caprolactam	NS	NS	NS	ND	ND	ND	ND
Carbazole	NS	NS	NS	ND	ND	ND	ND
Chrysene	1,000	3,900	56,000	ND	ND	ND	ND
Dibenzo (a, h) anthracene	330	330	560	ND	ND	ND	ND
Dibenzofuran	NS	NS	NS	ND	ND	ND	ND
Diethyl phthalate	NS	NS	NS	ND	ND	ND	ND
Dimethyl phthalate	NS	NS	NS	ND	ND	ND	ND
Di-n-butyl phthalate	NS	NS	NS	ND	ND	ND	ND
Di-n-octyl phthalate	NS	NS	NS	ND	ND	ND	ND
Fluoranthene	100,000	100,000	500,000	ND	ND	ND	ND
Fluorene	30,000	100,000	500,000	ND	ND	ND	ND
Hexachlorobenzene	NS	NS	NS	ND	ND	ND	ND
Hexachlorobutadiene	NS	NS	NS	ND	ND	ND	ND
Hexachlorocyclopentadiene	NS	NS	NS	ND	ND	ND	ND
Hexachloroethane	NS	NS	NS	ND	ND	ND	ND
Indeno(1,2,3-cd) pyrene	500	500	5,600	ND	ND	ND	ND
Naphthalene	12000	100,000	500,000	ND	ND	ND	ND
Phenanthrene	100,000	100,000	500,000	ND	ND	ND	ND
Pyrene	100,000	100,000	500,000	ND	ND	ND	ND

Notes:

- UUSCO - Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006
- RRSCO - Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
- CSCO - Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
- All units are in ug/kg or ppb
- Bold text indicates UUSCO exceedances
- Shaded cell indicates RRSCO exceedances
- ND – Not Detected
- NS (Blank) – No Standard

Table 7

**Groundwater Analytical Results
Volatile Organic Compounds
1810-1818 Cropsey Avenue, Brooklyn, NY**

COMPOUND	NYSDEC Groundwater Quality Standards (µg/L)	GW-1/SB-1 (8.47') 09/11/2020 ug/L	GW-2/SB-2 (8.05') 09/11/2020 ug/L	GW-3/SB-3 (7.70') 09/11/2020 ug/L	GW-4/SB-4 (7.55') 09/11/2020 ug/L
1,1,1,2 Tetrachloroethane	5	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND
1,1-Dichloroethylene	NS	ND	ND	ND	ND
1,2,3-Trichlorobenzene	5	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	12,000	140	19	3,200
1,2-Dibromo-3-chloropropane	0.04	ND	ND	ND	ND
1,2-Dibromoethane	5	ND	ND	ND	ND
1,2-Dichlorobenzene	3	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	1,600	150	77	470
1,3-Dichlorobenzene	20	ND	ND	ND	ND
1,4-Dichlorobenzene	30	ND	ND	ND	ND
1,4-Dioxane	NS	ND	ND	ND	ND
2-Butanone	NS	ND	ND	ND	ND
4-Methyl-2-pentanone	NS	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND
Acetone	50	26	ND	13	ND
Acrolein	5	ND	ND	ND	ND
Acrylonitrile	5	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND
Bromochloromethane	5	ND	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND

Bromomethane	5	ND	ND	ND	ND
Butylbenzene	NS	ND	ND	ND	ND
Carbon disulfide	60	ND	ND	ND	ND
Carbon tetrachloride	5	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND
cis-1,2-Dichloroethylene	5	ND	ND	ND	ND
cis-1,3-Dichloropropylene	NS	ND	ND	ND	ND
Cyclohexane	NS	210	27	170	140
Dibromochloromethane	50	ND	ND	ND	ND
Dibromomethane	5	ND	ND	ND	ND
Dichlorodifluoromethane	5	ND	ND	ND	ND
Ethyl Benzene	NS	1,900	110	1,000	650
Hexachlorobenzene	0.04	ND	ND	ND	ND
Hexachlorobutadiene	0.05	ND	ND	ND	ND
Isopropylbenzene	5	240	38	100	120
Methyl acetate	NS	ND	ND	ND	ND
Methyl tert-butyl ether (MTBE)	10	ND	ND	ND	ND
Methylcyclohexane	NS	330	38	170	280
Methylene chloride	5	ND	ND	ND	ND
n-Butylbenzene	5	290	48	41	94
n-Propylbenzene	5	760	130	280	360
sec-Butylbenzene	5	51	11	14	24
Styrene	5	ND	ND	ND	ND
Tert-Butyl alcohol (TBA)	NS	ND	ND	ND	ND
tert-Butylbenzene	5	ND	ND	ND	ND
Tetrachloroethylene	5	ND	ND	ND	ND
Toluene	5	ND	ND	23	2
trans-1,2-Dichloroethylene	NS	ND	ND	ND	ND
trans-1,3-Dichloropropylene	0.4	ND	ND	ND	ND
* trans-1,4-dichloro-2-butene	5	ND	ND	ND	ND
Trichloroethylene	5	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND
o-Xylene	5	ND	ND	ND	ND
p & m- Xylene	5	260	7.1	42	36
p-Isopropyltoluene	NS	37	8	8.6	18
Xylenes, Total	1,600	260	7.1	44	36

Notes:

- All units are in ug/L or ppb
- Bold text indicates NYSDEC exceedances.
- ND – Not Detected
- NS (Blank) – No Standard

Table 8

**Groundwater Analytical Results
1810-1818 Cropsey Avenue, Brooklyn, NY
Semi-Volatile Organic Compounds**

COMPOUND	NYSDEC Groundwater Quality Standards (µg/L)	GW-1/SB-1 (8.47') 09/11/2020 ug/L	GW-2/SB-2 (8.05') 09/11/2020 ug/L	GW-3/SB-3 (7.70') 09/11/2020 ug/L	GW-4/SB-4 (7.55') 09/11/2020 ug/L
1,1'-Biphenyl	5	ND	3.12	ND	6.53
1,2,4,5-Tetrachlorobenzene	10	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND
1,2-Dichlorobenzene	3	ND	ND	ND	ND
1,2-Diphenylhydrazine (as Azobenzene)	5	ND	ND	ND	ND
1,3-Dichlorobenzene	3	ND	ND	ND	ND
1,4-Dichlorobenzene	3	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	NS	ND	ND	ND	ND
2,4,5-Trichlorophenol	NS	ND	ND	ND	ND
2,4,6-Trichlorophenol	NS	ND	ND	ND	ND
2,4-Dichlorophenol	5	ND	ND	ND	ND
2,4-Dimethylphenol		ND	ND	ND	ND
2,4-Dinitrophenol	5	ND	ND	ND	ND
2,4-Dinitrotoluene	5	ND	ND	ND	ND
2,6-Dinitrotoluene	5	ND	ND	ND	ND
2-Chloronaphthalene	10	ND	ND	ND	ND
2-Chlorophenol	NS	ND	ND	ND	ND
2-Methylnaphthalene	NS	5,030	551	164	827
2-Methylphenol	NS	ND	ND	ND	ND
3- & 4- Methylphenols	NS	ND	ND	ND	ND
2-Nitroaniline	5	ND	ND	ND	ND
2-Nitrophenol	NS	ND	ND	ND	ND
3,3'-Dichlorobenzidine	5	ND	ND	ND	ND
3-Nitroaniline	5	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	NS	ND	ND	ND	ND
4-Bromophenyl phenyl ether	NS	ND	ND	ND	ND
4-Chloro-3-methylphenol	NS	ND	ND	ND	ND

4-Chloroaniline	5	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	NS	ND	ND	ND	ND
4-Nitroaniline	5	ND	ND	ND	ND
4-Nitrophenol	NS	ND	ND	ND	ND
Acenaphthene	20	ND	0.233	0.144	1.09
Acenaphthylene	NS	ND	0.200	0.0556	0.503
Acetophenone	NS	ND	ND	ND	ND
Aniline	5	ND	ND	ND	ND
Anthracene	50	ND	0.267	ND	0.441
Atrazine	50	ND	ND	ND	ND
Benzaldehyde	NS	ND	ND	ND	ND
Benzidine	5	ND	ND	ND	ND
Benzo(a)anthracene	0.002	ND	0.0556	ND	0.0923
Benzo(a)pyrene	NS	ND	ND	ND	ND
Benzo(b)fluoranthene	0.002	ND	ND	ND	0.0513
Benzo (g, h, i) perylene		ND	ND	ND	0.0923
Benzo(k)fluoranthene	0.002	ND	ND	ND	ND
Benzoic acid	NS	ND	ND	ND	ND
Benzyl alcohol	NS	ND	ND	ND	ND
Benzyl butyl phthalate	50	ND	ND	ND	ND
Bis(2-chloroethoxy) methane	5	ND	ND	ND	ND
Bis(2-chloroethyl) ether	1.0	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	NS	ND	ND	ND	ND
Bis(2-ethylhexyl) phthalate	5	ND	ND	ND	5.57
Caprolactam	NS	ND	ND	ND	ND
Carbazole	NS	ND	ND	ND	ND
Chrysene	0.002	ND	ND	ND	0.0923
Dibenzo (a, h) anthracene	NS	ND	ND	ND	ND
Dibenzofuran	NS	ND	ND	ND	ND
Diethyl phthalate	50	ND	ND	ND	ND
Dimethyl phthalate	50	ND	ND	ND	ND
Di-n-butyl phthalate	50	ND	ND	ND	ND
Di-n-octyl phthalate	50	ND	ND	ND	ND
Fluoranthene	50	ND	0.2	ND	0.390
Fluorene	50	ND	1.2	0.256	2.04
Hexachlorobenzene	0.04	ND	ND	ND	ND
Hexachlorobutadiene	0.5	ND	ND	ND	ND
Hexachlorocyclopentadiene	5	ND	ND	ND	ND
Hexachloroethane	5	ND	ND	ND	ND

Indeno(1,2,3-cd) pyrene	0.002	ND	ND	ND	ND
Isophorone	50	ND	ND	ND	ND
Naphthalene	10	5,210	698	604	756
Nitrobenzene	0.4	ND	ND	ND	ND
N-Nitrosodimethylamine	NS	ND	ND	ND	ND
N-nitroso-di-n-propylamine	NS	ND	ND	ND	ND
N-Nitrosodiphenylamine	50	ND	ND	ND	ND
Pentachlorophenol	1	ND	ND	ND	ND
Phenanthrene	50	ND	1.44	0.289	2.63
Phenol	1	ND	ND	ND	ND
Pyrene	50	ND	0.311	ND	0.615

Notes:

- All units are in ug/L or ppb
- Bold text indicates NYSDEC exceedances.
- ND – Not Detected
- NS (Blank) – No Standard

Table 9

**Groundwater Analytical Results
1810-1818 Cropsey Avenue, Brooklyn, NY
RCRA Target Analyte List - Metals**

COMPOUND	NYSDEC GROUNDWATER QUALITY STANDARDS (ug/L)	GW-1/SB-1 (8.47') 09/11/2020 ug/L	GW-2/SB-2 (8.05') 09/11/2020 ug/L	GW-3/SB-3 (7.70') 09/11/2020 ug/L	GW-4/SB-4 (7.55') 09/11/2020 ug/L
Arsenic	25	17.9	4.79	3.28	39.4
Barium	1,000	292	99	199	899
Cadmium	5	0.920	ND	ND	1.56
Chromium	50	404	32.9	65.1	388
Lead	25	319	51.4	15.5	242
Selenium	10	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND
Mercury by 7473	1.4	ND	ND	ND	ND

Notes:

- All units are in ug/L or ppb
- Bold text indicates NYSDEC exceedances.
- ND – Not Detected
- NS (Blank) – No Standard

Table 10

**1810-1818 Cropsey Avenue, Brooklyn, NY
Soil Vapor Analytical Results
Volatile Organic Compounds**

COMPOUND	NYSDOH Background Standards- Indoor Air 25 th Percentile ug/m ³	NYSDOH Background Standards- Indoor Air 75 th Percentile ug/m ³	NYSDOH Background Standards- Indoor Air 95 th Percentile ug/m ³	SI-1 (Cellar) 09/14/20 ug/m ³	IA-1 (1 ST Floor) 09/14/20 ug/m ³	IA-2 (Cellar) 09/14/20 ug/m	OA-1 (Outside) 09/14/20 ug/m ³
1,1 Dichloroethylene	0.25	1.2	NS	ND	ND	ND	ND
2-Chlorotoluene	NS	NS	NS	ND	ND	ND	ND
1,1,1-Trichloroethane	0.25	1.1	6.9	ND	ND	ND	ND
Trichloroethene	NS	NS	NS	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.25	1.1	3.4	ND	ND	0.67	ND
1,1,2-Trichloroethane	0.25	0.25	0.25	ND	ND	ND	ND
Dichlorodifluoromethane (Freon 12)	0.25	4.1	26	2.8	1.8	ND	1.7
Trichlorofluoromethane (Freon 11)	1.1	5.4	30	2.1	1.6	2.4	1.5
1,1-Dichloroethene	NS	NS	NS	ND	ND	ND	ND
1,2 Dichloroethene (trans)	NS	NS	NS	ND	ND	ND	ND
1,1 Dichloroethane	0.25	0.25	0.25	ND	ND	ND	ND
1,2 Dichloroethene (cis)	NS	NS	NS	110	ND	ND	ND
1,2-Dichloroethene (trans)	NS	NS	NS	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.25	0.25	6.3	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.7	4.3	18	120	0.76	5.6	ND
2,2,4-Trimethylpentane	NS	NS	NS	ND	ND	ND	ND
1,2-Dibromoethane	0.25	0.25	0.25	ND	ND	ND	ND
1,2-Dichlorobenzene	0.25	0.25	1	ND	ND	ND	ND
1,2-Dichloroethane	0.25	0.25	0.25	3.9	ND	ND	ND
1,2-Dichloropropane	0.25	0.25	0.25	ND	ND	ND	ND
1,3 Dichloropropene (total)	NS	NS	NS	ND	ND	ND	ND
1,3 Dichloropropene (cis)	NS	NS	NS	ND	ND	ND	ND
1,3 Dichloropropene (trans)	0.25	0.25	0.25	ND	ND	ND	ND
1,2-Dichloroethylene (cis)	0.25	0.25	1.2	110	ND	0.24	ND
1,2-Dichlorotetrafluoroethane	0.25	0.25	1.2	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.25	0.25	6.5	43	ND	2.1	ND

1,3-Dichlorobenzene	0.25	0.25	0.9	ND	ND	ND	ND
1,4-Dichlorobenzene	0.25	0.5	2.6	ND	ND	ND	ND
Trans-1,3-Dichloropropylene	0.25	0.25	0.25	ND	ND	ND	ND
1,4-Dioxane	NS	NS	NS	ND	ND	ND	ND
2-Hexanone	NS	NS	NS	ND	ND	ND	ND
Acetone	9.9	52	140	69	16	6.1	8.3
Benzene	1.1	5.9	15	58	0.49	0.36	0.48
Acrylonitrile	NS	NS	NS	ND	ND	ND	ND
Bromochloromethane	NS	NS	NS	ND	ND	ND	ND
Bromodichloromethane	NS	NS	NS	ND	ND	ND	ND
Bromoform	NS	NS	NS	ND	ND	ND	ND
Bromomethane	0.25	0.25	0.9	ND	ND	ND	ND
1,3-Butadiene	NS	NS	NS	ND	ND	ND	ND
2-Butanone	NS	NS	NS	6.9	1.4	0.36	0.56
Carbon disulfide	NS	NS	NS	6.5	ND	ND	ND
Carbon tetrachloride	0.25	0.6	1.1	ND	0.52	0.55	0.50
Chlorobenzene	0.25	0.25	0.25	ND	ND	ND	ND
Chloroethane	0.25	0.25	0.6	ND	ND	ND	ND
Chloroform	0.25	0.5	4.6	2.8	ND	0.47	ND
Chloromethane	0.25	1.8	5.2	ND	1.8	1.4	1.8
Cyclohexane	0.25	2.6	19	24	ND	0.87	ND
Dibromochloromethane	NS	NS	NS	ND	ND	ND	ND
Dichlorodifluoromethane	NS	NS	NS	2.8	1.8	2	1.7
Ethyl Alcohol	27	540	3000	ND	ND	ND	ND
*Ethyl acetate	NS	NS	NS	ND	ND	ND	ND
Ethyl Benzene	0.25	2.8	13	62	0.40	1.5	ND
4-Ethyltoluene	NS	NS	NS	ND	ND	ND	ND
Ethanol	NS	NS	NS	ND	ND	ND	ND
n-Heptane	1	7.6	33	41	0.56	4.3	ND
1,3-Hexachlorobutadiene	0.25	0.25	11	ND	ND	ND	ND
n-Hexane	0.6	5.9	35	56	0.96	2.9	0.46
Isopropanol ¹	NS	NS	NS	29	56	18	7.1
Isopropylbenzene	0.25	0.25	1.3	ND	ND	ND	ND
Mercury (elemental)	NS	NS	NS	ND	ND	ND	ND
4-Methyl-2-pentanone	0.25	3.0	NS	ND	0.45	ND	ND
Methyl tert-butyl ether (MTBE)	0.25	5.6	71	ND	ND	ND	ND
Methylene chloride	0.3	6.6	45	ND	10	5.3	4.6
Methyl isobutyl ketone (MIBK)	1.4	7.3	39	ND	ND	ND	ND
Methyl Methacrylate	0.25	0.25	1.1	ND	1.9	ND	ND

Styrene	0.25	0.6	2.3	ND	ND	ND	ND
Tert-Butyl alcohol (TBA)	NS	NS	NS	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	NS	NS	NS	ND	ND	ND	ND
Tetrachloroethylene (PERC)	0.25	1.1	4.1	330	2.0	19	ND
Tetrahydrofuran	0.25	0.4	9.4	ND	0.64	ND	ND
Toluene	3.5	25	110	630	3.5	1.9	3.2
Trichloroethylene (TCE)	NS	NS	2	24	ND	0.89	ND
Bromoethene (vinyl bromide)	NS	NS	NS	ND	ND	ND	ND
Vinyl chloride	0.25	0.25	0.25	ND	ND	ND	ND
o-Xylene	0.4	3.1	13	94	0.44	0.38	ND
p & m- Xylene	0.5	4.6	NS	220	1.2	1.1	ND
*p-Ethyltoluene	NS	NS	NS	93	ND	0.94	ND
Xylenes, Total	NS	NS	NS	ND	ND	ND	ND
*Propylene	NS	NS	NS	3.7	ND	ND	ND
Naphthalene*	NS	NS	NS	ND	ND	ND	ND

Notes:

- Guidance for Evaluating Soil Vapor Intrusion in the State of New York, Table C1, Indoor Air, NYSDOH 2003
- All units are in ug/m³
- Bold text indicates exceedances
- Highlighted text requires mitigation and/or monitoring
- ND- Not Detected
- NS (Blank)- No Standard

The page features several large, light green, abstract, curved shapes that resemble stylized leaves or petals, scattered across the white background. One large shape is on the left, another is at the top right, and a third is at the bottom right.

PHOTOS

PHOTO LOCATION: Depicts facing southwest to the front of the subject property.

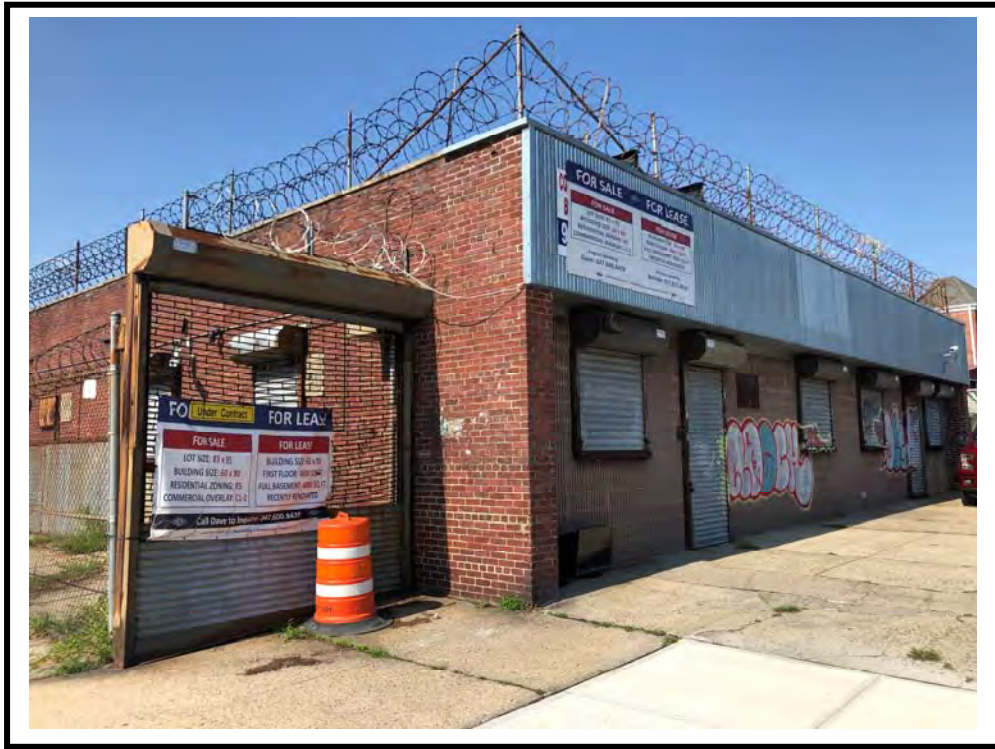


PHOTO LOCATION: Depicts facing south along Bay 19th Street.

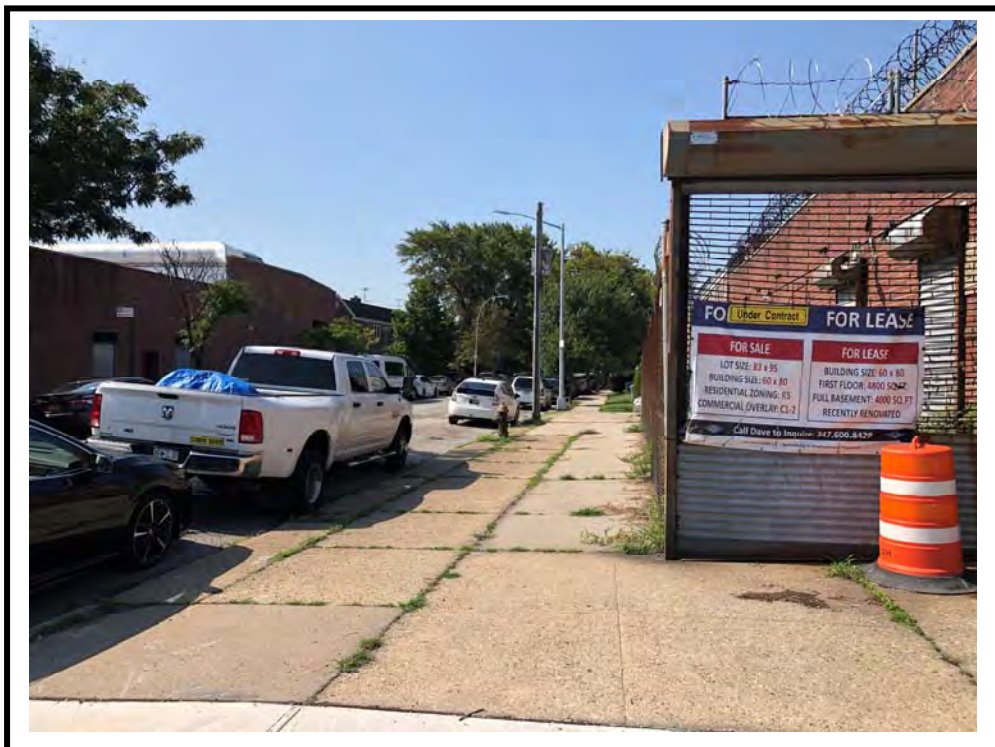


PHOTO LOCATION: Depicts the view facing east along Cropsey Avenue.



PHOTO LOCATION: Depicts the view facing west of the Bay 19th Street.



PHOTO LOCATION: Depicts facing south along the western section of the subject property.



PHOTO LOCATION: Depicts the property west of the subject property.



PHOTO LOCATION: Depicts property north of the subject property.

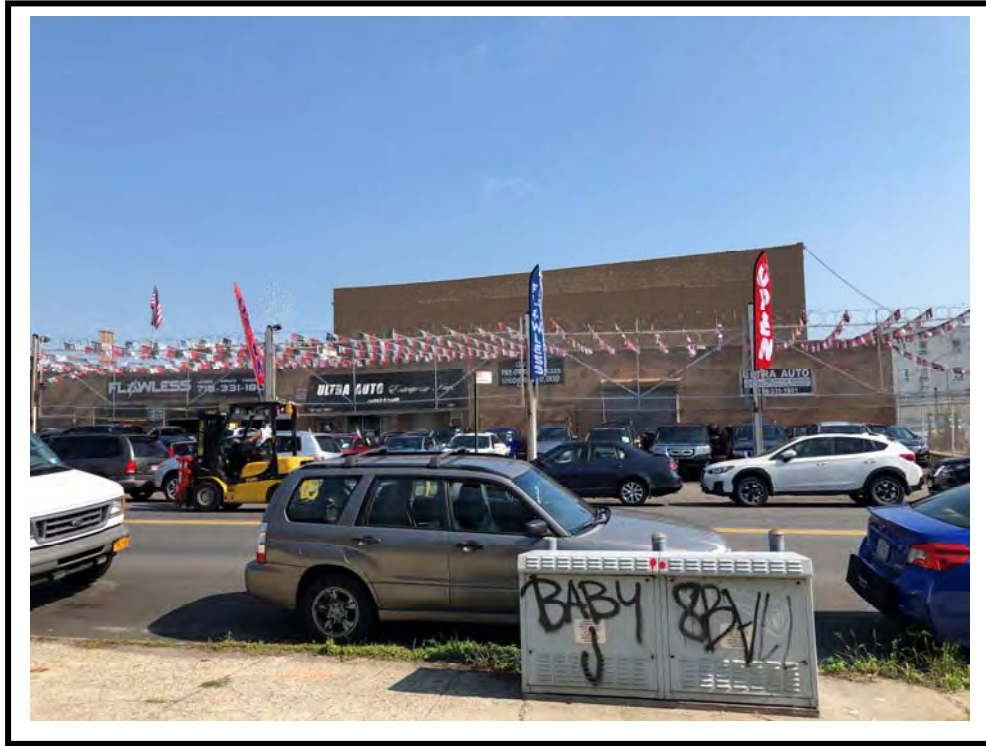


PHOTO LOCATION: Depicts the property east of the subject property.



PHOTO LOCATION: Depicts the property northeast of the subject property.



PHOTO LOCATION: Depicts the view of the eastern most side of the subject property.



PHOTO LOCATION: Depicts the side door to leading into the building.



PHOTO LOCATION: Depicts the coring for SB-1.



PHOTO LOCATION: Depicts the coring for SB-1.



PHOTO LOCATION: Depicts the coring for SB-3.



PHOTO LOCATION: Depicts the coring for SB-4.



PHOTO LOCATION: Depicts IA- (1st Floor).



PHOTO LOCATION: Depicts IA- (1st Floor) installed in the cellar of the Site.



PHOTO LOCATION: Depicts IA-2 (Cellar) installed in the cellar of the Site.



PHOTO LOCATION: Depicts SI-1 (Cellar) installed within the subslab of the Site.



PHOTO LOCATION: Depicts OA-1 (Outside) installed outside the Site.



APPENDICES

The following sources were utilized to determine the physical setting of the subject site, current and past usage of the site and are researched to evaluate and Recognized Environmental Conditions that might have an adverse effect on the subject property.

- Appendix A – Previous Environmental Reports
- Appendix B – Soil Boring Logs
- Appendix C – York Analytical Laboratories Analytical Results

APPENDIX A – Previous Environmental Reports



BISON ENVIRONMENTAL, LLC

August 31, 2020

Christopher Comber (Via e-mail to ccomber@finwisebank.com)
Finwise Bank
820 East 9400 South
Sandy, UT 84094

Re: Records Search/Risk Assessment
1810-1818 Cropsey Avenue (Block 6463, Lot 137)
Brooklyn, New York 11214

Dear Mr. Comber:

Pursuant to your request, Bison Environmental, LLC (Bison) has completed a Records Search/Risk Assessment (RSRA) of the subject property. This letter presents the results of that RSRA.

OBJECTIVE

The objective of the RSRA was to determine the “environmental risk level” of the property based on a review of a regulatory database report and review of readily available and reasonably ascertainable historical use records such as city directories, Sanborn maps, aerial photographs, etc.

SCOPE OF WORK

The following activities were conducted:

- Review of “street side” photographs of the property on google.com.
- Review of an EDR Radius Map™ Report with Geotcheck®, dated August 25, 2020, containing the federal and state databases specified to be searched in the ASTM Standard Practice for Phase 1 Environmental Site Assessments (E1527-13, hereinafter referred to as the Standard Practice), at the search radii specified in the Standard Practice, obtained from Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut. Note that in addition to the databases specified in the Standard Practice, EDR also searches numerous other supplemental databases.
- Review of a Certified Sanborn® Map Report for the property, dated August 25, 2020, also obtained from EDR, which contains Sanborn maps of the property and surrounding area dated 1895, 1906, 1929, 1950, 1968, 1969, 1977, 1980, 1981, 1983, 1986, 1987, 1989, 1990, 1992 through 1996 and 2001 through 2007.

Records Search/Risk Assessment
1810-1818 Cropsey Avenue (Block 6463, Lot 137)
Brooklyn, New York 11214
August 31, 2020
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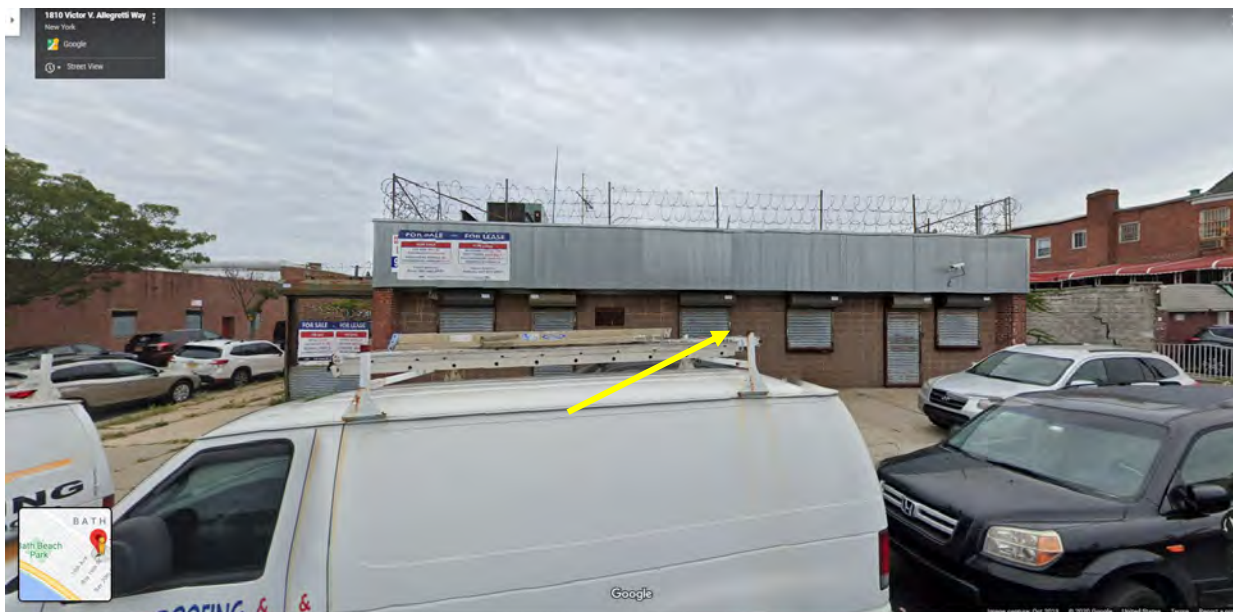
- Review of an EDR City Directory Abstract Report, dated August 26, 2020, also obtained from EDR, which lists historical property occupants based on review of telephone directories.
- Review of information contained in various online databases available on the New York State Department of Environmental Conservation (NYSDEC) website (dec.ny.gov).
- Review of information on the property and surrounding properties available on the NYSDEC DEC Info Locator website (gisservices.dec.ny.gov).

Review of historical aerial photographs and historical United States Geological Survey (USGS) topographic maps of the property and surrounding area was not performed as review of aerial photographs and topographic maps for small properties (less than 0.2 acres) in densely developed urban areas that have been developed for more than 100 years does not typically yield any useful or new information, particularly with such extensive Sanborn map coverage.

FINDINGS

Review of “Street Side” Photographs of the Property

Review of street side photographs of the property on google.com indicates the property consists of a one-story warehouse building. The surrounding area is mixed commercial and residential use, typical of this section of Brooklyn.



Records Search/Risk Assessment
1810-1818 Cropsey Avenue (Block 6463, Lot 137)
Brooklyn, New York 11214
August 31, 2020
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Radius Map Report Review

A copy of the Summary Radius Map report is attached. The addresses of 1810 through 1818 Cropsey Avenue are not listed on any of the databases specified to be searched in the Standard Practice, or on any of the supplemental databases searched by EDR.

Numerous sites in the surrounding area were listed on various databases specified to be searched in the Standard Practice, or on supplemental databases searched by EDR. This is common in heavily developed urban areas. However, based on review of information in the Radius Map Report and from the various NYSDEC websites, these sites are unlikely to increase the environmental risk level at the property given their distance from the property, location side or down gradient of the property, case status, nature of the listing (e.g., a no longer regulated hazardous waste generator), or some combination of these facts.

Sanborn Map Review

A copy of the Sanborn Map report is attached.

The 1895 Sanborn map, the date of the earliest available map depicting the property, depicts the property as part of the New York Children's Aid Society, with a building marked with the symbol for a stable, a structure labeled water tower, and a building labeled "dormitory laundry". The 1906 Sanborn map also depicts the property as part of the New York Children's Aid Society, with the stable building labeled now labeled "storage shed" and another building labeled "Astor Cottage Waldorf Cottage Dormitories"; the dormitory laundry building and water tower are not depicted on the 1906 Sanborn map. The 1929 Sanborn map also depicts the property as part of the New York Children's Aid Society, with the building labeled "Astor Cottage Waldorf Cottage Dormitories" still depicted; the storage shed/stable is not depicted on the 1929 Sanborn map. The current building is depicted on the 1950 and subsequent Sanborn maps. The building is shown divided into three sections, each labeled "S" (i.e., an undifferentiated store) on the 1950 Sanborn map. The 1968, 1969, 1977, 1980, 1981, and 1983 Sanborn maps show the building divided into three sections with two sections labeled "S" and the third section labeled "dry clean'g" (i.e., a dry cleaner); the dry cleaner was in the space marked with an address of 1812 Cropsey Avenue. The 1986 and subsequent Sanborn maps depict the building divided into three sections and labeled "One-C" (undifferentiated commercial use) and "One-M" (undifferentiated manufacturing). No items of environmental significance such as symbols for gasoline tanks, areas labeled as hazardous substance storage areas, etc., were identified on the property on the Sanborn maps. Other than the dry cleaner designation on the 1968 through 1983 Sanborn maps, no property usage labels indicating uses with inherently significant potential to raise the environmental risk level of the property, such as dry cleaning, chemical manufacturing, service station, etc., were identified on the property on the Sanborn maps. Note the property was not listed on the EDR Historic Cleaners database in the Radius Map Report.

Records Search/Risk Assessment
1810-1818 Cropsey Avenue (Block 6463, Lot 137)
Brooklyn, New York 11214
August 31, 2020
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City Directory Review

A copy of the City Directory Abstract report is attached. Listings for 1810, 1812 and 1816 Cropsey Avenue dated back to 1960. Listings for 1814 Cropsey Avenue dated back to 1970. There were no listings for 1818 Cropsey Avenue. Listings consisted of various commercial enterprises (e.g., food company, taxi association, footwear company, meat market, etc.). The only listings for uses that would be expected to have an inherently higher potential to increase the environmental risk level at the property were 1960, 1965, 1970, 1973 and 1976 listings for King Cleaners at 1812 Cropsey Avenue.

Review of NYSDEC Online Databases

No information which would raise the environmental risk level of the property was identified during review of the NYSDEC website. The property is not listed in the Spill Incidents or Environmental Site Remediation databases available on the website. No information which would raise the environmental risk level of the property was identified during review of the DEC Info Locator website.

CONCLUSIONS

Based on the findings of the RSRA activities described herein, the property is of **high environmental risk**. This conclusion is based on the presence of a dry cleaner at 1812 Cropsey Avenue from at least 1960 through at least 1983. A Phase 1 Environmental Site Assessment is needed to attempt to determine if there are any indications of a discharge, and if the cleaners may have been a drop off location only. The need for further investigation would depend on the results of the Phase 1 ESA.

RELIANCE

This report has been prepared for Finwise Bank and the United States Small Business Administration for the purpose of determining the environmental risk level of the property. Others may not rely upon this report without written acknowledgment by Bison. No responsibility or liability is assumed by Bison if this report is used for other purposes or used by other entities.

LIMITATIONS

- In preparing this report, Bison has relied upon certain information provided by federal, state, and local agencies and other parties (e.g., EDR) referenced herein and as applicable on information contained in the files of federal, state, and local agencies (including web sites) available to Bison at the time of the RSRA. Bison has assumed that the information provided is complete and accurate, but that information has not been independently verified. Bison cannot guarantee that information provided by, or available

Records Search/Risk Assessment
1810-1818 Cropsey Avenue (Block 6463, Lot 137)
Brooklyn, New York 11214
August 31, 2020
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from, others (including regulatory agencies) is complete or accurate and Bison shall not in any way be held responsible for errors or omissions in information provided by others.

- The findings and conclusions expressed herein are based solely on review of reasonably ascertainable and practically reviewable (as defined in the Standard Practice) records; no site inspection has been performed. The findings and conclusions expressed herein do not entirely rule out the presence of areas of potential or actual environmental concern at the site. This report is not intended to be a warrantee or guarantee of any kind, expressed or implied, that the site is free from contamination.
- Due to the limited availability of records such as historic maps and aerial photographs, there are some intervals of past use of the property research that exceed 5 years. Based on the use of the property determined by available records reviewed as part of this RSRA, this is not considered a significant data gap.

Contact me if you have any questions or need any additional information.

Sincerely,
BISON ENVIRONMENTAL, LLC



George Guzdek, PG
General Manager

Attachments: Summary Radius Map Report Obtained from EDR
Certified Sanborn Map Report Obtained from EDR
City Directory Abstract Report Obtained from EDR

Finwise 1810 Cropsey Avenue

1810 Cropsey Avenue

Brooklyn, NY 11214

Inquiry Number: 6167629.2s

August 25, 2020

EDR Summary Radius Map Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1810 CROPSEY AVENUE
BROOKLYN, NY 11214

COORDINATES

Latitude (North): 40.6022390 - 40° 36' 8.06"
Longitude (West): 74.0071540 - 74° 0' 25.75"
Universal Transverse Mercator: Zone 18
UTM X (Meters): 584002.7
UTM Y (Meters): 4494866.0
Elevation: 19 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: TP
Source: U.S. Geological Survey

Target Property: SE
Source: U.S. Geological Survey

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20150522
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:
1810 CROPSEY AVENUE
BROOKLYN, NY 11214

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	DRUM RUN (ABANDONED	CORNER OF BAY 19TH S	NY Spills	Higher	104, 0.020, ENE
A2	GIANT STEP REALTY, L	1820 CROPSEY AVENUE	NY UST	Lower	166, 0.031, ESE
A3	BAYSIDE COMMERCIAL	1820 CROPSEY AVE	NY LTANKS	Lower	166, 0.031, ESE
A4	GIANT STEP REALTY, L	1820 CROPSEY AVENUE	NY AST	Lower	166, 0.031, ESE
5	BRUNOS SERVICE STATI	1801 CROPSEY AVE	EDR Hist Auto	Higher	166, 0.031, NNE
B6	RABEN SERVICE CENTER	1785 CROPSEY AVENUE	NY UST	Higher	271, 0.051, NNW
B7	RABEN SERVICE STATIO	1785 CROPSEY AVE	EDR Hist Auto	Higher	271, 0.051, NNW
B8	FORMER GETTY S/S #98	1785 CROPSEY AV	NY Spills	Higher	271, 0.051, NNW
9	BRUCE SUPPLY CORPORA	8805 18TH AVENUE	NY UST	Higher	334, 0.063, NNE
C10	KING CLEANERS	1766 CROPSEY AVE	EDR Hist Cleaner	Higher	336, 0.064, NW
C11	J & W/KINGS CLEANERS	1766 CROPSEY AVE.	NY DRYCLEANERS	Higher	336, 0.064, NW
C12	CON EDISON - VAULT S	1758 CROPSEY AVE	NY MANIFEST	Higher	337, 0.064, NW
D13	BAY SHORE OWNERS	247-279 BAY 19TH ST	NY UST	Lower	351, 0.066, SSW
D14	BAY SHORE OWNERS INC	244-276 BAY 19TH ST	NY UST	Lower	352, 0.067, SSW
15	CON EDISON SERVICE B	212 BAY 20TH ST FRON	RCRA NonGen / NLR, NY MANIFEST	Higher	418, 0.079, East
E16	CON EDISON	235 BAY 20TH ST FRON	RCRA NonGen / NLR	Higher	424, 0.080, SE
E17	CON EDISON	235 BAY 20TH ST FRON	NJ MANIFEST	Higher	424, 0.080, SE
C18	SPILL NUMBER 0012216	BAY 17TH ST & CROPSE	NY LTANKS	Higher	428, 0.081, NW
F19	CON EDISON SERVICE B	8798 18TH AVE	RCRA NonGen / NLR, FINDS	Higher	431, 0.082, North
F20	CON EDISON	8798 18TH AVE	NY MANIFEST	Higher	431, 0.082, North
G21	CON EDISON	8885 18TH AVE	RCRA NonGen / NLR, NY MANIFEST	Lower	444, 0.084, SW
G22	CON EDISON	8885 18TH AVE	NJ MANIFEST	Lower	444, 0.084, SW
23	199 BAY 17 STREET	199 BAY 17TH STREET	NY AST	Higher	450, 0.085, NNW
H24	CASTLE OIL TRUCK	257 BAY 19TH STREET	NY Spills	Lower	468, 0.089, SSW
25	CON EDISON	259 BAY 20 ST	NY MANIFEST	Lower	469, 0.089, SSE
H26	280-306 BAY 19TH ST	280-306 BAY 19TH ST	NY LTANKS	Lower	518, 0.098, SSW
I27	CON EDISON	1745 CROPSEY AVE E O	NY MANIFEST	Higher	524, 0.099, NW
I28	CON EDISON SERVICE B	1745 CROPSEY AVE E O	RCRA NonGen / NLR	Higher	524, 0.099, NW
H29	BAY SHORE OWNERS INC	287-311 BAY 19TH ST	NY UST	Lower	538, 0.102, SSW
H30	BAY SHORE OWNER, INC	287-311 BAY 19TH STR	NY LTANKS	Lower	538, 0.102, SSW
H31	RESIDENTIAL	287-311 BAY 19TH ST	NY LTANKS	Lower	538, 0.102, SSW
H32	BAY SHORE OWNERS, IN	298 BAY 19TH STREET	NY AST	Lower	560, 0.106, SSW
H33	BAY SHORE OWNERS, IN	298 BAY 19TH STREET	NY UST	Lower	560, 0.106, SSW
H34	SPILL NUMBER 0306777	298 BAY 19TH ST	NY Spills	Lower	560, 0.106, SSW
H35	SPILL NUMBER 9908820	304 BAY 19TH ST	NY Spills	Lower	574, 0.109, SSW
36	CON EDISON SERVICE B	283 BAY 20TH ST	RCRA NonGen / NLR, NY MANIFEST	Lower	580, 0.110, South
J37	CON EDISON	8858 19TH AVE	NJ MANIFEST	Lower	582, 0.110, SE
J38	CON EDISON	8858 19 AVE	RCRA NonGen / NLR	Lower	582, 0.110, SE
J39	CON EDISON	8858 19 AVE	NY MANIFEST	Lower	582, 0.110, SE

MAPPED SITES SUMMARY

Target Property Address:
1810 CROPSEY AVENUE
BROOKLYN, NY 11214

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
K40	CON EDISON SERVICE B	1828 BATH AVE FRONT	RCRA NonGen / NLR, NY MANIFEST	Higher	635, 0.120, NE
K41	HEARTSHARE HUMAN SER	NUE	NY UST	Higher	653, 0.124, NE
L42	DRUM RUN	1758 BATH AVE	NY Spills	Higher	655, 0.124, North
M43	CON EDISON SERVICE B	8800 19TH AVE	RCRA NonGen / NLR, NY MANIFEST	Higher	656, 0.124, East
N44	CON EDISON TRANSFORM	18TH AVE & BATH AVE	RCRA NonGen / NLR, NY MANIFEST	Higher	660, 0.125, NNE
L45	MAUJER LLC	171 BAY 17TH STREET	NY AST	Higher	662, 0.125, North
46	CON EDISON	CROPSEY AVE & BAY 16	NY MANIFEST	Higher	675, 0.128, NW
O47	CON EDISON	154 BAY 19TH ST	NY MANIFEST	Higher	714, 0.135, NE
O48	CON EDISON	154 BAY 19TH ST	RCRA NonGen / NLR, FINDS, ECHO	Higher	714, 0.135, NE
O49	CON EDISON	154 BAY 19TH ST	NJ MANIFEST	Higher	714, 0.135, NE
50	8785 BAY 16TH STREET	8785 BAY 16TH STREET	NY AST	Higher	729, 0.138, NNW
P51	SUNOCO #0014-0996	1907 CROPSEY AVENUE	RCRA NonGen / NLR, US AIRS, FINDS, ECHO	Higher	735, 0.139, ESE
P52	SUNOCO	1907 CROPSEY AVE	NY LTANKS, NY Spills	Higher	735, 0.139, ESE
P53	SUNOCO #0014-0996	1907 CROPSEY AVENUE	NY UST	Higher	735, 0.139, ESE
P54	SUNOCO #0014-0996	1907 CROPSEY AVENUE	NY AST	Higher	735, 0.139, ESE
P55	1907 CROPSEY AVE/SUN	1907 CROPSEY AVE/SUN	NY LTANKS	Higher	735, 0.139, ESE
56	CON EDISON SERVICE B	8786 19TH AVE	RCRA NonGen / NLR, NY MANIFEST	Higher	739, 0.140, East
Q57	CON EDISON	1852 BATH AVE	NY MANIFEST	Higher	741, 0.140, ENE
Q58	CON EDISON	1852 BATH AVE	NJ MANIFEST	Higher	741, 0.140, ENE
Q59	CON EDISON	1852 BATH AVE	RCRA NonGen / NLR	Higher	741, 0.140, ENE
Q60	CON EDISON SERVICE B	1850 BATH AVE	RCRA NonGen / NLR, FINDS, ECHO, NY MANIFEST	Higher	753, 0.143, ENE
N61	CON EDISON SERVICE B	1763 BATH AVE	RCRA NonGen / NLR, NY MANIFEST	Higher	755, 0.143, NNE
M62	CON EDISON SERVICE B	8801 19TH AVE	RCRA NonGen / NLR, NY MANIFEST	Higher	773, 0.146, East
R63	8853 BAY 16TH ST	8853 BAY 16TH ST	NY LTANKS	Lower	791, 0.150, West
R64	BAYVIEW OWNERS CORP	8853 BAY 16TH STREET	NY UST	Lower	791, 0.150, West
Q65	CON EDISON SERVICE B	1862 BATH AVE	RCRA NonGen / NLR, NY MANIFEST	Higher	792, 0.150, ENE
S66	ATHINA GARDEN APTS L	247 BAY 17TH STREET	NY UST	Lower	804, 0.152, WSW
67	IN FRONT OF	8802 BAY 16TH ST	NY LTANKS	Higher	805, 0.152, NNW
P68	ZALOOM REALITY	1917 CROPSEY AVE	NY AST	Higher	808, 0.153, ESE
P69	CON EDISON SERVICE B	1917 CROPSEY AVE & B	RCRA NonGen / NLR, NY MANIFEST, NY LEAD	Higher	808, 0.153, ESE
S70	ATHINA GARDEN APARTM	267 BAY 17TH STREET	NY UST	Lower	816, 0.155, WSW
R71	BAYVIEW OWNERS CORP	8873 BAY 16TH ST	NY UST	Lower	819, 0.155, West
S72	BAYVIEW OWNERS CORP	248 BAY 17TH ST	NY UST	Lower	826, 0.156, WSW
S73	ATHINA GARDEN APARTM	289 BAY 17TH ST	NY UST	Lower	829, 0.157, WSW
S74	BAYVIEW OWNERS CORP	268 BAY 17TH ST	NY UST	Lower	838, 0.159, WSW
S75	BAYVIEW OWNERS CORP	290 BAY 17TH ST	NY UST	Lower	850, 0.161, WSW
R76	8895 BAY 16TH STREET	8895 BAY 16TH STREET	NY LTANKS	Lower	850, 0.161, West
R77	BAYVIEW OWNERS CORP	8895 BAY 16TH ST	NY UST	Lower	850, 0.161, West
78	CON EDISON SERVICE B	151 BAY 17TH ST FRON	RCRA NonGen / NLR, NY MANIFEST	Higher	858, 0.162, NNE

MAPPED SITES SUMMARY

Target Property Address:
1810 CROPSEY AVENUE
BROOKLYN, NY 11214

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
T79	CON EDISON - MANHOLE	8895 19 AVE	NJ MANIFEST	Lower	884, 0.167, SSE
T80	CON EDISON - MANHOLE	8895 19 AVE	RCRA-LQG	Lower	884, 0.167, SSE
T81	CON ED	8895 19 AVE	NY MANIFEST	Lower	884, 0.167, SSE
U82	MAFAR & DAYTONA MOTO	8733 18TH AVE	RCRA NonGen / NLR, FINDS, ECHO, NY MANIFEST	Higher	911, 0.173, NNE
U83	CON EDISON - MANHOLE	8731 18 AVE AND BATH	RCRA-LQG, NY MANIFEST, NJ MANIFEST	Higher	913, 0.173, NNE
V84	CON EDISON	1865 BATH AVE	NJ MANIFEST	Higher	924, 0.175, ENE
V85	CON EDISON	1865 BATH AVE	NY MANIFEST	Higher	924, 0.175, ENE
V86	CON EDISON	1865 BATH AVE	RCRA NonGen / NLR, FINDS, ECHO	Higher	924, 0.175, ENE
W87	CON EDISON	8867 17TH AVE	NY MANIFEST	Higher	928, 0.176, WNW
W88	CON EDISON SERVICE B	8867 17TH AVE	RCRA NonGen / NLR, FINDS	Higher	928, 0.176, WNW
89	NYCDDC BED763	CROPSEY AVE & W 17TH	RCRA NonGen / NLR	Higher	937, 0.177, NW
X90	CON EDISON	1720 BATH AVE	RCRA NonGen / NLR, FINDS, ECHO	Higher	947, 0.179, NNW
X91	CON EDISON	1720 BATH AVE	NY MANIFEST	Higher	947, 0.179, NNW
X92	CON EDISON	1720 BATH AVE	NJ MANIFEST	Higher	947, 0.179, NNW
93	BAYVIEW OWNERS CORP	1265 SHORE PKWY N	NY UST	Lower	948, 0.180, WSW
Y94	BENSONHURST CLEANER	1725 BATH AVE.	NY DRYCLEANERS	Higher	952, 0.180, North
Y95	BENSONHURST CLEANERS	1725 BATH AVE	RCRA-SQG, ICIS, US AIRS, RI MANIFEST, NY MANIFEST	Higher	952, 0.180, North
U96	SEA BREEZE AUTO BODY	8729-8739 18TH AVENU	NY UST, NY AST	Higher	988, 0.187, NNE
U97	ALPINE PONTIAC	87-29 18TH AVENUE	NJ MANIFEST	Higher	988, 0.187, NNE
U98	ALPINE PONTIAC	87-29 18TH AVE	RCRA-VSQG, NY Spills, FINDS, ECHO, NY MANIFEST	Higher	988, 0.187, NNE
Z99	ST FINBAR CONTRATERN	138 BAY 20TH STREET	NY UST	Higher	1032, 0.195, NE
Z100	138 BAY 20TH ST	138 BAY 20TH ST	NY LTANKS	Higher	1038, 0.197, ENE
101	CON EDISON SERVICE B	SHORE PKWY & BAY 16T	RCRA NonGen / NLR, NY MANIFEST	Lower	1045, 0.198, WSW
AA102	CON EDISON - MANHOLE	1702 BATH AVE	RCRA-LQG	Higher	1047, 0.198, NNW
AA103	CON EDISON - MANHOLE	1702 BATH AVE	NY MANIFEST	Higher	1047, 0.198, NNW
104	CROPSEY & 17TH PROPE	1662 CROPSEY AVENUE	NY AST	Higher	1059, 0.201, NW
AB105	CON EDISON - MANHOLE	8745 19TH AVE	NY MANIFEST	Higher	1131, 0.214, ENE
AB106	CON EDISON - MANHOLE	8745 19TH AVE	RCRA-LQG	Higher	1131, 0.214, ENE
AA107	CON EDISON MANHOLE 5	BATH AVE & 17TH AVE	RCRA NonGen / NLR	Higher	1136, 0.215, NNW
AA108	CONSOLIDATED EDISON	S SIDE BATH AVE 31 F	NY MANIFEST	Higher	1136, 0.215, NNW
AC109	CON EDISON	200 BAY 23RD ST	RCRA NonGen / NLR, FINDS, ECHO	Higher	1144, 0.217, ESE
AC110	CON EDISON	192 BAY 23RD ST	NY MANIFEST	Higher	1174, 0.222, ESE
AC111	CON EDISON	192 BAY 23RD ST	RCRA NonGen / NLR	Higher	1174, 0.222, ESE
AD112	CON EDISON	1804 BENSON AVE	NY MANIFEST	Higher	1181, 0.224, NE
AC113	CON EDISON	190 BAY 23RD ST	PA MANIFEST	Higher	1184, 0.224, ESE
AE114	CON EDISON	231 BAY 23RD ST	RCRA NonGen / NLR	Higher	1200, 0.227, SE
AE115	CON EDISON	231 BAY 23RD ST	NJ MANIFEST	Higher	1200, 0.227, SE
AE116	CON EDISON	231 BAY 23RD ST	NY MANIFEST	Higher	1200, 0.227, SE
AB117	CON EDISON SERVICE B	150 BAY 17TH ST FRON	RCRA NonGen / NLR, NY MANIFEST, NY LEAD	Higher	1201, 0.227, East

MAPPED SITES SUMMARY

Target Property Address:
1810 CROPSEY AVENUE
BROOKLYN, NY 11214

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
AF118	178 BAY 23RD STREET	178 BAY 23RD STREET	NY AST	Higher	1203, 0.228, ESE
AG119	CON EDISON MANHOLE:	215 BAY 23 ST	RCRA NonGen / NLR, NY MANIFEST	Higher	1204, 0.228, ESE
AF120	SUN'S CLEANERS	1936 BATH AVE	RCRA NonGen / NLR, ICIS, US AIRS, FINDS, ECHO, NY...	Higher	1214, 0.230, East
AF121	SUN'S CLEANERS	1936 BATH AVENUE	NY DRYCLEANERS	Higher	1214, 0.230, East
AH122	NYCPD 62ND PRECINCT	1925 BATH AVE	RCRA NonGen / NLR, FINDS, ECHO, NY MANIFEST	Higher	1220, 0.231, East
AH123	62 PCT	1925 BATH AVENUE	NY UST	Higher	1220, 0.231, East
AH124	62 PRECINCT NYPD -DD	1925 BATH AVENUE	NY LTANKS, NY AST, NY Spills	Higher	1220, 0.231, East
AE125	CON EDISON SERVICE B	221 BAY 23RD ST FRON	RCRA NonGen / NLR, NY MANIFEST	Higher	1220, 0.231, ESE
126	CON EDISON SERVICE B	8722 19TH AVE	RCRA NonGen / NLR, NY MANIFEST	Higher	1228, 0.233, ENE
AD127	18TH AVE ASSOCIATES	8711 18TH AVE	NY UST	Higher	1252, 0.237, NNE
AG128	CON EDISON	1965 CROPSEY AVE	NY MANIFEST	Higher	1268, 0.240, ESE
AG129	CON EDISON	1965 CROPSEY AVE	NJ MANIFEST	Higher	1268, 0.240, ESE
AG130	CON EDISON	1965 CROPSEY AVE	RCRA NonGen / NLR, FINDS, ECHO	Higher	1268, 0.240, ESE
131	87-54 REALTY CORPORA	8754 17TH AVENUE	NY AST	Higher	1270, 0.241, NNW
132	CON EDISON SERVICE B	1647 CROPSEY AVE	RCRA NonGen / NLR, NY MANIFEST	Higher	1311, 0.248, NW
133	1947-1955 BATH AVE	1947 BATH AVE	NY LTANKS	Higher	1336, 0.253, East
AI134	2010 CROXY AVENUE	2010 CROXY AVENUE	NY LTANKS	Higher	1473, 0.279, SE
AI135	2002-2024 CROPSEY AV	2002- 2024 CROPSEY A	NY SHWS, NY BROWNFIELDS	Higher	1544, 0.292, SE
136	2040 21ST DR	2040 21ST DR	NY LTANKS	Lower	1893, 0.359, SE
137		2056 CROPSEY AVENUE	NY LTANKS, NY LEAD	Higher	1972, 0.373, SE
138	CLOSED-LACKOF RECENT	2061 BATH AVENUE	NY LTANKS	Higher	2108, 0.399, ESE
AJ139	PARK CAR DRIPPING	21ST LANE & CROPSEY	NY LTANKS	Higher	2182, 0.413, SE
AJ140	WONG RESIDENCE	2111 CROPSEY AVE	NY LTANKS	Higher	2288, 0.433, SE
141	CLOSED-LACKOF RECENT	86TH ST / 19TH AVENU	NY LTANKS	Higher	2313, 0.438, NE
142	APARTMENT BUILDINGS	1081 SHORE PARKWAY	NY LTANKS	Lower	2398, 0.454, West
AK143	GAS STATION	1672 86TH ST BAY 14T	NY LTANKS, NY Spills	Higher	2436, 0.461, North
AK144	GETTY S/S #6 - GETTY	1672 86TH STREET	NY LTANKS, NY Spills	Higher	2436, 0.461, North
145	1736-60 85TH STREET	1736-60 85TH STREET	NY LTANKS	Higher	2501, 0.474, NNE
146	8857 15TH AVE	8857 15TH AVE	NY LTANKS	Higher	2545, 0.482, NW
147	1 BAY 13TH ST/BKLY/S	1 BAY 13TH STREET	NY LTANKS, NY Spills	Higher	2547, 0.482, North
148	GAS MAIN IN STREET	86TH STREET/BAY 24TH	NY LTANKS	Higher	2617, 0.496, ENE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: A review of the RCRA-LQG list, as provided by EDR, and dated 03/23/2020 has revealed that there are 4 RCRA-LQG sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>CON EDISON - MANHOLE</i> EPA ID:: NYP004192423	<i>8731 18 AVE AND BATH</i>	<i>NNE 1/8 - 1/4 (0.173 mi.)</i>	<i>U83</i>	<i>25</i>
CON EDISON - MANHOLE EPA ID:: NYP005039522	1702 BATH AVE	NNW 1/8 - 1/4 (0.198 mi.)	AA102	30
CON EDISON - MANHOLE EPA ID:: NYP005092721	8745 19TH AVE	ENE 1/8 - 1/4 (0.214 mi.)	AB106	31

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON - MANHOLE EPA ID:: NYP004870552	8895 19 AVE	SSE 1/8 - 1/4 (0.167 mi.)	T80	25

RCRA-SQG: A review of the RCRA-SQG list, as provided by EDR, and dated 03/23/2020 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>BENSONHURST CLEANERS</i> EPA ID:: NYD986886414	<i>1725 BATH AVE</i>	<i>N 1/8 - 1/4 (0.180 mi.)</i>	<i>Y95</i>	<i>28</i>

EXECUTIVE SUMMARY

RCRA-VSQG: A review of the RCRA-VSQG list, as provided by EDR, and dated 03/23/2020 has revealed that there is 1 RCRA-VSQG site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ALPINE PONTIAC EPA ID:: NYD981564214	87-29 18TH AVE	NNE 1/8 - 1/4 (0.187 mi.)	U98	29

State- and tribal - equivalent CERCLIS

NY SHWS: A review of the NY SHWS list, as provided by EDR, and dated 05/12/2020 has revealed that there is 1 NY SHWS site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
2002-2024 CROPSEY AV Site Code: 476227	2002- 2024 CROPSEY A	SE 1/4 - 1/2 (0.292 mi.)	AI135	38

State and tribal leaking storage tank lists

NY LTANKS: A review of the NY LTANKS list, as provided by EDR, and dated 05/12/2020 has revealed that there are 27 NY LTANKS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SPILL NUMBER 0012216 Spill Number/Closed Date: 0012216 / 2004-01-05 Site ID: 272503 Spill Date: 2001-02-13	BAY 17TH ST & CROPSEY	NW 0 - 1/8 (0.081 mi.)	C18	11
SUNOCO Spill Number/Closed Date: 9611416 / 2013-05-22 Spill Number/Closed Date: 9712841 / 1998-06-26 Site ID: 195984 Site ID: 195985 Spill Date: 1996-12-17 Spill Date: 1998-02-18	1907 CROPSEY AVE	ESE 1/8 - 1/4 (0.139 mi.)	P52	18
1907 CROPSEY AVE/SUN Spill Number/Closed Date: 9201496 / 1992-07-10 Site ID: 218694 Spill Date: 1992-05-06	1907 CROPSEY AVE/SUN	ESE 1/8 - 1/4 (0.139 mi.)	P55	19
IN FRONT OF Spill Number/Closed Date: 0504234 / 2005-07-11 Site ID: 349008 Spill Date: 2005-07-10	8802 BAY 16TH ST	NNW 1/8 - 1/4 (0.152 mi.)	67	22
138 BAY 20TH ST Spill Number/Closed Date: 8706817 / 1993-02-25 Site ID: 231650 Spill Date: 1987-11-10	138 BAY 20TH ST	ENE 1/8 - 1/4 (0.197 mi.)	Z100	30
62 PRECINCT NYPD -DD	1925 BATH AVENUE	E 1/8 - 1/4 (0.231 mi.)	AH124	35

EXECUTIVE SUMMARY

Spill Number/Closed Date: 9407869 / 2001-08-09				
Site ID: 235180				
Spill Date: 1994-09-12				
1947-1955 BATH AVE	1947 BATH AVE	E 1/4 - 1/2 (0.253 mi.)	133	37
Spill Number/Closed Date: 9703494 / 2006-03-30				
Site ID: 186049				
Spill Date: 1997-06-20				
2010 CROXY AVENUE	2010 CROXY AVENUE	SE 1/4 - 1/2 (0.279 mi.)	AI134	38
Spill Number/Closed Date: 9306866 / 1993-10-25				
Site ID: 126605				
Spill Date: 1993-09-03				
Not reported	2056 CROPSEY AVENUE	SE 1/4 - 1/2 (0.373 mi.)	137	38
Spill Number/Closed Date: 1301248 / 2018-01-23				
Site ID: 481623				
Spill Date: 2013-05-06				
CLOSED-LACKOF RECENT	2061 BATH AVENUE	ESE 1/4 - 1/2 (0.399 mi.)	138	39
Spill Number/Closed Date: 8807475 / 2003-03-04				
Site ID: 260004				
Spill Date: 1988-12-09				
PARK CAR DRIPPING	21ST LANE & CROPSEY	SE 1/4 - 1/2 (0.413 mi.)	AJ139	39
Spill Number/Closed Date: 0612672 / 2007-02-22				
Site ID: 377564				
Spill Date: 2007-02-22				
WONG RESIDENCE	2111 CROPSEY AVE	SE 1/4 - 1/2 (0.433 mi.)	AJ140	39
Spill Number/Closed Date: 0504514 / 2005-07-18				
Site ID: 349372				
Spill Date: 2005-07-15				
CLOSED-LACKOF RECENT	86TH ST / 19TH AVENUE	NE 1/4 - 1/2 (0.438 mi.)	141	39
Spill Number/Closed Date: 8907430 / 2003-03-06				
Site ID: 292716				
Spill Date: 1989-10-26				
GAS STATION	1672 86TH ST BAY 14T	N 1/4 - 1/2 (0.461 mi.)	AK143	40
Spill Number/Closed Date: 1511208 / 2016-04-25				
Site ID: 522940				
Spill Date: 2016-02-22				
GETTY S/S #6 - GETTY	1672 86TH STREET	N 1/4 - 1/2 (0.461 mi.)	AK144	40
Spill Number/Closed Date: 9213669 / 1993-04-15				
Spill Number/Closed Date: 0500551 / 2005-04-19				
Site ID: 59544				
Site ID: 343559				
Spill Date: 1993-03-11				
Spill Date: 2005-04-13				
1736-60 85TH STREET	1736-60 85TH STREET	NNE 1/4 - 1/2 (0.474 mi.)	145	41
Spill Number/Closed Date: 9503584 / 1995-12-29				
Site ID: 285571				
Spill Date: 1995-06-23				
8857 15TH AVE	8857 15TH AVE	NW 1/4 - 1/2 (0.482 mi.)	146	41
Spill Number/Closed Date: 9212842 / 1993-02-15				
Site ID: 321257				
Spill Date: 1993-02-15				
1 BAY 13TH ST/BKLY/S	1 BAY 13TH STREET	N 1/4 - 1/2 (0.482 mi.)	147	42

EXECUTIVE SUMMARY

Spill Number/Closed Date: 8906534 / 2004-03-05

Site ID: 200864

Spill Date: 1989-10-03

GAS MAIN IN STREET	86TH STREET/BAY 24TH	ENE 1/4 - 1/2 (0.496 mi.)	148	42
Spill Number/Closed Date: 0503663 / 2005-07-13				
Site ID: 348295				
Spill Date: 2005-06-27				

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
BAYSIDE COMMERCIAL	1820 CROPPSEY AVE	ESE 0 - 1/8 (0.031 mi.)	A3	8
Spill Number/Closed Date: 1606901 / 2016-10-19				
Site ID: 533547				
Spill Date: 2016-09-01				
280-306 BAY 19TH ST	280-306 BAY 19TH ST	SSW 0 - 1/8 (0.098 mi.)	H26	13
Spill Number/Closed Date: 8805603 / 1989-08-25				
Site ID: 264310				
Spill Date: 1988-09-29				
BAY SHORE OWNER, INC	287-311 BAY 19TH STR	SSW 0 - 1/8 (0.102 mi.)	H30	13
Spill Number/Closed Date: 1306145 / 2016-07-20				
Site ID: 486738				
Spill Date: 2013-09-11				
RESIDENTIAL	287-311 BAY 19TH ST	SSW 0 - 1/8 (0.102 mi.)	H31	14
Spill Number/Closed Date: 0607197 / 2008-12-05				
Site ID: 370721				
Spill Date: 2006-09-22				
8853 BAY 16TH ST	8853 BAY 16TH ST	W 1/8 - 1/4 (0.150 mi.)	R63	21
Spill Number/Closed Date: 0304619 / 2006-06-09				
Site ID: 213103				
Spill Date: 2003-07-31				
8895 BAY 16TH STREET	8895 BAY 16TH STREET	W 1/8 - 1/4 (0.161 mi.)	R76	24
Spill Number/Closed Date: 0304620 / 2006-06-09				
Spill Number/Closed Date: 9910737 / 2000-01-03				
Site ID: 238583				
Site ID: 201413				
Spill Date: 2003-07-31				
Spill Date: 1999-12-07				
2040 21ST DR	2040 21ST DR	SE 1/4 - 1/2 (0.359 mi.)	136	38
Spill Number/Closed Date: 8910725 / 1997-10-16				
Site ID: 161156				
Spill Date: 1990-02-09				
APARTMENT BUILDINGS	1081 SHORE PARKWAY	W 1/4 - 1/2 (0.454 mi.)	142	40
Spill Number/Closed Date: 0807773 / 2008-12-15				
Site ID: 405135				
Spill Date: 2008-10-09				

EXECUTIVE SUMMARY

State and tribal registered storage tank lists

NY UST: A review of the NY UST list, as provided by EDR, has revealed that there are 23 NY UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
RABEN SERVICE CENTER Database: UST, Date of Government Version: 03/23/2020	1785 CROPSEY AVENUE	NNW 0 - 1/8 (0.051 mi.)	B6	9
BRUCE SUPPLY CORPORA Database: UST, Date of Government Version: 03/23/2020	8805 18TH AVENUE	NNE 0 - 1/8 (0.063 mi.)	9	9
HEARTSHARE HUMAN SER Database: UST, Date of Government Version: 03/23/2020	NUE	NE 0 - 1/8 (0.124 mi.)	K41	16
SUNOCO #0014-0996 Database: UST, Date of Government Version: 03/23/2020	1907 CROPSEY AVENUE	ESE 1/8 - 1/4 (0.139 mi.)	P53	19
SEA BREEZE AUTO BODY Database: UST, Date of Government Version: 03/23/2020	8729-8739 18TH AVENUE	NNE 1/8 - 1/4 (0.187 mi.)	U96	29
ST FINBAR CONTRATERN Database: UST, Date of Government Version: 03/23/2020	138 BAY 20TH STREET	NE 1/8 - 1/4 (0.195 mi.)	Z99	29
62 PCT Database: UST, Date of Government Version: 03/23/2020	1925 BATH AVENUE	E 1/8 - 1/4 (0.231 mi.)	AH123	35
18TH AVE ASSOCIATES Database: UST, Date of Government Version: 03/23/2020	8711 18TH AVE	NNE 1/8 - 1/4 (0.237 mi.)	AD127	36

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GIANT STEP REALTY, L Database: UST, Date of Government Version: 03/23/2020	1820 CROPSEY AVENUE	ESE 0 - 1/8 (0.031 mi.)	A2	8
BAY SHORE OWNERS Database: UST, Date of Government Version: 03/23/2020	247-279 BAY 19TH ST	SSW 0 - 1/8 (0.066 mi.)	D13	10
BAY SHORE OWNERS INC Database: UST, Date of Government Version: 03/23/2020	244-276 BAY 19TH ST	SSW 0 - 1/8 (0.067 mi.)	D14	10
BAY SHORE OWNERS INC Database: UST, Date of Government Version: 03/23/2020	287-311 BAY 19TH ST	SSW 0 - 1/8 (0.102 mi.)	H29	13
BAY SHORE OWNERS, IN Database: UST, Date of Government Version: 03/23/2020	298 BAY 19TH STREET	SSW 0 - 1/8 (0.106 mi.)	H33	14
BAYVIEW OWNERS CORP Database: UST, Date of Government Version: 03/23/2020	8853 BAY 16TH STREET	W 1/8 - 1/4 (0.150 mi.)	R64	21
ATHINA GARDEN APTS L Database: UST, Date of Government Version: 03/23/2020	247 BAY 17TH STREET	WSW 1/8 - 1/4 (0.152 mi.)	S66	22
ATHINA GARDEN APARTM Database: UST, Date of Government Version: 03/23/2020	267 BAY 17TH STREET	WSW 1/8 - 1/4 (0.155 mi.)	S70	23
BAYVIEW OWNERS CORP Database: UST, Date of Government Version: 03/23/2020	8873 BAY 16TH ST	W 1/8 - 1/4 (0.155 mi.)	R71	23
BAYVIEW OWNERS CORP Database: UST, Date of Government Version: 03/23/2020	248 BAY 17TH ST	WSW 1/8 - 1/4 (0.156 mi.)	S72	23
ATHINA GARDEN APARTM Database: UST, Date of Government Version: 03/23/2020	289 BAY 17TH ST	WSW 1/8 - 1/4 (0.157 mi.)	S73	23
BAYVIEW OWNERS CORP Database: UST, Date of Government Version: 03/23/2020	268 BAY 17TH ST	WSW 1/8 - 1/4 (0.159 mi.)	S74	23

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
BAYVIEW OWNERS CORP Database: UST, Date of Government Version: 03/23/2020	290 BAY 17TH ST	WSW 1/8 - 1/4 (0.161 mi.)	S75	24
BAYVIEW OWNERS CORP Database: UST, Date of Government Version: 03/23/2020	8895 BAY 16TH ST	W 1/8 - 1/4 (0.161 mi.)	R77	24
BAYVIEW OWNERS CORP Database: UST, Date of Government Version: 03/23/2020	1265 SHORE PKWY N	WSW 1/8 - 1/4 (0.180 mi.)	93	28

NY AST: A review of the NY AST list, as provided by EDR, has revealed that there are 12 NY AST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
199 BAY 17 STREET Database: AST, Date of Government Version: 03/23/2020 Facility Id: 2-247243	199 BAY 17TH STREET	NNW 0 - 1/8 (0.085 mi.)	23	12
MAUJER LLC Database: AST, Date of Government Version: 03/23/2020 Facility Id: 2-061638	171 BAY 17TH STREET	N 1/8 - 1/4 (0.125 mi.)	L45	17
8785 BAY 16TH STREET Database: AST, Date of Government Version: 03/23/2020 Facility Id: 2-098914	8785 BAY 16TH STREET	NNW 1/8 - 1/4 (0.138 mi.)	50	18
SUNOCO #0014-0996 Database: AST, Date of Government Version: 03/23/2020 Facility Id: 2-339911	1907 CROPEY AVENUE	ESE 1/8 - 1/4 (0.139 mi.)	P54	19
ZALoon REALITY Database: AST, Date of Government Version: 03/23/2020 Facility Id: 2-268879	1917 CROPEY AVE	ESE 1/8 - 1/4 (0.153 mi.)	P68	22
SEA BREEZE AUTO BODY Database: AST, Date of Government Version: 03/23/2020 Facility Id: 2-610552	8729-8739 18TH AVENUE	NNE 1/8 - 1/4 (0.187 mi.)	U96	29
CROPEY & 17TH PROPE Database: AST, Date of Government Version: 03/23/2020 Facility Id: 2-602416	1662 CROPEY AVENUE	NW 1/8 - 1/4 (0.201 mi.)	104	30
178 BAY 23RD STREET Database: AST, Date of Government Version: 03/23/2020 Facility Id: 2-400289	178 BAY 23RD STREET	ESE 1/8 - 1/4 (0.228 mi.)	AF118	33
62 PRECINCT NYPD -DD Database: AST, Date of Government Version: 03/23/2020 Facility Id: 2-342858	1925 BATH AVENUE	E 1/8 - 1/4 (0.231 mi.)	AH124	35
87-54 REALTY CORPORA Database: AST, Date of Government Version: 03/23/2020 Facility Id: 2-246522	8754 17TH AVENUE	NNW 1/8 - 1/4 (0.241 mi.)	131	37

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GIANT STEP REALTY, L Database: AST, Date of Government Version: 03/23/2020	1820 CROPEY AVENUE	ESE 0 - 1/8 (0.031 mi.)	A4	8

EXECUTIVE SUMMARY

Facility Id: 2-017582
 BAY SHORE OWNERS, IN 298 BAY 19TH STREET SSW 0 - 1/8 (0.106 mi.) H32 14
 Database: AST, Date of Government Version: 03/23/2020
 Facility Id: 2-340812

State and tribal Brownfields sites

NY BROWNFIELDS: A review of the NY BROWNFIELDS list, as provided by EDR, and dated 05/12/2020 has revealed that there is 1 NY BROWNFIELDS site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
2002-2024 CROPSEY AV Site Code: 492427	2002- 2024 CROPSEY A	SE 1/4 - 1/2 (0.292 mi.)	AI135	38

ADDITIONAL ENVIRONMENTAL RECORDS

Records of Emergency Release Reports

NY Spills: A review of the NY Spills list, as provided by EDR, and dated 05/12/2020 has revealed that there are 6 NY Spills sites within approximately 0.125 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
DRUM RUN (ABANDONED) Spill Date: 2014-07-17 Spill Number/Closed Date: 1404171 / 2014-08-11 Site ID: 497558	CORNER OF BAY 19TH S	ENE 0 - 1/8 (0.020 mi.)	A1	8
FORMER GETTY S/S #98 Spill Date: 1999-01-06 Spill Number/Closed Date: 9812361 / 2016-08-26 Site ID: 88887	1785 CROPSEY AV	NNW 0 - 1/8 (0.051 mi.)	B8	9
DRUM RUN Spill Date: 2019-11-08 Spill Number/Closed Date: 1908039 / 2019-11-26 Site ID: 596205	1758 BATH AVE	N 0 - 1/8 (0.124 mi.)	L42	16

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CASTLE OIL TRUCK Spill Date: 2007-03-28 Spill Number/Closed Date: 0613938 / 2007-03-29 Site ID: 379083	257 BAY 19TH STREET	SSW 0 - 1/8 (0.089 mi.)	H24	12
SPILL NUMBER 0306777 Spill Date: 2003-09-26	298 BAY 19TH ST	SSW 0 - 1/8 (0.106 mi.)	H34	14

EXECUTIVE SUMMARY

Spill Number/Closed Date: 0306777 / 2004-02-04
 Site ID: 309657

SPILL NUMBER 9908820	304 BAY 19TH ST	SSW 0 - 1/8 (0.109 mi.)	H35	14
Spill Date: 1999-10-18				
Spill Number/Closed Date: 9908820 / 2001-11-21				
Site ID: 98459				

Other Ascertainable Records

RCRA NonGen / NLR: A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/23/2020 has revealed that there are 38 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON SERVICE B EPA ID:: NYP004347811	212 BAY 20TH ST FRON	E 0 - 1/8 (0.079 mi.)	15	10
CON EDISON EPA ID:: NYP004881013	235 BAY 20TH ST FRON	SE 0 - 1/8 (0.080 mi.)	E16	11
CON EDISON SERVICE B EPA ID:: NYP004572921	8798 18TH AVE	N 0 - 1/8 (0.082 mi.)	F19	11
CON EDISON SERVICE B EPA ID:: NYP004377438	1745 CROSEY AVE E O	NW 0 - 1/8 (0.099 mi.)	I28	13
CON EDISON SERVICE B EPA ID:: NYP004347415	1828 BATH AVE FRONT	NE 0 - 1/8 (0.120 mi.)	K40	15
CON EDISON SERVICE B EPA ID:: NYP004381380	8800 19TH AVE	E 0 - 1/8 (0.124 mi.)	M43	16
CON EDISON TRANSFORM EPA ID:: NYP004398004	18TH AVE & BATH AVE	NNE 0 - 1/8 (0.125 mi.)	N44	16
CON EDISON EPA ID:: NYP004772299	154 BAY 19TH ST	NE 1/8 - 1/4 (0.135 mi.)	O48	17
SUNOCO #0014-0996 EPA ID:: NYD000818047	1907 CROSEY AVENUE	ESE 1/8 - 1/4 (0.139 mi.)	P51	18
CON EDISON SERVICE B EPA ID:: NYP004380663	8786 19TH AVE	E 1/8 - 1/4 (0.140 mi.)	56	19
CON EDISON EPA ID:: NYP004821480	1852 BATH AVE	ENE 1/8 - 1/4 (0.140 mi.)	Q59	20
CON EDISON SERVICE B EPA ID:: NYP004346359	1850 BATH AVE	ENE 1/8 - 1/4 (0.143 mi.)	Q60	20
CON EDISON SERVICE B EPA ID:: NYP004355723	1763 BATH AVE	NNE 1/8 - 1/4 (0.143 mi.)	N61	21
CON EDISON SERVICE B EPA ID:: NYP004382321	8801 19TH AVE	E 1/8 - 1/4 (0.146 mi.)	M62	21
CON EDISON SERVICE B EPA ID:: NYP004348306	1862 BATH AVE	ENE 1/8 - 1/4 (0.150 mi.)	Q65	22
CON EDISON SERVICE B	1917 CROSEY AVE & B	ESE 1/8 - 1/4 (0.153 mi.)	P69	22

EXECUTIVE SUMMARY

EPA ID:: NYP004377420				
CON EDISON SERVICE B	151 BAY 17TH ST FRON	NNE 1/8 - 1/4 (0.162 mi.)	78	24
EPA ID:: NYP004339610				
MAFAR & DAYTONA MOTO	8733 18TH AVE	NNE 1/8 - 1/4 (0.173 mi.)	U82	25
EPA ID:: NYD986937035				
CON EDISON	1865 BATH AVE	ENE 1/8 - 1/4 (0.175 mi.)	V86	26
EPA ID:: NYP004742086				
CON EDISON SERVICE B	8867 17TH AVE	WNW 1/8 - 1/4 (0.176 mi.)	W88	27
EPA ID:: NYP004551735				
NYCDDC BED763	CROPSEY AVE & W 17TH	NW 1/8 - 1/4 (0.177 mi.)	89	27
EPA ID:: NYR000103374				
CON EDISON	1720 BATH AVE	NNW 1/8 - 1/4 (0.179 mi.)	X90	27
EPA ID:: NYP004766051				
CON EDISON MANHOLE 5	BATH AVE & 17TH AVE	NNW 1/8 - 1/4 (0.215 mi.)	AA107	31
EPA ID:: NYP004144655				
CON EDISON	200 BAY 23RD ST	ESE 1/8 - 1/4 (0.217 mi.)	AC109	31
EPA ID:: NYP004878858				
CON EDISON	192 BAY 23RD ST	ESE 1/8 - 1/4 (0.222 mi.)	AC111	32
EPA ID:: NYP004573291				
CON EDISON	231 BAY 23RD ST	SE 1/8 - 1/4 (0.227 mi.)	AE114	32
EPA ID:: NYP004786745				
CON EDISON SERVICE B	150 BAY 17TH ST FRON	E 1/8 - 1/4 (0.227 mi.)	AB117	33
EPA ID:: NYP004339602				
CON EDISON MANHOLE:	215 BAY 23 ST	ESE 1/8 - 1/4 (0.228 mi.)	AG119	33
EPA ID:: NYP004439055				
SUN'S CLEANERS	1936 BATH AVE	E 1/8 - 1/4 (0.230 mi.)	AF120	34
EPA ID:: NYD986931210				
NYCPD 62ND PRECINCT	1925 BATH AVE	E 1/8 - 1/4 (0.231 mi.)	AH122	34
EPA ID:: NY0000886218				
CON EDISON SERVICE B	221 BAY 23RD ST FRON	ESE 1/8 - 1/4 (0.231 mi.)	AE125	35
EPA ID:: NYP004357216				
CON EDISON SERVICE B	8722 19TH AVE	ENE 1/8 - 1/4 (0.233 mi.)	126	36
EPA ID:: NYP004461844				
CON EDISON	1965 CROPSEY AVE	ESE 1/8 - 1/4 (0.240 mi.)	AG130	37
EPA ID:: NYP004756250				
CON EDISON SERVICE B	1647 CROPSEY AVE	NW 1/8 - 1/4 (0.248 mi.)	132	37
EPA ID:: NYP004351136				
Lower Elevation	Address	Direction / Distance	Map ID	Page
CON EDISON	8885 18TH AVE	SW 0 - 1/8 (0.084 mi.)	G21	12
EPA ID:: NYP004350351				
CON EDISON SERVICE B	283 BAY 20TH ST	S 0 - 1/8 (0.110 mi.)	36	15
EPA ID:: NYP004436564				
CON EDISON	8858 19 AVE	SE 0 - 1/8 (0.110 mi.)	J38	15
EPA ID:: NYP004767984				
CON EDISON SERVICE B	SHORE PKWY & BAY 16T	WSW 1/8 - 1/4 (0.198 mi.)	101	30

EXECUTIVE SUMMARY

EPA ID:: NYP004347555

NY DRYCLEANERS: A review of the NY DRYCLEANERS list, as provided by EDR, and dated 07/12/2019 has revealed that there are 3 NY DRYCLEANERS sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
J & W/KINGS CLEANERS Facility Id: 2-6106-00290	1766 CROPSEY AVE.	NW 0 - 1/8 (0.064 mi.)	C11	10
BENSONHURST CLEANER Facility Id: 2-6106-00293	1725 BATH AVE.	N 1/8 - 1/4 (0.180 mi.)	Y94	28
SUN'S CLEANERS Facility Id: 2-6106-00220	1936 BATH AVENUE	E 1/8 - 1/4 (0.230 mi.)	AF121	34

NY MANIFEST: A review of the NY MANIFEST list, as provided by EDR, and dated 01/01/2019 has revealed that there are 44 NY MANIFEST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON - VAULT S EPA ID: NYP004969099	1758 CROPSEY AVE	NW 0 - 1/8 (0.064 mi.)	C12	10
CON EDISON SERVICE B EPA ID: NYP004347811	212 BAY 20TH ST FRON	E 0 - 1/8 (0.079 mi.)	15	10
CON EDISON EPA ID: NYP004572921	8798 18TH AVE	N 0 - 1/8 (0.082 mi.)	F20	11
CON EDISON EPA ID: NYP004377438	1745 CROPSEY AVE E O	NW 0 - 1/8 (0.099 mi.)	I27	13
CON EDISON SERVICE B EPA ID: NYP004347415	1828 BATH AVE FRONT	NE 0 - 1/8 (0.120 mi.)	K40	15
CON EDISON SERVICE B EPA ID: NYP004381380	8800 19TH AVE	E 0 - 1/8 (0.124 mi.)	M43	16
CON EDISON TRANSFORM EPA ID: NYP004398004	18TH AVE & BATH AVE	NNE 0 - 1/8 (0.125 mi.)	N44	16
CON EDISON EPA ID: NYP004699419	CROPSEY AVE & BAY 16	NW 1/8 - 1/4 (0.128 mi.)	46	17
CON EDISON EPA ID: NYP004772299	154 BAY 19TH ST	NE 1/8 - 1/4 (0.135 mi.)	O47	17
CON EDISON SERVICE B EPA ID: NYP004380663	8786 19TH AVE	E 1/8 - 1/4 (0.140 mi.)	56	19
CON EDISON EPA ID: NYP004821480	1852 BATH AVE	ENE 1/8 - 1/4 (0.140 mi.)	Q57	20
CON EDISON SERVICE B EPA ID: NYP004346359	1850 BATH AVE	ENE 1/8 - 1/4 (0.143 mi.)	Q60	20
CON EDISON SERVICE B	1763 BATH AVE	NNE 1/8 - 1/4 (0.143 mi.)	N61	21

EXECUTIVE SUMMARY

EPA ID: NYP004355723				
CON EDISON SERVICE B	8801 19TH AVE	E 1/8 - 1/4 (0.146 mi.)	M62	21
EPA ID: NYP004382321				
CON EDISON SERVICE B	1862 BATH AVE	ENE 1/8 - 1/4 (0.150 mi.)	Q65	22
EPA ID: NYP004348306				
CON EDISON SERVICE B	1917 CROPSEY AVE & B	ESE 1/8 - 1/4 (0.153 mi.)	P69	22
EPA ID: NYP004377420				
CON EDISON SERVICE B	151 BAY 17TH ST FRON	NNE 1/8 - 1/4 (0.162 mi.)	78	24
EPA ID: NYP004339610				
MAFAR & DAYTONA MOTO	8733 18TH AVE	NNE 1/8 - 1/4 (0.173 mi.)	U82	25
EPA ID: NYD986937035				
CON EDISON - MANHOLE	8731 18 AVE AND BATH	NNE 1/8 - 1/4 (0.173 mi.)	U83	25
EPA ID: NYP004192423				
CON EDISON	1865 BATH AVE	ENE 1/8 - 1/4 (0.175 mi.)	V85	26
EPA ID: NYP004742086				
CON EDISON	8867 17TH AVE	WNW 1/8 - 1/4 (0.176 mi.)	W87	26
EPA ID: NYP004551735				
CON EDISON	1720 BATH AVE	NNW 1/8 - 1/4 (0.179 mi.)	X91	27
EPA ID: NYP004766051				
BENSONHURST CLEANERS	1725 BATH AVE	N 1/8 - 1/4 (0.180 mi.)	Y95	28
EPA ID: NYD986886414				
ALPINE PONTIAC	87-29 18TH AVE	NNE 1/8 - 1/4 (0.187 mi.)	U98	29
EPA ID: NYD981564214				
CON EDISON - MANHOLE	1702 BATH AVE	NNW 1/8 - 1/4 (0.198 mi.)	AA103	30
EPA ID: NYP005039522				
CON EDISON - MANHOLE	8745 19TH AVE	ENE 1/8 - 1/4 (0.214 mi.)	AB105	31
EPA ID: NYP005092721				
CONSOLIDATED EDISON	S SIDE BATH AVE 31 F	NNW 1/8 - 1/4 (0.215 mi.)	AA108	31
EPA ID: NYP004144655				
CON EDISON	192 BAY 23RD ST	ESE 1/8 - 1/4 (0.222 mi.)	AC110	32
EPA ID: NYP004573291				
CON EDISON	1804 BENSON AVE	NE 1/8 - 1/4 (0.224 mi.)	AD112	32
EPA ID: NYP004596847				
CON EDISON	231 BAY 23RD ST	SE 1/8 - 1/4 (0.227 mi.)	AE116	33
EPA ID: NYP004786745				
CON EDISON SERVICE B	150 BAY 17TH ST FRON	E 1/8 - 1/4 (0.227 mi.)	AB117	33
EPA ID: NYP004339602				
CON EDISON MANHOLE:	215 BAY 23 ST	ESE 1/8 - 1/4 (0.228 mi.)	AG119	33
EPA ID: NYP004439055				
SUN'S CLEANERS	1936 BATH AVE	E 1/8 - 1/4 (0.230 mi.)	AF120	34
EPA ID: NYD986931210				
NYCPD 62ND PRECINCT	1925 BATH AVE	E 1/8 - 1/4 (0.231 mi.)	AH122	34
EPA ID: NY0000886218				
CON EDISON SERVICE B	221 BAY 23RD ST FRON	ESE 1/8 - 1/4 (0.231 mi.)	AE125	35
EPA ID: NYP004357216				
CON EDISON SERVICE B	8722 19TH AVE	ENE 1/8 - 1/4 (0.233 mi.)	126	36

EXECUTIVE SUMMARY

EPA ID: NYP004461844				
CON EDISON EPA ID: NYP004756250	1965 CROPSEY AVE	ESE 1/8 - 1/4 (0.240 mi.)	AG128	36
CON EDISON SERVICE B EPA ID: NYP004351136	1647 CROPSEY AVE	NW 1/8 - 1/4 (0.248 mi.)	132	37

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON EPA ID: NYP004350351	8885 18TH AVE	SW 0 - 1/8 (0.084 mi.)	G21	12
CON EDISON EPA ID: NYP004624847	259 BAY 20 ST	SSE 0 - 1/8 (0.089 mi.)	25	12
CON EDISON SERVICE B EPA ID: NYP004436564	283 BAY 20TH ST	S 0 - 1/8 (0.110 mi.)	36	15
CON EDISON EPA ID: NYP004767984	8858 19 AVE	SE 0 - 1/8 (0.110 mi.)	J39	15
CON ED EPA ID: NYP004870552	8895 19 AVE	SSE 1/8 - 1/4 (0.167 mi.)	T81	25
CON EDISON SERVICE B EPA ID: NYP004347555	SHORE PKWY & BAY 16T	WSW 1/8 - 1/4 (0.198 mi.)	101	30

PA MANIFEST: A review of the PA MANIFEST list, as provided by EDR, and dated 06/30/2018 has revealed that there is 1 PA MANIFEST site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON Generator EPA Id: NYP004573291	190 BAY 23RD ST	ESE 1/8 - 1/4 (0.224 mi.)	AC113	32

RI MANIFEST: A review of the RI MANIFEST list, as provided by EDR, and dated 12/31/2018 has revealed that there is 1 RI MANIFEST site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
BENSONHURST CLEANERS EPA Id: NYD986886414 Manifest Document Number: 002595163SKS	1725 BATH AVE	N 1/8 - 1/4 (0.180 mi.)	Y95	28

NJ MANIFEST: A review of the NJ MANIFEST list, as provided by EDR, and dated 12/31/2018 has revealed that there are 12 NJ MANIFEST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON EPA Id: NYP004881013	235 BAY 20TH ST FRON	SE 0 - 1/8 (0.080 mi.)	E17	11
CON EDISON	154 BAY 19TH ST	NE 1/8 - 1/4 (0.135 mi.)	O49	18

EXECUTIVE SUMMARY

EPA Id: NYP004772299				
CON EDISON EPA Id: NYP004821480	1852 BATH AVE	ENE 1/8 - 1/4 (0.140 mi.)	Q58	20
CON EDISON - MANHOLE EPA Id: NYP004192423	8731 18 AVE AND BATH	NNE 1/8 - 1/4 (0.173 mi.)	U83	25
CON EDISON EPA Id: NYP004742086	1865 BATH AVE	ENE 1/8 - 1/4 (0.175 mi.)	V84	26
CON EDISON EPA Id: NYP004766051	1720 BATH AVE	NNW 1/8 - 1/4 (0.179 mi.)	X92	28
ALPINE PONTIAC EPA Id: NYD981564214	87-29 18TH AVENUE	NNE 1/8 - 1/4 (0.187 mi.)	U97	29
CON EDISON EPA Id: NYP004786745	231 BAY 23RD ST	SE 1/8 - 1/4 (0.227 mi.)	AE115	33
CON EDISON EPA Id: NYP004756250	1965 CROPSEY AVE	ESE 1/8 - 1/4 (0.240 mi.)	AG129	36

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON EPA Id: NYP004350351	8885 18TH AVE	SW 0 - 1/8 (0.084 mi.)	G22	12
CON EDISON EPA Id: NYP004767984	8858 19TH AVE	SE 0 - 1/8 (0.110 mi.)	J37	15
CON EDISON - MANHOLE EPA Id: NYP004870552	8895 19 AVE	SSE 1/8 - 1/4 (0.167 mi.)	T79	24

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 2 EDR Hist Auto sites within approximately 0.125 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
BRUNOS SERVICE STATI	1801 CROPSEY AVE	NNE 0 - 1/8 (0.031 mi.)	5	8
RABEN SERVICE STATIO	1785 CROPSEY AVE	NNW 0 - 1/8 (0.051 mi.)	B7	9

EDR Hist Cleaner: A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there is 1 EDR Hist Cleaner site within approximately 0.125 miles of the target property.

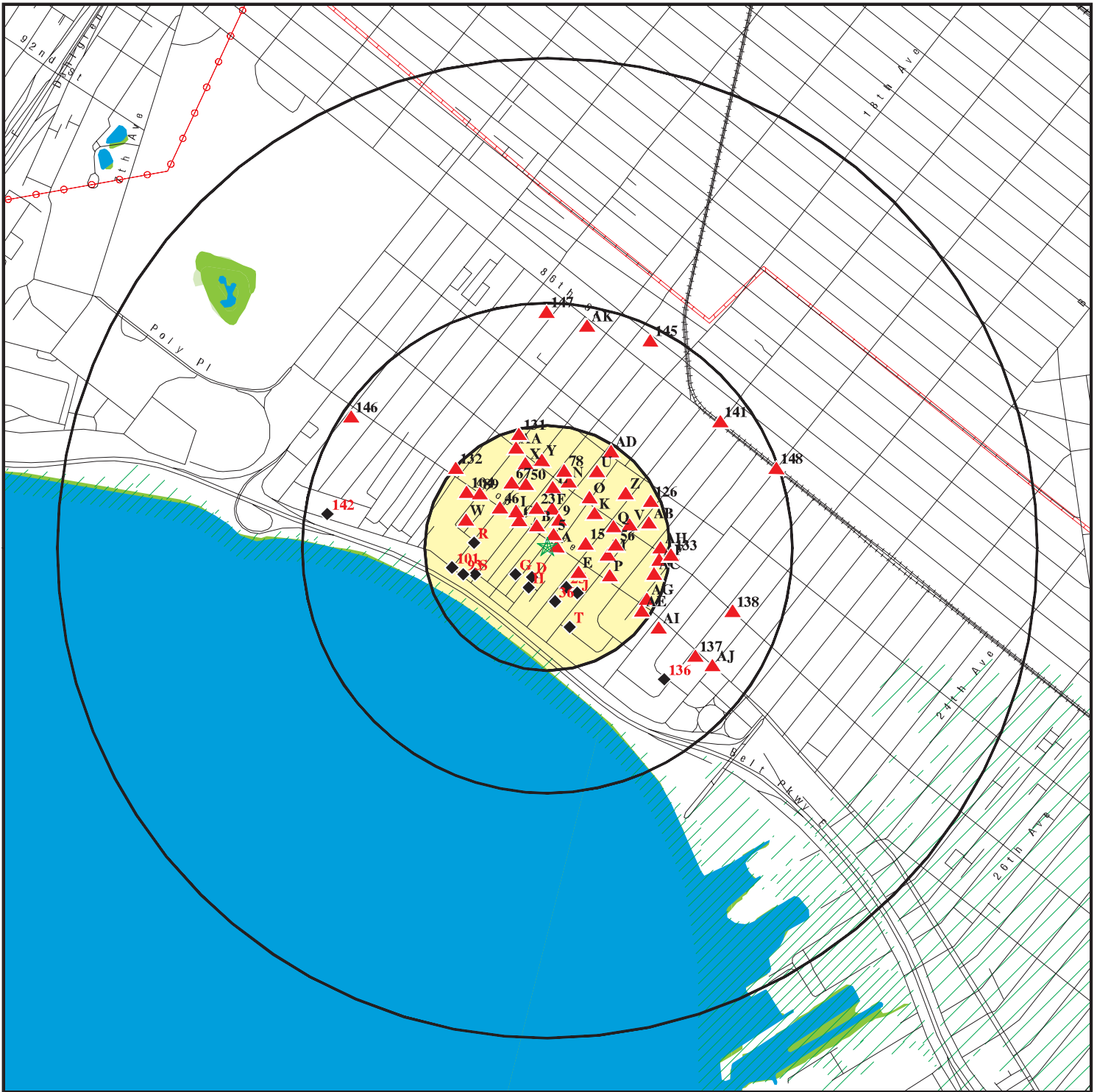
<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
KING CLEANERS	1766 CROPSEY AVE	NW 0 - 1/8 (0.064 mi.)	C10	9

Count: 8 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BROOKLYN	S105841909	HIGHWAY CONTAINER CORP.	BAY 56TH STREET (BET. W 21ST.	11214	NY SWF/LF
BROOKLYN	S126023819	SOUTH SHORE INCINERATOR	BOUNDED BY STANLEY AVENUE, 79T		NY SWF/LF
BROOKLYN	S126022792	CRESCENT STREET - SHERIDAN & FAIRF	BOUNDED BY ATKINS AVE, COZINE		NY SWF/LF
BROOKLYN	S126023777	SEAVIEW PARK	BOUNDED BY FRESH CREEK, SEAVIE		NY SWF/LF
BROOKLYN	S126022983	FOUNTAIN AVE	FOUNTAIN AVE. AND SHORE PKWY		NY SWF/LF
BROOKLYN	S126022660	CALVER VAUX/DRIER OFFERMAN	10 HUTCHINSON RIVER PKWY CROPS		NY SWF/LF
BROOKLYN	1007444974	FOUNTAIN AVENUE LANDFILL	OFF SHORE PARKWAY		ODI
BROOKLYN	S126023581	PENNSYLVANIA AVE	PENINSULA PROJECTING INTO JAMA		NY SWF/LF

OVERVIEW MAP - 6167629.2S



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites



- Indian Reservations BIA
- ⚡ Power transmission lines
- ⚡ Pipelines
- ▨ Special Flood Hazard Area (1%)
- ▨ 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands

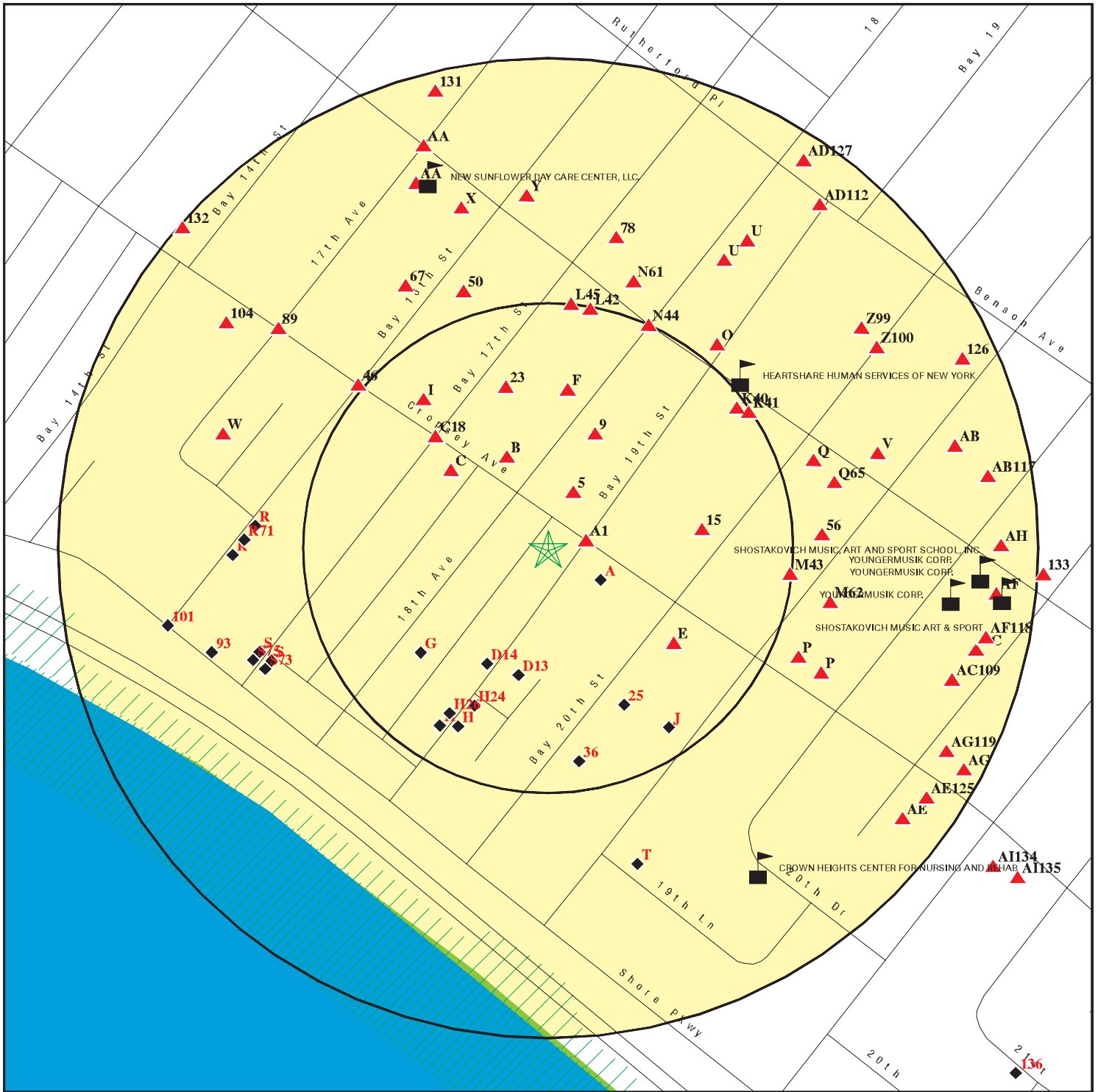


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Finwise 1810 Cropsey Avenue
 ADDRESS: 1810 Cropsey Avenue
 Brooklyn NY 11214
 LAT/LONG: 40.602239 / 74.007154

CLIENT: Bison Environmental, LLC
 CONTACT: George Guzdek
 INQUIRY #: 6167629.2s
 DATE: August 25, 2020 10:30 am

DETAIL MAP - 6167629.2S



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Finwise 1810 Cropsey Avenue
 ADDRESS: 1810 Cropsey Avenue
 Brooklyn NY 11214
 LAT/LONG: 40.602239 / 74.007154

CLIENT: Bison Environmental, LLC
 CONTACT: George Guzdek
 INQUIRY #: 6167629.2s
 DATE: August 25, 2020 10:31 am

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site list</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	4	NR	NR	NR	4
RCRA-SQG	0.250		0	1	NR	NR	NR	1
RCRA-VSQG	0.250		0	1	NR	NR	NR	1
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	TP		NR	NR	NR	NR	NR	0
<i>State- and tribal - equivalent CERCLIS</i>								
NY SHWS	1.000		0	0	1	0	NR	1
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
NY SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
INDIAN LUST	0.500		0	0	0	NR	NR	0
NY LTANKS	0.500		5	7	15	NR	NR	27
NY HIST LTANKS	0.500		0	0	0	NR	NR	0
<i>State and tribal registered storage tank lists</i>								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NY UST	0.250		8	15	NR	NR	NR	23
NY CBS UST	0.250		0	0	NR	NR	NR	0
NY MOSF UST	0.500		0	0	0	NR	NR	0
NY MOSF	0.500		0	0	0	NR	NR	0
NY CBS	0.250		0	0	NR	NR	NR	0
NY AST	0.250		3	9	NR	NR	NR	12
NY CBS AST	0.250		0	0	NR	NR	NR	0
NY MOSF AST	0.500		0	0	0	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
NY TANKS	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
NY RES DECL	0.125		0	NR	NR	NR	NR	0
NY ENG CONTROLS	0.500		0	0	0	NR	NR	0
NY INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
NY VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
NY BROWNFIELDS	0.500		0	0	1	NR	NR	1
NY ERP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
NY SWRCY	0.500		0	0	0	NR	NR	0
NY SWTIRE	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
NY DEL SHWS	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
NY PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
NY HIST UST	0.250		0	0	NR	NR	NR	0
NY HIST AST	TP		NR	NR	NR	NR	NR	0
Local Land Records								
NY LIENS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
NY Spills	0.125		6	NR	NR	NR	NR	6
NY Hist Spills	0.125		0	NR	NR	NR	NR	0
NY SPILLS 90	0.125		0	NR	NR	NR	NR	0
NY SPILLS 80	0.125		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		10	28	NR	NR	NR	38
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
NY AIRS	TP		NR	NR	NR	NR	NR	0
NY COAL ASH	0.500		0	0	0	NR	NR	0
NY DRYCLEANERS	0.250		1	2	NR	NR	NR	3
NY E DESIGNATION	0.125		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NY Financial Assurance	TP		NR	NR	NR	NR	NR	0
NY HSWDS	0.500		0	0	0	NR	NR	0
NY MANIFEST	0.250		11	33	NR	NR	NR	44
PA MANIFEST	0.250		0	1	NR	NR	NR	1
RI MANIFEST	0.250		0	1	NR	NR	NR	1
NJ MANIFEST	0.250		3	9	NR	NR	NR	12
NY SPDES	TP		NR	NR	NR	NR	NR	0
NY VAPOR REOPENED	0.500		0	0	0	NR	NR	0
NY UIC	TP		NR	NR	NR	NR	NR	0
NY COOLING TOWERS	TP		NR	NR	NR	NR	NR	0
NY LEAD	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		2	NR	NR	NR	NR	2
EDR Hist Cleaner	0.125		1	NR	NR	NR	NR	1

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

NY RGA HWS	TP		NR	NR	NR	NR	NR	0
NY RGA LF	TP		NR	NR	NR	NR	NR	0

- Totals -- 0 50 111 17 0 0 178

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A1 ENE < 1/8 0.020 mi. 104 ft.	DRUM RUN (ABANDONED DRUMS) CORNER OF BAY 19TH STREET AND CROPSEY AVENUE BROOKLYN, NY Click here for full text details	NY Spills	S117268643 N/A
Relative: Higher	NY Spills Site ID 497558 Spill Date 2014-07-17 Spill Number/Closed Date 1404171 / 2014-08-11		
A2 ESE < 1/8 0.031 mi. 166 ft.	GIANT STEP REALTY, LLC 1820 CROPSEY AVENUE BROOKLYN, NY 11214 Click here for full text details	NY UST	U004061999 N/A
Relative: Lower			
A3 ESE < 1/8 0.031 mi. 166 ft.	BAYSIDE COMMERCIAL 1820 CROPSEY AVE BROOKLYN, NY 11229 Click here for full text details	NY LTANKS	S118953572 N/A
Relative: Lower	NY LTANKS Spill Number/Closed Date 1606901 / 2016-10-19 Site ID 533547 Spill Date 2016-09-01		
A4 ESE < 1/8 0.031 mi. 166 ft.	GIANT STEP REALTY, LLC 1820 CROPSEY AVENUE BROOKLYN, NY 11214 Click here for full text details	NY AST	U001838876 N/A
Relative: Lower	NY AST Facility Id 2-017582		
5 NNE < 1/8 0.031 mi. 166 ft.	BRUNOS SERVICE STATION 1801 CROPSEY AVE BROOKLYN, NY 11214 Click here for full text details	EDR Hist Auto	1020148002 N/A
Relative: Higher			

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
B6 NNW < 1/8 0.051 mi. 271 ft. Relative: Higher	RABEN SERVICE CENTER, INC.. 1785 CROPSEY AVENUE BROOKLYN, NY 11214 Click here for full text details	NY UST	U004064122 N/A
B7 NNW < 1/8 0.051 mi. 271 ft. Relative: Higher	RABEN SERVICE STATION INC 1785 CROPSEY AVE BROOKLYN, NY 11214 Click here for full text details	EDR Hist Auto	1021716339 N/A
B8 NNW < 1/8 0.051 mi. 271 ft. Relative: Higher	FORMER GETTY S/S #98768 - GETTY MARKETING 1785 CROPSEY AV BROOKLYN, NY Click here for full text details NY Spills Site ID 88887 Spill Date 1999-01-06 Spill Number/Closed Date 9812361 / 2016-08-26	NY Spills	S103559059 N/A
9 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher	BRUCE SUPPLY CORPORATION 8805 18TH AVENUE BROOKLYN, NY 11214 Click here for full text details	NY UST	U002170647 N/A
C10 NW < 1/8 0.064 mi. 336 ft. Relative: Higher	KING CLEANERS 1766 CROPSEY AVE BROOKLYN, NY 11214 Click here for full text details	EDR Hist Cleaner	1018596999 N/A

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
C11 NW < 1/8 0.064 mi. 336 ft.	J & W/KINGS CLEANERS 1766 CROPSEY AVE. BROOKLYN, NY 11214 Click here for full text details	NY DRYCLEANERS	S110246878 N/A
Relative: Higher	NY DRYCLEANERS Facility Id 2-6106-00290		
C12 NW < 1/8 0.064 mi. 337 ft.	CON EDISON - VAULT SUBMERSIBLE 4870 1758 CROPSEY AVE BROOKLYN, NY 11214 Click here for full text details	NY MANIFEST	S120958837 N/A
Relative: Higher	NY MANIFEST EPA ID NYP004969099		
D13 SSW < 1/8 0.066 mi. 351 ft.	BAY SHORE OWNERS 247-279 BAY 19TH ST BROOKLYN, NY 11214 Click here for full text details	NY UST	U002034262 N/A
Relative: Lower			
D14 SSW < 1/8 0.067 mi. 352 ft.	BAY SHORE OWNERS INC. 244-276 BAY 19TH ST BROOKLYN, NY 11214 Click here for full text details	NY UST	U002034261 N/A
Relative: Lower			
15 East < 1/8 0.079 mi. 418 ft.	CON EDISON SERVICE BOX: 40263 212 BAY 20TH ST FRONT OF BROOKLYN, NY 11228 Click here for full text details	RCRA NonGen / NLR NY MANIFEST	1016961851 NYP004347811
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004347811 NY MANIFEST EPA ID NYP004347811		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
E16 SE < 1/8 0.080 mi. 424 ft.	CON EDISON 235 BAY 20TH ST FRONT OF BROOKLYN, NY 11219 Click here for full text details	RCRA NonGen / NLR	1019909101 NYP004881013
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004881013		
E17 SE < 1/8 0.080 mi. 424 ft.	CON EDISON 235 BAY 20TH ST FRONT OF BROOKLYN, NY 11219 Click here for full text details	NJ MANIFEST	S120678272 N/A
Relative: Higher	NJ MANIFEST EPA Id NYP004881013		
C18 NW < 1/8 0.081 mi. 428 ft.	SPILL NUMBER 0012216 BAY 17TH ST & CROPSEY AVE BROOKLYN, NY Click here for full text details	NY LTANKS	S104951378 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 0012216 / 2004-01-05 Site ID 272503 Spill Date 2001-02-13		
F19 North < 1/8 0.082 mi. 431 ft.	CON EDISON SERVICE BOX: 46451 8798 18TH AVE BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR FINDS	1017779302 NYP004572921
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004572921 FINDS Registry ID: 110063836158		
F20 North < 1/8 0.082 mi. 431 ft.	CON EDISON 8798 18TH AVE BROOKLYN, NY 11214 Click here for full text details	NY MANIFEST	S117064786 N/A
Relative: Higher	NY MANIFEST EPA ID NYP004572921		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
G21 SW < 1/8 0.084 mi. 444 ft.	CON EDISON 8885 18TH AVE BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR NY MANIFEST	1016962062 NYP004350351
Relative: Lower	RCRA NonGen / NLR EPA Id NYP004350351 NY MANIFEST EPA ID NYP004350351		
G22 SW < 1/8 0.084 mi. 444 ft.	CON EDISON 8885 18TH AVE BROOKLYN, NY 11214 Click here for full text details	NJ MANIFEST	S120665982 N/A
Relative: Lower	NJ MANIFEST EPA Id NYP004350351		
23 NNW < 1/8 0.085 mi. 450 ft.	199 BAY 17 STREET 199 BAY 17TH STREET BROOKLYN, NY 11214 Click here for full text details	NY AST	A100364474 N/A
Relative: Higher	NY AST Facility Id 2-247243		
H24 SSW < 1/8 0.089 mi. 468 ft.	CASTLE OIL TRUCK 257 BAY 19TH STREET BROOKLYN, NY Click here for full text details	NY Spills	S108467139 N/A
Relative: Lower	NY Spills Site ID 379083 Spill Date 2007-03-28 Spill Number/Closed Date 0613938 / 2007-03-29		
25 SSE < 1/8 0.089 mi. 469 ft.	CON EDISON 259 BAY 20 ST BROOKLYN, NY 11214 Click here for full text details	NY MANIFEST	S117737231 N/A
Relative: Lower	NY MANIFEST EPA ID NYP004624847		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
H26 SSW < 1/8 0.098 mi. 518 ft.	280-306 BAY 19TH ST 280-306 BAY 19TH ST BROOKLYN, NY	NY LTANKS	S106703275 N/A
Relative: Lower	Click here for full text details NY LTANKS Spill Number/Closed Date 8805603 / 1989-08-25 Site ID 264310 Spill Date 1988-09-29		
I27 NW < 1/8 0.099 mi. 524 ft.	CON EDISON 1745 CROSEY AVE E OF BAY 17TH BROOKLYN, NY 11214	NY MANIFEST	S117564599 N/A
Relative: Higher	Click here for full text details NY MANIFEST EPA ID NYP004377438		
I28 NW < 1/8 0.099 mi. 524 ft.	CON EDISON SERVICE BOX: 35424 1745 CROSEY AVE E OF BAY 17TH ST BROOKLYN, NY 11214	RCRA NonGen / NLR	1016964838 NYP004377438
Relative: Higher	Click here for full text details RCRA NonGen / NLR EPA Id NYP004377438		
H29 SSW < 1/8 0.102 mi. 538 ft.	BAY SHORE OWNERS INC. 287-311 BAY 19TH ST BROOKLYN, NY 11214	NY UST	U002034263 N/A
Relative: Lower	Click here for full text details		
H30 SSW < 1/8 0.102 mi. 538 ft.	BAY SHORE OWNER, INC - TTF 287-311 BAY 19TH STREET BROOKLYN, NY	NY LTANKS	S113916429 N/A
Relative: Lower	Click here for full text details NY LTANKS Spill Number/Closed Date 1306145 / 2016-07-20 Site ID 486738 Spill Date 2013-09-11		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
H31 SSW < 1/8 0.102 mi. 538 ft.	RESIDENTIAL 287-311 BAY 19TH ST BROOKLYN, NY 11214 Click here for full text details	NY LTANKS	S108298466 N/A
Relative: Lower	NY LTANKS Spill Number/Closed Date 0607197 / 2008-12-05 Site ID 370721 Spill Date 2006-09-22		
H32 SSW < 1/8 0.106 mi. 560 ft.	BAY SHORE OWNERS, INC. 298 BAY 19TH STREET BROOKLYN, NY 11214 Click here for full text details	NY AST	A100293193 N/A
Relative: Lower	NY AST Facility Id 2-340812		
H33 SSW < 1/8 0.106 mi. 560 ft.	BAY SHORE OWNERS, INC. 298 BAY 19TH STREET BROOKLYN, NY 11214 Click here for full text details	NY UST	U004078254 N/A
Relative: Lower			
H34 SSW < 1/8 0.106 mi. 560 ft.	SPILL NUMBER 0306777 298 BAY 19TH ST BROOKLYN, NY Click here for full text details	NY Spills	S106018484 N/A
Relative: Lower	NY Spills Site ID 309657 Spill Date 2003-09-26 Spill Number/Closed Date 0306777 / 2004-02-04		
H35 SSW < 1/8 0.109 mi. 574 ft.	SPILL NUMBER 9908820 304 BAY 19TH ST BROOKLYN, NY Click here for full text details	NY Spills	S104649839 N/A
Relative: Lower	NY Spills Site ID 98459 Spill Date 1999-10-18 Spill Number/Closed Date 9908820 / 2001-11-21		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
36 South < 1/8 0.110 mi. 580 ft.	CON EDISON SERVICE BOX: 55738 283 BAY 20TH ST BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR NY MANIFEST	1016969961 NYP004436564
Relative: Lower	RCRA NonGen / NLR EPA Id NYP004436564 NY MANIFEST EPA ID NYP004436564		
J37 SE < 1/8 0.110 mi. 582 ft.	CON EDISON 8858 19TH AVE BROOKLYN, NY 11228 Click here for full text details	NJ MANIFEST	S120670483 N/A
Relative: Lower	NJ MANIFEST EPA Id NYP004767984		
J38 SE < 1/8 0.110 mi. 582 ft.	CON EDISON 8858 19 AVE BROOKLYN, NY 11228 Click here for full text details	RCRA NonGen / NLR	1019324836 NYP004767984
Relative: Lower	RCRA NonGen / NLR EPA Id NYP004767984		
J39 SE < 1/8 0.110 mi. 582 ft.	CON EDISON 8858 19 AVE BROOKLYN, NY 11228 Click here for full text details	NY MANIFEST	S118089200 N/A
Relative: Lower	NY MANIFEST EPA ID NYP004767984		
K40 NE < 1/8 0.120 mi. 635 ft.	CON EDISON SERVICE BOX: 34671 1828 BATH AVE FRONT OF BROOKLYN, NY 11228 Click here for full text details	RCRA NonGen / NLR NY MANIFEST	1016961828 NYP004347415
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004347415 NY MANIFEST		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
	CON EDISON SERVICE BOX: 34671 (Continued) EPA ID NYP004347415		1016961828
K41 NE < 1/8 0.124 mi. 653 ft. Relative: Higher	HEARTSHARE HUMAN SERVICE NY NUE BROOKLYN, NY 11201 Click here for full text details	NY UST	U004159763 N/A
L42 North < 1/8 0.124 mi. 655 ft. Relative: Higher	DRUM RUN 1758 BATH AVE BROOKLYN, NY Click here for full text details NY Spills Site ID 596205 Spill Date 2019-11-08 Spill Number/Closed Date 1908039 / 2019-11-26	NY Spills	S125867016 N/A
M43 East < 1/8 0.124 mi. 656 ft. Relative: Higher	CON EDISON SERVICE BOX: 46586 8800 19TH AVE BROOKLYN, NY 11214 Click here for full text details RCRA NonGen / NLR EPA Id NYP004381380 NY MANIFEST EPA ID NYP004381380	RCRA NonGen / NLR NY MANIFEST	1016965247 NYP004381380
N44 NNE < 1/8 0.125 mi. 660 ft. Relative: Higher	CON EDISON TRANSFORMER MANHOLE: 604 18TH AVE & BATH AVE BROOKLYN, NY 11217 Click here for full text details RCRA NonGen / NLR EPA Id NYP004398004 NY MANIFEST EPA ID NYP004398004	RCRA NonGen / NLR NY MANIFEST	1016966962 NYP004398004

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
L45 North 1/8-1/4 0.125 mi. 662 ft.	MAUJER LLC 171 BAY 17TH STREET BROOKLYN, NY 11214 Click here for full text details	NY AST	A100173261 N/A
Relative: Higher	NY AST Facility Id 2-061638		
46 NW 1/8-1/4 0.128 mi. 675 ft.	CON EDISON CROPSEY AVE & BAY 16TH ST BROOKLYN, NY 11214 Click here for full text details	NY MANIFEST	S117738039 N/A
Relative: Higher	NY MANIFEST EPA ID NYP004699419		
O47 NE 1/8-1/4 0.135 mi. 714 ft.	CON EDISON 154 BAY 19TH ST BROOKLYN, NY 11214 Click here for full text details	NY MANIFEST	S119074692 N/A
Relative: Higher	NY MANIFEST EPA ID NYP004772299		
O48 NE 1/8-1/4 0.135 mi. 714 ft.	CON EDISON 154 BAY 19TH ST BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR FINDS ECHO	1019902316 NYP004772299
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004772299		
	FINDS Registry ID: 110069681605		
	ECHO Registry ID 110069681605		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
O49 NE 1/8-1/4 0.135 mi. 714 ft.	CON EDISON 154 BAY 19TH ST BROOKLYN, NY 11214 Click here for full text details	NJ MANIFEST	S120670863 N/A
Relative: Higher	NJ MANIFEST EPA Id NYP004772299		
50 NNW 1/8-1/4 0.138 mi. 729 ft.	8785 BAY 16TH STREET LLC 8785 BAY 16TH STREET BROOKLYN, NY 11214 Click here for full text details	NY AST	U003384388 N/A
Relative: Higher	NY AST Facility Id 2-098914		
P51 ESE 1/8-1/4 0.139 mi. 735 ft.	SUNOCO #0014-0996 1907 CROPSEY AVENUE BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR US AIRS FINDS ECHO	1004568986 NYD000818047
Relative: Higher	RCRA NonGen / NLR EPA Id NYD000818047		
	US AIRS EPA plant ID: 110001572593		
	FINDS Registry ID: 110001572593		
	ECHO Registry ID 110001572593		
P52 ESE 1/8-1/4 0.139 mi. 735 ft.	SUNOCO 1907 CROPSEY AVE BROOKLYN, NY Click here for full text details	NY LTANKS NY Spills	S103037387 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 9611416 / 2013-05-22 Spill Number/Closed Date 9712841 / 1998-06-26 Site ID 195984 Site ID 195985 Spill Date 1996-12-17 Spill Date 1998-02-18		
	NY Spills		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
	SUNOCO (Continued) Site ID 195983 Spill Date 2004-05-13 Spill Number/Closed Date 0401560 / 2004-05-17		S103037387
P53 ESE 1/8-1/4 0.139 mi. 735 ft. Relative: Higher	SUNOCO #0014-0996 1907 CROPSEY AVENUE BROOKLYN, NY 11214 Click here for full text details	NY UST	U004064538 N/A
P54 ESE 1/8-1/4 0.139 mi. 735 ft. Relative: Higher	SUNOCO #0014-0996 1907 CROPSEY AVENUE BROOKLYN, NY 11214 Click here for full text details NY AST Facility Id 2-339911	NY AST	U003074676 N/A
P55 ESE 1/8-1/4 0.139 mi. 735 ft. Relative: Higher	1907 CROPSEY AVE/SUNOCO 1907 CROPSEY AVE/SUNOCO BROOKLYN, NY 11214 Click here for full text details	NY LTANKS	S106703617 N/A
56 East 1/8-1/4 0.140 mi. 739 ft. Relative: Higher	CON EDISON SERVICE BOX: 46585 8786 19TH AVE BROOKLYN, NY 11214 Click here for full text details RCRA NonGen / NLR EPA Id NYP004380663 NY MANIFEST EPA ID NYP004380663	RCRA NonGen / NLR NY MANIFEST	1016965172 NYP004380663

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
Q57 ENE 1/8-1/4 0.140 mi. 741 ft.	CON EDISON 1852 BATH AVE BROOKLYN, NY 11214	NY MANIFEST	S118258812 N/A
Relative: Higher	Click here for full text details NY MANIFEST EPA ID NYP004821480		
Q58 ENE 1/8-1/4 0.140 mi. 741 ft.	CON EDISON 1852 BATH AVE BROOKLYN, NY 11214	NJ MANIFEST	S120675244 N/A
Relative: Higher	Click here for full text details NJ MANIFEST EPA Id NYP004821480		
Q59 ENE 1/8-1/4 0.140 mi. 741 ft.	CON EDISON 1852 BATH AVE BROOKLYN, NY 11214	RCRA NonGen / NLR	1019906478 NYP004821480
Relative: Higher	Click here for full text details RCRA NonGen / NLR EPA Id NYP004821480		
Q60 ENE 1/8-1/4 0.143 mi. 753 ft.	CON EDISON SERVICE BOX: 34674 1850 BATH AVE BROOKLYN, NY 11214	RCRA NonGen / NLR FINDS ECHO NY MANIFEST	1016455223 NYP004346359
Relative: Higher	Click here for full text details RCRA NonGen / NLR EPA Id NYP004346359 FINDS Registry ID: 110056499383 ECHO Registry ID 110056499383 NY MANIFEST EPA ID NYP004346359		

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

N61 **CON EDISON SERVICE BOX: 34665** **RCRA NonGen / NLR** **1016962531**
NNE **1763 BATH AVE** **NY MANIFEST** **NYP004355723**
1/8-1/4 **BROOKLYN, NY 11214**
0.143 mi.
755 ft.

[Click here for full text details](#)

Relative:
Higher
RCRA NonGen / NLR
 EPA Id NYP004355723

NY MANIFEST
 EPA ID NYP004355723

M62 **CON EDISON SERVICE BOX: 46584** **RCRA NonGen / NLR** **1016965343**
East **8801 19TH AVE** **NY MANIFEST** **NYP004382321**
1/8-1/4 **BROOKLYN, NY 11214**
0.146 mi.
773 ft.

[Click here for full text details](#)

Relative:
Higher
RCRA NonGen / NLR
 EPA Id NYP004382321

NY MANIFEST
 EPA ID NYP004382321

R63 **8853 BAY 16TH ST** **NY LTANKS** **S105999518**
West **8853 BAY 16TH ST** **N/A**
1/8-1/4 **BROOKLYN, NY**
0.150 mi.
791 ft.

[Click here for full text details](#)

Relative:
Lower
NY LTANKS
 Spill Number/Closed Date 0304619 / 2006-06-09
 Site ID 213103
 Spill Date 2003-07-31

R64 **BAYVIEW OWNERS CORP** **NY UST** **U000417096**
West **8853 BAY 16TH STREET** **N/A**
1/8-1/4 **BROOKLYN, NY 11214**
0.150 mi.
791 ft.

[Click here for full text details](#)

Relative:
Lower

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
Q65 ENE 1/8-1/4 0.150 mi. 792 ft.	CON EDISON SERVICE BOX: 34678 1862 BATH AVE BROOKLYN, NY 11228 Click here for full text details	RCRA NonGen / NLR NY MANIFEST	1016961895 NYP004348306
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004348306 NY MANIFEST EPA ID NYP004348306		
S66 WSW 1/8-1/4 0.152 mi. 804 ft.	ATHINA GARDEN APTS LLC 247 BAY 17TH STREET BROOKLYN, NY 11214 Click here for full text details	NY UST	U000406390 N/A
Relative: Lower			
67 NNW 1/8-1/4 0.152 mi. 805 ft.	IN FRONT OF 8802 BAY 16TH ST BROOKLYN, NY Click here for full text details	NY LTANKS	S106972181 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 0504234 / 2005-07-11 Site ID 349008 Spill Date 2005-07-10		
P68 ESE 1/8-1/4 0.153 mi. 808 ft.	ZALOOON REALITY 1917 CROPSY AVE BROOKLYN, NY 11214 Click here for full text details	NY AST	U003388277 N/A
Relative: Higher	NY AST Facility Id 2-268879		
P69 ESE 1/8-1/4 0.153 mi. 808 ft.	CON EDISON SERVICE BOX: 35430 1917 CROPSY AVE & BAY 22ND ST BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR NY MANIFEST NY LEAD	1016964837 NYP004377420
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004377420 NY MANIFEST		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
CON EDISON SERVICE BOX: 35430 (Continued)			1016964837
	EPA ID NYP004377420		
S70 WSW 1/8-1/4 0.155 mi. 816 ft.	ATHINA GARDEN APARTMENTS LLC 267 BAY 17TH STREET BROOKLYN, NY 11214	NY UST	U000417227 N/A
Relative: Lower	Click here for full text details		
R71 West 1/8-1/4 0.155 mi. 819 ft.	BAYVIEW OWNERS CORP 8873 BAY 16TH ST BROOKLYN, NY 11214	NY UST	U001834927 N/A
Relative: Lower	Click here for full text details		
S72 WSW 1/8-1/4 0.156 mi. 826 ft.	BAYVIEW OWNERS CORP 248 BAY 17TH ST BROOKLYN, NY 11214	NY UST	U000417101 N/A
Relative: Lower	Click here for full text details		
S73 WSW 1/8-1/4 0.157 mi. 829 ft.	ATHINA GARDEN APARTMENTS LLC 289 BAY 17TH ST BROOKLYN, NY 11214	NY UST	U001835500 N/A
Relative: Lower	Click here for full text details		
S74 WSW 1/8-1/4 0.159 mi. 838 ft.	BAYVIEW OWNERS CORP 268 BAY 17TH ST BROOKLYN, NY 11214	NY UST	U000417099 N/A
Relative: Lower	Click here for full text details		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
S75 WSW 1/8-1/4 0.161 mi. 850 ft.	BAYVIEW OWNERS CORP 290 BAY 17TH ST BROOKLYN, NY 11214 Click here for full text details	NY UST	U001834926 N/A
Relative: Lower			
R76 West 1/8-1/4 0.161 mi. 850 ft.	8895 BAY 16TH STREET 8895 BAY 16TH STREET BROOKLYN, NY Click here for full text details	NY LTANKS	S104278979 N/A
Relative: Lower	NY LTANKS Spill Number/Closed Date 0304620 / 2006-06-09 Spill Number/Closed Date 9910737 / 2000-01-03 Site ID 238583 Site ID 201413 Spill Date 2003-07-31 Spill Date 1999-12-07		
R77 West 1/8-1/4 0.161 mi. 850 ft.	BAYVIEW OWNERS CORP 8895 BAY 16TH ST BROOKLYN, NY 11214 Click here for full text details	NY UST	U001834925 N/A
Relative: Lower			
78 NNE 1/8-1/4 0.162 mi. 858 ft.	CON EDISON SERVICE BOX: 40229 151 BAY 17TH ST FRONT OF BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR NY MANIFEST	1016961313 NYP004339610
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004339610 NY MANIFEST EPA ID NYP004339610		
T79 SSE 1/8-1/4 0.167 mi. 884 ft.	CON EDISON - MANHOLE 56211 8895 19 AVE BROOKLYN, NY 11214 Click here for full text details	NJ MANIFEST	S120677877 N/A
Relative: Lower	NJ MANIFEST EPA Id NYP004870552		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
T80 SSE 1/8-1/4 0.167 mi. 884 ft.	CON EDISON - MANHOLE 56211 8895 19 AVE BROOKLYN, NY 11214	RCRA-LQG	1019325915 NYP004870552
Relative: Lower	Click here for full text details RCRA-LQG EPA Id NYP004870552		
T81 SSE 1/8-1/4 0.167 mi. 884 ft.	CON ED 8895 19 AVE BROOKLYN, NY 11214	NY MANIFEST	S118563674 N/A
Relative: Lower	Click here for full text details NY MANIFEST EPA ID NYP004870552		
U82 NNE 1/8-1/4 0.173 mi. 911 ft.	MAFAR & DAYTONA MOTORS COLLISION INC 8733 18TH AVE BROOKLYN, NY 11214	RCRA NonGen / NLR FINDS ECHO NY MANIFEST	1000458313 NYD986937035
Relative: Higher	Click here for full text details RCRA NonGen / NLR EPA Id NYD986937035 FINDS Registry ID: 110004459041 ECHO Registry ID 110004459041 NY MANIFEST EPA ID NYD986937035		
U83 NNE 1/8-1/4 0.173 mi. 913 ft.	CON EDISON - MANHOLE 6506 8731 18 AVE AND BATH AVE BROOKLYN, NY 11214	RCRA-LQG NY MANIFEST NJ MANIFEST	1014396926 NYP004192423
Relative: Higher	Click here for full text details RCRA-LQG EPA Id NYP004192423 NY MANIFEST EPA ID NYP004192423 NJ MANIFEST		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
	CON EDISON - MANHOLE 6506 (Continued) EPA Id NYP004192423		1014396926
V84 ENE 1/8-1/4 0.175 mi. 924 ft.	CON EDISON 1865 BATH AVE BROOKLYN, NY 11214 Click here for full text details	NJ MANIFEST	S120668224 N/A
Relative: Higher	NJ MANIFEST EPA Id NYP004742086		
V85 ENE 1/8-1/4 0.175 mi. 924 ft.	CON EDISON 1865 BATH AVE BROOKLYN, NY 11214 Click here for full text details	NY MANIFEST	S117741015 N/A
Relative: Higher	NY MANIFEST EPA ID NYP004742086		
V86 ENE 1/8-1/4 0.175 mi. 924 ft.	CON EDISON 1865 BATH AVE BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR FINDS ECHO	1018279402 NYP004742086
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004742086		
	FINDS Registry ID: 110067690617		
	ECHO Registry ID 110067690617		
W87 WNW 1/8-1/4 0.176 mi. 928 ft.	CON EDISON 8867 17TH AVE BROOKLYN, NY 11214 Click here for full text details	NY MANIFEST	S117062790 N/A
Relative: Higher	NY MANIFEST EPA ID NYP004551735		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
W88 WNW 1/8-1/4 0.176 mi. 928 ft. Relative: Higher	CON EDISON SERVICE BOX: 46276 8867 17TH AVE BROOKLYN, NY 11214 Click here for full text details RCRA NonGen / NLR EPA Id NYP004551735 FINDS Registry ID: 110063817213	RCRA NonGen / NLR FINDS	1017777281 NYP004551735
89 NW 1/8-1/4 0.177 mi. 937 ft. Relative: Higher	NYCDDC BED763 CROPSEY AVE & W 17TH ST BROOKLYN, NY 11214 Click here for full text details RCRA NonGen / NLR EPA Id NYR000103374	RCRA NonGen / NLR	1005417213 NYR000103374
X90 NNW 1/8-1/4 0.179 mi. 947 ft. Relative: Higher	CON EDISON 1720 BATH AVE BROOKLYN, NY 11214 Click here for full text details RCRA NonGen / NLR EPA Id NYP004766051 FINDS Registry ID: 110069656900 ECHO Registry ID 110069656900	RCRA NonGen / NLR FINDS ECHO	1019901790 NYP004766051
X91 NNW 1/8-1/4 0.179 mi. 947 ft. Relative: Higher	CON EDISON 1720 BATH AVE BROOKLYN, NY 11214 Click here for full text details NY MANIFEST EPA ID NYP004766051	NY MANIFEST	S119074332 N/A

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
X92 NNW 1/8-1/4 0.179 mi. 947 ft.	CON EDISON 1720 BATH AVE BROOKLYN, NY 11214 Click here for full text details	NJ MANIFEST	S120670317 N/A
Relative: Higher	NJ MANIFEST EPA Id NYP004766051		
93 WSW 1/8-1/4 0.180 mi. 948 ft.	BAYVIEW OWNERS CORP 1265 SHORE PKWY N BROOKLYN, NY 11214 Click here for full text details	NY UST	U000400034 N/A
Relative: Lower			
Y94 North 1/8-1/4 0.180 mi. 952 ft.	BENSONHURST CLEANER 1725 BATH AVE. BROOKLYN, NY 11214 Click here for full text details	NY DRYCLEANERS	S110246005 N/A
Relative: Higher	NY DRYCLEANERS Facility Id 2-6106-00293		
Y95 North 1/8-1/4 0.180 mi. 952 ft.	BENSONHURST CLEANERS 1725 BATH AVE BROOKLYN, NY 11214 Click here for full text details	RCRA-SQG ICIS US AIRS RI MANIFEST NY MANIFEST	1000385286 NYD986886414
Relative: Higher	RCRA-SQG EPA Id NYD986886414		
	ICIS FRS ID: 110002366350		
	US AIRS EPA plant ID: 110002362675		
	RI MANIFEST EPA Id NYD986886414 Manifest Document Number 002595163SKS		
	NY MANIFEST EPA ID NYD986886414		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
U96 NNE 1/8-1/4 0.187 mi. 988 ft. Relative: Higher	SEA BREEZE AUTO BODY REPAIRS, INC. 8729-8739 18TH AVENUE BROOKLYN, NY 11214 Click here for full text details NY AST Facility Id 2-610552	NY UST NY AST	U004114954 N/A
U97 NNE 1/8-1/4 0.187 mi. 988 ft. Relative: Higher	ALPINE PONTIAC 87-29 18TH AVENUE BROOKLYN, NY 11214 Click here for full text details NJ MANIFEST EPA Id NYD981564214	NJ MANIFEST	S108794027 N/A
U98 NNE 1/8-1/4 0.187 mi. 988 ft. Relative: Higher	ALPINE PONTIAC 87-29 18TH AVE BROOKLYN, NY 11214 Click here for full text details RCRA-VSQG EPA Id NYD981564214 NY Spills Site ID 289265 Spill Date 1995-11-01 Spill Number/Closed Date 9509508 / 1995-11-01 FINDS Registry ID: 110004410165 ECHO Registry ID 110004410165 NY MANIFEST EPA ID NYD981564214	RCRA-VSQG NY Spills FINDS ECHO NY MANIFEST	1000256073 NYD981564214
Z99 NE 1/8-1/4 0.195 mi. 1032 ft. Relative: Higher	ST FINBAR CONTRATERNITY CTR 138 BAY 20TH STREET BROOKLYN, NY 11214 Click here for full text details	NY UST	U003128074 N/A

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
Z100 ENE 1/8-1/4 0.197 mi. 1038 ft.	138 BAY 20TH ST 138 BAY 20TH ST NEW YORK CITY, NY Click here for full text details	NY LTANKS	S100144886 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 8706817 / 1993-02-25 Site ID 231650 Spill Date 1987-11-10		
101 WSW 1/8-1/4 0.198 mi. 1045 ft.	CON EDISON SERVICE BOX: 65244 SHORE PKWY & BAY 16TH ST BROOKLYN, NY 11228 Click here for full text details	RCRA NonGen / NLR NY MANIFEST	1016961837 NYP004347555
Relative: Lower	RCRA NonGen / NLR EPA Id NYP004347555 NY MANIFEST EPA ID NYP004347555		
AA102 NNW 1/8-1/4 0.198 mi. 1047 ft.	CON EDISON - MANHOLE M56567 1702 BATH AVE BROOKLYN, NY 11214 Click here for full text details	RCRA-LQG	1024890815 NYP005039522
Relative: Higher	RCRA-LQG EPA Id NYP005039522		
AA103 NNW 1/8-1/4 0.198 mi. 1047 ft.	CON EDISON - MANHOLE M56567 1702 BATH AVE BROOKLYN, NY 11214 Click here for full text details	NY MANIFEST	S121967725 N/A
Relative: Higher	NY MANIFEST EPA ID NYP005039522		
104 NW 1/8-1/4 0.201 mi. 1059 ft.	CROPSEY & 17TH PROPERTIES LLC 1662 CROPSEY AVENUE BROOKLYN, NY 11214 Click here for full text details	NY AST	U003396632 N/A
Relative: Higher	NY AST Facility Id 2-602416		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
AB105 ENE 1/8-1/4 0.214 mi. 1131 ft.	CON EDISON - MANHOLE 6910 8745 19TH AVE BROOKLYN, NY 11214 Click here for full text details	NY MANIFEST	S121968201 N/A
Relative: Higher	NY MANIFEST EPA ID NYP005092721		
AB106 ENE 1/8-1/4 0.214 mi. 1131 ft.	CON EDISON - MANHOLE 6910 8745 19TH AVE BROOKLYN, NY 11214 Click here for full text details	RCRA-LQG	1024891280 NYP005092721
Relative: Higher	RCRA-LQG EPA Id NYP005092721		
AA107 NNW 1/8-1/4 0.215 mi. 1136 ft.	CON EDISON MANHOLE 5567 BATH AVE & 17TH AVE BROOKLYN, NY 11201 Click here for full text details	RCRA NonGen / NLR	1010327106 NYP004144655
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004144655		
AA108 NNW 1/8-1/4 0.215 mi. 1136 ft.	CONSOLIDATED EDISON S SIDE BATH AVE 31 FEET E OF 1 BROOKLYN, NY 11201 Click here for full text details	NY MANIFEST	S119072822 N/A
Relative: Higher	NY MANIFEST EPA ID NYP004144655		
AC109 ESE 1/8-1/4 0.217 mi. 1144 ft.	CON EDISON 200 BAY 23RD ST BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR FINDS ECHO	1019908902 NYP004878858
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004878858		
	FINDS Registry ID: 110069700915		
	ECHO		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
	CON EDISON (Continued) Registry ID 110069700915		1019908902
AC110 ESE 1/8-1/4 0.222 mi. 1174 ft.	CON EDISON 192 BAY 23RD ST BROOKLYN, NY 11214 Click here for full text details	NY MANIFEST	S117064823 N/A
Relative: Higher	NY MANIFEST EPA ID NYP004573291		
AC111 ESE 1/8-1/4 0.222 mi. 1174 ft.	CON EDISON 192 BAY 23RD ST BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR	1017779338 NYP004573291
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004573291		
AD112 NE 1/8-1/4 0.224 mi. 1181 ft.	CON EDISON 1804 BENSON AVE BROOKLYN, NY 11214 Click here for full text details	NY MANIFEST	S117066975 N/A
Relative: Higher	NY MANIFEST EPA ID NYP004596847		
AC113 ESE 1/8-1/4 0.224 mi. 1184 ft.	CON EDISON 190 BAY 23RD ST BROOKLYN, NY 11214 Click here for full text details	PA MANIFEST	S118889121 N/A
Relative: Higher	PA MANIFEST Generator EPA Id NYP004573291		
AE114 SE 1/8-1/4 0.227 mi. 1200 ft.	CON EDISON 231 BAY 23RD ST BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR	1019903533 NYP004786745
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004786745		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
AE115 SE 1/8-1/4 0.227 mi. 1200 ft.	CON EDISON 231 BAY 23RD ST BROOKLYN, NY 11214 Click here for full text details	NJ MANIFEST	S120672138 N/A
Relative: Higher	NJ MANIFEST EPA Id NYP004786745		
AE116 SE 1/8-1/4 0.227 mi. 1200 ft.	CON EDISON 231 BAY 23RD ST BROOKLYN, NY 11214 Click here for full text details	NY MANIFEST	S119075515 N/A
Relative: Higher	NY MANIFEST EPA ID NYP004786745		
AB117 East 1/8-1/4 0.227 mi. 1201 ft.	CON EDISON SERVICE BOX: 40229 150 BAY 17TH ST FRONT OF BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR NY MANIFEST NY LEAD	1016961312 NYP004339602
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004339602 NY MANIFEST EPA ID NYP004339602		
AF118 ESE 1/8-1/4 0.228 mi. 1203 ft.	178 BAY 23RD STREET 178 BAY 23RD STREET BROOKLYN, NY 11214 Click here for full text details	NY AST	A100175131 N/A
Relative: Higher	NY AST Facility Id 2-400289		
AG119 ESE 1/8-1/4 0.228 mi. 1204 ft.	CON EDISON MANHOLE: 6863 215 BAY 23 ST BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR NY MANIFEST	1016970204 NYP004439055
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004439055 NY MANIFEST		

MAP FINDINGS

Map ID			EDR ID Number
Direction			EPA ID Number
Distance			
Elevation	Site	Database(s)	

CON EDISON MANHOLE: 6863 (Continued)

1016970204

EPA ID NYP004439055

AF120
East
1/8-1/4
0.230 mi.
1214 ft.

SUN'S CLEANERS
1936 BATH AVE
BROOKLYN, NY 11214

RCRA NonGen / NLR
ICIS
US AIRS
FINDS
ECHO
NY MANIFEST

1000457842
NYD986931210

Relative:
Higher

[Click here for full text details](#)

RCRA NonGen / NLR
EPA Id NYD986931210

ICIS
FRS ID: 110002368358

US AIRS
EPA plant ID: 110012158707

FINDS
Registry ID: 110002368358

ECHO
Registry ID 110002368358

NY MANIFEST
EPA ID NYD986931210

AF121
East
1/8-1/4
0.230 mi.
1214 ft.

SUN'S CLEANERS
1936 BATH AVENUE
BROOKLYN, NY 11214

NY DRYCLEANERS

S110248017
N/A

Relative:
Higher

[Click here for full text details](#)

NY DRYCLEANERS
Facility Id 2-6106-00220

AH122
East
1/8-1/4
0.231 mi.
1220 ft.

NYCPD 62ND PRECINCT
1925 BATH AVE
BROOKLYN, NY 11214

RCRA NonGen / NLR
FINDS
ECHO
NY MANIFEST

1000912646
NY0000886218

Relative:
Higher

[Click here for full text details](#)

RCRA NonGen / NLR
EPA Id NY0000886218

FINDS

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

NYCPD 62ND PRECINCT (Continued)

1000912646

Registry ID: 110004320681

ECHO

Registry ID 110004320681

NY MANIFEST

EPA ID NY0000886218

AH123
East
1/8-1/4
0.231 mi.
1220 ft.

62 PCT
1925 BATH AVENUE
BROOKLYN, NY 11214

NY UST **U004077848**
N/A

Relative:
Higher

[Click here for full text details](#)

AH124
East
1/8-1/4
0.231 mi.
1220 ft.

62 PRECINCT NYPD -DDC
1925 BATH AVENUE
BROOKLYN, NY

NY LTANKS **U001839405**
NY AST **N/A**
NY Spills

Relative:
Higher

[Click here for full text details](#)

NY LTANKS

Spill Number/Closed Date 9407869 / 2001-08-09
Site ID 235180
Spill Date 1994-09-12

NY AST

Facility Id 2-342858

NY Spills

Site ID 185281
Site ID 185282
Spill Date 1995-05-05
Spill Date 1995-10-16
Spill Number/Closed Date 9501517 / 2001-08-09
Spill Number/Closed Date 9508737 / 1995-10-17

AE125
ESE
1/8-1/4
0.231 mi.
1220 ft.

CON EDISON SERVICE BOX: 56173
221 BAY 23RD ST FRONT OF
BROOKLYN, NY 11214

RCRA NonGen / NLR **1016962662**
NY MANIFEST **NYP004357216**

Relative:
Higher

[Click here for full text details](#)

RCRA NonGen / NLR

EPA Id NYP004357216

NY MANIFEST

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
	CON EDISON SERVICE BOX: 56173 (Continued) EPA ID NYP004357216		1016962662
126 ENE 1/8-1/4 0.233 mi. 1228 ft.	CON EDISON SERVICE BOX: 46581 8722 19TH AVE BROOKLYN, NY 11214 Click here for full text details Relative: Higher	RCRA NonGen / NLR NY MANIFEST	1016972412 NYP004461844
	NY MANIFEST EPA ID NYP004461844		
AD127 NNE 1/8-1/4 0.237 mi. 1252 ft.	18TH AVE ASSOCIATES INC 8711 18TH AVE BROOKLYN, NY 11214 Click here for full text details Relative: Higher	NY UST	U004045130 N/A
AG128 ESE 1/8-1/4 0.240 mi. 1268 ft.	CON EDISON 1965 CROPSEY AVE BROOKLYN, NY 11214 Click here for full text details Relative: Higher	NY MANIFEST	S118088086 N/A
	NY MANIFEST EPA ID NYP004756250		
AG129 ESE 1/8-1/4 0.240 mi. 1268 ft.	CON EDISON 1965 CROPSEY AVE BROOKLYN, NY 11214 Click here for full text details Relative: Higher	NJ MANIFEST	S120669450 N/A
	NJ MANIFEST EPA Id NYP004756250		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
AG130 ESE 1/8-1/4 0.240 mi. 1268 ft.	CON EDISON 1965 CROPSEY AVE BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR FINDS ECHO	1018280721 NYP004756250
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004756250 FINDS Registry ID: 110067710775 ECHO Registry ID 110067710775		
131 NNW 1/8-1/4 0.241 mi. 1270 ft.	87-54 REALTY CORPORATION 8754 17TH AVENUE BROOKLYN, NY 11214 Click here for full text details	NY AST	U003386733 N/A
Relative: Higher	NY AST Facility Id 2-246522		
132 NW 1/8-1/4 0.248 mi. 1311 ft.	CON EDISON SERVICE BOX: 68080 1647 CROPSEY AVE BROOKLYN, NY 11214 Click here for full text details	RCRA NonGen / NLR NY MANIFEST	1016962121 NYP004351136
Relative: Higher	RCRA NonGen / NLR EPA Id NYP004351136 NY MANIFEST EPA ID NYP004351136		
133 East 1/4-1/2 0.253 mi. 1336 ft.	1947-1955 BATH AVE 1947 BATH AVE BROOKLYN, NY Click here for full text details	NY LTANKS	S102618900 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 9703494 / 2006-03-30 Site ID 186049 Spill Date 1997-06-20		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
AI134 SE 1/4-1/2 0.279 mi. 1473 ft.	2010 CROXY AVENUE 2010 CROXY AVENUE BROOKLYN, NY Click here for full text details	NY LTANKS	S100560078 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 9306866 / 1993-10-25 Site ID 126605 Spill Date 1993-09-03		
AI135 SE 1/4-1/2 0.292 mi. 1544 ft.	2002-2024 CROPSEY AVENUE SITE 2002- 2024 CROPSEY AVENUE BROOKLYN, NY 11214 Click here for full text details	NY SHWS NY BROWNFIELDS	S113916798 N/A
Relative: Higher	NY SHWS Site Code 476227 NY BROWNFIELDS Site Code 492427		
136 SE 1/4-1/2 0.359 mi. 1893 ft.	2040 21ST DR 2040 21ST DR BROOKLYN, NY Click here for full text details	NY LTANKS	S102671498 N/A
Relative: Lower	NY LTANKS Spill Number/Closed Date 8910725 / 1997-10-16 Site ID 161156 Spill Date 1990-02-09		
137 SE 1/4-1/2 0.373 mi. 1972 ft.	2056 CROPSEY AVENUE BROOKLYN, NY 11214 Click here for full text details	NY LTANKS NY LEAD	S113494317 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 1301248 / 2018-01-23 Site ID 481623 Spill Date 2013-05-06		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
138 ESE 1/4-1/2 0.399 mi. 2108 ft.	CLOSED-LACKOF RECENT INFO 2061 BATH AVENUE NEW YORK CITY, NY Click here for full text details	NY LTANKS	S100145302 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 8807475 / 2003-03-04 Site ID 260004 Spill Date 1988-12-09		
AJ139 SE 1/4-1/2 0.413 mi. 2182 ft.	PARK CAR DRIPPING 21ST LANE & CROSEY AVE BROOKLYN, NY Click here for full text details	NY LTANKS	S108467759 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 0612672 / 2007-02-22 Site ID 377564 Spill Date 2007-02-22		
AJ140 SE 1/4-1/2 0.433 mi. 2288 ft.	WONG RESIDENCE 2111 CROSEY AVE BROOKLYN, NY Click here for full text details	NY LTANKS	S106972228 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 0504514 / 2005-07-18 Site ID 349372 Spill Date 2005-07-15		
141 NE 1/4-1/2 0.438 mi. 2313 ft.	CLOSED-LACKOF RECENT INFO 86TH ST / 19TH AVENUE NEW YORK CITY, NY Click here for full text details	NY LTANKS	S100145670 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 8907430 / 2003-03-06 Site ID 292716 Spill Date 1989-10-26		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
142 West 1/4-1/2 0.454 mi. 2398 ft.	APARTMENT BUILDINGS 1081 SHORE PARKWAY BROOKLYN, NY Click here for full text details	NY LTANKS	S109374665 N/A
Relative: Lower	NY LTANKS Spill Number/Closed Date 0807773 / 2008-12-15 Site ID 405135 Spill Date 2008-10-09		
AK143 North 1/4-1/2 0.461 mi. 2436 ft.	GAS STATION 1672 86TH ST BAY 14TH ST BROOKLYN, NY Click here for full text details	NY LTANKS NY Spills	S104653117 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 1511208 / 2016-04-25 Site ID 522940 Spill Date 2016-02-22 NY Spills Site ID 331458 Spill Date 2000-05-26 Spill Number/Closed Date 0002415 / 2003-02-25		
AK144 North 1/4-1/2 0.461 mi. 2436 ft.	GETTY S/S #6 - GETTY PROPERTIES 1672 86TH STREET BROOKLYN, NY Click here for full text details	NY LTANKS NY Spills	S100494843 N/A
Relative: Higher	NY LTANKS Spill Number/Closed Date 9213669 / 1993-04-15 Spill Number/Closed Date 0500551 / 2005-04-19 Site ID 59544 Site ID 343559 Spill Date 1993-03-11 Spill Date 2005-04-13 NY Spills Site ID 380796 Site ID 377509 Site ID 390408 Site ID 207367 Site ID 332201 Site ID 348404 Site ID 350442 Site ID 357544 Site ID 357501 Site ID 364224 Site ID 371721		

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GETTY S/S #6 - GETTY PROPERTIES (Continued)

S100494843

Site ID 86481
Spill Date 2007-05-01
Spill Date 2007-02-21
Spill Date 2007-11-28
Spill Date 1997-01-17
Spill Date 2004-10-11
Spill Date 2005-06-28
Spill Date 2005-08-03
Spill Date 2006-01-02
Spill Date 2005-12-30
Spill Date 2006-05-20
Spill Date 2006-10-11
Spill Date 2004-09-23
Spill Number/Closed Date 0701312 / 2007-05-03
Spill Number/Closed Date 0612624 / 2007-02-21
Spill Number/Closed Date 0709347 / 2008-01-04
Spill Number/Closed Date 9612416 / 2013-03-21
Spill Number/Closed Date 0407676 / 2005-10-18
Spill Number/Closed Date 0503733 / 2005-10-18
Spill Number/Closed Date 0505427 / 2005-08-04
Spill Number/Closed Date 0511402 / 2006-01-03
Spill Number/Closed Date 0511364 / 2005-12-30
Spill Number/Closed Date 0601873 / 2008-07-09
Spill Number/Closed Date 0607885 / 2008-07-09

145
NNE
1/4-1/2
0.474 mi.
2501 ft.

**1736-60 85TH STREET
1736-60 85TH STREET
BROOKLYN, NY**

**NY LTANKS S104275736
N/A**

[Click here for full text details](#)

Relative:
Higher

NY LTANKS
Spill Number/Closed Date 9503584 / 1995-12-29
Site ID 285571
Spill Date 1995-06-23

146
NW
1/4-1/2
0.482 mi.
2545 ft.

**8857 15TH AVE
8857 15TH AVE
BROOKLYN, NY**

**NY LTANKS S102672107
N/A**

[Click here for full text details](#)

Relative:
Higher

NY LTANKS
Spill Number/Closed Date 9212842 / 1993-02-15
Site ID 321257
Spill Date 1993-02-15

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
<p>147 North 1/4-1/2 0.482 mi. 2547 ft.</p> <p>Relative: Higher</p>	<p>1 BAY 13TH ST/BKLY/SUNOCO 1 BAY 13TH STREET NEW YORK CITY, NY</p> <p>Click here for full text details</p> <p>NY LTANKS Spill Number/Closed Date 8906534 / 2004-03-05 Site ID 200864 Spill Date 1989-10-03</p> <p>NY Spills Site ID 200865 Spill Date 1990-02-06 Spill Number/Closed Date 8910610 / 1994-07-27</p>	<p>NY LTANKS NY Spills</p>	<p>S100145619 N/A</p>
<p>148 ENE 1/4-1/2 0.496 mi. 2617 ft.</p> <p>Relative: Higher</p>	<p>GAS MAIN IN STREET 86TH STREET/BAY 24TH AVE BROOKLYN, NY</p> <p>Click here for full text details</p> <p>NY LTANKS Spill Number/Closed Date 0503663 / 2005-07-13 Site ID 348295 Spill Date 2005-06-27</p>	<p>NY LTANKS</p>	<p>S106972104 N/A</p>

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
NY	AIRS	Air Emissions Data	Department of Environmental Conservation	08/14/2019	08/14/2019	10/16/2019
NY	AST	Petroleum Bulk Storage	Department of Environmental Conservation	03/23/2020	03/25/2020	06/10/2020
NY	BROWNFIELDS	Brownfields Site List	Department of Environmental Conservation	05/12/2020	05/13/2020	07/29/2020
NY	CBS	Chemical Bulk Storage Site Listing	Department of Environmental Conservation	03/23/2020	03/25/2020	06/10/2020
NY	CBS AST	Chemical Bulk Storage Database	NYSDEC	01/01/2002	02/20/2002	03/22/2002
NY	CBS UST	Chemical Bulk Storage Database	NYSDEC	01/01/2002	02/20/2002	03/22/2002
NY	COAL ASH	Coal Ash Disposal Site Listing	Department of Environmental Conservation	12/24/2019	03/03/2020	05/15/2020
NY	COOLING TOWERS	Registered Cooling Towers	Department of Health	04/08/2020	04/15/2020	07/06/2020
NY	DEL SHWS	Delisted Registry Sites	Department of Environmental Conservation	05/12/2020	05/13/2020	07/28/2020
NY	DRYCLEANERS	Registered Drycleaners	Department of Environmental Conservation	07/12/2019	12/09/2019	02/06/2020
NY	E DESIGNATION	E DESIGNATION SITE LISTING	New York City Department of City Planning	02/27/2020	03/25/2020	06/10/2020
NY	ENG CONTROLS	Registry of Engineering Controls	Department of Environmental Conservation	05/12/2020	05/13/2020	07/29/2020
NY	ENV RES DECL	Environmental Restrictive Declarations	New York City Department of City Planning	12/16/2019	12/17/2019	03/02/2020
NY	ERP	Environmental Restoration Program Listing	Department of Environmental Conservation	05/12/2020	05/13/2020	07/29/2020
NY	Financial Assurance 1	Financial Assurance Information Listing	Department of Environmental Conservation	06/25/2020	06/25/2020	07/22/2020
NY	Financial Assurance 2	Financial Assurance Information Listing	Department of Environmental Conservation	03/01/2019	03/19/2019	06/18/2019
NY	HIST AST	Historical Petroleum Bulk Storage Database	Department of Environmental Conservation	01/01/2002	06/02/2006	07/20/2006
NY	HIST LTANKS	Listing of Leaking Storage Tanks	Department of Environmental Conservation	01/01/2002	07/08/2005	07/14/2005
NY	HIST SPILLS	SPILLS Database	Department of Environmental Conservation	01/01/2002	07/08/2005	07/14/2005
NY	HIST UST	Historical Petroleum Bulk Storage Database	Department of Environmental Conservation	01/01/2002	06/02/2006	07/20/2006
NY	HSWDS	Hazardous Substance Waste Disposal Site Inventory	Department of Environmental Conservation	01/01/2003	10/20/2006	11/30/2006
NY	INST CONTROL	Registry of Institutional Controls	Department of Environmental Conservation	05/12/2020	05/13/2020	07/29/2020
NY	LIENS	Spill Liens Information	Office of the State Comptroller	05/20/2020	05/22/2020	08/06/2020
NY	LTANKS	Spills Information Database	Department of Environmental Conservation	05/12/2020	05/13/2020	08/03/2020
NY	MOSF	Major Oil Storage Facility Site Listing	Department of Environmental Conservation	03/23/2020	03/25/2020	06/10/2020
NY	MOSF AST	Major Oil Storage Facilities Database	NYSDEC	01/01/2002	02/20/2002	03/22/2002
NY	MOSF UST	Major Oil Storage Facilities Database	NYSDEC	01/01/2002	02/20/2002	03/22/2002
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	01/01/2019	04/29/2020	07/10/2020
NY	NYC LEAD	Lead-based Paint Testing Results	New York City Department of Education	05/28/2020	05/29/2020	07/02/2020
NY	NYC LEAD 2	Recent Lead Paint Violations	New York City Department of Housing Preservat	05/28/2020	06/02/2020	07/02/2020
NY	PFAS	PFAS Contamination Site Location Listing	Department of Environmental Conservation	01/16/2019	05/08/2019	06/24/2019
NY	RES DECL	Restrictive Declarations Listing	NYC Department of City Planning	12/16/2019	12/16/2019	03/02/2020
NY	RGA HWS	Recovered Government Archive State Hazardous Waste Facilitie	Department of Environmental Conservation		07/01/2013	12/30/2013
NY	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Environmental Conservation		07/01/2013	01/10/2014
NY	SHWS	Inactive Hazardous Waste Disposal Sites in New York State	Department of Environmental Conservation	05/12/2020	05/13/2020	07/28/2020
NY	SPDES	State Pollutant Discharge Elimination System	Department of Environmental Conservation	05/12/2020	05/14/2020	07/31/2020
NY	SPILLS	Spills Information Database	Department of Environmental Conservation	05/12/2020	05/13/2020	08/03/2020
NY	SPILLS 80	SPILLS80 data from FirstSearch	FirstSearch	11/02/2010	01/03/2013	03/07/2013
NY	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	12/14/2012	01/03/2013	02/12/2013
NY	SWF/LF	Facility Register	Department of Environmental Conservation	04/03/2020	04/08/2020	06/25/2020
NY	SWRCY	Registered Recycling Facility List	Department of Environmental Conservation	04/03/2020	04/08/2020	06/25/2020
NY	SWTIRE	Registered Waste Tire Storage & Facility List	Department of Environmental Conservation	02/27/2018	04/06/2018	06/08/2018
NY	TANKS	Storage Tank Facility Listing	Department of Environmental Conservation	03/23/2020	03/25/2020	06/10/2020
NY	UIC	Underground Injection Control Wells	Department of Environmental Conservation	05/31/2020	06/03/2020	08/13/2020
NY	UST	Petroleum Bulk Storage (PBS) Database	Department of Environmental Conservation	03/23/2020	03/25/2020	06/10/2020
NY	VAPOR REOPENED	Vapor Intrusion Legacy Site List	Department of Environmental Conservation	12/01/2018	02/13/2019	06/13/2019
NY	VCP	Voluntary Cleanup Agreements	Department of Environmental Conservation	05/12/2020	05/13/2020	07/29/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
NY	VCP NYC	Voluntary Cleanup Program Listing NYC	New York City Office of Environmental Protect	03/17/2020	03/18/2020	05/29/2020
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	03/05/2020	03/06/2020	05/29/2020
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2015	02/22/2017	09/28/2017
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2018	12/04/2019	01/15/2020
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	06/30/2020	07/15/2020	07/21/2020
US	CORRACTS	Corrective Action Report	EPA	03/23/2020	03/25/2020	05/21/2020
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/31/2018	07/26/2018	10/05/2018
US	DOD	Department of Defense Sites	USGS	12/31/2005	11/10/2006	01/11/2007
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	Delisted NPL	National Priority List Deletions	EPA	04/27/2020	05/06/2020	05/28/2020
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	04/04/2020	04/07/2020	06/26/2020
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	03/22/2020	03/24/2020	06/18/2020
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	04/03/2019	04/05/2019	05/14/2019
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FEMA UST	Underground Storage Tank Listing	FEMA	02/01/2020	03/19/2020	06/09/2020
US	FINDS	Facility Index System/Facility Registry System	EPA	02/03/2020	03/03/2020	05/28/2020
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	05/13/2020	05/18/2020	08/12/2020
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	05/18/2020	05/19/2020	08/03/2020
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	08/08/2017	09/11/2018	09/14/2018
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	02/27/2020	03/24/2020	06/18/2020
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/29/2020	05/20/2020	08/12/2020
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	04/14/2020	05/20/2020	08/12/2020
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	04/14/2020	05/26/2020	08/12/2020
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	04/14/2020	05/20/2020	08/12/2020
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	04/08/2020	05/20/2020	08/12/2020
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	04/15/2020	05/20/2020	08/12/2020
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	04/14/2020	05/20/2020	08/12/2020
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	04/08/2020	05/20/2020	08/12/2020
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	04/29/2020	05/20/2020	08/12/2020
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	04/14/2020	05/20/2020	08/12/2020
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	04/14/2020	05/26/2020	08/12/2020
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/14/2020	05/20/2020	08/12/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	04/08/2020	05/20/2020	08/12/2020
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	04/03/2020	05/20/2020	08/12/2020
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	04/14/2020	05/20/2020	08/13/2020
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	04/08/2020	05/20/2020	08/12/2020
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Listing	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	04/27/2020	05/06/2020	05/28/2020
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	04/27/2020	05/06/2020	05/28/2020
US	LUCIS	Land Use Control Information System	Department of the Navy	05/15/2020	05/19/2020	06/18/2020
US	MINES MRDS	Mineral Resources Data System	USGS	04/06/2018	10/21/2019	10/24/2019
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	05/28/2020	05/28/2020	08/13/2020
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	10/25/2019	10/25/2019	01/15/2020
US	NPL	National Priority List	EPA	04/27/2020	05/06/2020	05/28/2020
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	10/09/2019	10/11/2019	12/20/2019
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	PCS	Permit Compliance System	EPA, Office of Water	07/14/2011	08/05/2011	09/29/2011
US	PCS ENF	Enforcement data	EPA	12/31/2014	02/05/2015	03/06/2015
US	PCS INACTIVE	Listing of Inactive PCS Permits	EPA	11/05/2014	01/06/2015	05/06/2015
US	PRP	Potentially Responsible Parties	EPA	04/27/2020	05/06/2020	06/09/2020
US	Proposed NPL	Proposed National Priority List Sites	EPA	04/27/2020	05/06/2020	05/28/2020
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	03/23/2020	03/25/2020	05/21/2020
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	03/23/2020	03/25/2020	05/21/2020
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	03/23/2020	03/25/2020	05/21/2020
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	03/23/2020	03/25/2020	05/21/2020
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	03/23/2020	03/25/2020	05/21/2020
US	RMP	Risk Management Plans	Environmental Protection Agency	01/31/2020	05/13/2020	08/03/2020
US	ROD	Records Of Decision	EPA	04/27/2020	05/06/2020	05/28/2020
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	SEMS	Superfund Enterprise Management System	EPA	04/27/2020	05/06/2020	05/28/2020
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	04/27/2020	05/06/2020	05/28/2020
US	SSTS	Section 7 Tracking Systems	EPA	03/01/2020	04/21/2020	07/15/2020
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2018	02/05/2020	04/24/2020
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/21/2017	01/05/2018
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	06/01/2020	06/02/2020	06/09/2020
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	03/18/2020	03/19/2020	06/09/2020
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	02/13/2020	02/20/2020	05/15/2020
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	03/23/2020	03/24/2020	06/18/2020
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	03/18/2020	03/19/2020	06/09/2020
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	02/13/2020	02/20/2020	05/15/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	05/01/2020	05/21/2020	08/13/2020
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	05/06/2020	05/27/2020	08/13/2020
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UXO	Unexploded Ordnance Sites	Department of Defense	12/31/2017	01/17/2019	04/01/2019
CT	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	05/12/2020	05/12/2020	07/27/2020
NJ	NJ MANIFEST	Manifest Information	Department of Environmental Protection	12/31/2018	04/10/2019	05/16/2019
PA	PA MANIFEST	Manifest Information	Department of Environmental Protection	06/30/2018	07/19/2019	09/10/2019
RI	RI MANIFEST	Manifest information	Department of Environmental Management	12/31/2018	10/02/2019	12/10/2019
VT	VT MANIFEST	Hazardous Waste Manifest Data	Department of Environmental Conservation	10/28/2019	10/29/2019	01/09/2020
WI	WI MANIFEST	Manifest Information	Department of Natural Resources	05/31/2018	06/19/2019	09/03/2019
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
NY	Daycare Centers	Sensitive Receptor: Day Care Providers	Department of Health			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
NY	State Wetlands	Freshwater Wetlands	Department of Environmental Conservation			
US	Topographic Map		U.S. Geological Survey			
US	Oil/Gas Pipelines		Endeavor Business Media			
US	Electric Power Transmission Line Data		Endeavor Business Media			

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

FINWISE 1810 CROPSY AVENUE
1810 CROPSY AVENUE
BROOKLYN, NY 11214

TARGET PROPERTY COORDINATES

Latitude (North):	40.602239 - 40° 36' 8.06"
Longitude (West):	74.007154 - 74° 0' 25.75"
Universal Transverse Mercator:	Zone 18
UTM X (Meters):	584002.7
UTM Y (Meters):	4494866.0
Elevation:	19 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5939335 THE NARROWS, NY
Version Date:	2013
Southeast Map:	5940601 CONEY ISLAND, NY
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

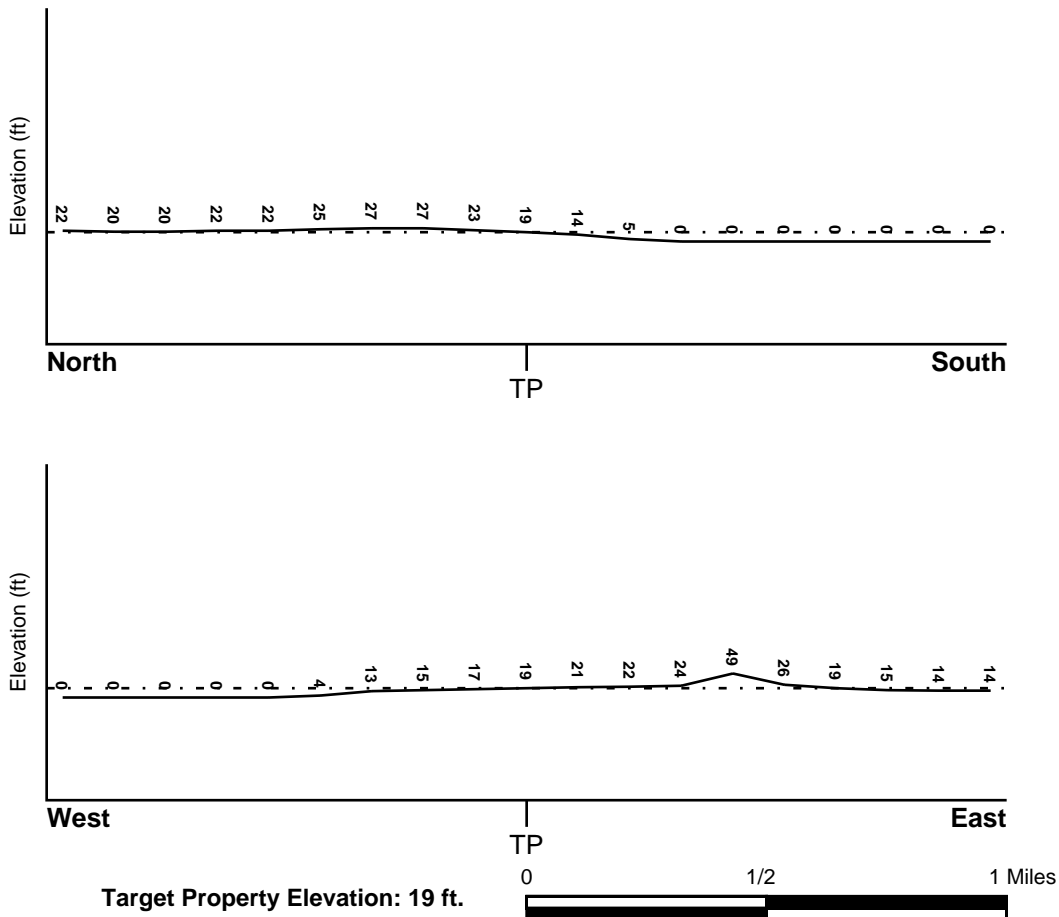
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
3604970332F	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
3604970351F	FEMA FIRM Flood data
3604970334F	FEMA FIRM Flood data
3604970353F	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
THE NARROWS	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era: Mesozoic
System: Cretaceous
Series: Upper Cretaceous
Code: uK *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: URBAN LAND

Soil Surface Texture: variable

Hydrologic Group: Not reported

Soil Drainage Class: Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 10 inches

Depth to Bedrock Max: > 10 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	6 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: sandy loam
sand
mucky - loamy sand

Surficial Soil Types: sandy loam
sand
mucky - loamy sand

Shallow Soil Types: sand
loamy sand

Deeper Soil Types: stratified
gravelly - coarse sand
sand

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	USGS40000826089	1/4 - 1/2 Mile NNE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
2	USGS40000826062	1/4 - 1/2 Mile ESE
3	USGS40000826141	1/2 - 1 Mile NNW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

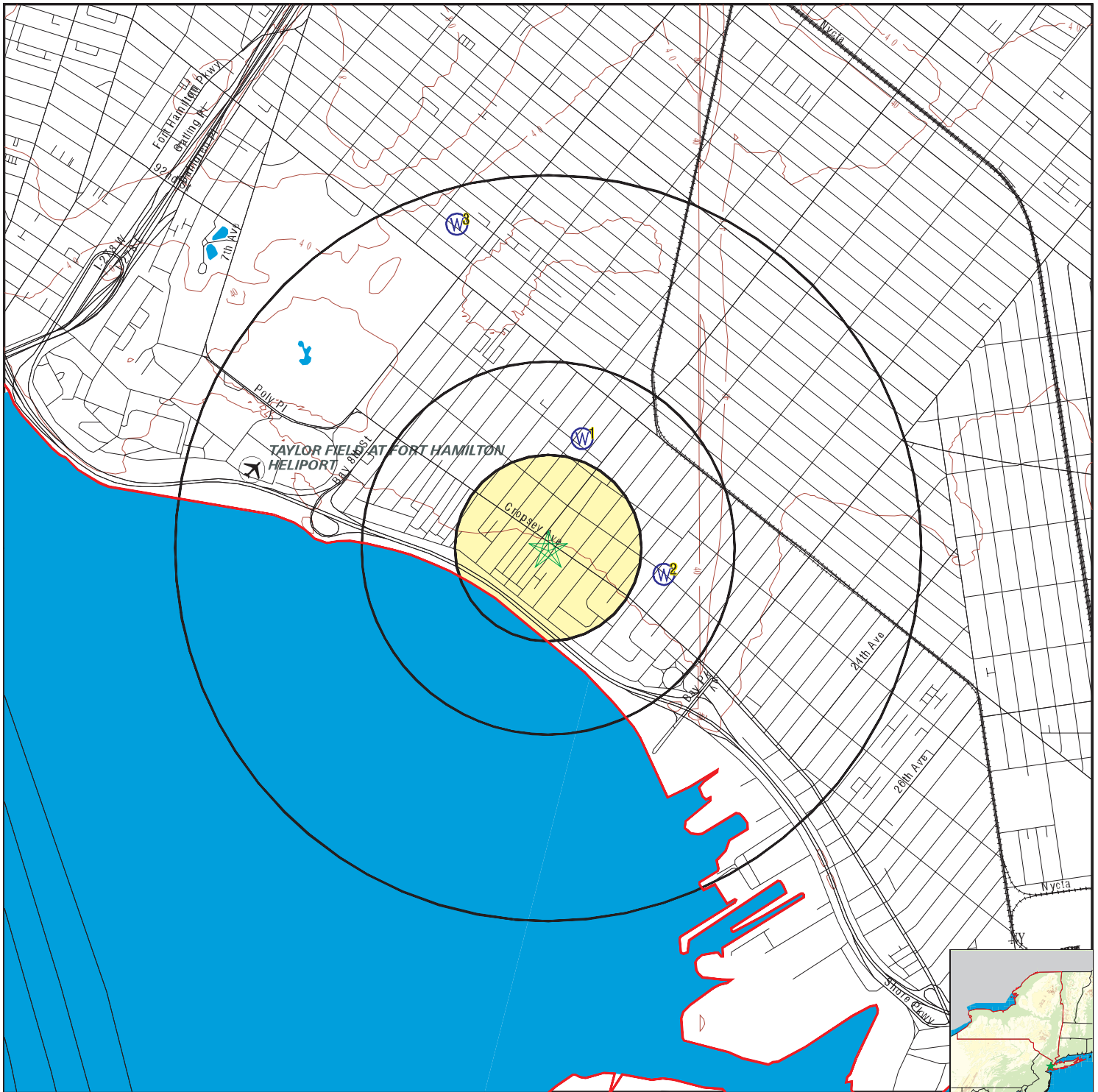
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 6167629.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons



- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells



SITE NAME: Finwise 1810 Cropsey Avenue
 ADDRESS: 1810 Cropsey Avenue
 Brooklyn NY 11214
 LAT/LONG: 40.602239 / 74.007154

CLIENT: Bison Environmental, LLC
 CONTACT: George Guzdek
 INQUIRY #: 6167629.2s
 DATE: August 25, 2020 10:31 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID	Direction	Distance	Elevation	Database	EDR ID Number
1	NNE	1/4 - 1/2 Mile	Higher	FED USGS	USGS40000826089
		Click here for full text details			
2	ESE	1/4 - 1/2 Mile	Higher	FED USGS	USGS40000826062
		Click here for full text details			
3	NNW	1/2 - 1 Mile	Higher	FED USGS	USGS40000826141
		Click here for full text details			

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for KINGS County: 3

- Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level \geq 2 pCi/L and \leq 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for KINGS COUNTY, NY

Number of sites tested: 51

<u>Area</u>	<u>Average Activity</u>	<u>% <4 pCi/L</u>	<u>% 4-20 pCi/L</u>	<u>% >20 pCi/L</u>
Living Area	0.750 pCi/L	100%	0%	0%
Basement	1.370 pCi/L	88%	10%	2%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Freshwater Wetlands

Source: Department of Environmental Conservation

Telephone: 518-402-8961

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

New York Public Water Wells

Source: New York Department of Health

Telephone: 518-458-6731

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Database

Source: Department of Environmental Conservation

Telephone: 518-402-8072

These files contain records, in the database, of wells that have been drilled.

RADON

State Database: NY Radon

Source: Department of Health

Telephone: 518-402-7556

Radon Test Results

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Finwise 1810 Cropsy Avenue

1810 Cropsy Avenue

Brooklyn, NY 11214

Inquiry Number: 6167629.3

August 25, 2020

Certified Sanborn® Map Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

08/25/20

Site Name:

Finwise 1810 Cropsey Avenue
1810 Cropsey Avenue
Brooklyn, NY 11214
EDR Inquiry # 6167629.3

Client Name:

Bison Environmental, LLC
89 Jennifer Lane
Burlington, NJ 08016
Contact: George Guzdek



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Bison Environmental, LLC were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 016C-4AEB-ACB7

PO # NA

Project NA

Maps Provided:

2007	1995	1983	1906
2006	1994	1981	1895
2005	1993	1980	
2004	1992	1977	
2003	1990	1969	
2002	1989	1968	
2001	1987	1950	
1996	1986	1929	



Sanborn® Library search results

Certification #: 016C-4AEB-ACB7

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

The Sanborn Library LLC Since 1866™

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Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.



2007 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

2006 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

2005 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

2004 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.



2003 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

2002 Source Sheets



Volume 12, Sheet 10



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 11

2001 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

1996 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.



1995 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

1994 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

1993 Source Sheets



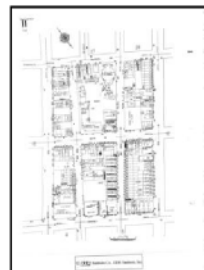
Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

1992 Source Sheets



Volume 12, Sheet 11



Volume 12, Sheet 4



Volume 12, Sheet 5



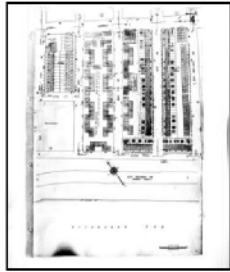
Volume 12, Sheet 10

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.



1990 Source Sheets



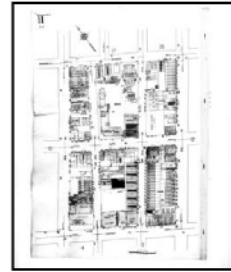
Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

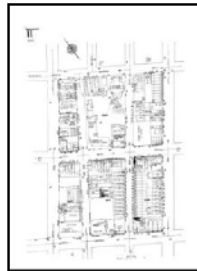
1989 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 11



Volume 12, Sheet 10

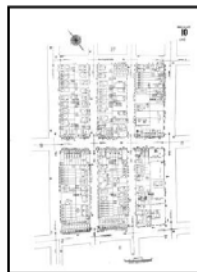
1987 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10

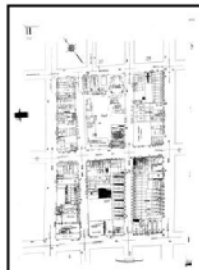


Volume 12, Sheet 11

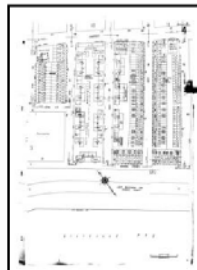
1986 Source Sheets



Volume 12, Sheet 10



Volume 12, Sheet 11



Volume 12, Sheet 4



Volume 12, Sheet 5

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.



1983 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

1981 Source Sheets



Volume 12, Sheet 10



Volume 12, Sheet 11



Volume 12, Sheet 4

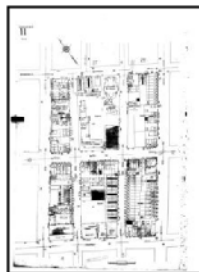


Volume 12, Sheet 5

1980 Source Sheets



Volume 12, Sheet 10



Volume 12, Sheet 11



Volume 12, Sheet 4



Volume 12, Sheet 5

1977 Source Sheets



Volume 12, Sheet 11



Volume 12, Sheet 4



Volume 12, Sheet 5



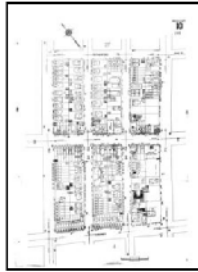
Volume 12, Sheet 10

Sanborn Sheet Key

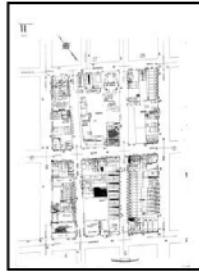
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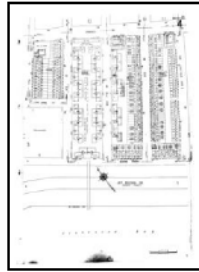
1969 Source Sheets



Volume 12, Sheet 10



Volume 12, Sheet 11



Volume 12, Sheet 4



Volume 12, Sheet 5

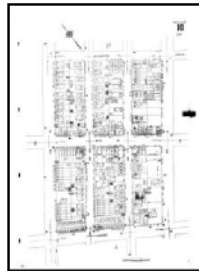
1968 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5

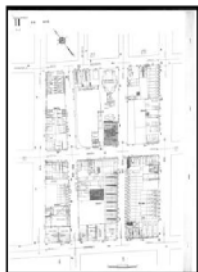


Volume 12, Sheet 10



Volume 12, Sheet 11

1950 Source Sheets



Volume 12, Sheet 11



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10

1929 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.



1906 Source Sheets



Volume 12, Sheet 4



Volume 12, Sheet 5



Volume 12, Sheet 10



Volume 12, Sheet 11

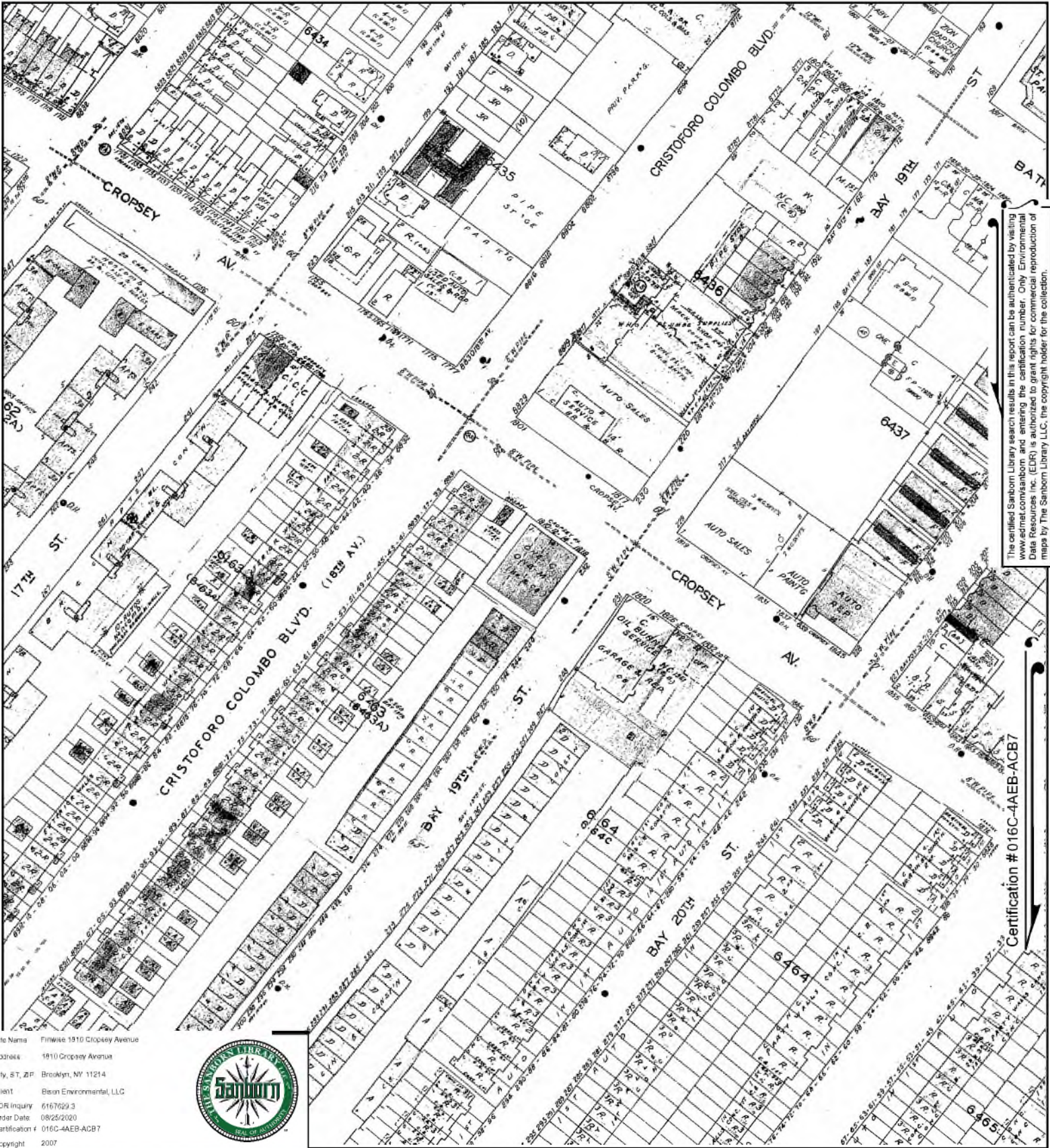
1895 Source Sheets



Volume B, Sheet 133



Volume B, Sheet 134



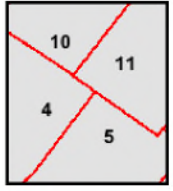
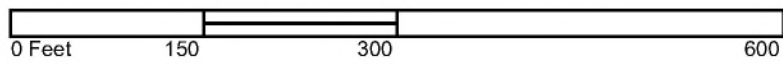
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 Order Date: 08/25/2020
 Certification #: 016C-4AEB-ACB7
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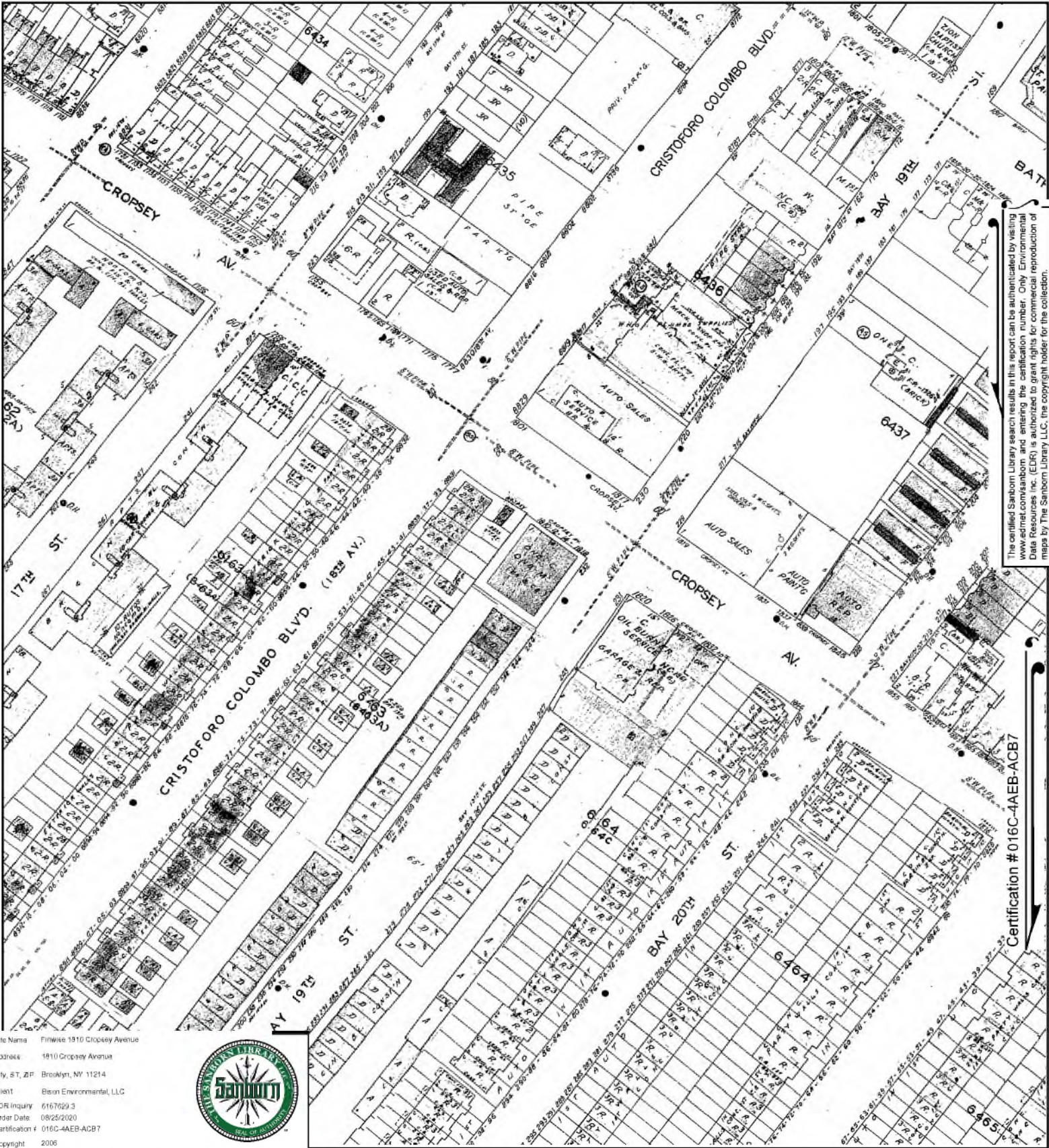


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- Volume 12, Sheet 10
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- Volume 12, Sheet 4





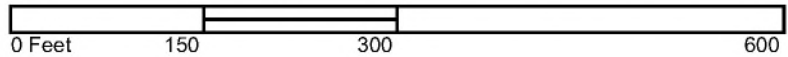
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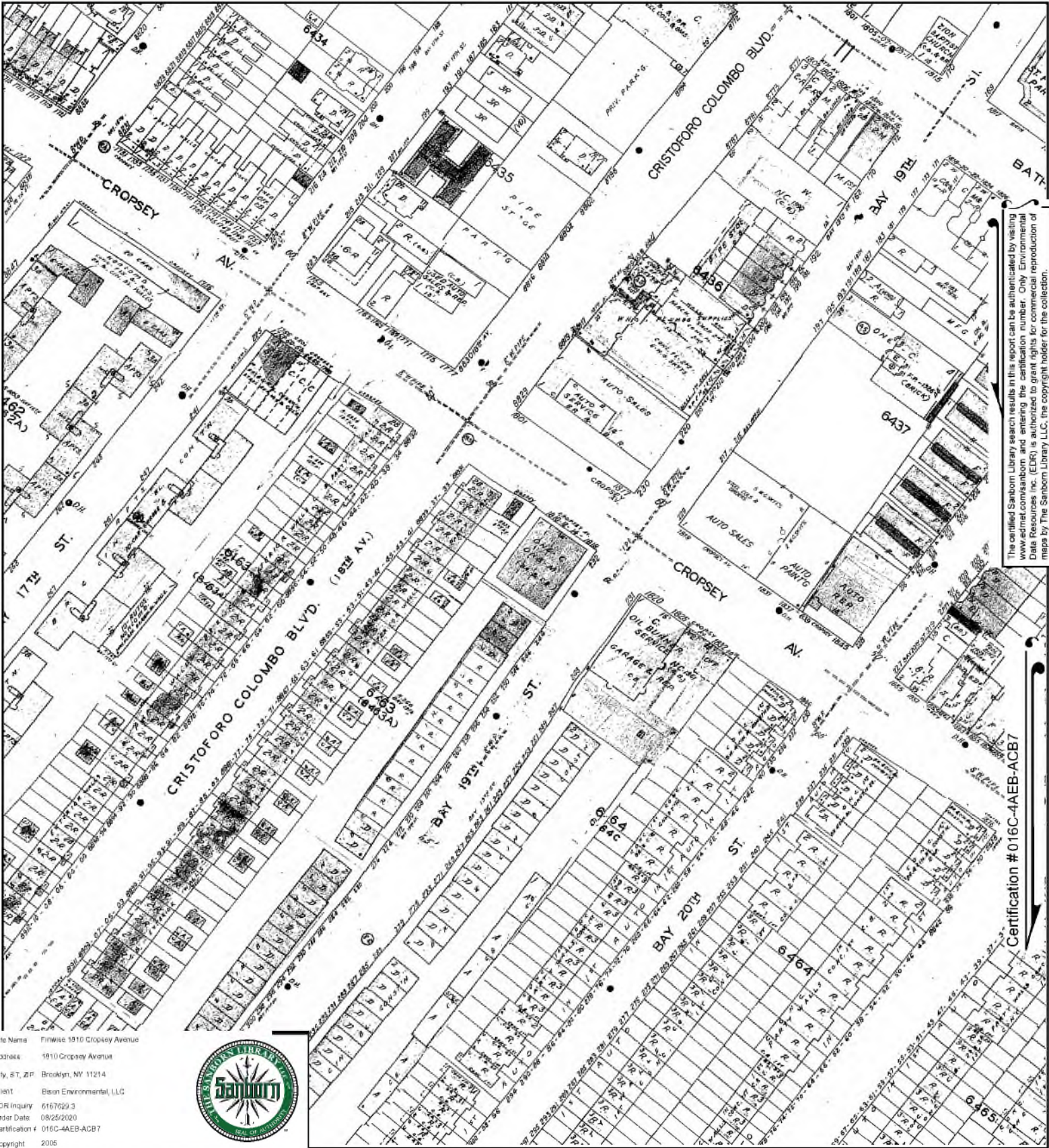


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 Volume 12, Sheet 4





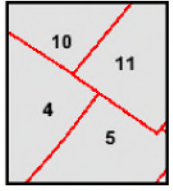
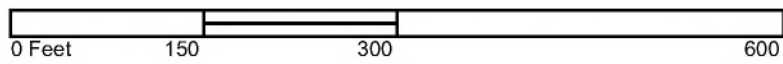
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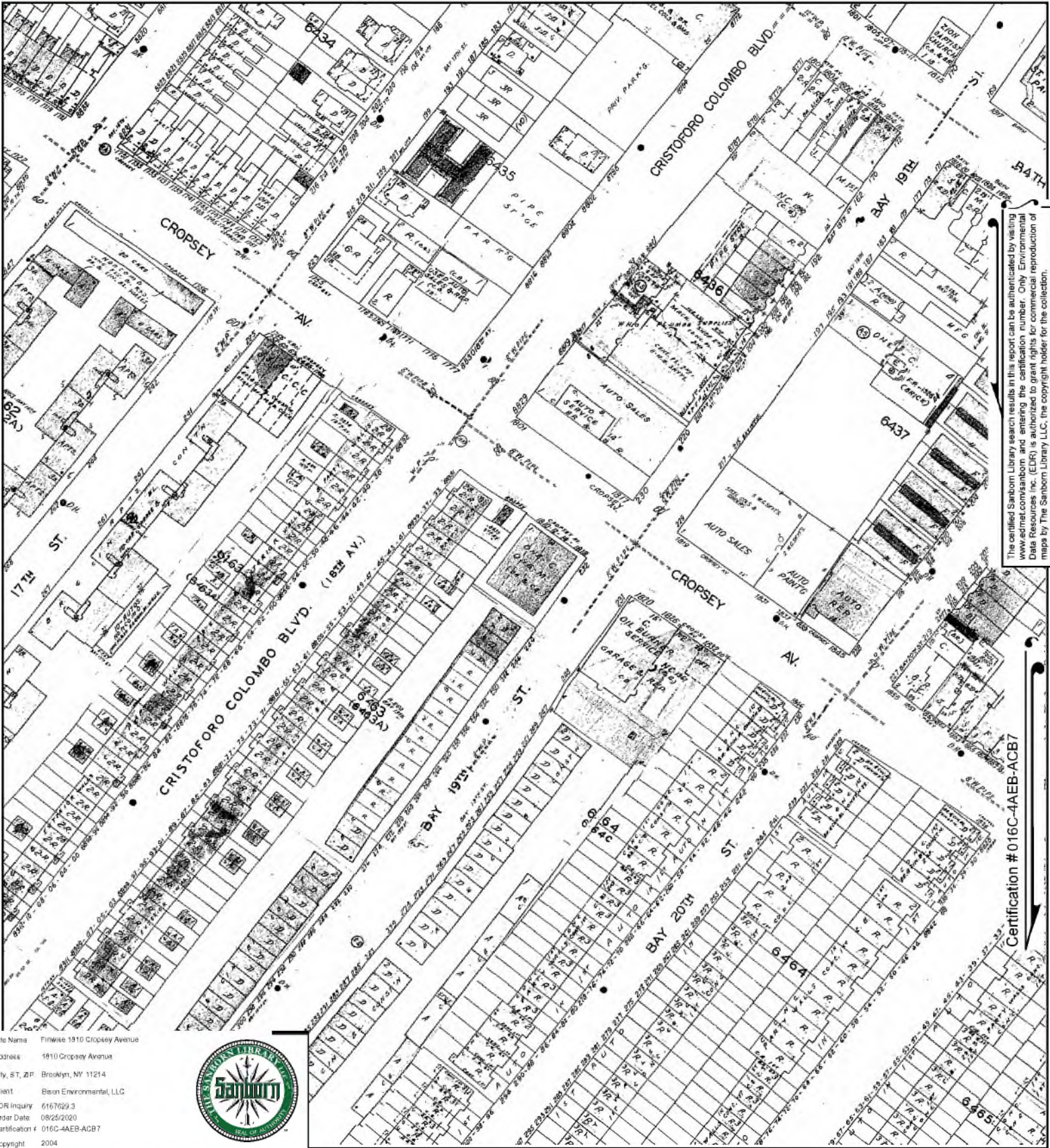


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- Volume 12, Sheet 10
- Volume 12, Sheet 5
- Volume 12, Sheet 4





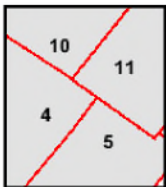
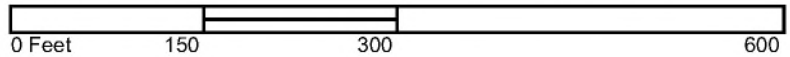
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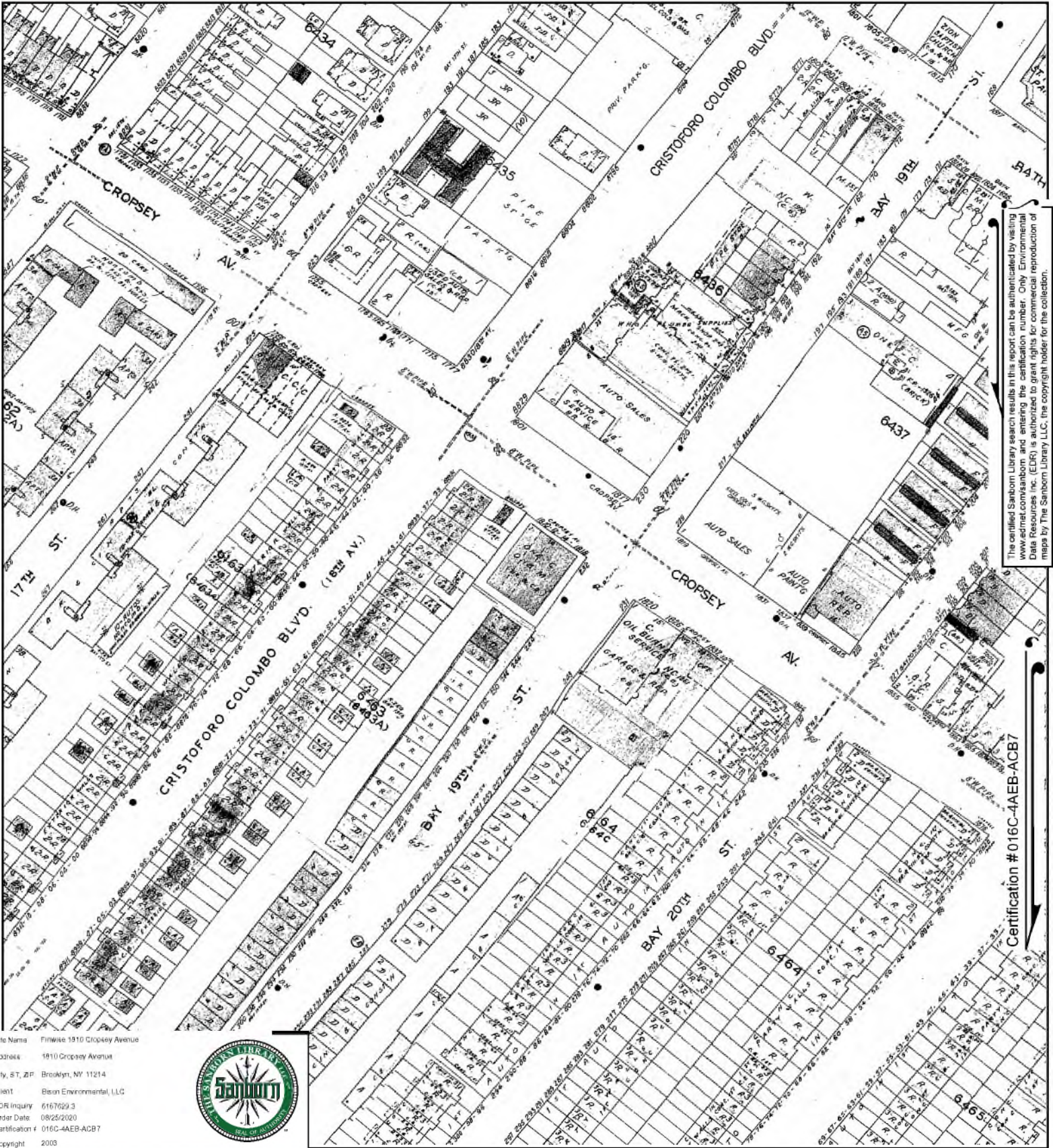


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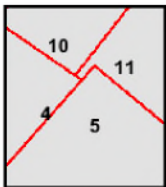
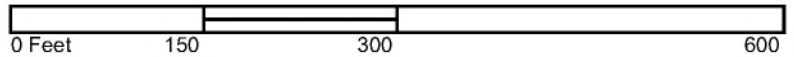
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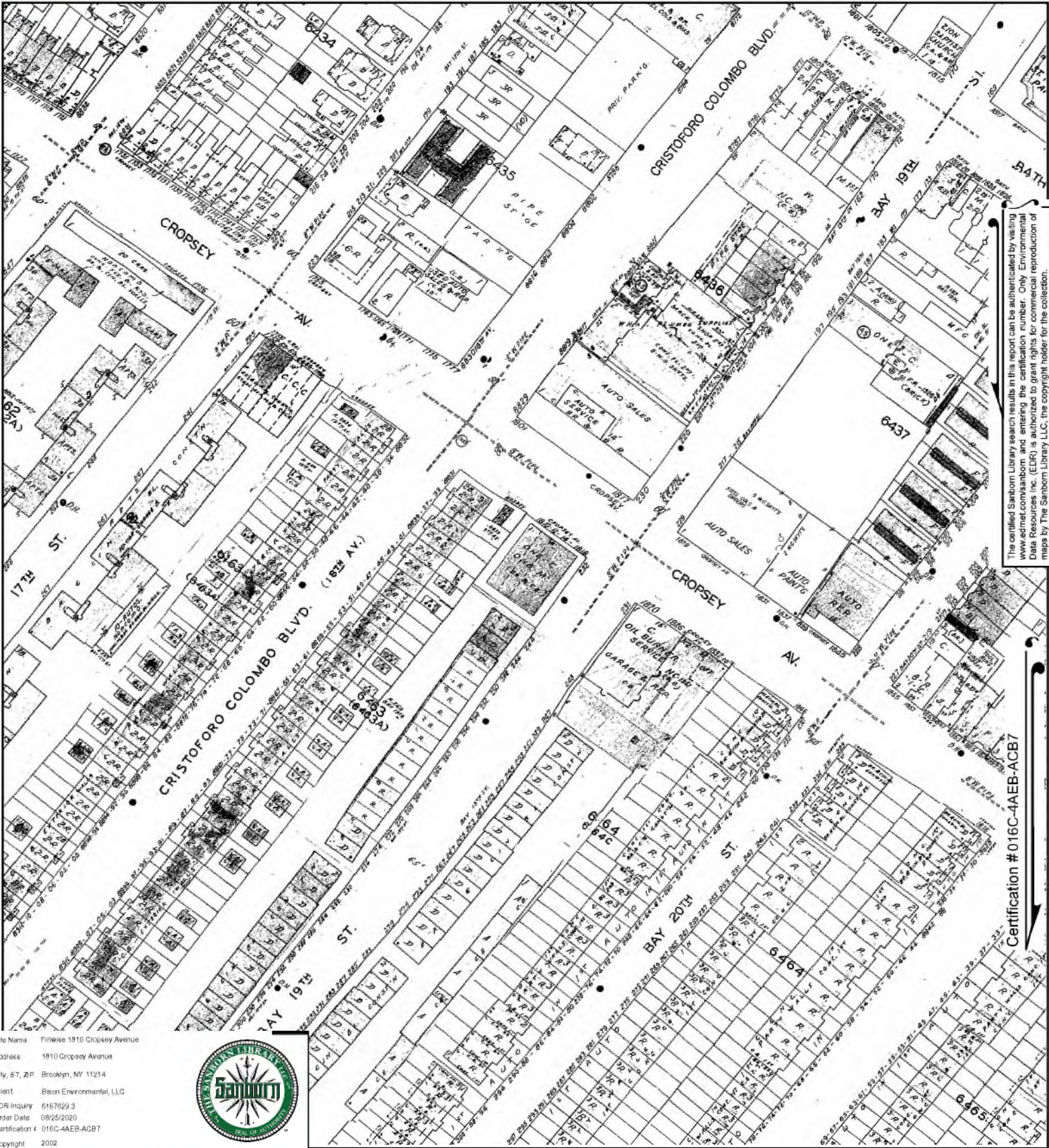


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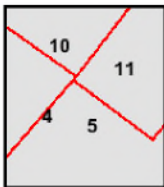
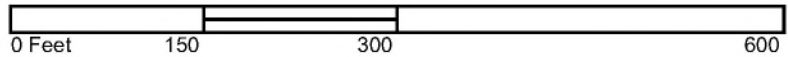
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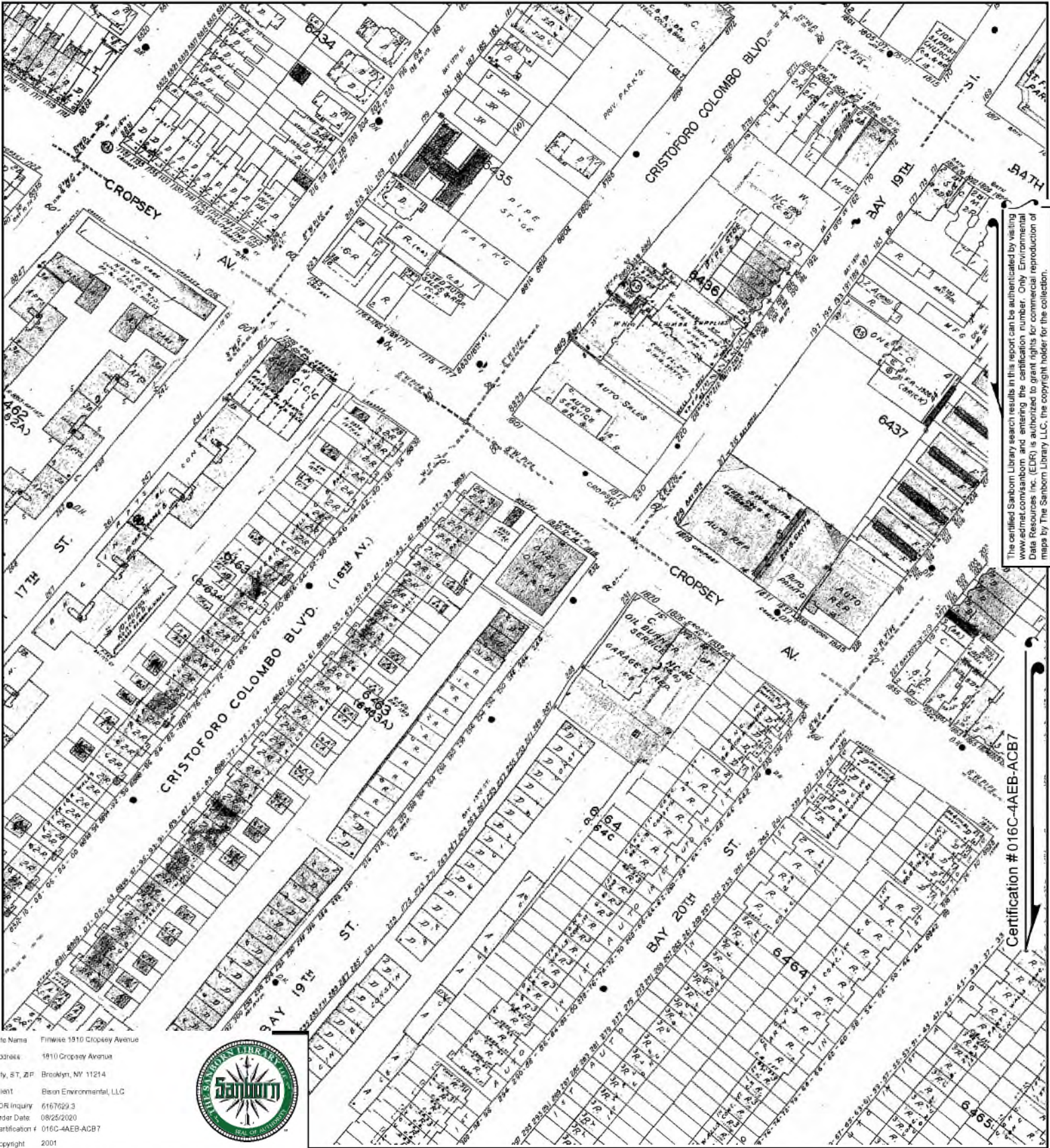


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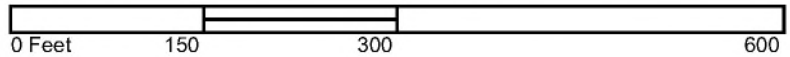
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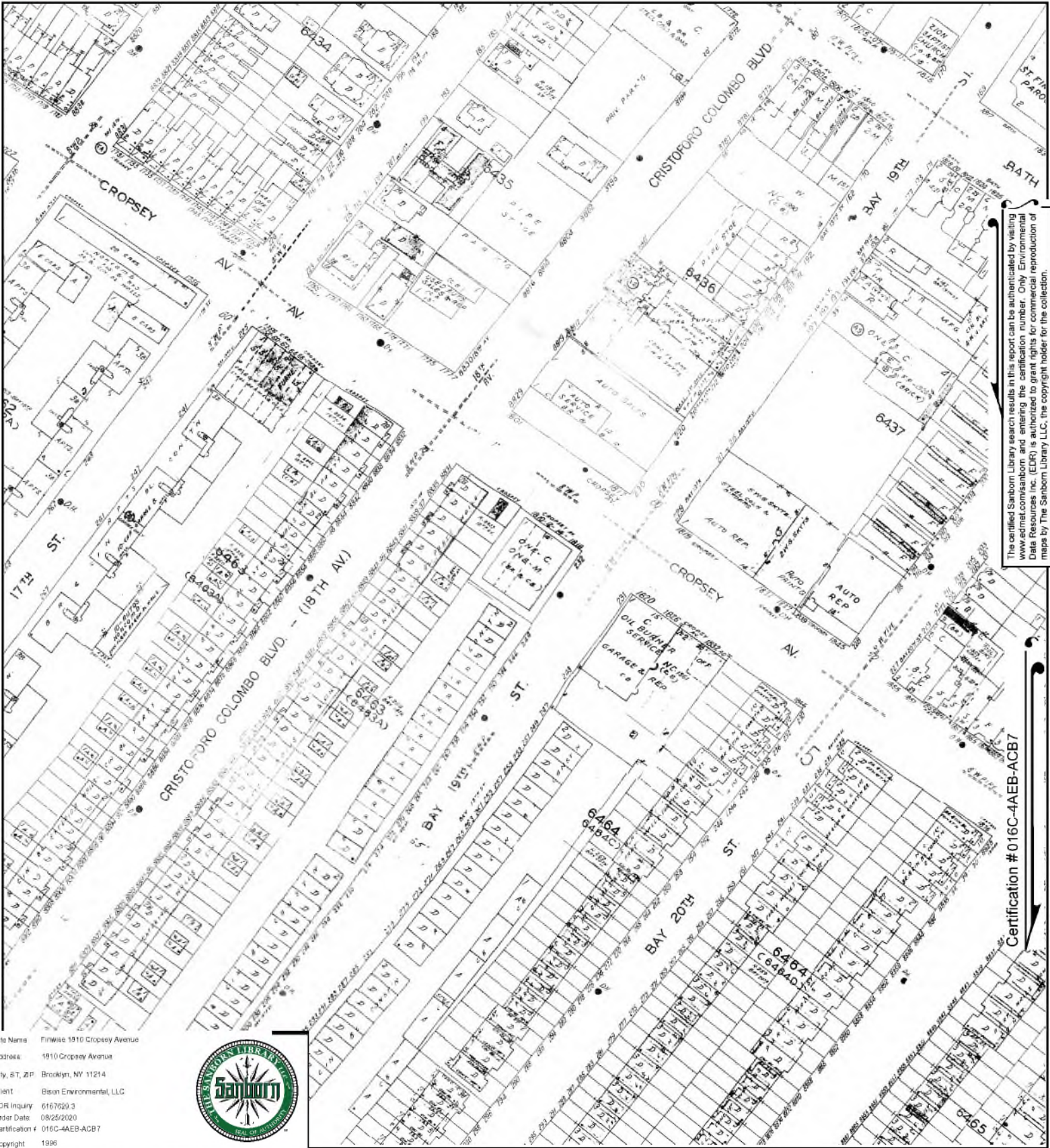


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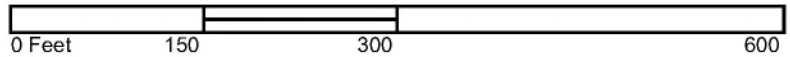
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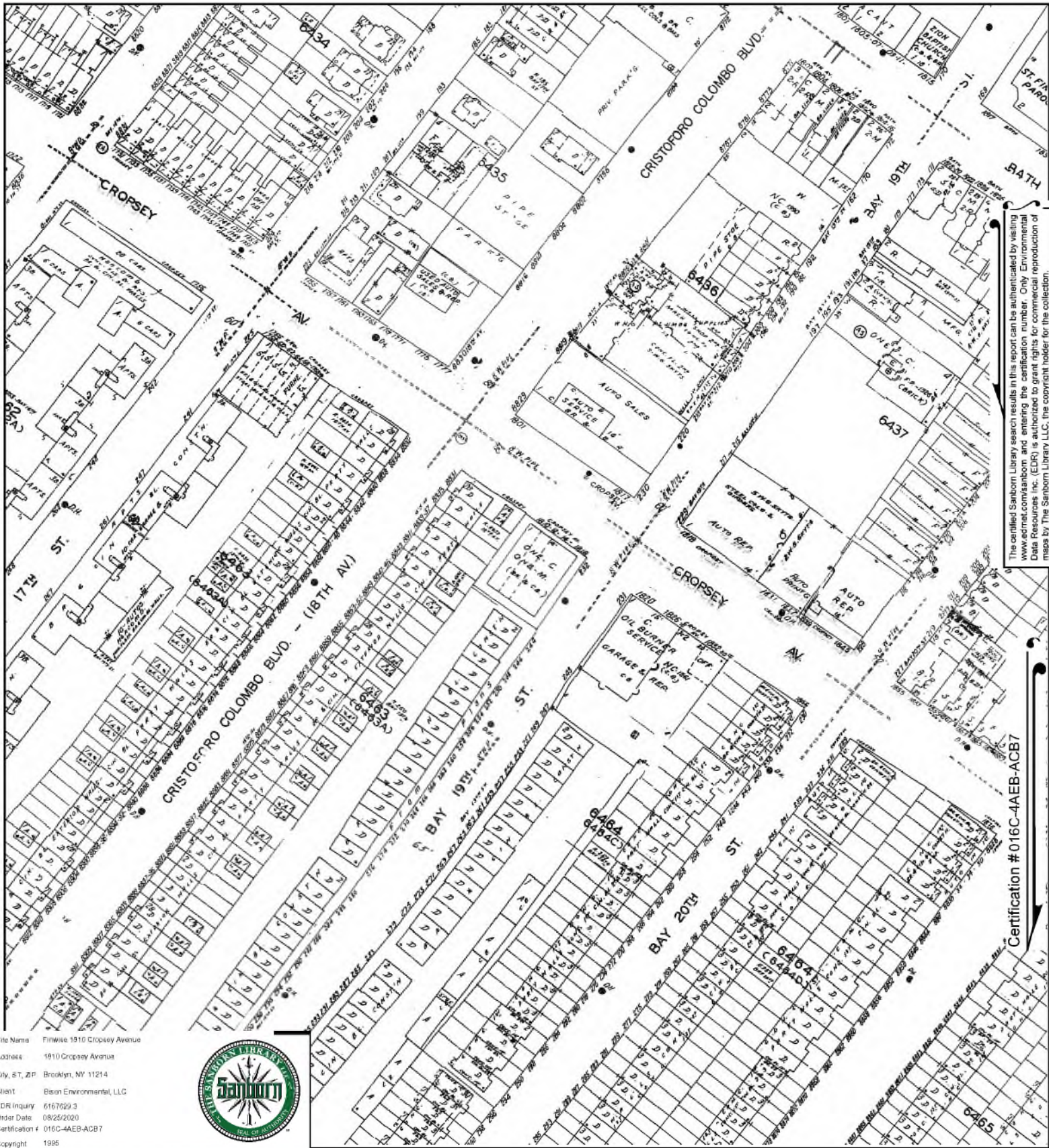


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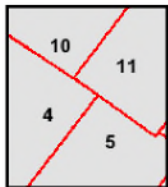
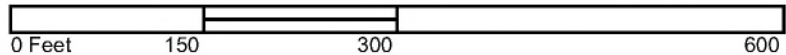
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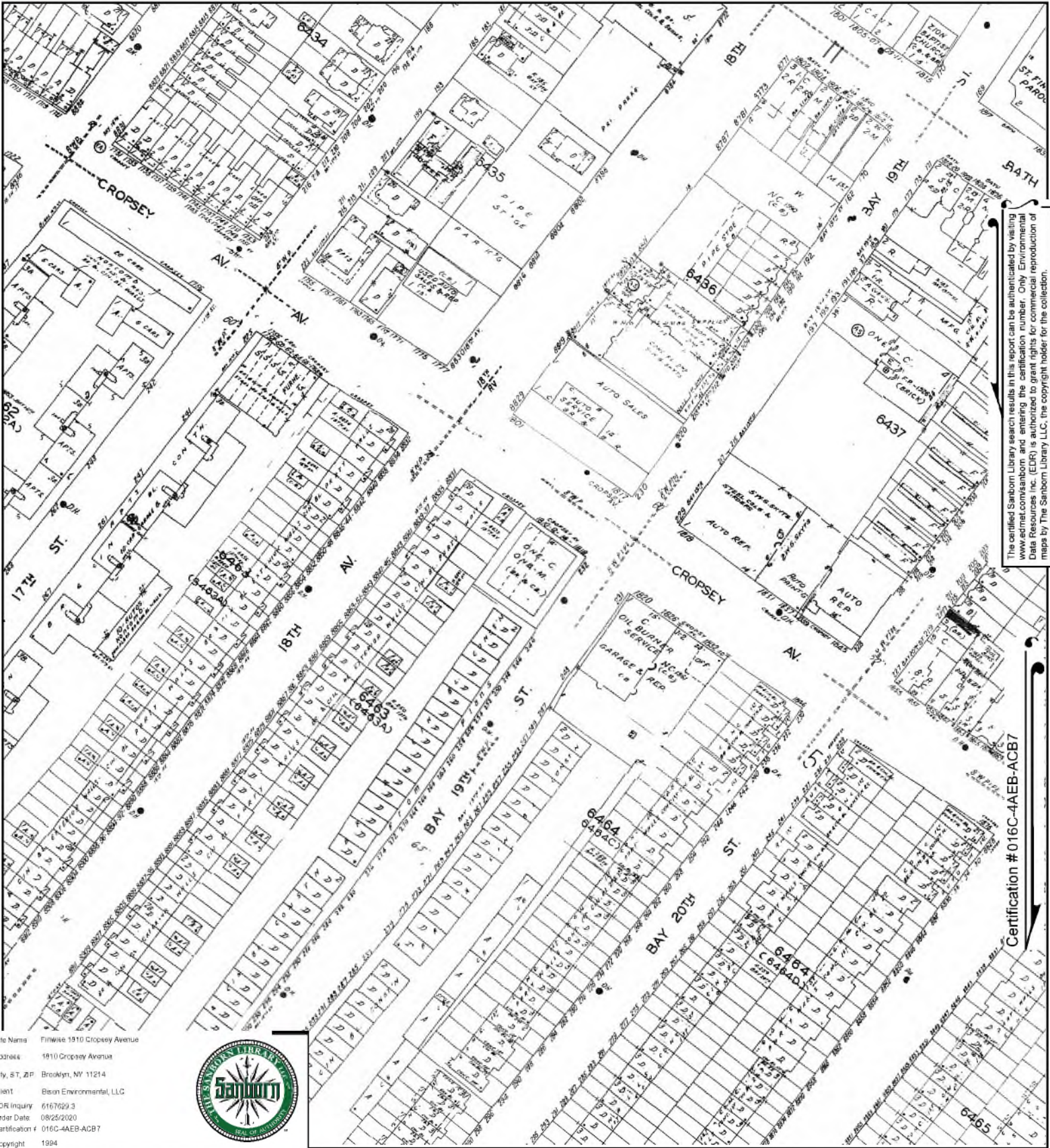
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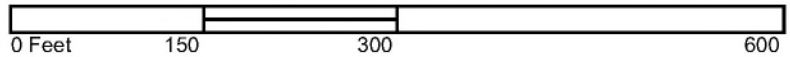
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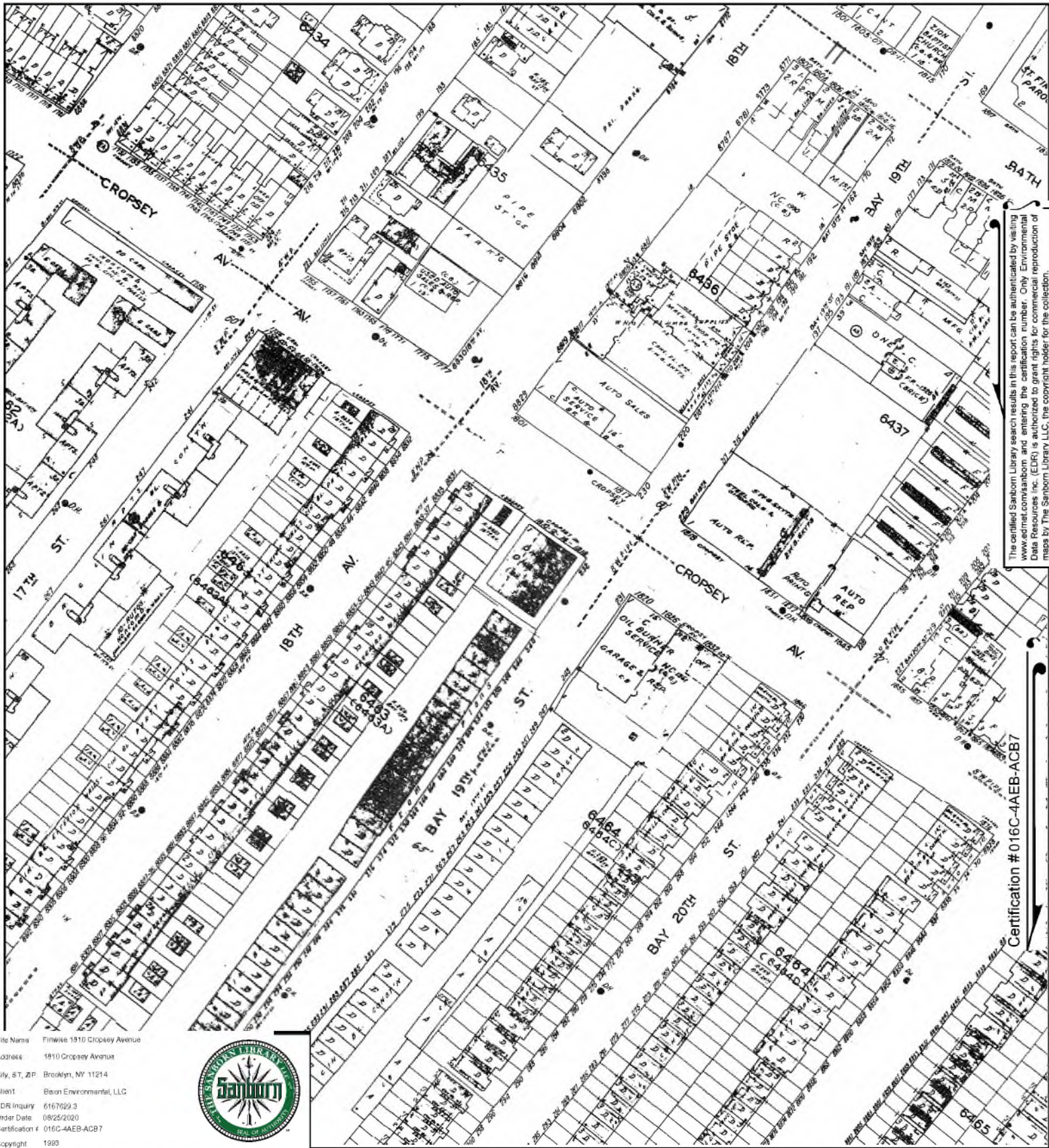


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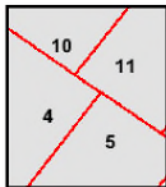
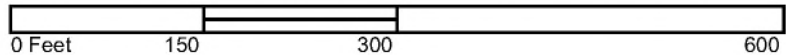
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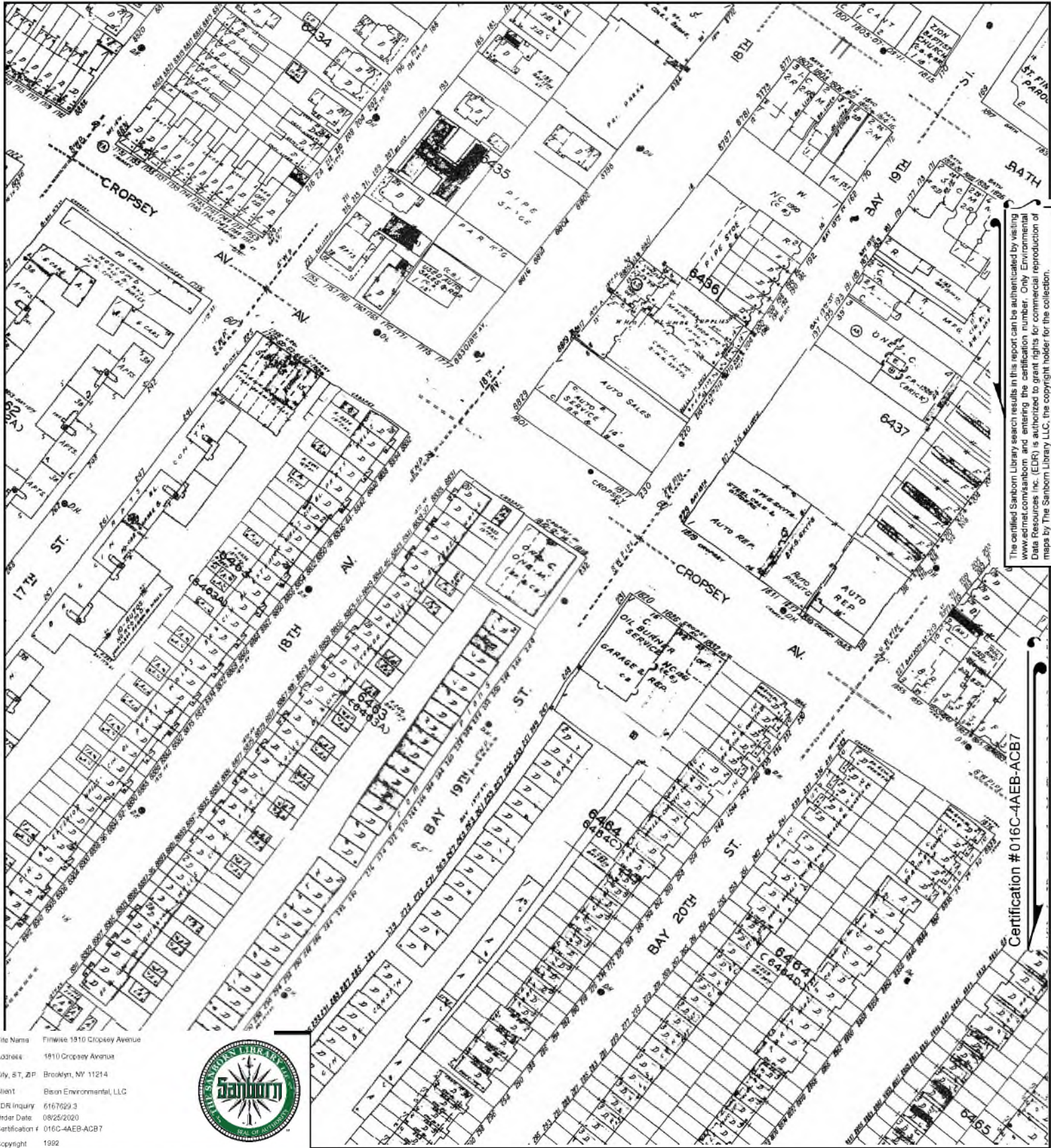
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 Volume 12, Sheet 4





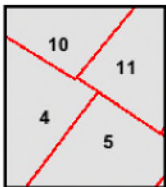
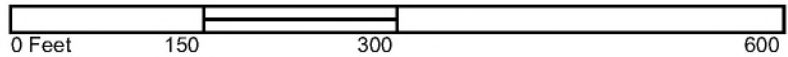
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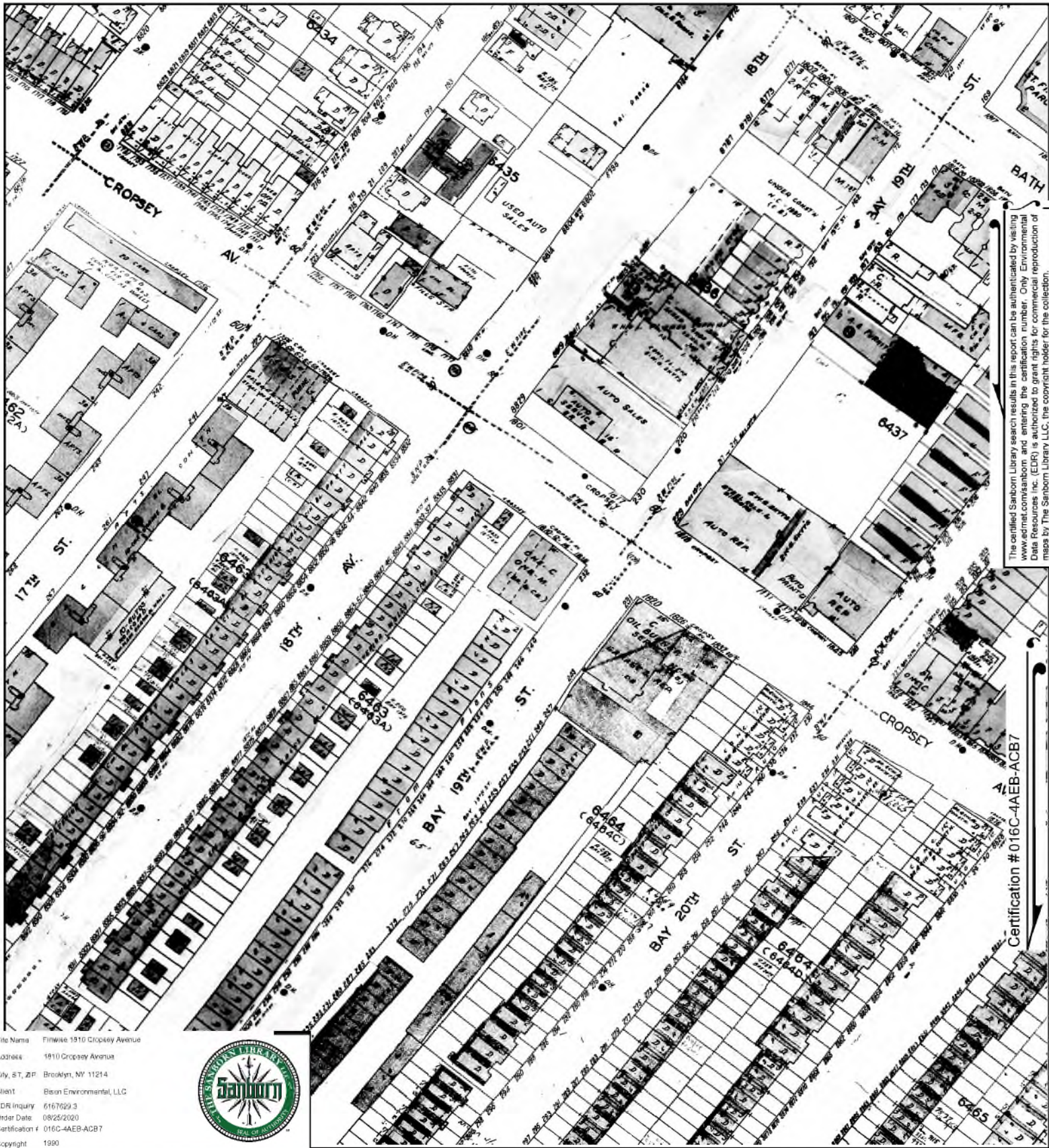


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- Volume 12, Sheet 11





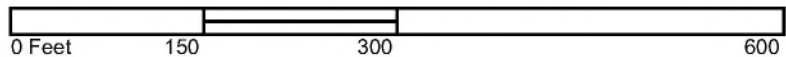
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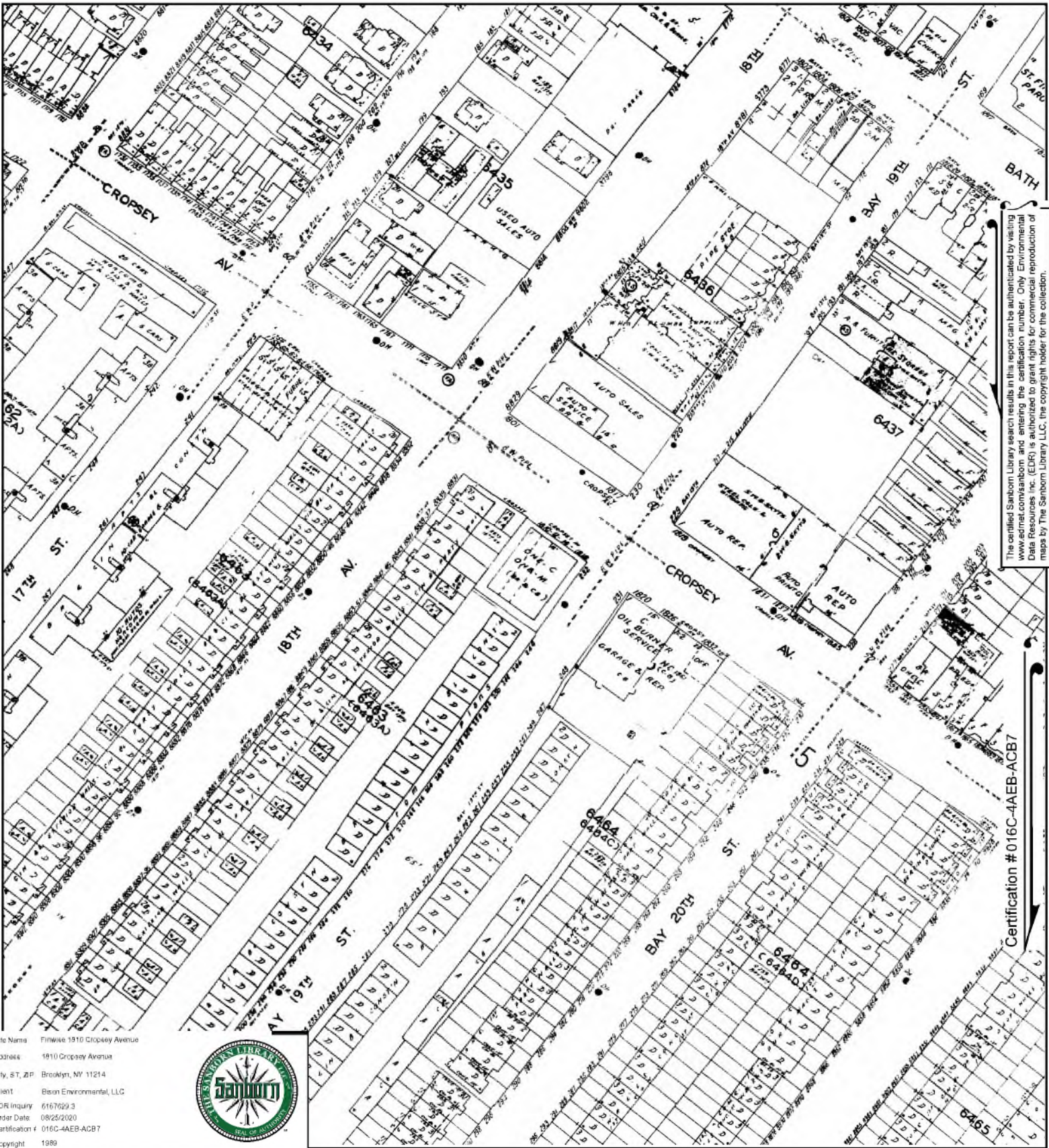
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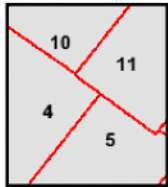
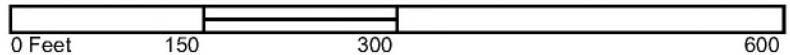
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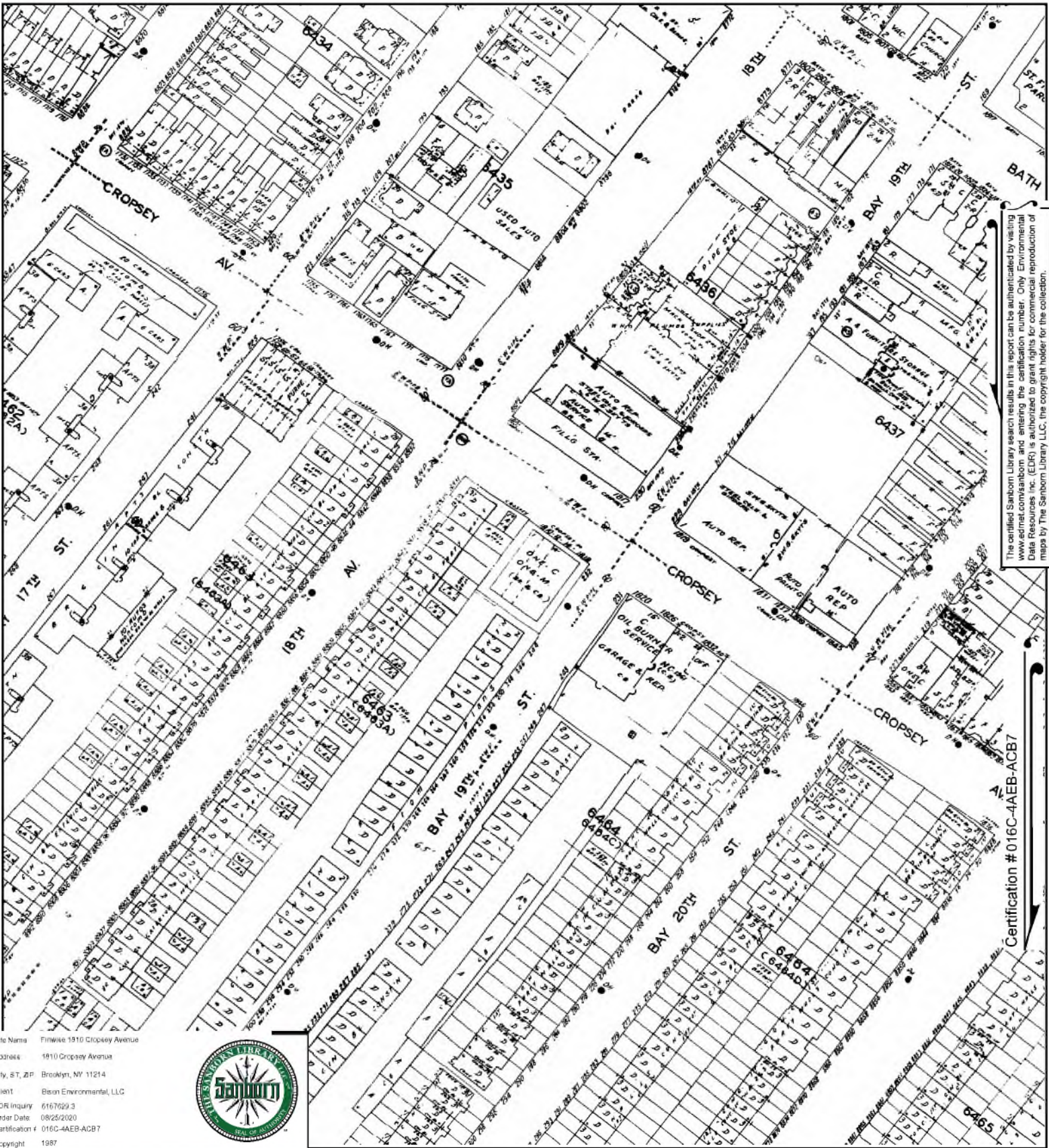


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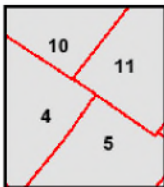
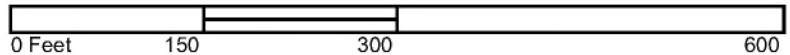


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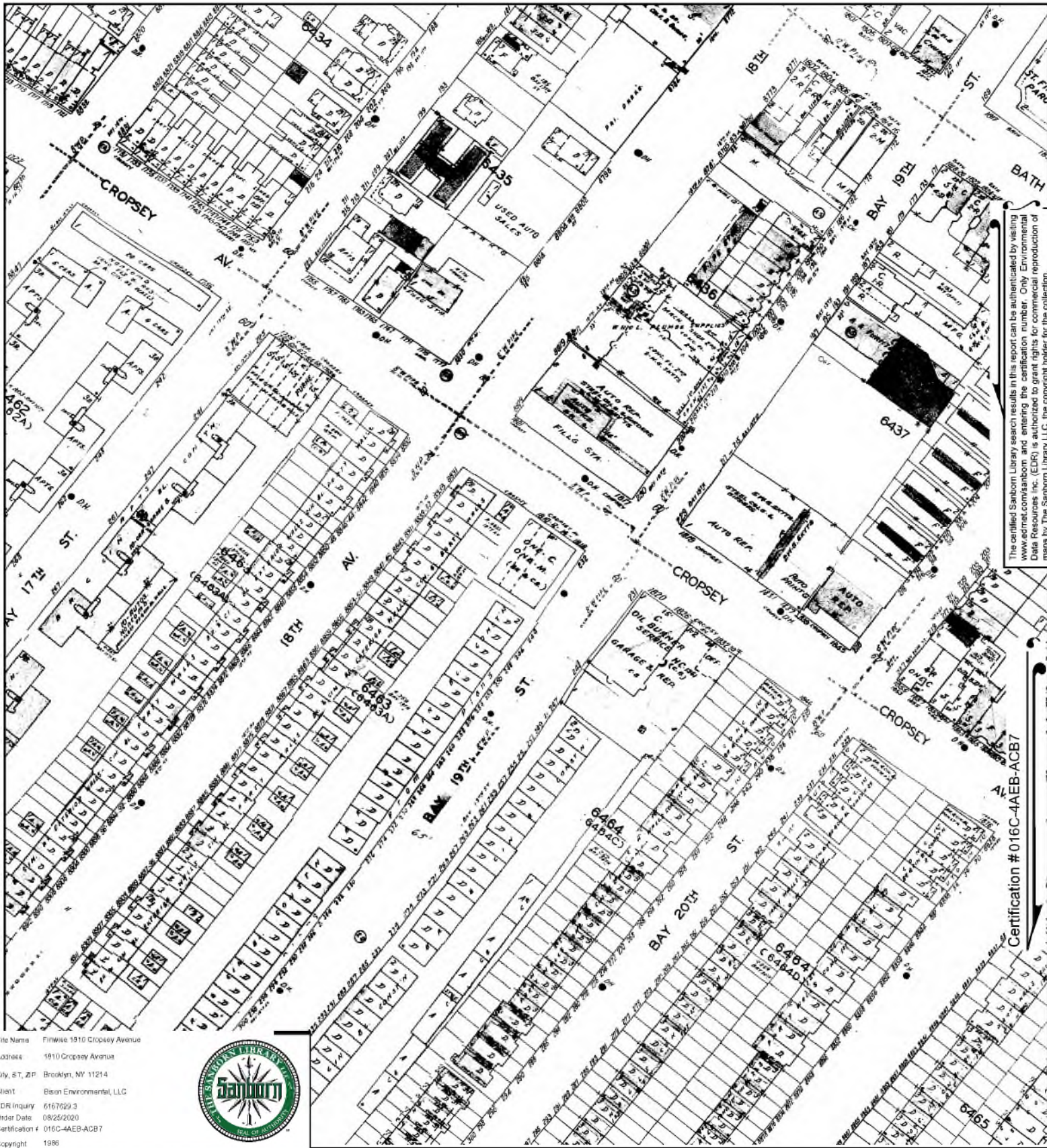
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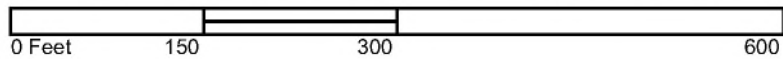
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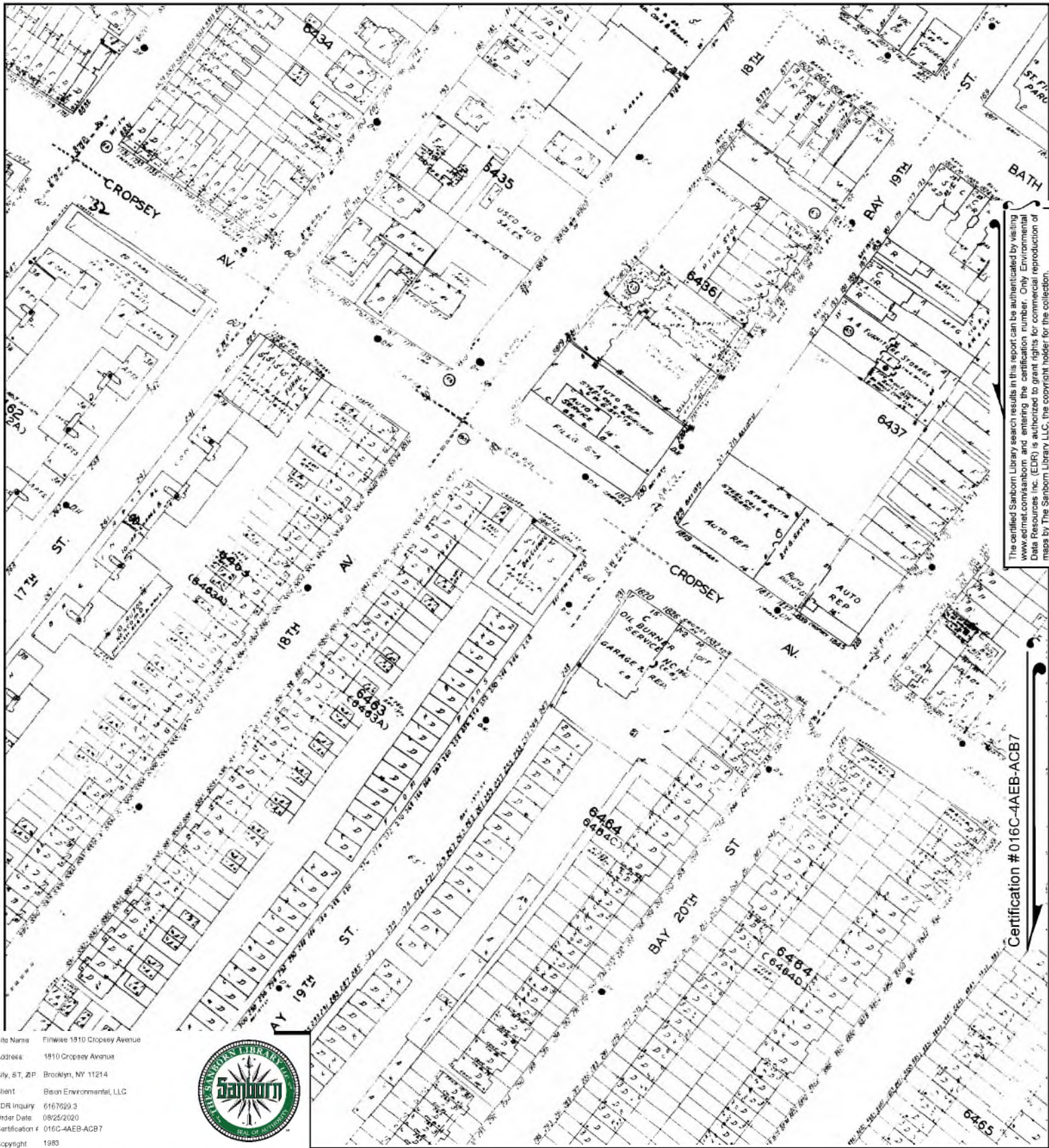
Certification #016C-4AEB-ACB7

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Volume 12, Sheet 5
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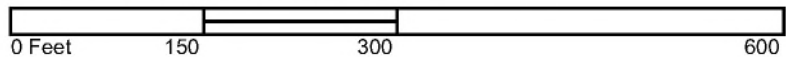
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Certification #016C-4AEB-ACB7

Site Name: Finwise 1910 Cropsy Avenue
 Address: 1910 Cropsy Avenue
 City, ST, ZIP: Brooklyn, NY 11214
 Client: Bison Environmental, LLC
 EDR Inquiry: 6167629-3
 Order Date: 08/25/2020
 Certification #: 016C-4AEB-ACB7
 Copyright: 1983

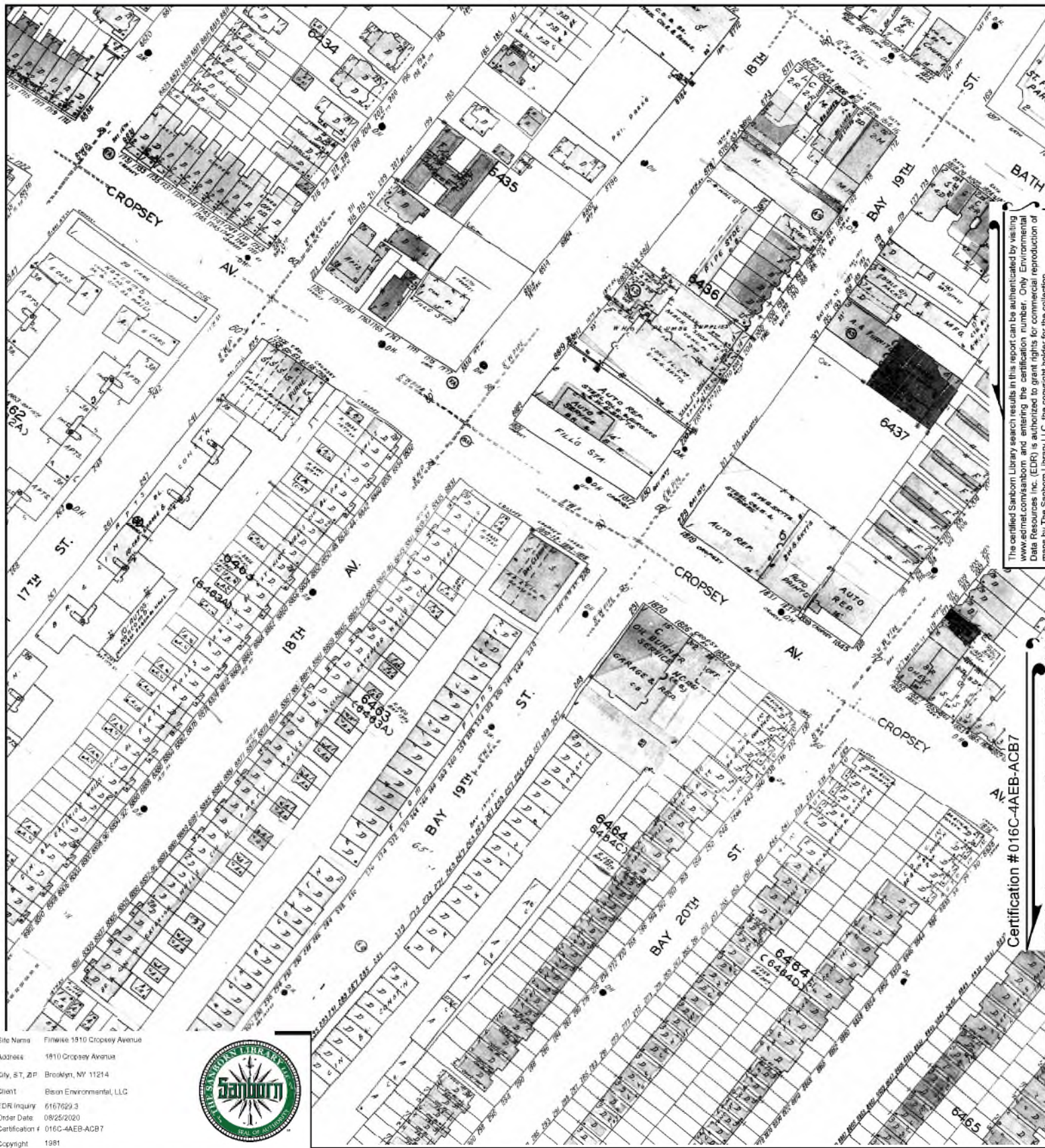


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 Outlined areas indicate map sheets within the collection.



Volume 12, Sheet 11
 Volume 12, Sheet 10
 Volume 12, Sheet 5
 Volume 12, Sheet 4





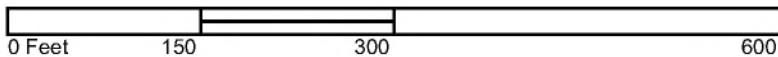
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Site Name Finwise 1910 Cropsy Avenue
 Address 1910 Cropsy Avenue
 City, ST, ZIP Brooklyn, NY 11214
 Client Bison Environmental, LLC
 EDR Inquiry 6167629-3
 Order Date 08/25/2020
 Certification # 016C-4AEB-ACB7
 Copyright 1981

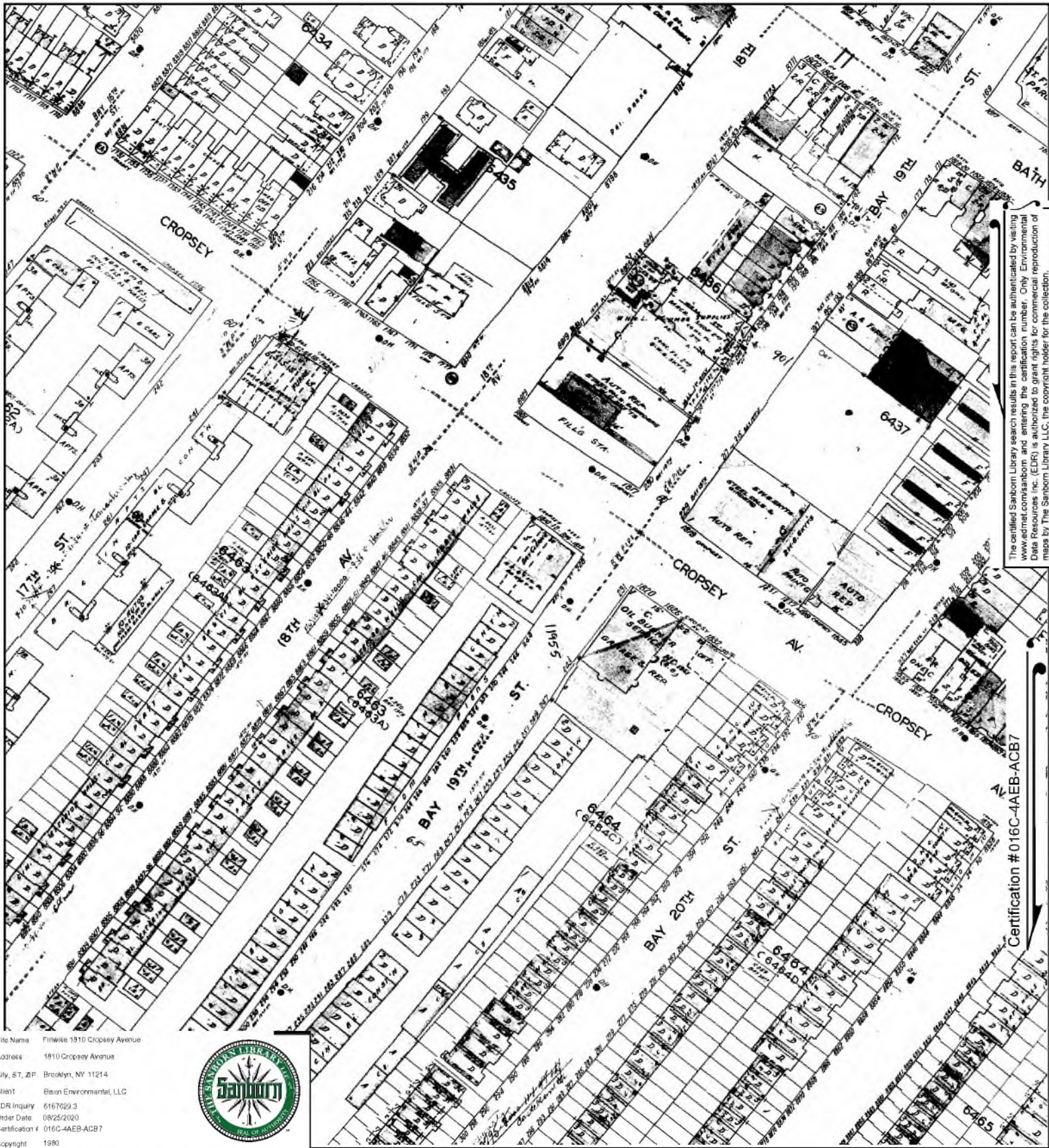


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Volume 12, Sheet 5
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 Volume 12, Sheet 11
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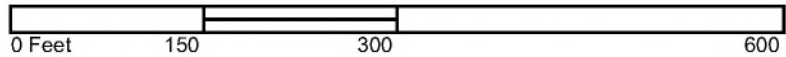
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Certification # 016C-4AEB-ACB7

Site Name: Finwise 1910 Cropsy Avenue
 Address: 1910 Cropsy Avenue
 City, ST, ZIP: Brooklyn, NY 11214
 Client: Bison Environmental, LLC
 EDR Inquiry: 6167629-3
 Order Date: 08/25/2020
 Certification #: 016C-4AEB-ACB7
 Copyright: 1980

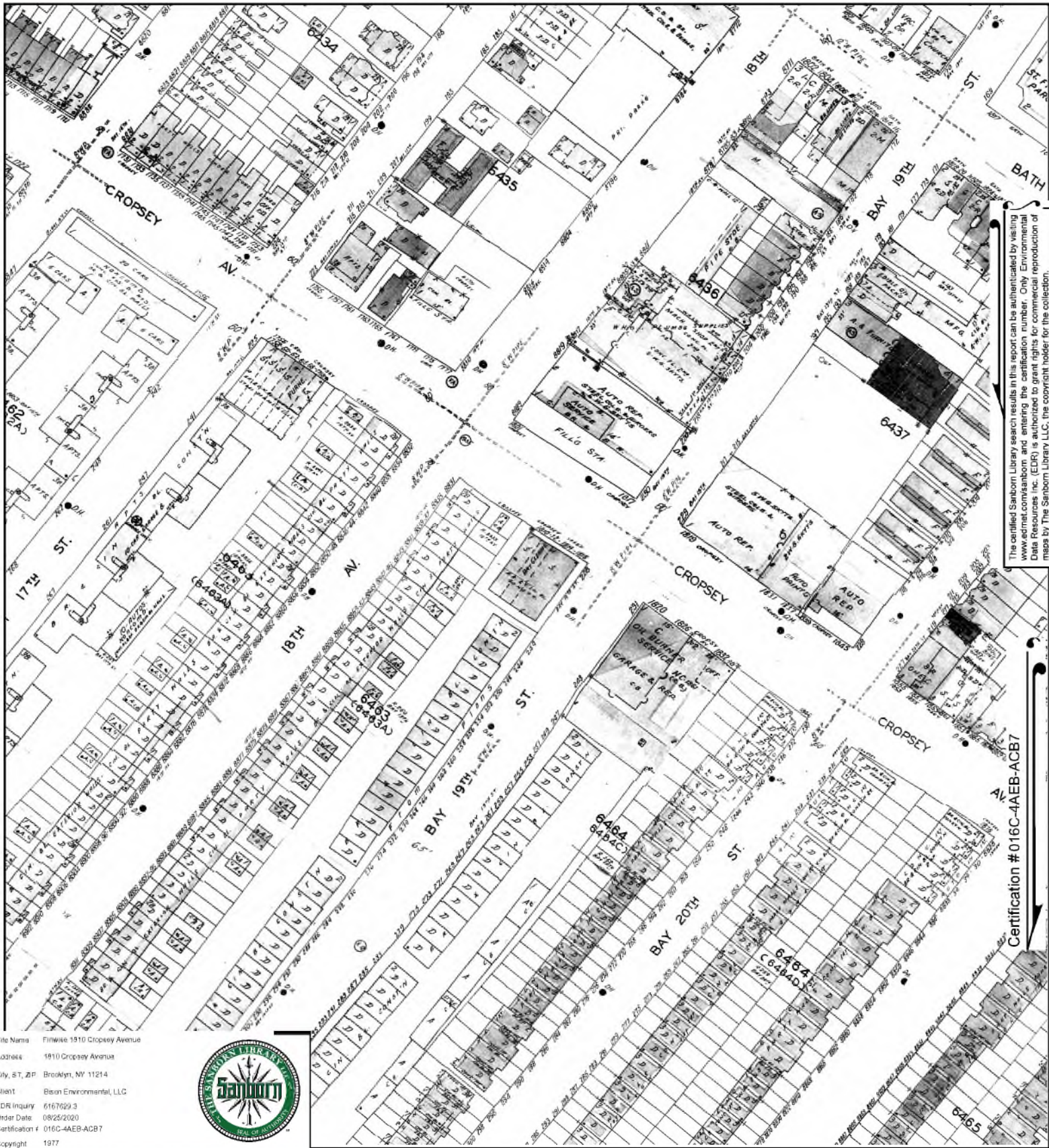


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- Volume 12, Sheet 11
- Volume 12, Sheet 10





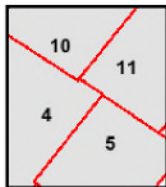
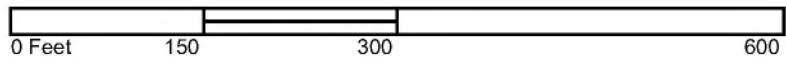
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Site Name: Finwise 1910 Cropsy Avenue
 Address: 1910 Cropsy Avenue
 City, ST, ZIP: Brooklyn, NY 11214
 Client: Bison Environmental, LLC
 EDR Inquiry: 6167629-3
 Order Date: 08/25/2020
 Certification #: 016C-4AEB-ACB7
 Copyright: 1977



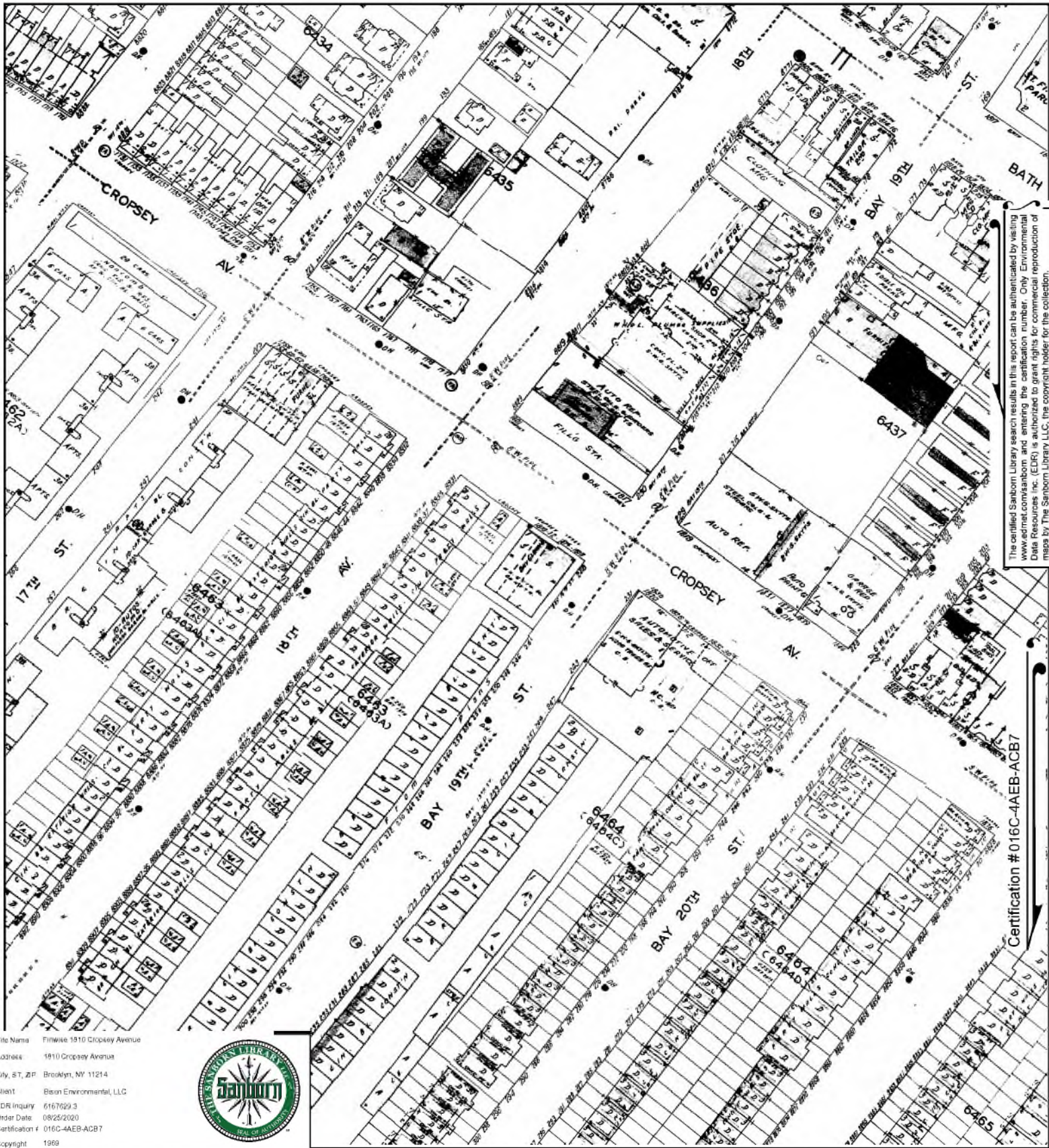
Certification #016C-4AEB-ACB7

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Volume 12, Sheet 10
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 Volume 12, Sheet 4
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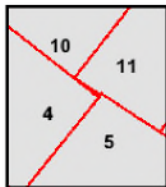
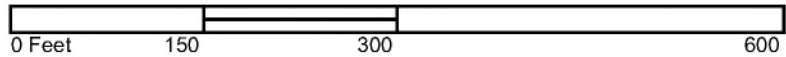
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Site Name Finwise 1910 Cropsy Avenue
 Address 1910 Cropsy Avenue
 City, ST, ZIP Brooklyn, NY 11214
 Client Bison Environmental, LLC
 EDR Inquiry 6167629-3
 Order Date 08/25/2020
 Certification # 016C-4AEB-ACB7
 Copyright 1969



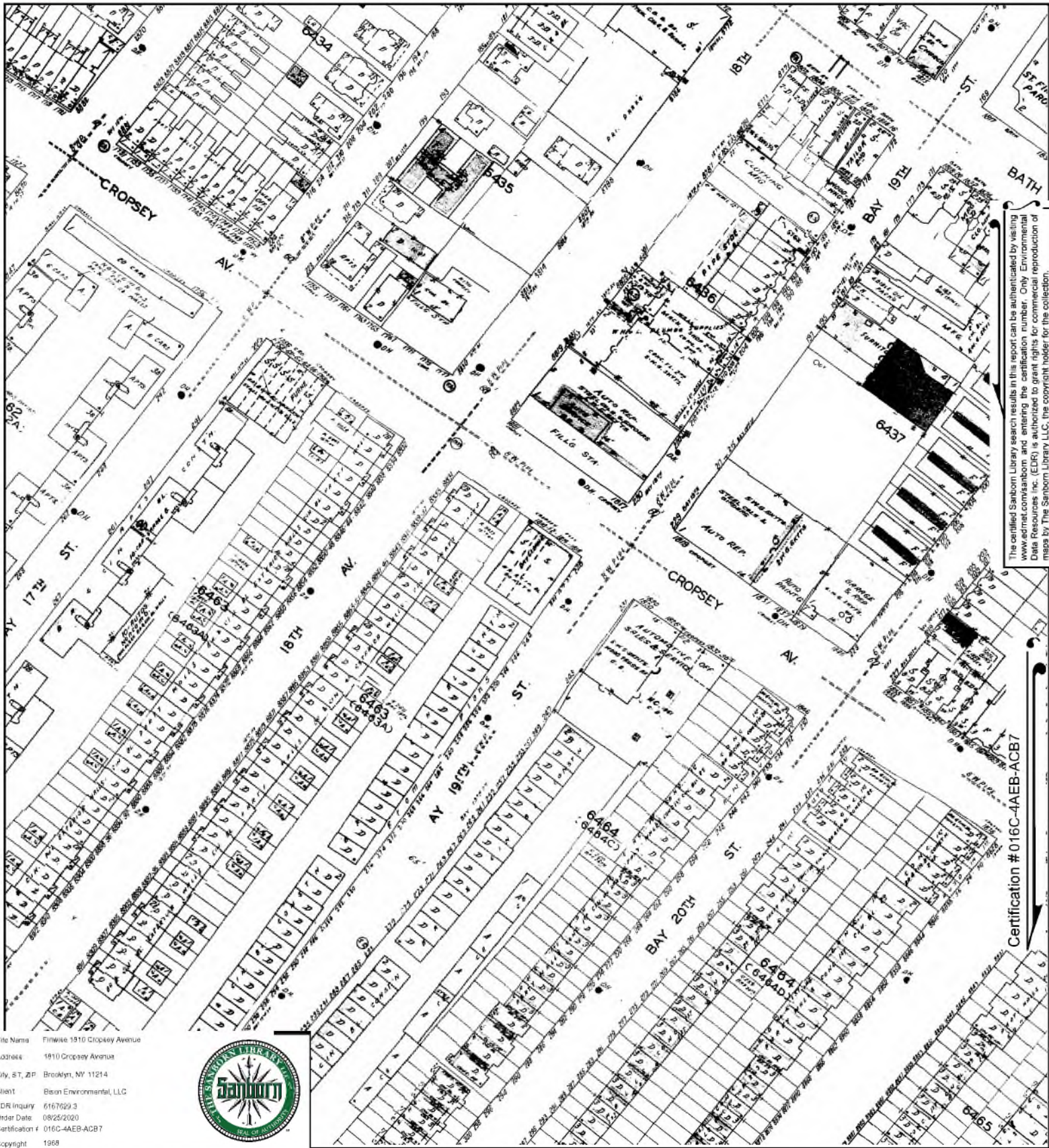
Certification #016C-4AEB-ACB7

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Volume 12, Sheet 5
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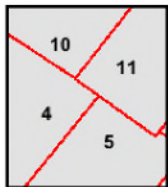
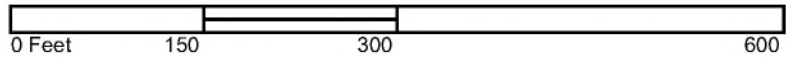
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Certification # 016C-4AEB-ACB7

Site Name Finwise 1910 Cropsy Avenue
 Address 1910 Cropsy Avenue
 City, ST, ZIP Brooklyn, NY 11214
 Client Bison Environmental, LLC
 EDR Inquiry 6167629-3
 Order Date 08/25/2020
 Certification # 016C-4AEB-ACB7
 Copyright 1968

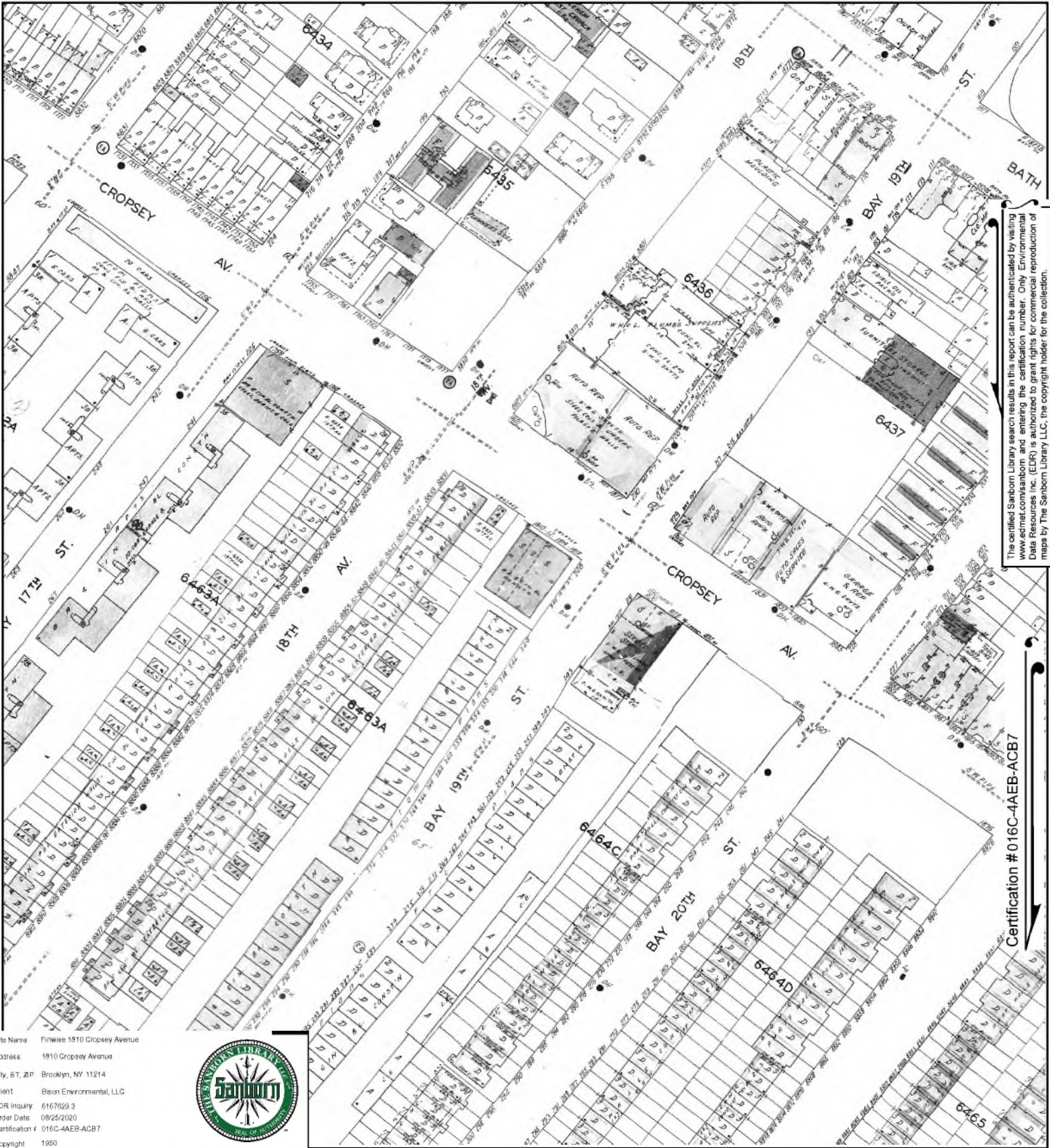


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Volume 12, Sheet 11
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 Volume 12, Sheet 4



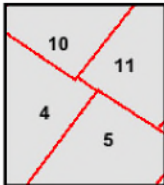
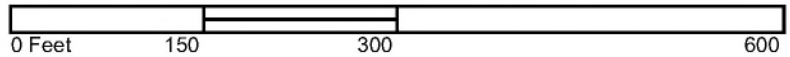


Site Name Finwise 1910 Cropsy Avenue
 Address 1910 Cropsy Avenue
 City, ST, ZIP Brooklyn, NY 11214
 Client Bison Environmental, LLC
 EDR Inquiry 6167629-3
 Order Date 08/25/2020
 Certification # 016C-4AEB-ACB7
 Copyright 1950



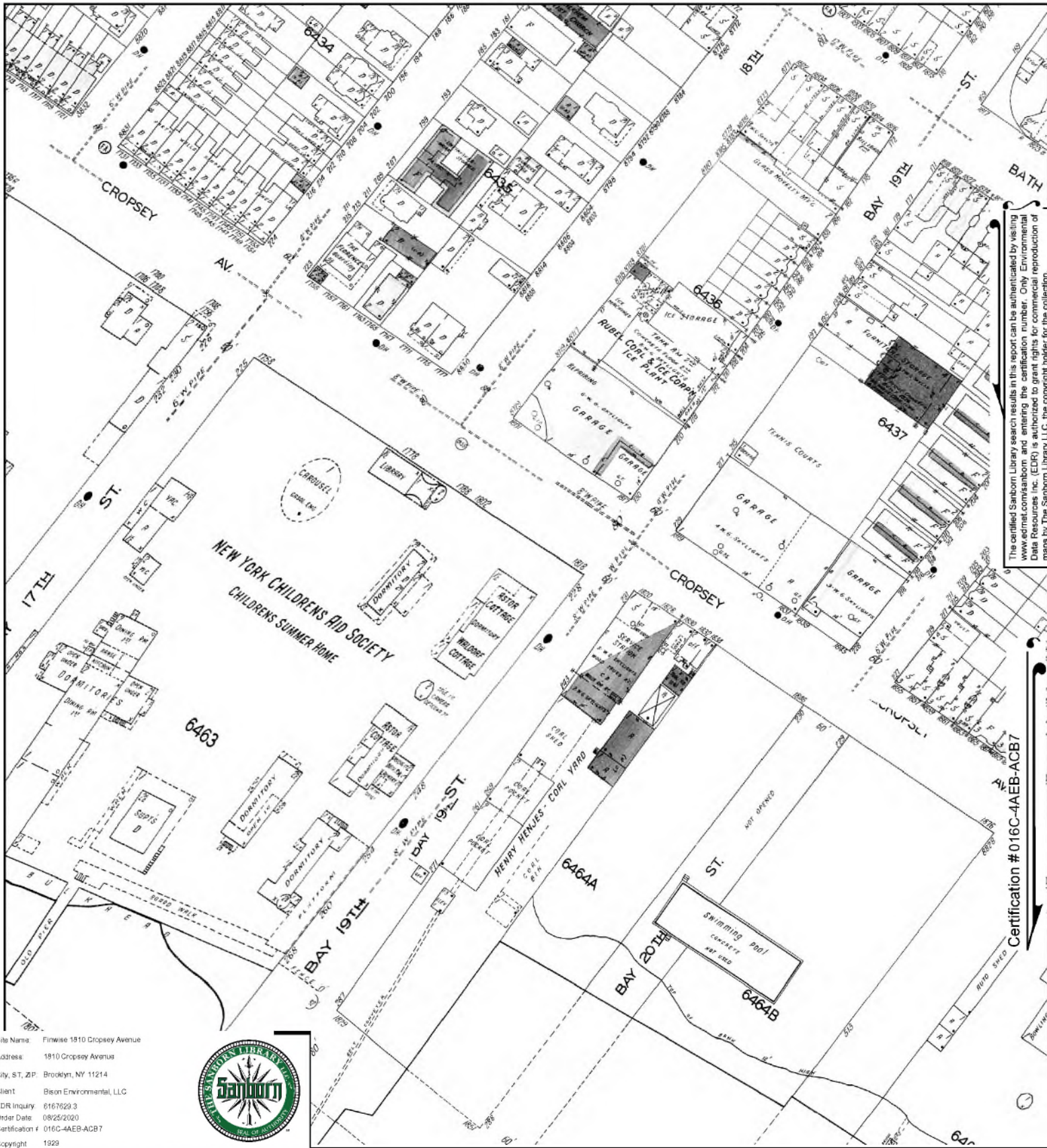
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 Outlined areas indicate map sheets within the collection.



Volume 12, Sheet 10
 Volume 12, Sheet 5
 Volume 12, Sheet 4
 Volume 12, Sheet 11





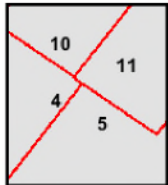
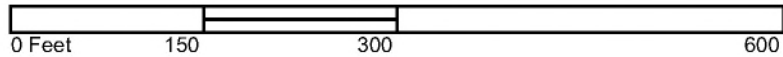
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Certification # 016C-4AEB-ACB7

Site Name: Finwise 1910 Cropsy Avenue
 Address: 1910 Cropsy Avenue
 City, ST, ZIP: Brooklyn, NY 11214
 Client: Bison Environmental, LLC
 EDR Inquiry: 6167629-3
 Order Date: 08/25/2020
 Certification #: 016C-4AEB-ACB7
 Copyright: 1929

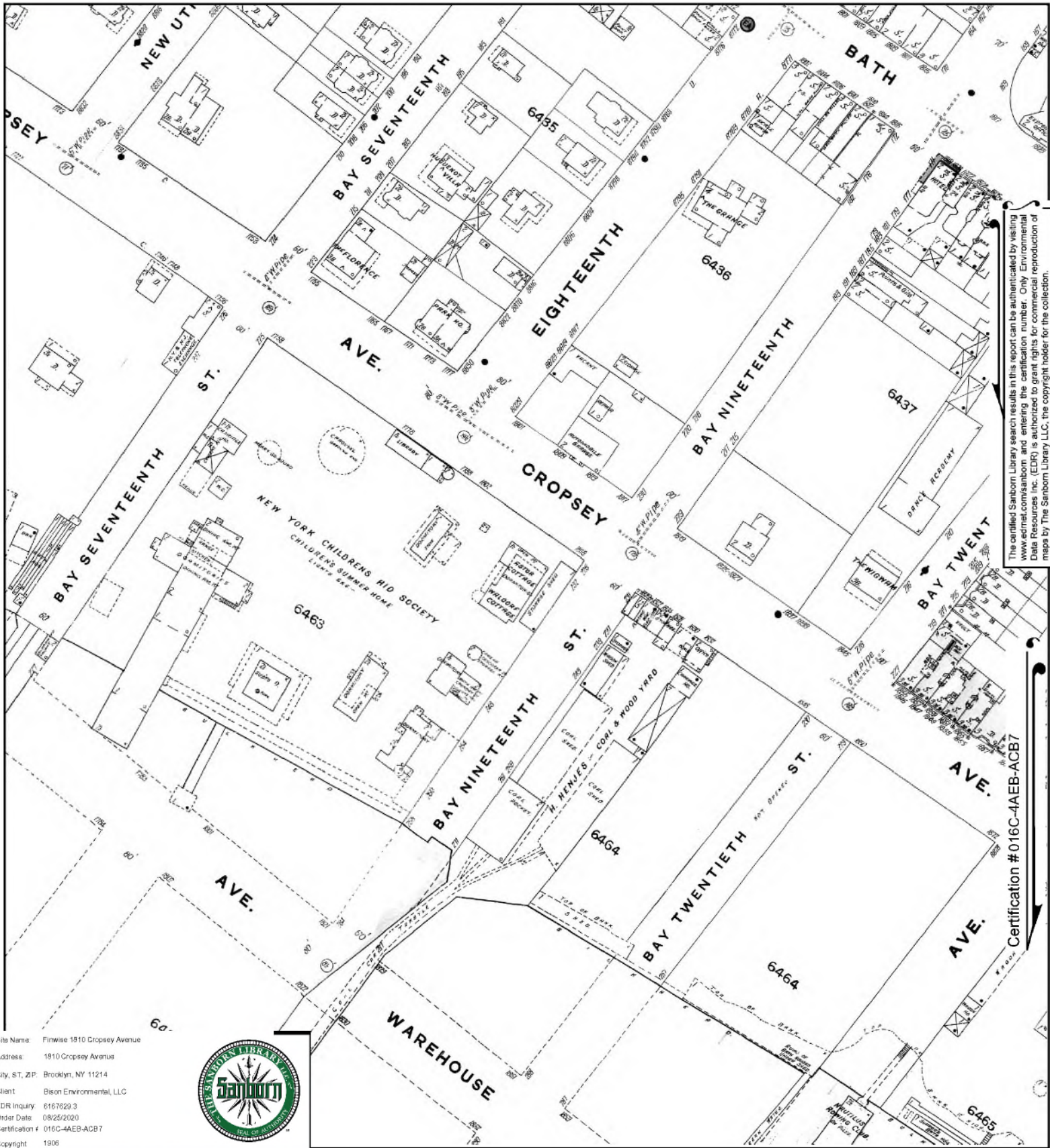


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Volume 12, Sheet 11
 Volume 12, Sheet 10
 Volume 12, Sheet 5
 Volume 12, Sheet 4





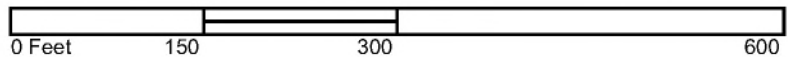
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Certification # 016C-4AEB-ACB7

Site Name: Finwise 1910 Cropey Avenue
 Address: 1910 Cropey Avenue
 City, ST, ZIP: Brooklyn, NY 11214
 Client: Bison Environmental, LLC
 EDR Inquiry: 6167629-3
 Order Date: 08/25/2020
 Certification #: 016C-4AEB-ACB7
 Copyright: 1906

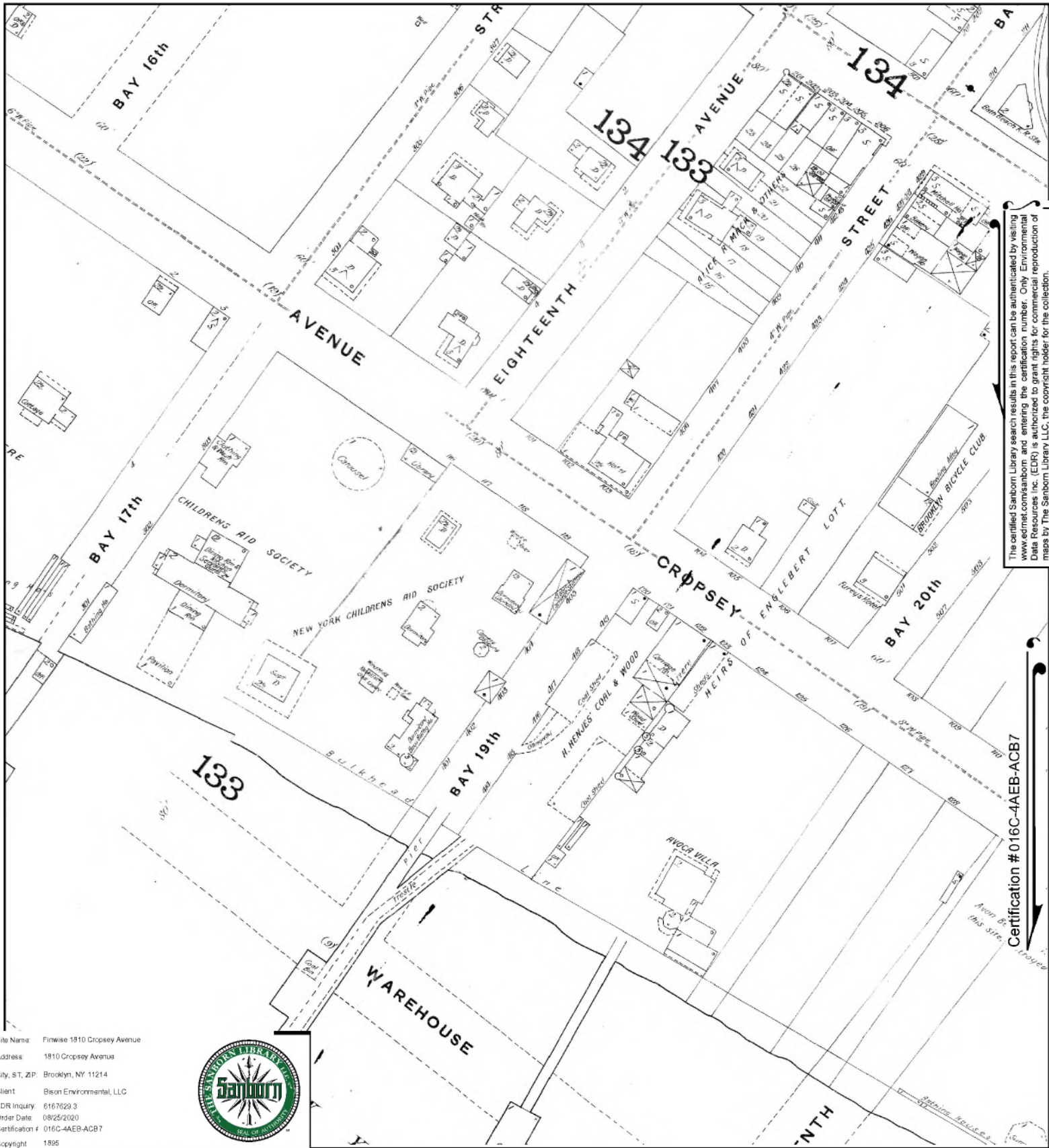


This Certified Sanborn Map combines the following sheets. Outlined areas indicate map sheets within the collection.



Volume 12, Sheet 11
 Volume 12, Sheet 10
 Volume 12, Sheet 5
 Volume 12, Sheet 4





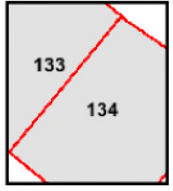
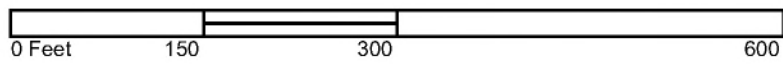
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Certification # 016C-4AEB-ACB7

Site Name: Finwise 1810 Cropsy Avenue
 Address: 1810 Cropsy Avenue
 City, ST, ZIP: Brooklyn, NY 11214
 Client: Bison Environmental, LLC
 EDR Inquiry: 6167629-3
 Order Date: 08/25/2020
 Certification #: 016C-4AEB-ACB7
 Copyright: 1895



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Volume B, Sheet 134
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Finwise 1810 Cropsey Avenue

1810 Cropsey Avenue
Brooklyn, NY 11214

Inquiry Number: 6167629.5
August 26, 2020

The EDR-City Directory Abstract

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Executive Summary

Findings

City Directory Images

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with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1928 through 2017. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 200 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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Data by

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

<u>Year</u>	<u>Source</u>	<u>TP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
2017	Cole Information Services	-	X	X	-
2014	Cole Information Services	X	X	X	-
2009	Cole Information Services	X	X	X	-
2005	Hill-Donnelly Corporation	-	X	X	-
	Hill-Donnelly Corporation	X	X	X	-
2004	Cole Information Services	X	X	X	-
2000	Cole Information Services	-	X	X	-
	Cole Information Services	X	X	X	-
1999	Cole Information Services	X	X	X	-
1997	NYNEX	-	X	X	-
	NYNEX	X	X	X	-
1994	Cole Information Services	X	X	X	-

EXECUTIVE SUMMARY

<u>Year</u>	<u>Source</u>	<u>TP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
1992	NYNEX Informantion Resource Co.	-	X	X	-
	NYNEX Informantion Resource Co.	X	X	X	-
1985	NYNEX Information Resources Company	-	X	X	-
	NYNEX Information Resources Company	X	X	X	-
1980	New York Telephone	-	X	X	-
1976	New York Telephone	-	X	X	-
	New York Telephone	X	X	X	-
1973	New York Telephone	-	X	X	-
	New York Telephone	X	X	X	-
1970	New York Telephone	-	X	X	-
	New York Telephone	X	X	X	-
1965	New York Telephone	-	X	X	-
	New York Telephone	X	X	X	-
1960	New York Telephone	-	X	X	-
	New York Telephone	X	X	X	-
	New York Telephone Company	-	X	X	-
	New York Telephone Company	X	X	X	-
1949	New York Telephone Company	-	X	X	-
1945	New York Telephone	-	X	X	-
1940	New York Telephone	-	X	X	-
1934	R. L. Polk & Co.	-	X	X	-
1928	New York Telephone	-	X	X	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

1810 Cropsey Avenue
Brooklyn, NY 11214

FINDINGS DETAIL

Target Property research detail.

CRNPSEY AVE

1810 CRNPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1985	DECO ELEVATOR CORP	NYNEX Information Resources Company

CROPSEY AVE

1810 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	RANKO INTERNATIONAL TRADING CORPORAT	Cole Information Services
2009	RANKO INTERNATIONAL TRADING CORP	Cole Information Services
2005	Ranko International Trading Co	Hill-Donnelly Corporation
2004	BIG APPLE CAR INC	Cole Information Services
2000	BIG APPLE CAR INC	Cole Information Services
	E-Z BYNG & TRADE	Cole Information Services
1999	BIG APPLE CAR INCORPORATED	Cole Information Services
	E Z BUYING & TRADING INCORPORATED	Cole Information Services
1997	BIG APPLE CAR INC	NYNEX
	E Z Buying Trading Inc	NYNEX
1994	BIG APPLE CAR INC	Cole Information Services
	DECO ELEVATOR CORP	Cole Information Services
1992	CLOVERDALE TRANSPORTATION SVCE S INC	NYNEX Informantion Resource Co.
	DECO ELEVATOR CORP	NYNEX Informantion Resource Co.
1976	JOE S FISH TOWN	New York Telephone
1973	Rose Banner Meat Mkt	New York Telephone
1965	Rose Banner Meat tkt	New York Telephone
1960	Banner Meat Mkt	New York Telephone Company

FINDINGS

CRPSY AVE

1810 CRPSY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	Rose Banner Meat Mkt	New York Telephone
1960	BANNER MEAT MKT	New York Telephone

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

18 A

8855 18 A

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1949	Caporale Angela	New York Telephone Company

18 AVE

8850 18 AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1997	SPINELLI Angelo Mrs	NYNEX

8851 18 AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1997	PARADISO J	NYNEX

18TH

8813 18TH

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	HICKEY T W MRS R	New York Telephone

18TH AVE

8815 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	Markel Michl	New York Telephone
1934	MAGEZAS BERNARD PDLR H	R. L. Polk & Co.

8817 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	Burner Mfg Corp of Amer	New York Telephone
1965	Burner Mfg Corp of Amer	New York Telephone

8818 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1934	BELLIZZI ANGELO BARBER H DO	R. L. Polk & Co.

FINDINGS

8819 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	ROCCO PUGLIESI	Cole Information Services
2005	h Pugliesi Rocco	Hill-Donnelly Corporation
2000	ROCCO PUGLIESI	Cole Information Services
1997	PUGLIESI Recco	NYNEX
1994	PUGLIESI, ROCCO	Cole Information Services
1992	PUGLIESI ROCCO	NYNEX Informantion Resource Co.
1985	PUGLIESI ROCCO	NYNEX Information Resources Company

8821 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1934	THOME BRUNO R	R. L. Polk & Co.

8825 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	HILLTOP AUTO PAINTING	New York Telephone
1976	BOB HIRSCH INC SALES	New York Telephone
	HIRSCH BOB INC SHW RM	New York Telephone
1973	BO HIRSCH INC sales	New York Telephone
	Svce & Parts	New York Telephone
	HIRSCH BOB INC shw rm	New York Telephone
	Svce & Parts	New York Telephone
1965	BOB HIRSCH INC sales	New York Telephone
	Svrs & Ports	New York Telephone
	HIRSCH BOB INC shwrm	New York Telephone
	Svce & Parts	New York Telephone
1960	Bob Hirsch Inc sales	New York Telephone Company
	Svce & Parts	New York Telephone Company
	Svce & Parts	New York Telephone Company
	HIRSCH BOB INC	New York Telephone Company
	BOB HIRSCH INC SALES	New York Telephone
	HIRSCH BOB INC	New York Telephone

8831 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	YA HO	Cole Information Services
	CHUN CHAN	Cole Information Services
2014	YA HO	Cole Information Services
	CHUN CHAN	Cole Information Services

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	CHANG KOW-KEER	Cole Information Services
	AI LIU	Cole Information Services
	CHAN WAN	Cole Information Services
2009	CHUN CHAN	Cole Information Services
2005	Penglo Yuet Foon	Hill-Donnelly Corporation
	HChan CH	Hill-Donnelly Corporation
2004	CHUN CHAN	Cole Information Services
2000	AR H LIU	Cole Information Services
	CHUNHON CHAN	Cole Information Services
1997	PORTUONDO Miguel	NYNEX
	FABLE Fredk	NYNEX
1994	FABLE, FREDK	Cole Information Services
	PORTUONDO, MIGUEL	Cole Information Services
1992	FABLE FREDK	NYNEX Informantion Resource Co.
	FIMOWICZ SYLWIA	NYNEX Informantion Resource Co.
1985	FABLE FREDK	NYNEX Information Resources Company
1976	FABLE FREDK	New York Telephone
	SALAMON LUCIANO	New York Telephone
1973	Fable Freik	New York Telephone
	Scimone Christopher	New York Telephone
1970	Fable Fred K	New York Telephone
	Scimone Christopher	New York Telephone
1965	lozzi Albert	New York Telephone
	Fable Fredk	New York Telephone
1960	Fable Fredk	New York Telephone Company
	Hughes Eugene F	New York Telephone Company
	HUGHES EUGENE F	New York Telephone
	FABLE FREDK	New York Telephone
1949	Heller Theo M MD	New York Telephone Company

8832 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	BILLY TRUONG	Cole Information Services
	HIEU HUYNH	Cole Information Services
2014	PHUOC HUYNH	Cole Information Services
	TRUONG THUTHAO	Cole Information Services
2009	TINA TRUONG	Cole Information Services
2005	H Tnuong Thu Thao	Hill-Donnelly Corporation
2004	HOA HUYNH	Cole Information Services

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2004	THU TROUNG	Cole Information Services
	THUTHAO TRUONG	Cole Information Services
2000	3FL JOSEPH FARELLO	Cole Information Services
	JOSEPH FARELLO	Cole Information Services
	C FARELLO	Cole Information Services
	APARTMENTS	Cole Information Services
1997	FARELLO C	NYNEX
	FARELLO Jos	NYNEX
1994	FARELLO, LISA A	Cole Information Services
	FARELLO, JOS	Cole Information Services
1992	FARELLO LISA A	NYNEX Informantion Resource Co.
	FARELLO JOS	NYNEX Informantion Resource Co.
1985	FARELLO LISA A	NYNEX Information Resources Company
	BROSNAN KATHLEEN	NYNEX Information Resources Company
1976	FARELLO JOS	New York Telephone
1973	Farello Jos	New York Telephone
1970	Farello Jos	New York Telephone
	Estela Gilbert P	New York Telephone
1965	Farello Jos	New York Telephone
1960	SUAREZ PETRA	New York Telephone
	IACONO JOHN	New York Telephone
	Suarez Petra	New York Telephone Company
	Iacono John	New York Telephone Company
1949	Suarez Petra	New York Telephone Company
	Charlop Jos	New York Telephone Company

8833 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	GEORGINA ADAMO	Cole Information Services
2014	GEORGINA ADAMO	Cole Information Services
	ROSE FAZIO	Cole Information Services
2009	ROSE FAZIO	Cole Information Services
	GEORGINA ADAMO	Cole Information Services
	M JALAZO	Cole Information Services
2005	h Fazio Rose	Hill-Donnelly Corporation
2004	ROSE FAZIO	Cole Information Services
	M JALAZO	Cole Information Services
1999	OCCUPANT UNKNOWN	Cole Information Services
1992	VITOLO VINCENT J	NYNEX Informantion Resource Co.

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1973	Luciani Julia	New York Telephone
1970	Luciani Richd J	New York Telephone
	Luciani Julia	New York Telephone
1965	Jalazo Martin	New York Telephone
1960	MISKELL FRANK J	New York Telephone
	JALAZO MARTIN	New York Telephone
	Miskell Frank J	New York Telephone Company
	Jalazo Martin	New York Telephone Company
1949	Schuman Rudy	New York Telephone Company
	Jalazo Martin	New York Telephone Company

8834 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	MICHAEL PERROTTA	Cole Information Services
2014	S CATANZARO	Cole Information Services
	MICHAEL PERROTTA	Cole Information Services
2009	S CATANZARO	Cole Information Services
	MICHAEL PERROTTA	Cole Information Services
2005	No Current Listing	Hill-Donnelly Corporation
2004	GLORIA TOLVE	Cole Information Services
	MICHAEL PERROTTA	Cole Information Services
2000	A JET	Cole Information Services
1997	JET A	NYNEX
1985	COOPERSMITH MOE & JOE	NYNEX Information Resources Company
	TURZILLI ROBERT	NYNEX Information Resources Company
1976	COOPERSMITH MOE	New York Telephone
	TURZILLI ROBERT	New York Telephone
1973	Coppersmith Moe	New York Telephone
	Turzilli Robert	New York Telephone
1970	Coopersmith Moe	New York Telephone
1965	Coopersmith Moe	New York Telephone
	Kwasniewski Louis L	New York Telephone
1960	COOPERSMITH MOE	New York Telephone
	Coopersmith Moe	New York Telephone Company
1949	Albuquerque Jos	New York Telephone Company
	Levy Harvey	New York Telephone Company

FINDINGS

8835 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1973	Leviness S	New York Telephone

8837 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	VIRGINIA HLINKO-ARIAS	Cole Information Services
	ARMAN AZARANI	Cole Information Services
	TANYA AZARANI	Cole Information Services
	EMIL FRANK	Cole Information Services
	ANNA LIKHTEN	Cole Information Services
2014	AZARANI KHALIL	Cole Information Services
	VIRGINIA HLINKO-ARIAS	Cole Information Services
	ARMAN AZARANI	Cole Information Services
2009	CHARLES HLINKO	Cole Information Services
2005	Hilnko Charles	Hill-Donnelly Corporation
2004	CHARLES HLINKO	Cole Information Services
2000	REGINA BERGER	Cole Information Services
	TROY BALATTI	Cole Information Services
1997	BERGER David	NYNEX
1994	BERGER, DAVID	Cole Information Services
1992	BERGER DAVID	NYNEX Informantion Resource Co.
1985	BERGER DAVID	NYNEX Information Resources Company
1976	BERGER HARVEY	New York Telephone
1973	Berger David	New York Telephone
1970	Berger David	New York Telephone
1965	Cordero Jos A	New York Telephone
	Berger David	New York Telephone
1960	TAFFET HERBERT H	New York Telephone
	O BRIEN FRANCIS P	New York Telephone
	OBrien Francis P	New York Telephone Company
	Taffet Herbert H	New York Telephone Company

8838 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	BOON LEE	Cole Information Services
2014	LEE KIN	Cole Information Services
	KAM LEE	Cole Information Services
	LEE BOON	Cole Information Services
2009	GEORGE LEE	Cole Information Services

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	Lee George Ka Yau	Hill-Donnelly Corporation
	Lee Kam On	Hill-Donnelly Corporation
2004	GEORGE LEE	Cole Information Services
	GLOBAL DISTRICUTION ENTRPRS CORP	Cole Information Services
2000	GEORGE K LEE	Cole Information Services
1994	LEE, GEORGE KA-YAU	Cole Information Services
1992	CAFARO JOSEPH	NYNEX Informantion Resource Co.
1985	CAFARO JOSEPH	NYNEX Information Resources Company
1976	CAFARO JOSEPH	New York Telephone
1970	Merone Donald	New York Telephone
1965	Merone Donald	New York Telephone
1949	Brumberg Wm	New York Telephone Company
	Rosenfeld Mollie	New York Telephone Company

8839 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	SANTA CATARELLI	Cole Information Services
	KRISTINE CLAPHAN-CATARELLI	Cole Information Services
2014	KRISTINE CLAPHAN	Cole Information Services
2005	No Current Listing	Hill-Donnelly Corporation
2000	EUSTACHIO N COSMO	Cole Information Services
1997	COSMO Eustachio N	NYNEX
1994	COSMO, EUSTACHIO N	Cole Information Services
1992	COSMO EUSTACHIO N	NYNEX Informantion Resource Co.
1985	COSMO EUSTACHIO N	NYNEX Information Resources Company
1976	LIOTTA COILEEN	New York Telephone
	COSINO YVONNE	New York Telephone
	COSMO EUSTACHIO N	New York Telephone
1973	Cosmo Eustachio N	New York Telephone
1970	Cosmo Eustachio N	New York Telephone
1965	Cosmo Eustachio N	New York Telephone
1960	COSMO EUSTACHIO N	New York Telephone
	BRUNO MARIO	New York Telephone
	Cosmo Eustachio N	New York Telephone Company
	Bruno Mario	New York Telephone Company
1949	Cosmo Eustachio N	New York Telephone Company

FINDINGS

8840 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	RAYMOND HUO	Cole Information Services
2014	RAYMOND HUO	Cole Information Services
2005	Hin HNo	Hill-Donnelly Corporation
	Huo Raymond AO	Hill-Donnelly Corporation
2004	ZHEN ZHU	Cole Information Services
	SANDI NOOL	Cole Information Services
	CHI CHOW	Cole Information Services
	SIM TIN	Cole Information Services
1999	OCCUPANT UNKNOWN	Cole Information Services
1997	DORIA Victor	NYNEX
1994	TORRES, EDISON	Cole Information Services
1985	MARINO JACK	NYNEX Information Resources Company
1976	LOMBARDO T	New York Telephone
	MARINO JACK	New York Telephone
1973	Lombardo T	New York Telephone
	Marino Jack	New York Telephone
1970	Lombardo T	New York Telephone
	Marino Jack	New York Telephone
1965	Gill Jas	New York Telephone
	Marino Jack	New York Telephone
1960	MARINO JACK	New York Telephone
	Marino Jack	New York Telephone Company
	Quadrino Emil A Jr	New York Telephone Company
	QUADRINO EMIL A JR	New York Telephone

8841 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	RAMONA MIELE	Cole Information Services
	VINCENT SAMPIERI	Cole Information Services
2014	RAMONA MIELE	Cole Information Services
	JEFFREY LEVINE	Cole Information Services
2009	JEFFREY LEVINE	Cole Information Services
	RAMONA MIELE	Cole Information Services
2005	Na	Hill-Donnelly Corporation
2004	SALVATORE CAMMALLERE	Cole Information Services
2000	BRUNILDA PRIFTL	Cole Information Services
1980	GNOZA CONWAY R	New York Telephone
	MIELE MICHAEL	New York Telephone

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1976	BREDER JAMES	New York Telephone
1970	Ratner Harry	New York Telephone
1965	Czubakowski Theo J	New York Telephone
	Ratner Harry	New York Telephone
1960	RATNER HARRY	New York Telephone
	SPERO ANTHONY	New York Telephone
	Ratner Harry	New York Telephone Company
	Spero Anthony	New York Telephone Company
1949	Ratner Jos B	New York Telephone Company

8842 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	KATHY CHANG	Cole Information Services
	RICHARD LIU	Cole Information Services
2014	KATHY CHANG	Cole Information Services
	RICHARD LIU	Cole Information Services
	LI YI	Cole Information Services
	LIU LIYI	Cole Information Services
2009	LIU LIYI	Cole Information Services
	ZHONG LIU	Cole Information Services
2005	H Uu Zhong Uang	Hill-Donnelly Corporation
2004	ZHONG LIU	Cole Information Services
	LIU LIYI	Cole Information Services
2000	GUO L BI	Cole Information Services
	ZHONG L LIU	Cole Information Services
1997	GOLDSTEIN Herbert W	NYNEX
	IBRAHIM Eileen	NYNEX
1994	GOLDSTEIN, HERBERT W	Cole Information Services
1992	GOLDSTEIN HERBERT W	NYNEX Informantion Resource Co.
1985	GOLDSTEIN HERBERT W	NYNEX Information Resources Company
1980	GOLDSTEIN HERBERT W	New York Telephone
1976	GOLDSTEIN HERBERT W	New York Telephone
1973	Arrabito M	New York Telephone
	Goldstein Herbert W	New York Telephone
1970	Goldstein Herbert W	New York Telephone
	Goldstein Leonard A	New York Telephone
	Pasquale John J	New York Telephone
1965	Goldstein Herbert W	New York Telephone
	Werner Michl	New York Telephone

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1960	GOLDSTEIN HERBERT W	New York Telephone
	HOWLEY RAYMOND	New York Telephone
	Goldstein Herbert W	New York Telephone Company
	Howley Raymond	New York Telephone Company
1949	North Amer Agencies	New York Telephone Company

8843 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	RICHARD LIBERTO	Cole Information Services
2014	RICHARD LIBERTO	Cole Information Services
2009	RICHARD LIBERTO	Cole Information Services
2005	H Uberto Richard	Hill-Donnelly Corporation
2004	RICHARD LIBERTO	Cole Information Services
2000	RICHARD LIBERTO	Cole Information Services
1997	LIBERTO Richard	NYNEX
	LIBERTO Catherine	NYNEX
1994	LIBERTO, RICHARD	Cole Information Services
1992	LIBERTO RICHARD	NYNEX Informantion Resource Co.
1985	LIBERTO RICHARD	NYNEX Information Resources Company
1976	PIAZZA J P	New York Telephone
1973	Piazza Pat Jr	New York Telephone
1970	Piazza Pat Jr	New York Telephone
1965	Piazza Pat Jr	New York Telephone
1960	WEINER SANFORD	New York Telephone
	Weiner Sanford	New York Telephone Company
	Piazza J P	New York Telephone Company
	PIAZZA J P	New York Telephone
1949	Schepisi Victor P	New York Telephone Company

8844 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	TAM UNG	Cole Information Services
	LUU CHAU	Cole Information Services
	FRANK COWLEY	Cole Information Services
	YESENIA SALDIVAR	Cole Information Services
2014	BRIAN CHAU	Cole Information Services
	TAM UNG	Cole Information Services
	P LINH	Cole Information Services
2009	ESSAID AHBICH	Cole Information Services

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2009	P LINH	Cole Information Services
2005	No Current Listing	Hill-Donnelly Corporation
2004	ROBERT SWIFT	Cole Information Services
1976	ROGOZINSKI EDWARD	New York Telephone
1973	Kugler Bernard	New York Telephone
1970	Solins Murray E	New York Telephone
1965	Solino Murray E	New York Telephone
1960	VOGEL HERMAN	New York Telephone
	SOLINS MURRAY E	New York Telephone
	Vogel Herman	New York Telephone Company
	Solins Murray E	New York Telephone Company
1949	Gerard Bernard H	New York Telephone Company

8845 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	CHARLOTTE JACOBS	Cole Information Services
2014	CHARLOTTE JACOBS	Cole Information Services
2009	CHARLOTTE JACOBS	Cole Information Services
2005	Jacobs C	Hill-Donnelly Corporation
2004	CHARLOTTE JACOBS	Cole Information Services
2000	C JACOBS	Cole Information Services
1997	Criers Federal Credit Union	NYNEX
	JACOBS C	NYNEX
1994	JACOBS, HARRY	Cole Information Services
1992	JACOBS HARRY	NYNEX Informantion Resource Co.
1985	JACOBS HARRY	NYNEX Information Resources Company
1976	JACOBS HARRY ELEC CORP	New York Telephone
1973	Jacobs Harry Elec Corp	New York Telephone
1970	Jacobs Harry Elec Corp	New York Telephone
1965	Jacobs Harry Elec Corp	New York Telephone
1960	Jacobs Harry	New York Telephone Company
	JACOBS HARRY	New York Telephone

8846 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	DANIEL GONG	Cole Information Services
	TAMMY SAK	Cole Information Services
2014	DANIEL GONG	Cole Information Services
	A MANSOOR	Cole Information Services

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2009	A MANSOOR	Cole Information Services
2005	HAAlameda J P	Hill-Donnelly Corporation
2004	JOSEPH ALAMEDA	Cole Information Services
1985	TULLO MICHAEL	NYNEX Information Resources Company
	TULLO MICHL	NYNEX Information Resources Company
1980	TULLO MICHL	New York Telephone
1976	TULLO MICH I	New York Telephone
1970	Tullo Michl	New York Telephone
1965	Mantell Rose	New York Telephone
1960	MANTELL JOS	New York Telephone
	Mantell Jos	New York Telephone Company
1949	Fingerman Paul	New York Telephone Company

8847 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	YEVSEY SKULKLEPER	Cole Information Services
	GALINA SHULKLEPER	Cole Information Services
2014	SHULKLEPER YEVSEY	Cole Information Services
	YEVSEY SKULKLEPER	Cole Information Services
2009	GALINA SHULKLEPER	Cole Information Services
	SHULKLEPER YEVSEY	Cole Information Services
2005	H Cirello B F o	Hill-Donnelly Corporation
	H Shulkleper GA	Hill-Donnelly Corporation
2004	JOSEPH CIRELLO	Cole Information Services
2000	B CIRELLO	Cole Information Services
	JOSEPH CIRELLO	Cole Information Services
1997	CIRLLO B	NYNEX
1994	CIRELLO, JOSEPH	Cole Information Services
	BLANDO, ANTHONY	Cole Information Services
1992	BLANDO ANTHONY	NYNEX Informantion Resource Co.
1985	BLANDO ANTHONY	NYNEX Information Resources Company
1976	BLANDO ANTHONY	New York Telephone
1973	Blando Anthony	New York Telephone
1970	Blando Anthony	New York Telephone
1965	Blando Anthony	New York Telephone
1960	CASTIGLIONE VITO	New York Telephone
	BLANDO ANTHONY	New York Telephone
	Castiglione Vito	New York Telephone Company
	Blando Anthony	New York Telephone Company

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1949	Blando Jas	New York Telephone Company

8848 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	YAT WONG	Cole Information Services
2014	CHIU YAT	Cole Information Services
	DAVID WONG	Cole Information Services
2009	YAT WONG	Cole Information Services
2005	H Wong Yat Chiu	Hill-Donnelly Corporation
2004	YAT WONG	Cole Information Services
2000	YAT C WONG	Cole Information Services
1997	WONG Yat Chiu	NYNEX
1994	WONG, YAT CHIU	Cole Information Services
1965	Ominelli Louis	New York Telephone
1949	Mayerson Jack A	New York Telephone Company

8849 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	HVayner A	Hill-Donnelly Corporation
2000	PAUL STARTI	Cole Information Services
	JOSEPH DISTEFANO	Cole Information Services
1992	MAIER LARRY M	NYNEX Informantion Resource Co.
	MAIER SHERRY L	NYNEX Informantion Resource Co.
1985	MAIER LARRY M	NYNEX Information Resources Company
	MAIER SHERRY L	NYNEX Information Resources Company
1976	MAIER LARRY M	New York Telephone
	MAIER SHERRY L	New York Telephone
1973	Maier Larry M	New York Telephone
	Maier Sherry L	New York Telephone
1970	Maier Denise	New York Telephone
	Maier Larry M	New York Telephone
	Maier Sherry L	New York Telephone
1965	Maier Denise	New York Telephone
	Maier Larry M	New York Telephone
	Maier Sherry L	New York Telephone
1960	MAIER LARRY M	New York Telephone
	Maier Larry M	New York Telephone Company
1949	Arbetman Max	New York Telephone Company

FINDINGS

8850 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	H Spinelli Angelo Mrs	Hill-Donnelly Corporation
2000	ANGELO SPINELLS	Cole Information Services
1992	SPINELLI ANGELO MRS	NYNEX Informantion Resource Co.
1985	SPINELLI ANGELO MRS	NYNEX Information Resources Company
1980	GAMBINO ANTHONY	New York Telephone
1976	GAMBINO ANTHONY	New York Telephone
1973	Gambino Anthony	New York Telephone
1970	Gambino Anthony	New York Telephone
1965	Gambino Anthony	New York Telephone
1960	Gambino Anthony	New York Telephone Company
	GAMBINO ANTHONY	New York Telephone

8851 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	H Tong Wing Chun	Hill-Donnelly Corporation
2000	WING C TONG	Cole Information Services
1992	PARADISO J	NYNEX Informantion Resource Co.
1980	GARFINKEL JULIUS	New York Telephone
	GARFINKEL JULIUS	New York Telephone
1976	GARFINKEL JULIUS	New York Telephone
1973	Garfinkel Julius	New York Telephone
1970	Garfinkel Julius	New York Telephone
1965	Garfinkel Donna M	New York Telephone
	Garfinkel Julius	New York Telephone
	Garfinkel Marilyn L	New York Telephone
1960	GARFINKEL JULIUS	New York Telephone
	Garfinkel Julius	New York Telephone Company
1949	Garfinkel Julius	New York Telephone Company

8852 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	n Reisman S	Hill-Donnelly Corporation
2000	S REISMAN	Cole Information Services
1997	REISMAN S	NYNEX
1992	REISMAN S	NYNEX Informantion Resource Co.
1985	REISMAN S	NYNEX Information Resources Company
1976	CATALANO FRANK J	New York Telephone
1973	Di Blasi Vincent T	New York Telephone

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	Di Blasi Vincent T	New York Telephone
1965	Di Blasi Vincent T	New York Telephone
1960	DI BLASI VINCENT T	New York Telephone
	Di Blasi Vincent T	New York Telephone Company
1949	Di Blasi Vincent T	New York Telephone Company
	Eisenberg Isidor	New York Telephone Company

8853 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	8854 NCL	Hill-Donnelly Corporation
2000	FRANK NATALE	Cole Information Services
1997	NATALE Frank	NYNEX
1992	NATALE FRANK	NYNEX Informantion Resource Co.
1976	PIZZONIA MARIE MRS	New York Telephone
1973	Pizzonia Marie Mrs	New York Telephone
1970	Pizzonia J	New York Telephone
	Pizzonia Marie Mrs	New York Telephone
1965	Demonte Donato	New York Telephone
	Pizzonia Marie Mrs	New York Telephone
1960	GARFINKEL MOLLY	New York Telephone
	PIZZONIA MARIE MRS	New York Telephone
	Garfinkel Molly	New York Telephone Company
	Pizzonia Marie Mrs	New York Telephone Company
1949	Kardon Saml B	New York Telephone Company
	Stander Frank	New York Telephone Company

8854 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	TRINGALI CARL	New York Telephone
1976	TRINGALI CARL	New York Telephone
1973	Tringali Car L	New York Telephone
1970	Tringali Carl	New York Telephone
1965	Cappellini John L	New York Telephone
	Tringali Carl	New York Telephone
1960	Cappellini John L	New York Telephone Company
	CAPPELLINI JOHN L	New York Telephone
1949	Goodman Harold L	New York Telephone Company

FINDINGS

8855 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	HGargano F W	Hill-Donnelly Corporation
1997	SPIEGELBERG Anne	NYNEX
1976	BERBENICH ARTHUR	New York Telephone
1970	Caporale Angela	New York Telephone
1965	Caporale Angela	New York Telephone
1960	Caporale Angela	New York Telephone Company
	CAPORALE ANGELA	New York Telephone

8856 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	No Current Listing	Hill-Donnelly Corporation
2000	MEL E DLUGASH	Cole Information Services
	MEL E DLUGASH	Cole Information Services
1997	DLUGASH Mel E	NYNEX
	DLUGASH Mel E	NYNEX
1992	DLUGASH JACK L	NYNEX Informantion Resource Co.
1985	DLUGASH JACK L	NYNEX Information Resources Company
1976	DLUGASHI JACK L	New York Telephone
1973	Diugash Jack L	New York Telephone
1970	Diugash Jack L	New York Telephone
1965	Diugash Jack L	New York Telephone
1960	DLUGASH JACK L CPA	New York Telephone
	DOUGLAS ENTERPRISES	New York Telephone
	Diugash Jack L CPA	New York Telephone Company
	DOUGLAS ENTERPRISES	New York Telephone Company
1949	Diugash Jack L	New York Telephone Company
	Gutterman Wm	New York Telephone Company

8859 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	Baeza Gregory	Hill-Donnelly Corporation
2000	J VOLK	Cole Information Services
1997	VOLK J	NYNEX
1992	VOLK J	NYNEX Informantion Resource Co.
1985	VOLK J	NYNEX Information Resources Company
1973	Volk Julius N	New York Telephone
1970	Volk Julius N	New York Telephone
1965	Volk Julius N	New York Telephone

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1960	VOLK JULIUS N	New York Telephone
	Volk Julius N	New York Telephone Company
1949	Residence	New York Telephone Company
	Hendler Julius L DDS ofc	New York Telephone Company

8861 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	h Magliulo Frank	Hill-Donnelly Corporation
2000	FRANK MAGLIULO	Cole Information Services
1997	MAGLIULO Frank	NYNEX
1992	BRUNO JOSEPH	NYNEX Informantion Resource Co.
	MAGLIULO FRANK	NYNEX Informantion Resource Co.
1985	BRUNO JOSEPH	NYNEX Information Resources Company
	MAGLIULO FRANK	NYNEX Information Resources Company
	MAGLIULO L	NYNEX Information Resources Company
1980	BALDACHINO J	New York Telephone
1976	BALDACHINO J	New York Telephone
	MAGLIULO FRANK	New York Telephone
1973	Magliulo Frank	New York Telephone
	Savona Concetta	New York Telephone
1970	Magliulo Frank	New York Telephone
	Scalogna Neil R	New York Telephone
1965	Gravante Elinor R Mrs	New York Telephone
1960	GRAVANTE ELINOR R MRS	New York Telephone
	IORIO JOS A	New York Telephone
	RACKAUSKAS F MRS	New York Telephone
	Gravante Elinor R Mrs	New York Telephone Company
	lorio Jos A	New York Telephone Company
	Rackauskas F Mrs	New York Telephone Company
1949	De Mario Wm	New York Telephone Company
	Glauberg Martin E	New York Telephone Company

BAY 19TH ST

236 BAY 19TH ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1997	RIZZO Kevin	NYNEX

FINDINGS

CROPSE AVE

1785 CROPSE AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	RABEN SVCE CENTER INC	NYNEX Informantion Resource Co.

CROPSEY AVE

1781 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1997	Raben Svce Center Inc	NYNEX
1934	WESNER EMMA H	R. L. Polk & Co.

1785 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	BRUCE SUPPLY CORP	Cole Information Services
2014	RABEN SERVICE CENTER INC	Cole Information Services
	BRUCE SUPPLY CORPORATION	Cole Information Services
2005	Raben Service Ctr Inc I	Hill-Donnelly Corporation
2004	STEVE BENHANANIA	Cole Information Services
2000	RABEN SVCE CTR INC	Cole Information Services
1999	RABEN SVCE CENTER INCORPORATED	Cole Information Services
1997	Raben Svce Center Inc	NYNEX
1994	RABEN SVCE CENTER INC	Cole Information Services
1992	RABEN SVCE CENTER INC	NYNEX Informantion Resource Co.
1985	RABEN SVCE CENTER INC	NYNEX Information Resources Company
	RABEN SVCE CENTER INC	NYNEX Information Resources Company
1976	RABEN SVCE CENTER INC	New York Telephone
1973	Raben Svae Center Inc	New York Telephone
1965	Cropsey Shell	New York Telephone
1960	Ben & Herman Servicenter	New York Telephone Company
	Hanks Servicenter	New York Telephone Company

1787 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1934	SARRO ALFONSO LAB R	R. L. Polk & Co.

1798 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1934	TWENTIETH AVENUE SEVICE STATION	R. L. Polk & Co.

FINDINGS

1801 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	ULTRA AUTO INC	Cole Information Services
2014	ULTRA AUTOMOBILE INCORPORATED	Cole Information Services
	VILLA MOTORS	Cole Information Services
2009	B LINE AUTO SALES INC	Cole Information Services
2005	B Line	Hill-Donnelly Corporation
2004	B LINE AUTO SALES INC	Cole Information Services
	OCCUPANT UNKNOWN	Cole Information Services
2000	FORTWAY AT DLR RPR	Cole Information Services
	THE CAR PLACE	Cole Information Services
1999	CAR PLACE THE	Cole Information Services
	FORTWAY AUTO DEALER REPR INCORPORATED	Cole Information Services
1997	Dynasty Auto Sales	NYNEX
1994	DYNASTY AUTO SALES	Cole Information Services
1992	DYKER AUTO SALES INC	NYNEX Informantion Resource Co.
1965	Bruno Svce Sta	New York Telephone
	Brunos Svce Sta	New York Telephone
1960	Brunos Svce Sta	New York Telephone Company
1949	MERCER MOTORS INC sales & svce Service	New York Telephone Company New York Telephone Company
1945	Lafayette Garage Inc	New York Telephone
1934	SILVER IRVING PRES SILBRO GARAGE INC R	R. L. Polk & Co.
	SILBRO GARAGE INC IRVING SILVER PRES JACOB BROWER SEC-TREAS GARAGR	R. L. Polk & Co.

1811 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1949	Brownie Motors Inc	New York Telephone Company

1812 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1997	ASLAM Tanveer	NYNEX
1965	King Cleaners	New York Telephone
1960	King Cleaners	New York Telephone Company

1814 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	FILM HOLDERS LTD	New York Telephone

FINDINGS

1816 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	CLOVERDALE TRANSPORTATION SVC	NYNEX Informantion Resource Co.
	CLOVERDALE TWO-WAY RADIO TAXI ASSN INC	NYNEX Informantion Resource Co.
1960	Willabe Food Corp	New York Telephone Company

1817 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1934	ROTH JACK AUTOMOBILE SERVICE INC JACK ROTH PRES-TREAS LESTER GROVES SEC	R. L. Polk & Co.

1819 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	A LOCKSMITH	Cole Information Services
	BAY RIDGE SUBARU	Cole Information Services
2014	BAY RIDGE SUBARU	Cole Information Services
2009	BELTWAY LEASING LIMITED	Cole Information Services
	BAYRIDGE SUBARU SUZUKI	Cole Information Services
	RSTR MOTORS INC	Cole Information Services
	BELTWAY BUICK SUBARU	Cole Information Services
2005	Beltway	Hill-Donnelly Corporation
	Beltway Leasing i s 718 256 3 996 o	Hill-Donnelly Corporation
	Beltway Subaru	Hill-Donnelly Corporation
2004	WALDORF AUTO LSNG OF NEW YORK INC	Cole Information Services
	OCCUPANT UNKNOWN	Cole Information Services
	BELTWAY BUICK INC	Cole Information Services
2000	IDEA BROKERAGE INC	Cole Information Services
	WALDORF AT NY INC	Cole Information Services
	BELTWAY BUICK	Cole Information Services
	BELTWAY BUICK INC	Cole Information Services
	BELTWAY BUICK SBR	Cole Information Services
	BELTWAY BUICK SBR	Cole Information Services
	BELTWAY LEASE LTD	Cole Information Services
	BELTWAY SUBARU	Cole Information Services
1999	BELTWAY BUICK SUBARU	Cole Information Services
	BELTWAY BUICK	Cole Information Services
	BELTWAY BUICK SUBARU SERVICE DEPARTMENT	Cole Information Services
	BELTWAY SUBARU	Cole Information Services

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1999	IDEA BROKERAGE INCORPORATED	Cole Information Services
	BELTWAY LEASING LIMITED	Cole Information Services
	BELTWAY BUICK SUBARU PARTS DEPARTMENT	Cole Information Services
1997	Beltway Buick Inc parts dept	NYNEX
	Beltway Buick Subaru	NYNEX
	Parts Dept	NYNEX
	Beltway Buick Subaru	NYNEX
	Service Dept	NYNEX
1994	BELTWAY BUICK-SUBARU-SERVICE DEPT	Cole Information Services
	BELTWAY BUICK INC, PARTS DEPT	Cole Information Services
	BELTWAY BUICK-SUBARU-PARTS DEPT	Cole Information Services
1992	BARON BUICK INC PARTS DEPARTMENT	NYNEX Informantion Resource Co.
	BARON BUICK INC SERVICE DEPT	NYNEX Informantion Resource Co.
	BELTWAY BUICK INC PARTS DEPT	NYNEX Informantion Resource Co.
	BELTWAY BUICK INC SERVICE DEPT	NYNEX Informantion Resource Co.
1985	BARON BUICK INC	NYNEX Information Resources Company
	BARON BUICK INC PARTS DEPARTMENT	NYNEX Information Resources Company
	BARON BUICK INC SVCE DEPARTMENT	NYNEX Information Resources Company
1976	MERCER MOTORS INC SALES	New York Telephone
1973	Parts And Svce	New York Telephone
	Mercer Motors Inc sales	New York Telephone
1970	Parts and Svce	New York Telephone
	Mercer Motors Inc sales	New York Telephone
1965	Svce	New York Telephone
	Mercer Motors Inc sales & svce	New York Telephone
1960	Svce	New York Telephone Company
	Mercer Motors Inc sales & svce	New York Telephone Company
1949	ALBEE MOTORS INC svce	New York Telephone Company
1945	Adler Louis new & used cars	New York Telephone
	Albee Motors Inc	New York Telephone

1820 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	BAYSIDE FUEL	Cole Information Services
2009	PETRO INC	Cole Information Services

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	Petro	Hill-Donnelly Corporation
	Petro	Hill-Donnelly Corporation
2004	STEPHEN LOMBARDO	Cole Information Services
	SAVINO OIL & HEATING	Cole Information Services
1985	DYNOL FUEL CO	NYNEX Information Resources Company
	BAYSIDE FUEL OIL CORP	NYNEX Information Resources Company
1973	Bayside Fuel Oil Corp	New York Telephone
	Bayside Fuel Oil Corp	New York Telephone
1965	Moon Truck Rentng Corp	New York Telephone
	GMC Cropsey Auto Sales	New York Telephone
	CROPSEY GMC TRUCKS	New York Telephone
	Cropsey Auto Sales & Svce Corp	New York Telephone

1821 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1949	MERCER MOTORS INC sales & svce	New York Telephone Company
	Service station	New York Telephone Company

1823 CROPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1960	Mercer Motors Inc sales & svce	New York Telephone Company
	Svce Sta	New York Telephone Company

CROPSOY AVE

1820 CROPSOY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1976	BAYSIDE FUEL OIL CORP	New York Telephone

CROPSY AVE

1785 CROPSY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1976	RABES SVCE CENTER INC	New York Telephone

CRPSY AVE

1785 CRPSY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	Cropsey Shell	New York Telephone

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1960	BEN & HERMAN SERVICENTER	New York Telephone
	HANK S SERVICENTER	New York Telephone

1801 CRPSY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1976	BRUNO S SVCE STA	New York Telephone
1970	Brunos Svce Sta	New York Telephone
	Brunos Svce Sta	New York Telephone
1960	BRUNOS SVCE STA	New York Telephone
1940	Shore View Garage	New York Telephone

1812 CRPSY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1976	KING CLEANERS	New York Telephone
1970	King Cleaners	New York Telephone
1960	KING CLEANERS	New York Telephone

1814 CRPSY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1976	LEIBOW MURRAY FOOTWEAR CO	New York Telephone
1970	Leibow Murray Footwear Co	New York Telephone

1816 CRPSY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1960	WILLABE FOOD CORP	New York Telephone

1817 CRPSY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1940	Gasoline Alley Auto Repr	New York Telephone
	Hurwitz Saml auto reprs	New York Telephone
	Horwitz Saml auto reprs	New York Telephone

1819 CRPSY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1960	MERCER MOTORS INC SALES & SVCE	New York Telephone
1940	Albee Motors Inc	New York Telephone
	Svce	New York Telephone

1820 CRPSY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	CROPSEY AUTO SALES & SVCE CRP	New York Telephone

FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	GMC Cropsey Auto Sales	New York Telephone
	CROPSEY GMC TRUCKS	New York Telephone
	Moon Truck Rentng Corp	New York Telephone

1823 CRPSY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1960	MERCER MOTORS INC SALES & SVCE	New York Telephone

CRUPSEY AVE

1801 CRUPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1973	Brunos Svce Sta	New York Telephone

1812 CRUPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1973	King Cleaners	New York Telephone

1814 CRUPSEY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1973	Leibow Marray Footwear Co	New York Telephone

E 18TH AVE

8854 E 18TH AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1960	TRINGALI CARL	New York Telephone
	Tringali Carl	New York Telephone Company

FINDINGS

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

<u>Address Researched</u>	<u>Address Not Identified in Research Source</u>
1781 CROPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1928
1785 CROPSE AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1785 CROPSEY AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1970, 1949, 1945, 1940, 1934, 1928
1785 CROPSEY AVE	2009, 2005, 2000, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1785 CROPSY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1785 CRPSY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1965, 1949, 1945, 1940, 1934, 1928
1787 CROPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1928
1798 CROPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1928
1801 CROPSEY AVE	2017, 2014, 2009, 2004, 1999, 1994, 1985, 1980, 1976, 1973, 1970, 1940, 1928
1801 CROPSEY AVE	2005, 2000, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1801 CRPSY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1973, 1965, 1949, 1945, 1934, 1928
1801 CRUPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1811 CROPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1945, 1940, 1934, 1928
1812 CROPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1949, 1945, 1940, 1934, 1928
1812 CRPSY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1973, 1965, 1949, 1945, 1940, 1934, 1928
1812 CRUPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1814 CROPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1814 CRPSY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1973, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1814 CRUPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1816 CROPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1985, 1980, 1976, 1973, 1970, 1965, 1949, 1945, 1940, 1934, 1928
1816 CRPSY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1949, 1945, 1940, 1934, 1928

FINDINGS

Address Researched

Address Not Identified in Research Source

1817 CROPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1928
1817 CRPSY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1934, 1928
1819 CROPSEY AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1940, 1934, 1928
1819 CROPSEY AVE	2005, 2000, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1819 CRPSY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1949, 1945, 1934, 1928
1820 CROPSEY AVE	2017, 2014, 2009, 2004, 2000, 1999, 1997, 1994, 1992, 1980, 1976, 1970, 1960, 1949, 1945, 1940, 1934, 1928
1820 CROPSEY AVE	2014, 2005, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1820 CROPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1820 CRPSY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1965, 1960, 1949, 1945, 1940, 1934, 1928
1821 CROPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1945, 1940, 1934, 1928
1823 CROPSEY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1949, 1945, 1940, 1934, 1928
1823 CRPSY AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1949, 1945, 1940, 1934, 1928
236 BAY 19TH ST	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8813 18TH	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934
8815 18TH AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1965, 1960, 1949, 1945, 1940, 1928
8817 18TH AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1960, 1949, 1945, 1940, 1934, 1928
8818 18TH AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1928
8819 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8819 18TH AVE	2017, 2009, 2005, 2004, 2000, 1999, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8821 18TH AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1928
8825 18TH AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1970, 1949, 1945, 1940, 1934, 1928
8831 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1945, 1940, 1934, 1928
8831 18TH AVE	2005, 2000, 1999, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8832 18TH AVE	2005, 2000, 1999, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8832 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1945, 1940, 1934, 1928

FINDINGS

Address Researched

Address Not Identified in Research Source

8833 18TH AVE	2017, 2014, 2009, 2004, 2000, 1999, 1997, 1994, 1985, 1980, 1976, 1945, 1940, 1934, 1928
8833 18TH AVE	2005, 2000, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8834 18TH AVE	2005, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8834 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1992, 1980, 1945, 1940, 1934, 1928
8835 18TH AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8837 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1949, 1945, 1940, 1934, 1928
8837 18TH AVE	2005, 2000, 1999, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8838 18TH AVE	2005, 2000, 1999, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8838 18TH AVE	2017, 2014, 2009, 2004, 1999, 1997, 1994, 1980, 1973, 1960, 1945, 1940, 1934, 1928
8839 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1945, 1940, 1934, 1928
8839 18TH AVE	2009, 2005, 2004, 2000, 1999, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8840 18TH AVE	2009, 2005, 2000, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8840 18TH AVE	2017, 2014, 2009, 2004, 2000, 1999, 1994, 1992, 1980, 1949, 1945, 1940, 1934, 1928
8841 18TH AVE	2017, 2014, 2009, 2004, 1999, 1997, 1994, 1992, 1985, 1973, 1945, 1940, 1934, 1928
8841 18TH AVE	2005, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8842 18TH AVE	2005, 2000, 1999, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8842 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1945, 1940, 1934, 1928
8843 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1945, 1940, 1934, 1928
8843 18TH AVE	2005, 2000, 1999, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8844 18TH AVE	2005, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8844 18TH AVE	2017, 2014, 2009, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1945, 1940, 1934, 1928
8845 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1949, 1945, 1940, 1934, 1928
8845 18TH AVE	2005, 2000, 1999, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8846 18TH AVE	2005, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8846 18TH AVE	2017, 2014, 2009, 2004, 2000, 1999, 1997, 1994, 1992, 1973, 1945, 1940, 1934, 1928
8847 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1945, 1940, 1934, 1928

FINDINGS

Address Researched

Address Not Identified in Research Source

8847 18TH AVE	2005, 2000, 1999, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8848 18TH AVE	2005, 2000, 1999, 1997, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8848 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1960, 1945, 1940, 1934, 1928
8849 18TH AVE	2017, 2014, 2009, 2004, 1999, 1997, 1994, 1980, 1945, 1940, 1934, 1928
8850 18 AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8850 18TH AVE	2017, 2014, 2009, 2004, 1999, 1997, 1994, 1949, 1945, 1940, 1934, 1928
8851 18 AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1949, 1945, 1940, 1934, 1928
8851 18TH AVE	2017, 2014, 2009, 2004, 1999, 1997, 1994, 1985, 1945, 1940, 1934, 1928
8852 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1945, 1940, 1934, 1928
8853 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1985, 1980, 1945, 1940, 1934, 1928
8854 18TH AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1945, 1940, 1934, 1928
8854 E 18TH AVE	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1949, 1945, 1940, 1934, 1928
8855 18 A	2017, 2014, 2009, 2005, 2004, 2000, 1999, 1997, 1994, 1992, 1985, 1980, 1976, 1973, 1970, 1965, 1960, 1945, 1940, 1934, 1928
8855 18TH AVE	2017, 2014, 2009, 2004, 2000, 1999, 1994, 1992, 1985, 1980, 1973, 1949, 1945, 1940, 1934, 1928
8856 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1945, 1940, 1934, 1928
8859 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1980, 1976, 1945, 1940, 1934, 1928
8861 18TH AVE	2017, 2014, 2009, 2004, 1999, 1994, 1945, 1940, 1934, 1928

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched

1810 Cropsey Avenue

Address Not Identified in Research Source

2017, 1980, 1949, 1945, 1940, 1934, 1928

**PHASE I
ENVIRONMENTAL SITE ASSESSMENT**

for



**1810-1818 Cropsey Avenue,
Brooklyn, NY 11214
(Block: 6463, Lot: 137)**

September 9, 2020

EXECUTIVE SUMMARY

SITE DESCRIPTION

- The subject property is known as: 1810-1818 Cropsey Avenue (A.k.a. 232 Bay 19th Street), Brooklyn, NY 11214 also identified as (Block: 6463, Lot: 137). The subject property was documented with NYC Dept. of City Planning as having an alternate address as 1770 Cropsey Avenue, Brooklyn.
- The primary zoning for the subject property is R5 district which are mapped for the residential use, with a C1-2 commercial overlay mapped in Brooklyn, NY.
- The subject property is a rectangular shaped parcel with a lot area approximately 7,798-ft² in size and is currently developed with a one-story commercial building constructed circa 1931 with a building area of approximately 4,680-ft².
- The lot is situated south of Cropsey Avenue (A.k.a. Victor V. Allegratti Way), north of Shore Parkway, east of 18th Avenue and west of Bay 19th Street in Kings County in Brooklyn, NY.
- RSK performed a site reconnaissance on September 4, 2020; during our site reconnaissance, access gained throughout the entire building, including the cellar. The access to the roof was unavailable at the time of our inspection.

SURROUNDING LAND USE

DIRECTION	ADJOINING USE(S)	VICINITY USE(S)
North	Ultra Auto Inc – Used Car Dealership • Along Cropsey Avenue (Victor V. Allegratti Way)	Commercial
South	Attached residential buildings • Along Bay 19 th Street	Residential
East	High one-story industrial building • Corner of Cropsey Avenue & Bay 19 th Street	Industrial
West	Semi-detached residential buildings • Along 18 th Avenue	Residential

- Surrounding properties are mainly used as mixed-use residential, commercial and a few industrial properties.

SITE ACTIVITIES

- During our site reconnaissance, the subject property was identified as developed with a one-story brick and concrete building with a full cellar and a flat roof which is vacant with no activities for the past four (4) years.

MUNICIPAL RECORDS REVIEW

A review of available public records for the subject property completed are as follows:

- According to an Environmental Liens and AUL search conducted by EDR on September 3, 2020, a Deed was found for the subject property dated October 2, 2018, stating that the subject property is owned by Cropsey Golden Court LLC located at 1770 Cropsey Avenue, Brooklyn, NY 11214, and it was formerly owned by Lucia H Choi, address listed as 2932 165th Street, Flushing, NY 11358. An Affidavit of Compliance with smoke detector requirement for one- and two- family dwelling was included with the deed. No environmental liens or other AULs were documented by EDR.
- According to a Building Permit Report search conducted by EDR on September 1, 2020, a Permit no. 300401303-02-PL was found for the subject property and dated July 24, 1995. The permit was described as Plumbing for A2 – Alteration Type 2. The contractor who performed the work was Lloyd G. Drummond Plumbing & Con.
- According to a Building Permit Report search conducted by EDR on September 1, 2020, a Permit no. 300401303-02-EW-OT was found for the subject property and dated November 2, 1994. The permit was described as Other Construction Equipment for Equipment Work – A2 – Alteration Type 2. The contractor who performed the work was AD Iron Works.
- According to a Building Permit Report search conducted by EDR on September 1, 2020, a Permit no. 300401312-01-AL was found for the subject property and dated November 2, 1994. The permit was described for Alt–A3 (Alteration Type 3). The contractor who performed the work was AD Iron Works.
- According to a Building Permit Report search conducted by EDR on September 1, 2020, a Permit no. 300401303-02-EW-OT was found for the subject property and dated November 1, 1994. The permit was described as Other Construction Equipment for Equipment Work – A2 – Alteration Type 2. The contractor who performed the work was AD Iron Works.
- According to a Building Permit Report search conducted by EDR on September 1, 2020, a Permit no. K03873 was found for the subject property and dated April 16, 1984. The permit was described as Electrical. The contractor who performed the work was M. Ostroff Electric Inc.
- According to a Certificate of Occupancy #125248 and dated 1949, the subject property is in a commercial-use district, Block: 6463, Lot: 137, has a commercial occupancy classification. The cellar is listed as having an ordinary use, and the first floor is utilized as a store.
- According to the NYC Buildings website, OATH/ECB Violation No. 34116563J; DOB Violation No. 100694C13T1VW, was issued to the property, BIN 3169701 on October 6, 1994. The violation was for working without a permit. The work consisted of the demolition of fire rated ceiling and partition, in which it was stated that all work should cease, and a permit obtained prior to its continuation. in which the elevator needed an inspection to be completed. A certificate of correction was stated as accepted and found in compliance as of November 21, 1994.
- According to the NYC Buildings website, a permit application for Alteration Type 3 for Curb Cut was filed on October 28, 1994 for the subject property by K & K Engineering by Magner R Korsnes. The permit was for curb cutting on the south side of Cropsey Avenue, at the corner formed by the west side of Bay 19th Street and Cropsey Avenue. The application was approved on October 31, 1994 and signed off on August 30, 1995.

- According to the NYC Buildings website, a permit application for Alteration Type 2 for Other and Plumbing was filed on October 28, 1994 for the subject property by K & K Engineering by Magner R Korsnes. The permit was for the removal of plumbing fixtures and the rearrangement of interior partition within the building. The cost of the scope of work was \$6,000.00. The application was approved on October 31, 1994 and signed off on November 14, 1994.

SITE HISTORY

Certified Sanborn® Map Report and Aerial Photographs

In reviewing the history of the subject property, a Sanborn Map Search and Aerial Photograph Search was conducted for *1810-1818 Cropsey Avenue, Brooklyn, NY 11214*.

Sanborn Maps Findings:

YEAR	DESCRIPTION OF USE FOR <i>1810-1818 Cropsey Avenue, Brooklyn, NY 11214</i>
1895	The 1895 map depicts the subject property as an unparcelled block using the address as 119 Cropsey Avenue, which is developed with two structures (a two-story dormitory laundry and a one-story stable carriage storage) which was part of and utilized by New York Childrens Aid Society (NYCAS). Surrounding properties were lightly developed with residential and commercial usage. A coal yard (H. Henjes Coal & Wood was depicted east of the subject property.
1906	The 1906 map depicts the a one-story on the subject property extended to the north and used as a dormitory with the existing stable using the address as 1818 Cropsey Avenue which was part of and utilized by the NYCAS. Surrounding properties depicted additional developments as commercial properties.
1929	The 1929 map the building on the subject property extended south of the lot using the address as 1818 Cropsey Avenue which was still utilized as part of NYCAS. Surrounding properties were further developed with commercial and residential used properties. Three (3) gasoline filling stations with garages were depicted to the north, northeast and east of the subject property along Cropsey Avenue.
1950	The 1950 map depicted the block was divided into individual lots which were mainly used for dwellings and subject property's lot was redeveloped with a one-story brick and concrete building partitioned into three separate units as stores and used the addresses as 1810, 1812 and 1814-1818 Cropsey Avenue. Surrounding properties were further developed with residential properties (dwellings) to the west and south, and auto repair shops to the north and northeast of the subject property along Cropsey Avenue.
1968	The 1968 map did not depict any changes to the building on the subject property as compared with the 1950 map; however, the unit listed as 1812 Cropsey Avenue was utilized as a dry cleaner. <i>The former dry cleaner at the subject property is considered a REC at this time and will require a Phase-II Environmental Subsurface Investigation.</i> Surrounding properties were further developed and usage were changed.
1969-1983	The 1969-1983 maps depicted the no changes to the subject property structure or usage as compared with the 1968 map. Surrounding properties were further developed and usage were changed.
1986	The 1986 map depicted the subject property usage changed to one commercial and one manufacturing used building; no changes were made to the structure. Surrounding properties did not depict major changes as compared with the 1983 map.
1987-2007	The 1987-2007 map depicted no changes to the subject property as compared with the 1986 map. Surrounding properties did not depict major changes as compared with the 1986 map.

**Any data gaps identified herein, as defined by ASTM Practice E 1527-13 are not considered to have significantly affected the ability to identify Recognized Environmental Conditions (RECs) in connection with the subject property and do not alter the conclusions of this report.

Aerial Photographs Findings:

YEAR	OBSERVATIONS FOR <i>1810-1818 Cropsey Avenue, Brooklyn, NY 11214</i>
1924	The subject property is not identifiable in the 1924 photograph. Surrounding properties depicted as developed with residential and commercial properties.
1940	The 1940 photograph depict a small structure developed on the subject property. Surrounding properties were developed with a small structure to the west, a large two-story structure to the north, and a two-story structure to the west. The remaining surrounding properties to the south, southwest and southeast were unidentifiable.
1951-1954	The 1951-1954 photographs depict the subject property as developed with a large one-story structure which takes up half of the block along Cropsey Avenue. Surrounding properties were further developed with detached residential buildings to the west, southwest, south, and southeast. The property to the east consists of a large two-story building with a parking lot.
1961-1966	The 1961 photographs depict the subject property as unchanged from the 1954 photograph, (the storefront known as 1812 Cropsey Avenue is assumed to be utilized as a dry cleaner). Surrounding properties were further developed, with the property to the east having been further developed with the extension of the building overtaking the former parking lot. The property to the north was developed to be utilized as a filling station.
1976	The 1976 photograph is too blurry to determine if any changes occurred on the subject property. Surrounding properties were too blurry to determine if any changed occurred.
1980-1985	The 1980-1985 photographs depict the subject property as unchanged from the 1966 photograph. Surrounding properties remain unchanged.
1995	The 1995 photograph is too blurry to determine if any changes occurred on the subject property. Surrounding properties were too blurry to determine if any changed occurred.
2006-2017	The 2006-2017 photographs depict the subject property as unchanged from the 1985 photograph. Surrounding properties remain unchanged.

FUEL OIL AND GASOLINE STORAGE TANK

- At the time of inspection, RSK identified two (2) suspected fuel lines (a vent line and a remote fill line) on the most southern cellar wall within the former boiler room.
 - It was suspected at the time of inspection that the cut lines were connected to an aboveground fuel oil storage tank within the cellar.
- According to a radius search through EDR, the closest aboveground storage tank (AST) to the subject property was approximately 162-feet to the east and at a lower elevation. The closest underground storage tank (UST) to the subject property was Petro Home Services station located at 1820 Cropsey Avenue which was approximately 162-feet to the east and at a lower elevation. The site contains three active tanks, one 2,500-gallon UST and two 275-gallon ASTs. There is one listed case of a leaking tanks/spill documented for this service station.

SPILLS IDENTIFIED ON SITE

- According to a radius search through EDR the subject property was not listed as having any spills.

SPILLS IDENTIFIED ON SURROUNDING PROPERTIES

- According to a radius search conducted through EDR, there are six (6) Spill sites and twenty-seven (27) LTANKS site recorded within a 1-mile radius of the subject property.
 - Former Getty Service Station located at 1785 Cropsey Avenue, Brooklyn (Spill #9812361) was a former gasoline filling station circa 1929 through 1999 and soil and groundwater contamination (BTEX) was identified. The site completed an aggressive remediation with respect to groundwater and spill was closed by the NYSDEC case manager on August 26, 2016. *At this time the offsite spill where groundwater was impacted with BTEX is considered a REC for the subject property and will require a Phase-II Environmental Subsurface Investigation.*
 - Corner of Bay 19th Street and Cropsey Avenue (Facility ID #1404171), 98-feet away from and northeast of the subject property on Bay 19th Street and listed as Spill No. 1404171. On July 18, 2014, two abandoned drums were found by the NYCDEP, each were half-full and approximately 35-gallons of product was pumped out of them and disposed of in total. It is unknown if any specific resource was impacted. Spill was closed by the NYSDEC case manager on August 11, 2014.
 - Bayside Commercial (Facility ID #1606901, PBS # 2-017582); southeast and 162-feet away from the subject property. The site contained three closed in place USTs (one 4,000-gallon, one 1,080-gallon and one 550-gallon UST), as well as three (3) active tanks (one 2,500-gallon UST and two (2) 275-gallon ASTs). A tightness test was conducted on September 1, 2016, for one 2,500-gallon no. 2 fuel oil UST, which failed with a wet leak. The leaking lines were replaced, and the tank passed a full system test on October 14, 2016. There was no evidence of contamination within the excavation for the lines, and the spill was closed on October 19, 2016, thus was determined that no further action was needed at the site.

PCB's

- During our site reconnaissance, no signs of PCB storage tanks were utilized on the subject property.

WASTE CONTAINERS

- During our site reconnaissance, one (1) 55-gallon drum labeled as containing extra duty motor oil was identified on the first floor of the building on the subject property. In addition to this, several 5-gallon buckets containing soil and debris were found in the cellar of the subject property.

ENVIRONMENTAL DATA RESEARCH

- An Environmental Data Research Summary was performed for *1810-1818 Cropsey Avenue, Brooklyn, NY 11214*:

DATABASE	SEARCH DISTANCE	TARGET PROPERTY	OFF-SITES LISTED
FEDERAL RCRA-LQG	¼ MILE	-	4
FEDERAL RCRA-SQG	¼ MILE	-	1
FEDERAL RCRA-VSQG	¼ MILE	-	1
NY SHWS	1 MILE	-	1
NY LTANKS	½ MILE	-	27
NY UST	¼ MILE	-	23
NY AST	¼ MILE	-	12
NY BROWNFIELDS	½ MILE	-	1
NY SPILLS	1/8 MILE	-	6
RCRA NONGEN / NLR	¼ MILE	-	38
NY DRYCLEANERS	¼ MILE	-	3
NY MANIFEST	¼ MILE	-	44
NJ MANIFEST	¼ MILE	-	12
RI MANIFEST	¼ MILE	-	1
PA MANIFEST	¼ MILE	-	1
ED HIST AUTO	1/8 MILE	-	2
EDR HIST CLEANER	1/8 MILE	-	1

** Due to poor or inadequate address information 8 records were unmapped.**

CONDITIONS OUTSIDE THE SCOPE OF ASTM PRACTICE E 1527-13**• ASBESTOS CONTAINING MATERIALS (ACM)**

- Structures that were built prior to 1980 are more likely to contain asbestos. The building on the subject property was built circa 1931.
 - During our site reconnaissance, RSK identified suspected signs of asbestos containing materials within the ceiling of the cellar and window caulking of the building on the subject property. The ceiling of the cellar is in fair to good condition at this time. Due to this visual assessment and the age of the building, RSK recommends that an asbestos inspection is performed by a certified asbestos inspector.

Please note: NO core samples were taken during this inspection unless noted, in the event of change in present status, e.g., demolition, alteration, modification, all suspect materials should be tested and verified free of any ACM by a NYC certified asbestos investigator.

• LEAD BASED PAINT (LBP)

- Structures that were built prior to 1978 are more likely to contain LBP than structures that were built after 1978. The building on the subject property was built circa 1931.
 - During our site reconnaissance, there were visual signs of chipped and flaking paint within the building cellar on the subject property. Due to this visual assessment and the age of the building, RSK recommends that a lead-based paint inspection is performed by a certified lead inspector.

Please note: NO paint chip samples were taken during this inspection unless noted, in the event of change in present status, e.g., demolition, alteration, modification, all suspect materials should be tested and verified free of Lead by a NY certified lead inspector.

• LEAD IN DRINKING WATER

- The subject property is connected to the municipal potable water supply as provided by the New York City Environmental Protection. According to the New York City Drinking Water Supply and Quality Report for 2019 the drinking water supplied to the subject property is compliant with state and federal standards, including those for lead and copper.

Please note: NO drinking/potable water samples were taken during this inspection unless noted; where required, it is recommended that drinking/potable water samples should be tested and verified free of lead by a certified inspector.

• MOLD

- During our site reconnaissance, limited visual inspection for the noticeable presence of mold was performed. RSK observed visual signs of water staining and mold throughout the cellar walls and the ceiling of the first floor of the building on the subject property. In addition, water/mold damaged ceiling tiles were observed within the floor area of the first floor.
 - RSK suggests that a mold inspection should be conducted for the entire building in order to confirm the presence of mold and the water damaged areas should be repaired, and mitigation/remediation be undertaken immediately.

• RADON

- Radon is a colorless, odorless, radioactive gas. Radon comes from the natural decay of uranium that is found in nearly all soils. Radon typically moves through the ground and

into building through cracks and openings in the foundation. The USEPA has developed a "Map of Radon Zones" indicating the levels of radon concentrations from testing and aerial surveys conducted in all counties in the state of New York. The U.S. Environmental Protection Agency's Map of Radon Zones identified the Subject Property as a Radon Zone 3 (Counties with predicted average indoor radon screening levels less than 2 pCi/L).

- **WETLANDS**

- RSK reviewed available information regarding wetlands on the subject property, including National Wetlands Inventory online GIS mapping. RSK made general site observations for readily observable potential wetland characteristics. RSK did not observe surface water bodies or any evidence of potential wetlands on or adjacent to the subject property. The nearest body of water identified was the Gravesend Bay located approximately 1,020-feet south of the subject property. Groundwater is suspected to be at depths between 15-feet to 20-feet below the subject property and assumed to flow in south-southwest direction.

FINDINGS AS DEFINED BY ASTM E1527-13

A **Recognized Environmental Condition (REC)** refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property, due to release to the environment, under conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment.

- This assessment **has revealed** evidence of two (2) RECs in conjunction with the subject property as follows:
 - Review of the historical data from EDR City Directory and Sanborn Maps, depicted the historical use of part of the subject property as a former dry cleaner circa 1960 to at least 1976. The former use as a dry cleaner is suspected to have impacted the subsurface quality beneath the subject property and is considered a REC at this time which warrants a Phase-II Environmental Subsurface Investigation.
 - Review of the historical data from EDR Radius Map depicted several spills that occurred north-northwest, northeast and at a higher elevation to the subject property. The spill cases offsite is suspected to have impacted the subsurface quality beneath the subject property and is considered a REC at this time which warrants a Phase-II Environmental Subsurface Investigation.

Controlled Recognized Environmental Conditions (CRECs) are defined by the ASTM Standard Practice E1527-13 as a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a NFA letter or equivalent, or meeting risk-based criteria established by the regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (e.g. property use restrictions, AULs, institutional controls, or engineering controls).

- This assessment **has not revealed** evidence of CRECs in conjunction with the subject property.

Historical Recognized Environmental Conditions (HRECs) are defined by the ASTM Standard Practice E1527-13 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 residential use criteria established by a regulatory authority, without subjecting the property to any required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls).

- This assessment **has not revealed** evidence of HRECs in connection with the subject property.

Business Environmental Risk (BER) is defined by ASTM as "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 ASTM Standard Practice E1527-13. Consideration of business environmental risk issues may involve addressing one or more non-scope considerations."

- This assessment **has revealed** evidence of BERs in connection with the subject property as follows:

- The 55-gallon steel drum labeled as containing extra duty motor oil was identified on the first floor of the building, should be removed from the subject property and disposed of legally.
- During the investigation of the interior of the building, mold and water stained areas on the ceiling were observed. There were several indications of mold growth noted during the inspection.
- The building inhabiting the subject property constructed circa to 1931, and RSK identified visual signs of what may be asbestos-containing material in the window caulking and ceiling of the building on the subject property. Due to this and the age of the building, ACM material may be present in the building.
- The building inhabiting the subject property was constructed circa 1931, and there were visual signs of chipped and/or flaking paint throughout the building on the subject property. Due to this, and the age of the building, lead-based paint material may be present in the building.

CONCLUSIONS AND RECOMMENDATIONS

RSK has completed this Phase-I ESA in conformance with the scope and limitations as specified in the ASTM Practice E 1527-13 for the subject property located at 1810-1818 Cropsey Avenue, Brooklyn, NY 11214. RSK has considered the nature and extent of onsite sources of potential subsurface contamination by evaluating the current and available historical usage of the subject property and the potential sources of subsurface vapor migration through the review of available data was summarized in this Phase-I ESA.

REC Conclusions:

Based on the findings and conclusions of this assessment, RSK has concluded that the use of cleaning solvents from the historical use of the subject property as a dry cleaner and the offsite spill where BTEX impacted the groundwater quality may have impacted the subsurface quality beneath the subject property.

REC Recommendations:

RSK recommends that a Phase-II Environmental Subsurface Investigation which should include soil, groundwater and soil vapor assessments to ensure that the historical operations both onsite and offsite did not impact the subject property.

Non-scope ASTM Recommendations:

- An Asbestos, Lead-Based Paint and Mold inspection should be performed by a certified inspector for the entire building in order to determine the potential hazards and exposure within the building on the subject property.

Prepared by,

Keshanti Nandlall
Project Manager

Reviewed by,

Dhanraj Singh
Sr. Project Manager

Submitted by,

Sam Rosenbaum
Managing Director

Appendix B – Soil Boring Logs



BROOKLYN: 3611 14TH AVE. Suite #508B Brooklyn NY 11219

QUEENS: 132-02 89TH AVE. Suite #211 Richmond Hill, NY 11418

BORING LOGS

Boring No: SB-1

Site Name:	1810-1818 Cropsey Avenue, Brooklyn, NY				
Address:	1810-1818 Cropsey Avenue, Bronx, NY 11214				
Technician:	Ryan Seemungal	Date: 09/11/2020	Method:	GEOPROBE 6620DT/ MACRO CORE	
BORING	DEPTH (ft.)	SAMPLES		SOIL DESCRIPTION	
		Recovery (in.)	PID (ppm)		
	0	4"	0.00	4" Concrete	
	2' (S1)	48"	0.00	Fine dark sand, small stones	
	4'				
	6' (S2)	48"		Fine dark sand	
	8'				
	8.47' (GW)	48"		Coarse dark moist sand	
	10' (S3)				



BROOKLYN: 3611 14TH AVE. Suite #508B Brooklyn NY 11219

QUEENS: 132-02 89TH AVE. Suite #211 Richmond Hill, NY 11418

BORING LOGS

Boring No: SB-2

Site Name:	1810-1818 Cropsey Avenue, Brooklyn, NY				
Address:	1810-1818 Cropsey Avenue, Brooklyn, NY 11214				
Technician:	Ryan Seemungal	Date: 09/11/2020	Method:	GEOPROBE 6620DT/ MACRO CORE	
BORING	DEPTH (ft.)	SAMPLES		SOIL DESCRIPTION	
	0	4"	0.00	4" Concrete	
	2' (S1)	48"	0.00	Fine dark sand, small stones	
	4'				
	6' (S2)				
	8'	48"			Fine dark sand
	8.05' (GW)				
	10' (S3)				
		48"			Coarse dark moist sand



BROOKLYN: 3611 14TH AVE. Suite #508B Brooklyn NY 11219

QUEENS: 132-02 89TH AVE. Suite #211 Richmond Hill, NY 11418

BORING LOGS

Boring No: SB-3

Site Name:	1810-1818 Cropsey Avenue, Brooklyn, NY			
Address:	1810-1818 Cropsey Avenue, Brooklyn, NY 11214			
Technician:	Ryan Seemungal	Date: 09/11/2020	Method:	GEOPROBE 6620DT/ MACRO CORE
BORING	DEPTH (ft.)	SAMPLES		SOIL DESCRIPTION
	0	4"	0.00	4" Concrete
	2' (S1)	48"	0.00	Fine dark sand, small stones
	4'			
	6' (S2)			
	7.70' (GW)	48"		Fine dark sand
	8'			
	10' (S3)			



BROOKLYN: 3611 14TH AVE. Suite #508B Brooklyn NY 11219

QUEENS: 132-02 89TH AVE. Suite #211 Richmond Hill, NY 11418

BORING LOGS

Boring No: SB-4

Site Name:	1810-1818 Cropsey Avenue, Brooklyn, NY			
Address:	1810-1818 Cropsey Avenue, Brooklyn, NY 11214			
Technician:	Ryan Seemungal	Date: 07/11/2020	Method:	GEOPROBE 6620DT/ MACRO CORE
BORING	DEPTH (ft.)	SAMPLES		SOIL DESCRIPTION
	0	4"	0.00	4" Concrete
	2' (S1)	48"	0.00	Fine dark sand, small stones
	4'			
	6' (S2) 7.55' (GW)			
	8'	48"		Fine dark sand
	10' (S3)			

Appendix C – Laboratory Analytical Data



Technical Report

prepared for:

RSK Environmental Group
36-11 14th Suite 508B
Brooklyn NY, 11218
Attention: Danny Singh

Report Date: 09/18/2020
Client Project ID: 1810 Cropsey Ave Brooklyn, NY 11214
York Project (SDG) No.: 20I0640

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

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RICHMOND HILL, NY 11418
ClientServices@yorklab.com

Report Date: 09/18/2020
Client Project ID: 1810 Cropsey Ave Brooklyn, NY 11214
York Project (SDG) No.: 20I0640

RSK Environmental Group
36-11 14th Suite 508B
Brooklyn NY, 11218
Attention: Danny Singh

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on September 15, 2020 with a temperature of 3.4 C. The project was identified as your project: **1810 Cropsey Ave Brooklyn, NY 11214**.

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

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

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

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

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

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
20I0640-01	SB-1/S3 (8'-10')	Soil	09/11/2020	09/15/2020
20I0640-02	SB-2/S3 (8'-10')	Soil	09/11/2020	09/15/2020
20I0640-03	SB-3/S3 (8'-10')	Soil	09/11/2020	09/15/2020
20I0640-04	SB-4/S3 (8'-10')	Soil	09/11/2020	09/15/2020
20I0640-05	GW-1/SB-1 (8.47')	Water	09/11/2020	09/15/2020
20I0640-06	GW-2/SB-2 (8.05')	Water	09/11/2020	09/15/2020
20I0640-07	GW-3/SB-3 (7.70')	Water	09/11/2020	09/15/2020
20I0640-08	GW-4/SB-4 (7.55')	Water	09/11/2020	09/15/2020

General Notes for York Project (SDG) No.: 20I0640

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

Approved By:



Benjamin Gulizia
Laboratory Director

Date: 09/18/2020





Sample Information

Client Sample ID: SB-1/S3 (8'-10')

York Sample ID: 2010640-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

2010640

1810 CROPSY AVE BROOKLYN, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 14:57	TMP
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP	09/15/2020 06:43	09/15/2020 14:57	TMP
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 14:57	TMP
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
123-91-1	1,4-Dioxane	ND		ug/kg dry	25	51	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 14:57	TMP



Sample Information

Client Sample ID: SB-1/S3 (8'-10')

York Sample ID: 20I0640-01

York Project (SDG) No.

Client Project ID

Matrix

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20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
78-93-3	2-Butanone	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
591-78-6	2-Hexanone	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
108-10-1	4-Methyl-2-pentanone	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
67-64-1	Acetone	ND		ug/kg dry	2.5	5.1	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
107-02-8	Acrolein	ND		ug/kg dry	2.5	5.1	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
107-13-1	Acrylonitrile	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
71-43-2	Benzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
74-97-5	Bromochloromethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 14:57	TMP
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
75-25-2	Bromoform	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
74-83-9	Bromomethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
75-15-0	Carbon disulfide	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
108-90-7	Chlorobenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
75-00-3	Chloroethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
67-66-3	Chloroform	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
74-87-3	Chloromethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
110-82-7	Cyclohexane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 14:57	TMP
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 14:57	TMP



Sample Information

Client Sample ID: SB-1/S3 (8'-10')

York Sample ID: 20I0640-01

York Project (SDG) No.

Client Project ID

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20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-95-3	Dibromomethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 14:57	TMP
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 14:57	TMP
100-41-4	Ethyl Benzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 14:57	TMP
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
79-20-9	Methyl acetate	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 14:57	TMP
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
108-87-2	Methylcyclohexane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 14:57	TMP
75-09-2	Methylene chloride	ND		ug/kg dry	2.5	5.1	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
103-65-1	n-Propylbenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
95-47-6	o-Xylene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/15/2020 06:43	09/15/2020 14:57	TMP
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	2.5	5.1	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/15/2020 06:43	09/15/2020 14:57	TMP
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
100-42-5	Styrene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 14:57	TMP
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
127-18-4	Tetrachloroethylene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
108-88-3	Toluene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP



Sample Information

Client Sample ID: SB-1/S3 (8'-10')

York Sample ID: 20I0640-01

York Project (SDG) No.

Client Project ID

Matrix

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20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
110-57-6	* trans-1,4-dichloro-2-butene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH	09/15/2020 06:43	09/15/2020 14:57	TMP
79-01-6	Trichloroethylene	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.3	2.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
1330-20-7	Xylenes, Total	ND		ug/kg dry	3.8	7.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 14:57	TMP
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: SURR: 1,2-Dichloroethane-d4	106 %			77-125						
2037-26-5	Surrogate: SURR: Toluene-d8	102 %			85-120						
460-00-4	Surrogate: SURR: p-Bromofluorobenzene	97.0 %			76-130						

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
92-52-4	1,1-Biphenyl	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		ug/kg dry	85.9	172	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
122-66-7	1,2-Diphenylhydrazine (as Azobenzene)	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
58-90-2	2,3,4,6-Tetrachlorophenol	ND		ug/kg dry	85.9	172	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH



Sample Information

Client Sample ID: SB-1/S3 (8'-10')

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20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	85.9	172	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
95-57-8	2-Chlorophenol	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
95-48-7	2-Methylphenol	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
88-74-4	2-Nitroaniline	ND		ug/kg dry	85.9	172	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
88-75-5	2-Nitrophenol	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
91-94-1	3,3-Dichlorobenzidine	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
99-09-2	3-Nitroaniline	ND		ug/kg dry	85.9	172	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	85.9	172	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
106-47-8	4-Chloroaniline	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
100-01-6	4-Nitroaniline	ND		ug/kg dry	85.9	172	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
100-02-7	4-Nitrophenol	ND		ug/kg dry	85.9	172	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH



Sample Information

Client Sample ID: SB-1/S3 (8'-10')

York Sample ID: 20I0640-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include various chemical compounds like Acenaphthene, Atrazine, Benzaldehyde, etc.



Sample Information

Client Sample ID: SB-1/S3 (8'-10')

York Sample ID: 20I0640-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
86-74-8	Carbazole	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
218-01-9	Chrysene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
132-64-9	Dibenzofuran	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
84-66-2	Diethyl phthalate	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
131-11-3	Dimethyl phthalate	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
122-39-4	* Diphenylamine	ND		ug/kg dry	85.9	172	2	EPA 8270D Certifications:	09/16/2020 07:17	09/16/2020 17:01	KH
206-44-0	Fluoranthene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
86-73-7	Fluorene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
118-74-1	Hexachlorobenzene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
67-72-1	Hexachloroethane	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
78-59-1	Isophorone	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
91-20-3	Naphthalene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
98-95-3	Nitrobenzene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH



Sample Information

Client Sample ID: SB-1/S3 (8'-10')

York Sample ID: 20I0640-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
87-86-5	Pentachlorophenol	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
85-01-8	Phenanthrene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
108-95-2	Phenol	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
129-00-0	Pyrene	ND		ug/kg dry	43.0	85.9	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:01	KH
Surrogate Recoveries		Result			Acceptance Range						
367-12-4	Surrogate: SURRE: 2-Fluorophenol	67.0 %			20-108						
4165-62-2	Surrogate: SURRE: Phenol-d5	63.7 %			23-114						
4165-60-0	Surrogate: SURRE: Nitrobenzene-d5	91.6 %			22-108						
321-60-8	Surrogate: SURRE: 2-Fluorobiphenyl	72.5 %			21-113						
118-79-6	Surrogate: SURRE: 2,4,6-Tribromophenol	87.9 %			19-110						
1718-51-0	Surrogate: SURRE: Terphenyl-d14	84.0 %			24-116						

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	95.9		%	0.100	1	SM 2540G Certifications: CTDOH	09/16/2020 08:05	09/16/2020 16:11	SK

Sample Information

Client Sample ID: SB-2/S3 (8'-10')

York Sample ID: 20I0640-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP



Sample Information

Client Sample ID: SB-2/S3 (8'-10')

York Sample ID: 20I0640-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:24	TMP
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP	09/15/2020 06:43	09/15/2020 15:24	TMP
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:24	TMP
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
123-91-1	1,4-Dioxane	ND		ug/kg dry	29	57	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:24	TMP
78-93-3	2-Butanone	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
591-78-6	2-Hexanone	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP



Sample Information

Client Sample ID: SB-2/S3 (8'-10')

York Sample ID: 20I0640-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-10-1	4-Methyl-2-pentanone	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
67-64-1	Acetone	ND		ug/kg dry	2.9	5.7	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
107-02-8	Acrolein	ND		ug/kg dry	2.9	5.7	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
107-13-1	Acrylonitrile	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
71-43-2	Benzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
74-97-5	Bromochloromethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:24	TMP
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
75-25-2	Bromoform	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
74-83-9	Bromomethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
75-15-0	Carbon disulfide	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
108-90-7	Chlorobenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
75-00-3	Chloroethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
67-66-3	Chloroform	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
74-87-3	Chloromethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
110-82-7	Cyclohexane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:24	TMP
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:24	TMP
74-95-3	Dibromomethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:24	TMP
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:24	TMP



Sample Information

Client Sample ID: SB-2/S3 (8'-10')

York Sample ID: 20I0640-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	Ethyl Benzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:24	TMP
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
79-20-9	Methyl acetate	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:24	TMP
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
108-87-2	Methylcyclohexane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:24	TMP
75-09-2	Methylene chloride	ND		ug/kg dry	2.9	5.7	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
103-65-1	n-Propylbenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
95-47-6	o-Xylene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/15/2020 06:43	09/15/2020 15:24	TMP
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	2.9	5.7	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/15/2020 06:43	09/15/2020 15:24	TMP
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
100-42-5	Styrene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:24	TMP
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
127-18-4	Tetrachloroethylene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
108-88-3	Toluene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
110-57-6	* trans-1,4-dichloro-2-butene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH	09/15/2020 06:43	09/15/2020 15:24	TMP



Sample Information

Client Sample ID: SB-2/S3 (8'-10')

York Sample ID: 20I0640-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
79-01-6	Trichloroethylene	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.4	2.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
1330-20-7	Xylenes, Total	ND		ug/kg dry	4.3	8.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:24	TMP
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	107 %			77-125						
2037-26-5	Surrogate: SURRE: Toluene-d8	102 %			85-120						
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	94.6 %			76-130						

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
92-52-4	1,1-Biphenyl	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		ug/kg dry	84.2	168	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
122-66-7	1,2-Diphenylhydrazine (as Azobenzene)	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
58-90-2	2,3,4,6-Tetrachlorophenol	ND		ug/kg dry	84.2	168	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH



Sample Information

Client Sample ID: SB-2/S3 (8'-10')

York Sample ID: 20I0640-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	84.2	168	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
95-57-8	2-Chlorophenol	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
95-48-7	2-Methylphenol	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
88-74-4	2-Nitroaniline	ND		ug/kg dry	84.2	168	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
88-75-5	2-Nitrophenol	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
91-94-1	3,3-Dichlorobenzidine	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
99-09-2	3-Nitroaniline	ND		ug/kg dry	84.2	168	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	84.2	168	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
106-47-8	4-Chloroaniline	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
100-01-6	4-Nitroaniline	ND		ug/kg dry	84.2	168	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
100-02-7	4-Nitrophenol	ND		ug/kg dry	84.2	168	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
83-32-9	Acenaphthene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
208-96-8	Acenaphthylene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH



Sample Information

Client Sample ID: SB-2/S3 (8'-10')

York Sample ID: 20I0640-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include various chemical compounds like Acetophenone, Aniline, Anthracene, etc.



Sample Information

Client Sample ID: SB-2/S3 (8'-10')

York Sample ID: 20I0640-02

York Project (SDG) No.

Client Project ID

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20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
132-64-9	Dibenzofuran	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
84-66-2	Diethyl phthalate	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
131-11-3	Dimethyl phthalate	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
122-39-4	* Diphenylamine	ND		ug/kg dry	84.2	168	2	EPA 8270D Certifications:	09/16/2020 13:30	09/17/2020 12:11	KH
206-44-0	Fluoranthene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
86-73-7	Fluorene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
118-74-1	Hexachlorobenzene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
67-72-1	Hexachloroethane	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
78-59-1	Isophorone	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
91-20-3	Naphthalene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
98-95-3	Nitrobenzene	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH
87-86-5	Pentachlorophenol	ND		ug/kg dry	42.2	84.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:11	KH



Sample Information

Client Sample ID: SB-2/S3 (8'-10')

York Sample ID: 20I0640-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

Table with columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Includes rows for Phenanthrene, Phenol, Pyrene and Surrogate Recoveries.

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

Table with columns: CAS No., Parameter, Result, Flag, Units, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Includes row for % Solids.

Sample Information

Client Sample ID: SB-3/S3 (8'-10')

York Sample ID: 20I0640-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

Table with columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Includes rows for 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, and 1,1,2,2-Tetrachloroethane.



Sample Information

Client Sample ID: SB-3/S3 (8'-10')

York Sample ID: 20I0640-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:51	TMP
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP	09/15/2020 06:43	09/15/2020 15:51	TMP
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:51	TMP
95-63-6	1,2,4-Trimethylbenzene	6.6		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
108-67-8	1,3,5-Trimethylbenzene	2.5	J	ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
123-91-1	1,4-Dioxane	ND		ug/kg dry	30	59	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:51	TMP
78-93-3	2-Butanone	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
591-78-6	2-Hexanone	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
108-10-1	4-Methyl-2-pentanone	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
67-64-1	Acetone	ND		ug/kg dry	3.0	5.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
107-02-8	Acrolein	ND		ug/kg dry	3.0	5.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP



Sample Information

Client Sample ID: SB-3/S3 (8'-10')

York Sample ID: 20I0640-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-13-1	Acrylonitrile	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
71-43-2	Benzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
74-97-5	Bromochloromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:51	TMP
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
75-25-2	Bromoform	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
74-83-9	Bromomethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
75-15-0	Carbon disulfide	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
108-90-7	Chlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
75-00-3	Chloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
67-66-3	Chloroform	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
74-87-3	Chloromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
110-82-7	Cyclohexane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:51	TMP
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:51	TMP
74-95-3	Dibromomethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:51	TMP
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:51	TMP
100-41-4	Ethyl Benzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:51	TMP
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP



Sample Information

Client Sample ID: SB-3/S3 (8'-10')

York Sample ID: 20I0640-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
79-20-9	Methyl acetate	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:51	TMP
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
108-87-2	Methylcyclohexane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:51	TMP
75-09-2	Methylene chloride	ND		ug/kg dry	3.0	5.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
103-65-1	n-Propylbenzene	1.5	J	ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
95-47-6	o-Xylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/15/2020 06:43	09/15/2020 15:51	TMP
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	3.0	5.9	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/15/2020 06:43	09/15/2020 15:51	TMP
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
100-42-5	Styrene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 15:51	TMP
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
127-18-4	Tetrachloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
108-88-3	Toluene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
110-57-6	* trans-1,4-dichloro-2-butene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH	09/15/2020 06:43	09/15/2020 15:51	TMP
79-01-6	Trichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 15:51	TMP



Sample Information

Client Sample ID: SB-3/S3 (8'-10')

York Sample ID: 20I0640-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1330-20-7	Xylenes, Total	ND		ug/kg dry	4.4	8.9	1	EPA 8260C	09/15/2020 06:43	09/15/2020 15:51	TMP
									Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ		
Surrogate Recoveries		Result	Acceptance Range								
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	110 %	77-125								
2037-26-5	Surrogate: SURRE: Toluene-d8	101 %	85-120								
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	95.0 %	76-130								

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
92-52-4	1,1-Biphenyl	ND		ug/kg dry	42.9	85.6	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: NELAC-NY10854,NJDEP,PADEP		
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		ug/kg dry	85.6	171	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: NELAC-NY10854,NJDEP,PADEP		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP		
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: NELAC-NY10854,PADEP		
122-66-7	1,2-Diphenylhydrazine (as Azobenzene)	ND		ug/kg dry	42.9	85.6	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: NELAC-NY10854,NJDEP,PADEP		
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: NELAC-NY10854,PADEP		
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: NELAC-NY10854,PADEP		
58-90-2	2,3,4,6-Tetrachlorophenol	ND		ug/kg dry	85.6	171	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: NELAC-NY10854,NJDEP,PADEP		
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	42.9	85.6	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP		
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	42.9	85.6	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP		
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	42.9	85.6	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP		
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	42.9	85.6	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP		
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	85.6	171	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP		
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP		
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D	09/16/2020 07:17	09/16/2020 17:31	KH
									Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP		



Sample Information

Client Sample ID: SB-3/S3 (8'-10')

York Sample ID: 20I0640-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
95-57-8	2-Chlorophenol	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
95-48-7	2-Methylphenol	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
88-74-4	2-Nitroaniline	ND		ug/kg dry	85.6	171	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
88-75-5	2-Nitrophenol	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
91-94-1	3,3-Dichlorobenzidine	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
99-09-2	3-Nitroaniline	ND		ug/kg dry	85.6	171	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	85.6	171	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
106-47-8	4-Chloroaniline	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
100-01-6	4-Nitroaniline	ND		ug/kg dry	85.6	171	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
100-02-7	4-Nitrophenol	ND		ug/kg dry	85.6	171	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
83-32-9	Acenaphthene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
208-96-8	Acenaphthylene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
98-86-2	Acetophenone	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
62-53-3	Aniline	ND		ug/kg dry	171	343	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
120-12-7	Anthracene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH



Sample Information

Client Sample ID: SB-3/S3 (8'-10')

York Sample ID: 20I0640-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1912-24-9	Atrazine	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
100-52-7	Benzaldehyde	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
92-87-5	Benzidine	ND		ug/kg dry	171	343	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
65-85-0	Benzoic acid	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
100-51-6	Benzyl alcohol	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
105-60-2	Caprolactam	ND		ug/kg dry	85.6	171	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
86-74-8	Carbazole	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
218-01-9	Chrysene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
132-64-9	Dibenzofuran	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
84-66-2	Diethyl phthalate	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH



Sample Information

Client Sample ID: SB-3/S3 (8'-10')

York Sample ID: 20I0640-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
131-11-3	Dimethyl phthalate	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
122-39-4	* Diphenylamine	ND		ug/kg dry	85.6	171	2	EPA 8270D Certifications:	09/16/2020 07:17	09/16/2020 17:31	KH
206-44-0	Fluoranthene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
86-73-7	Fluorene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
118-74-1	Hexachlorobenzene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
67-72-1	Hexachloroethane	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
78-59-1	Isophorone	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
91-20-3	Naphthalene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
98-95-3	Nitrobenzene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
87-86-5	Pentachlorophenol	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
85-01-8	Phenanthrene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
108-95-2	Phenol	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH
129-00-0	Pyrene	ND		ug/kg dry	42.9	85.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:17	09/16/2020 17:31	KH

Surrogate Recoveries

Result

Acceptance Range



Sample Information

Client Sample ID: SB-3/S3 (8'-10')

York Sample ID: 20I0640-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 CROSEY AVE BROOKLYN, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
367-12-4	Surrogate: SURRE: 2-Fluorophenol	64.4 %			20-108						
4165-62-2	Surrogate: SURRE: Phenol-d5	58.8 %			23-114						
4165-60-0	Surrogate: SURRE: Nitrobenzene-d5	84.2 %			22-108						
321-60-8	Surrogate: SURRE: 2-Fluorobiphenyl	67.0 %			21-113						
118-79-6	Surrogate: SURRE: 2,4,6-Tribromophenol	82.6 %			19-110						
1718-51-0	Surrogate: SURRE: Terphenyl-d14	79.9 %			24-116						

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	97.1		%	0.100	1	SM 2540G Certifications: CTDOH	09/16/2020 08:05	09/16/2020 16:11	SK

Sample Information

Client Sample ID: SB-4/S3 (8'-10')

York Sample ID: 20I0640-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 CROSEY AVE BROOKLYN, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP



Sample Information

Client Sample ID: SB-4/S3 (8'-10')

York Sample ID: 20I0640-04

York Project (SDG) No.

Client Project ID

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20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 16:46	TMP
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP	09/15/2020 06:43	09/15/2020 16:46	TMP
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 16:46	TMP
95-63-6	1,2,4-Trimethylbenzene	5.7		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
108-67-8	1,3,5-Trimethylbenzene	2.1	J	ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
123-91-1	1,4-Dioxane	ND		ug/kg dry	30	60	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 16:46	TMP
78-93-3	2-Butanone	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
591-78-6	2-Hexanone	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
108-10-1	4-Methyl-2-pentanone	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
67-64-1	Acetone	ND		ug/kg dry	3.0	6.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
107-02-8	Acrolein	ND		ug/kg dry	3.0	6.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
107-13-1	Acrylonitrile	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
71-43-2	Benzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
74-97-5	Bromochloromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 16:46	TMP
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP



Sample Information

Client Sample ID: SB-4/S3 (8'-10')

York Sample ID: 20I0640-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-25-2	Bromoform	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
74-83-9	Bromomethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
75-15-0	Carbon disulfide	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
108-90-7	Chlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
75-00-3	Chloroethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
67-66-3	Chloroform	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
74-87-3	Chloromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
110-82-7	Cyclohexane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 16:46	TMP
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 16:46	TMP
74-95-3	Dibromomethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 16:46	TMP
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 16:46	TMP
100-41-4	Ethyl Benzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 16:46	TMP
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
79-20-9	Methyl acetate	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 16:46	TMP
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
108-87-2	Methylcyclohexane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 16:46	TMP
75-09-2	Methylene chloride	4.9	J	ug/kg dry	3.0	6.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP



Sample Information

Client Sample ID: SB-4/S3 (8'-10')

York Sample ID: 20I0640-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
103-65-1	n-Propylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
95-47-6	o-Xylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/15/2020 06:43	09/15/2020 16:46	TMP
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	3.0	6.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/15/2020 06:43	09/15/2020 16:46	TMP
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
100-42-5	Styrene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/15/2020 06:43	09/15/2020 16:46	TMP
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
127-18-4	Tetrachloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
108-88-3	Toluene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
110-57-6	* trans-1,4-dichloro-2-butene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH	09/15/2020 06:43	09/15/2020 16:46	TMP
79-01-6	Trichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.5	3.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
1330-20-7	Xylenes, Total	ND		ug/kg dry	4.5	9.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/15/2020 06:43	09/15/2020 16:46	TMP
Surrogate Recoveries		Result	Acceptance Range								
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	108 %	77-125								
2037-26-5	Surrogate: SURRE: Toluene-d8	103 %	85-120								
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	95.7 %	76-130								



Sample Information

Client Sample ID: SB-4/S3 (8'-10')

York Sample ID: 20I0640-04

York Project (SDG) No.

Client Project ID

Matrix

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20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
92-52-4	1,1-Biphenyl	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		ug/kg dry	42.9	85.6	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
122-66-7	1,2-Diphenylhydrazine (as Azobenzene)	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
58-90-2	2,3,4,6-Tetrachlorophenol	ND		ug/kg dry	42.9	85.6	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	42.9	85.6	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
95-57-8	2-Chlorophenol	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
95-48-7	2-Methylphenol	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
88-74-4	2-Nitroaniline	ND		ug/kg dry	42.9	85.6	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
88-75-5	2-Nitrophenol	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH



Sample Information

Client Sample ID: SB-4/S3 (8'-10')

York Sample ID: 20I0640-04

York Project (SDG) No.

Client Project ID

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20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
91-94-1	3,3-Dichlorobenzidine	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
99-09-2	3-Nitroaniline	ND		ug/kg dry	42.9	85.6	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	42.9	85.6	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
106-47-8	4-Chloroaniline	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
100-01-6	4-Nitroaniline	ND		ug/kg dry	42.9	85.6	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
100-02-7	4-Nitrophenol	ND		ug/kg dry	42.9	85.6	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
83-32-9	Acenaphthene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
208-96-8	Acenaphthylene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
98-86-2	Acetophenone	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
62-53-3	Aniline	ND		ug/kg dry	85.9	172	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
120-12-7	Anthracene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
1912-24-9	Atrazine	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
100-52-7	Benzaldehyde	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
92-87-5	Benzidine	ND		ug/kg dry	85.9	172	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH



Sample Information

Client Sample ID: SB-4/S3 (8'-10')

York Sample ID: 20I0640-04

York Project (SDG) No.

Client Project ID

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20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
65-85-0	Benzoic acid	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
100-51-6	Benzyl alcohol	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
105-60-2	Caprolactam	ND		ug/kg dry	42.9	85.6	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
86-74-8	Carbazole	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
218-01-9	Chrysene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
132-64-9	Dibenzofuran	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
84-66-2	Diethyl phthalate	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
131-11-3	Dimethyl phthalate	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
122-39-4	* Diphenylamine	ND		ug/kg dry	42.9	85.6	1	EPA 8270D Certifications:	09/16/2020 13:30	09/17/2020 12:42	KH
206-44-0	Fluoranthene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
86-73-7	Fluorene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH



Sample Information

Client Sample ID: SB-4/S3 (8'-10')

York Sample ID: 20I0640-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
118-74-1	Hexachlorobenzene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
67-72-1	Hexachloroethane	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
78-59-1	Isophorone	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
91-20-3	Naphthalene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
98-95-3	Nitrobenzene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
87-86-5	Pentachlorophenol	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
85-01-8	Phenanthrene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
108-95-2	Phenol	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
129-00-0	Pyrene	ND		ug/kg dry	21.5	42.9	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 13:30	09/17/2020 12:42	KH
Surrogate Recoveries		Result	Acceptance Range								
367-12-4	Surrogate: SURR: 2-Fluorophenol	35.3 %	20-108								
4165-62-2	Surrogate: SURR: Phenol-d5	31.6 %	23-114								
4165-60-0	Surrogate: SURR: Nitrobenzene-d5	42.9 %	22-108								
321-60-8	Surrogate: SURR: 2-Fluorobiphenyl	38.4 %	21-113								
118-79-6	Surrogate: SURR: 2,4,6-Tribromophenol	41.4 %	19-110								
1718-51-0	Surrogate: SURR: Terphenyl-d14	45.0 %	24-116								



Sample Information

Client Sample ID: SB-4/S3 (8'-10')

York Sample ID: 20I0640-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Soil

September 11, 2020 12:00 am

09/15/2020

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

Table with 11 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Row 1: solids, * % Solids, 95.7, %, 0.100, 1, SM 2540G, Certifications: CTDOH, 09/16/2020 08:05, 09/16/2020 16:11, SK

Sample Information

Client Sample ID: GW-1/SB-1 (8.47')

York Sample ID: 20I0640-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include various organic compounds like 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, etc., with results mostly ND.



Sample Information

Client Sample ID: GW-1/SB-1 (8.47')

York Sample ID: 20I0640-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-50-1	1,2-Dichlorobenzene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
107-06-2	1,2-Dichloroethane	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
78-87-5	1,2-Dichloropropane	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
108-67-8	1,3,5-Trimethylbenzene	1600		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
541-73-1	1,3-Dichlorobenzene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
106-46-7	1,4-Dichlorobenzene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
123-91-1	1,4-Dioxane	ND		ug/L	1000	1000	25	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:24	TMP
78-93-3	2-Butanone	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
591-78-6	2-Hexanone	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
108-10-1	4-Methyl-2-pentanone	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
67-64-1	Acetone	26	J	ug/L	25	50	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
107-02-8	Acrolein	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
107-13-1	Acrylonitrile	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
71-43-2	Benzene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
74-97-5	Bromochloromethane	ND		ug/L	5.0	12	25	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:24	TMP
75-27-4	Bromodichloromethane	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
75-25-2	Bromoform	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
74-83-9	Bromomethane	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
75-15-0	Carbon disulfide	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
56-23-5	Carbon tetrachloride	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
108-90-7	Chlorobenzene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
75-00-3	Chloroethane	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP



Sample Information

Client Sample ID: GW-1/SB-1 (8.47')

York Sample ID: 20I0640-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-66-3	Chloroform	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
74-87-3	Chloromethane	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
110-82-7	Cyclohexane	210		ug/L	5.0	12	25	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:24	TMP
124-48-1	Dibromochloromethane	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
74-95-3	Dibromomethane	ND		ug/L	5.0	12	25	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:24	TMP
75-71-8	Dichlorodifluoromethane	ND		ug/L	5.0	12	25	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:24	TMP
100-41-4	Ethyl Benzene	1900		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
87-68-3	Hexachlorobutadiene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:24	TMP
98-82-8	Isopropylbenzene	240		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
79-20-9	Methyl acetate	ND		ug/L	5.0	12	25	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:24	TMP
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
108-87-2	Methylcyclohexane	330		ug/L	5.0	12	25	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:24	TMP
75-09-2	Methylene chloride	ND		ug/L	25	50	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
104-51-8	n-Butylbenzene	290		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
103-65-1	n-Propylbenzene	760		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
95-47-6	o-Xylene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/16/2020 06:19	09/16/2020 13:24	TMP
179601-23-1	p- & m- Xylenes	260		ug/L	12	25	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/16/2020 06:19	09/16/2020 13:24	TMP
99-87-6	p-Isopropyltoluene	37		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
135-98-8	sec-Butylbenzene	51		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
100-42-5	Styrene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP



Sample Information

Client Sample ID: GW-1/SB-1 (8.47')

York Sample ID: 20I0640-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/L	12	25	25	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:24	TMP
98-06-6	tert-Butylbenzene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
127-18-4	Tetrachloroethylene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
108-88-3	Toluene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
110-57-6	trans-1,4-dichloro-2-butene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
79-01-6	Trichloroethylene	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
75-69-4	Trichlorofluoromethane	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
75-01-4	Vinyl Chloride	ND		ug/L	5.0	12	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
1330-20-7	Xylenes, Total	260		ug/L	15	38	25	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:24	TMP
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	101 %			69-130						
2037-26-5	Surrogate: SURRE: Toluene-d8	101 %			81-117						
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	100 %			79-122						

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
92-52-4	1,1-Biphenyl	ND		ug/L	52.6	105	20	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
95-50-1	1,2-Dichlorobenzene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
122-66-7	1,2-Diphenylhydrazine (as Azobenzene)	ND		ug/L	52.6	105	20	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW



Sample Information

Client Sample ID: GW-1/SB-1 (8.47')

York Sample ID: 20I0640-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
541-73-1	1,3-Dichlorobenzene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
106-46-7	1,4-Dichlorobenzene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
58-90-2	2,3,4,6-Tetrachlorophenol	ND		ug/L	52.6	105	20	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
95-95-4	2,4,5-Trichlorophenol	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
88-06-2	2,4,6-Trichlorophenol	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
120-83-2	2,4-Dichlorophenol	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
105-67-9	2,4-Dimethylphenol	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
51-28-5	2,4-Dinitrophenol	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
121-14-2	2,4-Dinitrotoluene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
606-20-2	2,6-Dinitrotoluene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
91-58-7	2-Chloronaphthalene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
95-57-8	2-Chlorophenol	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
91-57-6	2-Methylnaphthalene	5030		ug/L	1320	2630	500	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 12:41	OW
95-48-7	2-Methylphenol	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
88-74-4	2-Nitroaniline	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
88-75-5	2-Nitrophenol	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
65794-96-9	3- & 4-Methylphenols	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
91-94-1	3,3-Dichlorobenzidine	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
99-09-2	3-Nitroaniline	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
101-55-3	4-Bromophenyl phenyl ether	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW



Sample Information

Client Sample ID: GW-1/SB-1 (8.47')

York Sample ID: 20I0640-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include various chemical compounds like 4-Chloro-3-methylphenol, 4-Chloroaniline, etc.



Sample Information

Client Sample ID: GW-1/SB-1 (8.47')

York Sample ID: 20I0640-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
111-44-4	Bis(2-chloroethyl)ether	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
105-60-2	Caprolactam	ND		ug/L	52.6	105	20	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
86-74-8	Carbazole	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
218-01-9	Chrysene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
53-70-3	Dibenzo(a,h)anthracene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
132-64-9	Dibenzofuran	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
84-66-2	Diethyl phthalate	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
131-11-3	Dimethyl phthalate	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
84-74-2	Di-n-butyl phthalate	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
117-84-0	Di-n-octyl phthalate	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
122-39-4	* Diphenylamine	ND		ug/L	52.6	105	20	EPA 8270D Certifications:	09/16/2020 07:53	09/17/2020 10:09	OW
206-44-0	Fluoranthene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
86-73-7	Fluorene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
118-74-1	Hexachlorobenzene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
87-68-3	Hexachlorobutadiene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
77-47-4	Hexachlorocyclopentadiene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
67-72-1	Hexachloroethane	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW



Sample Information

Client Sample ID: GW-1/SB-1 (8.47')

York Sample ID: 20I0640-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
78-59-1	Isophorone	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
91-20-3	Naphthalene	5210	B	ug/L	1320	2630	500	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 12:41	OW
98-95-3	Nitrobenzene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
62-75-9	N-Nitrosodimethylamine	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
621-64-7	N-nitroso-di-n-propylamine	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
86-30-6	N-Nitrosodiphenylamine	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
87-86-5	Pentachlorophenol	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
85-01-8	Phenanthrene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
108-95-2	Phenol	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
129-00-0	Pyrene	ND		ug/L	52.6	105	20	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:09	OW
Surrogate Recoveries		Result	Acceptance Range								
367-12-4	Surrogate: SURR: 2-Fluorophenol	172 %	S-01	19.7-63.1							
4165-62-2	Surrogate: SURR: Phenol-d5	687 %	S-01	10.1-41.7							
4165-60-0	Surrogate: SURR: Nitrobenzene-d5	514 %	S-01	50.2-113							
321-60-8	Surrogate: SURR: 2-Fluorobiphenyl	76.0 %		39.9-105							
118-79-6	Surrogate: SURR: 2,4,6-Tribromophenol	61.6 %		39.3-151							
1718-51-0	Surrogate: SURR: Terphenyl-d14	72.8 %		30.7-106							

Metals, RCRA (no Hg) by 6020

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	17.9		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:40	BML
7440-39-3	Barium	292		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:40	BML
7440-43-9	Cadmium	0.920		ug/L	0.556	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:40	BML
7440-47-3	Chromium	404		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:40	BML
7439-92-1	Lead	319		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:40	BML



Sample Information

Client Sample ID: GW-1/SB-1 (8.47')

York Sample ID: 20I0640-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Metals, RCRA (no Hg) by 6020

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include Selenium and Silver.

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 water

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Row includes Mercury.

Sample Information

Client Sample ID: GW-2/SB-2 (8.05')

York Sample ID: 20I0640-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include various organic compounds like Tetrachloroethane, Trichloroethane, etc.



Sample Information

Client Sample ID: GW-2/SB-2 (8.05')

York Sample ID: 20I0640-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
96-18-4	1,2,3-Trichloropropane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:50	TMP
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:50	TMP
95-63-6	1,2,4-Trimethylbenzene	140		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
106-93-4	1,2-Dibromoethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
95-50-1	1,2-Dichlorobenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
107-06-2	1,2-Dichloroethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
78-87-5	1,2-Dichloropropane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
108-67-8	1,3,5-Trimethylbenzene	150		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
541-73-1	1,3-Dichlorobenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
106-46-7	1,4-Dichlorobenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
123-91-1	1,4-Dioxane	ND		ug/L	400	400	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:50	TMP
78-93-3	2-Butanone	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
591-78-6	2-Hexanone	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
108-10-1	4-Methyl-2-pentanone	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
67-64-1	Acetone	ND		ug/L	10	20	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
107-02-8	Acrolein	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
107-13-1	Acrylonitrile	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
71-43-2	Benzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
74-97-5	Bromochloromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:50	TMP
75-27-4	Bromodichloromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
75-25-2	Bromoform	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP



Sample Information

Client Sample ID: GW-2/SB-2 (8.05')

York Sample ID: 20I0640-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-83-9	Bromomethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
75-15-0	Carbon disulfide	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
56-23-5	Carbon tetrachloride	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
108-90-7	Chlorobenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
75-00-3	Chloroethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
67-66-3	Chloroform	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
74-87-3	Chloromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
110-82-7	Cyclohexane	27		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:50	TMP
124-48-1	Dibromochloromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
74-95-3	Dibromomethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:50	TMP
75-71-8	Dichlorodifluoromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:50	TMP
100-41-4	Ethyl Benzene	110		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
87-68-3	Hexachlorobutadiene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:50	TMP
98-82-8	Isopropylbenzene	38		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
79-20-9	Methyl acetate	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:50	TMP
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
108-87-2	Methylcyclohexane	38		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:50	TMP
75-09-2	Methylene chloride	ND		ug/L	10	20	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
104-51-8	n-Butylbenzene	48		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
103-65-1	n-Propylbenzene	130		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP



Sample Information

Client Sample ID: GW-2/SB-2 (8.05')

York Sample ID: 20I0640-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/16/2020 06:19	09/16/2020 13:50	TMP
179601-23-1	p- & m- Xylenes	7.1	J	ug/L	5.0	10	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/16/2020 06:19	09/16/2020 13:50	TMP
99-87-6	p-Isopropyltoluene	8.0		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
135-98-8	sec-Butylbenzene	11		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
100-42-5	Styrene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/L	5.0	10	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 13:50	TMP
98-06-6	tert-Butylbenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
127-18-4	Tetrachloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
108-88-3	Toluene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
110-57-6	trans-1,4-dichloro-2-butene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
79-01-6	Trichloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
75-69-4	Trichlorofluoromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
75-01-4	Vinyl Chloride	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
1330-20-7	Xylenes, Total	7.1	J	ug/L	6.0	15	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 13:50	TMP
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	106 %			69-130						
2037-26-5	Surrogate: SURRE: Toluene-d8	102 %			81-117						
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	99.4 %			79-122						

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120 RESEARCH DRIVE	STRATFORD, CT 06615										
www.YORKLAB.com	(203) 325-1371										
132-02 89th AVENUE											
FAX (203) 357-0166											
RICHMOND HILL, NY 11418											
ClientServices@yorklab.com											



Sample Information

Client Sample ID: GW-2/SB-2 (8.05')

York Sample ID: 20I0640-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
92-52-4	1,1-Biphenyl	3.12	J	ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
95-50-1	1,2-Dichlorobenzene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
122-66-7	1,2-Diphenylhydrazine (as Azobenzene)	ND	CCV-L	ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
541-73-1	1,3-Dichlorobenzene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
106-46-7	1,4-Dichlorobenzene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
58-90-2	2,3,4,6-Tetrachlorophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
95-95-4	2,4,5-Trichlorophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
88-06-2	2,4,6-Trichlorophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
120-83-2	2,4-Dichlorophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
105-67-9	2,4-Dimethylphenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
51-28-5	2,4-Dinitrophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
121-14-2	2,4-Dinitrotoluene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
606-20-2	2,6-Dinitrotoluene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
91-58-7	2-Chloronaphthalene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
95-57-8	2-Chlorophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
91-57-6	2-Methylnaphthalene	551		ug/L	139	278	50	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:39	OW
95-48-7	2-Methylphenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
88-74-4	2-Nitroaniline	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
88-75-5	2-Nitrophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW



Sample Information

Client Sample ID: GW-2/SB-2 (8.05')

York Sample ID: 20I0640-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
65794-96-9	3- & 4-Methylphenols	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
91-94-1	3,3-Dichlorobenzidine	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
99-09-2	3-Nitroaniline	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
101-55-3	4-Bromophenyl phenyl ether	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
59-50-7	4-Chloro-3-methylphenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
106-47-8	4-Chloroaniline	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
100-01-6	4-Nitroaniline	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
100-02-7	4-Nitrophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
83-32-9	Acenaphthene	0.233		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
208-96-8	Acenaphthylene	0.200		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
98-86-2	Acetophenone	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
62-53-3	Aniline	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
120-12-7	Anthracene	0.267		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
1912-24-9	Atrazine	ND		ug/L	0.556	0.556	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
100-52-7	Benzaldehyde	ND	CCV-L	ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
92-87-5	Benzidine	ND	CCV-L	ug/L	11.1	22.2	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
56-55-3	Benzo(a)anthracene	0.0556		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
50-32-8	Benzo(a)pyrene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
205-99-2	Benzo(b)fluoranthene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
191-24-2	Benzo(g,h,i)perylene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW



Sample Information

Client Sample ID: GW-2/SB-2 (8.05')

York Sample ID: 20I0640-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
207-08-9	Benzo(k)fluoranthene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
65-85-0	Benzoic acid	ND		ug/L	27.8	55.6	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
100-51-6	Benzyl alcohol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
85-68-7	Benzyl butyl phthalate	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
111-44-4	Bis(2-chloroethyl)ether	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/L	0.556	0.556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
105-60-2	Caprolactam	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
86-74-8	Carbazole	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
218-01-9	Chrysene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
53-70-3	Dibenzo(a,h)anthracene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
132-64-9	Dibenzofuran	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
84-66-2	Diethyl phthalate	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
131-11-3	Dimethyl phthalate	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
84-74-2	Di-n-butyl phthalate	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
117-84-0	Di-n-octyl phthalate	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
122-39-4	* Diphenylamine	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications:	09/16/2020 07:53	09/16/2020 21:06	OW
206-44-0	Fluoranthene	0.200		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
86-73-7	Fluorene	1.20		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
118-74-1	Hexachlorobenzene	ND		ug/L	0.0222	0.0222	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
87-68-3	Hexachlorobutadiene	ND		ug/L	0.556	0.556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW



Sample Information

Client Sample ID: GW-2/SB-2 (8.05')

York Sample ID: 20I0640-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
77-47-4	Hexachlorocyclopentadiene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
67-72-1	Hexachloroethane	ND		ug/L	0.556	0.556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
78-59-1	Isophorone	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
91-20-3	Naphthalene	698	B	ug/L	139	278	50	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 10:39	OW
98-95-3	Nitrobenzene	ND		ug/L	0.278	0.278	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
62-75-9	N-Nitrosodimethylamine	ND		ug/L	0.556	0.556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
621-64-7	N-nitroso-di-n-propylamine	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
86-30-6	N-Nitrosodiphenylamine	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
87-86-5	Pentachlorophenol	ND		ug/L	0.278	0.278	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
85-01-8	Phenanthrene	1.44		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW
108-95-2	Phenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:06	OW
129-00-0	Pyrene	0.311		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 18:46	OW

Surrogate Recoveries

Result

Acceptance Range

367-12-4	Surrogate: SURR: 2-Fluorophenol	32.2 %	19.7-63.1
4165-62-2	Surrogate: SURR: Phenol-d5	17.5 %	10.1-41.7
4165-60-0	Surrogate: SURR: Nitrobenzene-d5	79.9 %	50.2-113
321-60-8	Surrogate: SURR: 2-Fluorobiphenyl	74.4 %	39.9-105
118-79-6	Surrogate: SURR: 2,4,6-Tribromophenol	84.0 %	39.3-151
1718-51-0	Surrogate: SURR: Terphenyl-d14	86.9 %	30.7-106

Metals, RCRA (no Hg) by 6020

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	4.79		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:43	BML
7440-39-3	Barium	99.0		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:43	BML



Sample Information

Client Sample ID: GW-2/SB-2 (8.05')

York Sample ID: 20I0640-06

<u>York Project (SDG) No.</u> 20I0640	<u>Client Project ID</u> 1810 Cropsey Ave Brooklyn, NY 11214	<u>Matrix</u> Water	<u>Collection Date/Time</u> September 11, 2020 12:00 am	<u>Date Received</u> 09/15/2020
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Metals, RCRA (no Hg) by 6020

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-43-9	Cadmium	ND		ug/L	0.556	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:43	BML
7440-47-3	Chromium	32.9		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:43	BML
7439-92-1	Lead	51.4		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:43	BML
7782-49-2	Selenium	ND		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:43	BML
7440-22-4	Silver	ND		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:43	BML

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 water

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/L	0.00020	1	EPA 7473 Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 13:26	09/17/2020 14:04	SY

Sample Information

Client Sample ID: GW-3/SB-3 (7.70')

York Sample ID: 20I0640-07

<u>York Project (SDG) No.</u> 20I0640	<u>Client Project ID</u> 1810 Cropsey Ave Brooklyn, NY 11214	<u>Matrix</u> Water	<u>Collection Date/Time</u> September 11, 2020 12:00 am	<u>Date Received</u> 09/15/2020
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Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
71-55-6	1,1,1-Trichloroethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
79-00-5	1,1,2-Trichloroethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
75-34-3	1,1-Dichloroethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP



Sample Information

Client Sample ID: GW-3/SB-3 (7.70')

York Sample ID: 20I0640-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-35-4	1,1-Dichloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:16	TMP
96-18-4	1,2,3-Trichloropropane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:16	TMP
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:16	TMP
95-63-6	1,2,4-Trimethylbenzene	19		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
106-93-4	1,2-Dibromoethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
95-50-1	1,2-Dichlorobenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
107-06-2	1,2-Dichloroethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
78-87-5	1,2-Dichloropropane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
108-67-8	1,3,5-Trimethylbenzene	77		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
541-73-1	1,3-Dichlorobenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
106-46-7	1,4-Dichlorobenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
123-91-1	1,4-Dioxane	ND		ug/L	400	400	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:16	TMP
78-93-3	2-Butanone	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
591-78-6	2-Hexanone	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
108-10-1	4-Methyl-2-pentanone	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
67-64-1	Acetone	13	J	ug/L	10	20	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
107-02-8	Acrolein	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
107-13-1	Acrylonitrile	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
71-43-2	Benzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
74-97-5	Bromochloromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:16	TMP



Sample Information

Client Sample ID: GW-3/SB-3 (7.70')

York Sample ID: 20I0640-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-27-4	Bromodichloromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
75-25-2	Bromoform	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
74-83-9	Bromomethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
75-15-0	Carbon disulfide	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
56-23-5	Carbon tetrachloride	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
108-90-7	Chlorobenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
75-00-3	Chloroethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
67-66-3	Chloroform	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
74-87-3	Chloromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
110-82-7	Cyclohexane	170		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:16	TMP
124-48-1	Dibromochloromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
74-95-3	Dibromomethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:16	TMP
75-71-8	Dichlorodifluoromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:16	TMP
100-41-4	Ethyl Benzene	1000		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
87-68-3	Hexachlorobutadiene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:16	TMP
98-82-8	Isopropylbenzene	100		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
79-20-9	Methyl acetate	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:16	TMP
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
108-87-2	Methylcyclohexane	170		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:16	TMP
75-09-2	Methylene chloride	ND		ug/L	10	20	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP



Sample Information

Client Sample ID: GW-3/SB-3 (7.70')

York Sample ID: 20I0640-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
104-51-8	n-Butylbenzene	41		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
103-65-1	n-Propylbenzene	280		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
95-47-6	o-Xylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/16/2020 06:19	09/16/2020 14:16	TMP
179601-23-1	p- & m- Xylenes	42		ug/L	5.0	10	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/16/2020 06:19	09/16/2020 14:16	TMP
99-87-6	p-Isopropyltoluene	8.6		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
135-98-8	sec-Butylbenzene	14		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
100-42-5	Styrene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/L	5.0	10	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:16	TMP
98-06-6	tert-Butylbenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
127-18-4	Tetrachloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
108-88-3	Toluene	23		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
110-57-6	trans-1,4-dichloro-2-butene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
79-01-6	Trichloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
75-69-4	Trichlorofluoromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
75-01-4	Vinyl Chloride	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
1330-20-7	Xylenes, Total	44		ug/L	6.0	15	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:16	TMP
	Surrogate Recoveries	Result			Acceptance Range						
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	104 %			69-130						
2037-26-5	Surrogate: SURRE: Toluene-d8	102 %			81-117						
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	99.5 %			79-122						



Sample Information

Client Sample ID: GW-3/SB-3 (7.70')

York Sample ID: 20I0640-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
92-52-4	1,1-Biphenyl	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
95-50-1	1,2-Dichlorobenzene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
122-66-7	1,2-Diphenylhydrazine (as Azobenzene)	ND	CCV-L	ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
541-73-1	1,3-Dichlorobenzene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
106-46-7	1,4-Dichlorobenzene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
58-90-2	2,3,4,6-Tetrachlorophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
95-95-4	2,4,5-Trichlorophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
88-06-2	2,4,6-Trichlorophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
120-83-2	2,4-Dichlorophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
105-67-9	2,4-Dimethylphenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
51-28-5	2,4-Dinitrophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
121-14-2	2,4-Dinitrotoluene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
606-20-2	2,6-Dinitrotoluene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
91-58-7	2-Chloronaphthalene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
95-57-8	2-Chlorophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
91-57-6	2-Methylnaphthalene	164		ug/L	27.8	55.6	10	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 11:40	OW
95-48-7	2-Methylphenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
88-74-4	2-Nitroaniline	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
88-75-5	2-Nitrophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW



Sample Information

Client Sample ID: GW-3/SB-3 (7.70')

York Sample ID: 20I0640-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
65794-96-9	3- & 4-Methylphenols	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
91-94-1	3,3-Dichlorobenzidine	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
99-09-2	3-Nitroaniline	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
101-55-3	4-Bromophenyl phenyl ether	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
59-50-7	4-Chloro-3-methylphenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
106-47-8	4-Chloroaniline	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
100-01-6	4-Nitroaniline	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
100-02-7	4-Nitrophenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
83-32-9	Acenaphthene	0.144		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
208-96-8	Acenaphthylene	0.0556		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
98-86-2	Acetophenone	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
62-53-3	Aniline	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
120-12-7	Anthracene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
1912-24-9	Atrazine	ND		ug/L	0.556	0.556	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
100-52-7	Benzaldehyde	ND	CCV-L	ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
92-87-5	Benzidine	ND	CCV-L	ug/L	11.1	22.2	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
56-55-3	Benzo(a)anthracene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
50-32-8	Benzo(a)pyrene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
205-99-2	Benzo(b)fluoranthene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
191-24-2	Benzo(g,h,i)perylene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW



Sample Information

Client Sample ID: GW-3/SB-3 (7.70')

York Sample ID: 20I0640-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
207-08-9	Benzo(k)fluoranthene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
65-85-0	Benzoic acid	ND		ug/L	27.8	55.6	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
100-51-6	Benzyl alcohol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
85-68-7	Benzyl butyl phthalate	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
111-44-4	Bis(2-chloroethyl)ether	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/L	0.556	0.556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
105-60-2	Caprolactam	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
86-74-8	Carbazole	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
218-01-9	Chrysene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
53-70-3	Dibenzo(a,h)anthracene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
132-64-9	Dibenzofuran	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
84-66-2	Diethyl phthalate	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
131-11-3	Dimethyl phthalate	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
84-74-2	Di-n-butyl phthalate	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
117-84-0	Di-n-octyl phthalate	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
122-39-4	* Diphenylamine	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications:	09/16/2020 07:53	09/16/2020 21:37	OW
206-44-0	Fluoranthene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
86-73-7	Fluorene	0.256		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
118-74-1	Hexachlorobenzene	ND		ug/L	0.0222	0.0222	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW



Sample Information

Client Sample ID: GW-3/SB-3 (7.70')

York Sample ID: 20I0640-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/L	0.556	0.556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
77-47-4	Hexachlorocyclopentadiene	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
67-72-1	Hexachloroethane	ND		ug/L	0.556	0.556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
78-59-1	Isophorone	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
91-20-3	Naphthalene	604	B	ug/L	139	278	50	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 11:10	OW
98-95-3	Nitrobenzene	ND		ug/L	0.278	0.278	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
62-75-9	N-Nitrosodimethylamine	ND		ug/L	0.556	0.556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
621-64-7	N-nitroso-di-n-propylamine	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
86-30-6	N-Nitrosodiphenylamine	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
87-86-5	Pentachlorophenol	ND		ug/L	0.278	0.278	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
85-01-8	Phenanthrene	0.289		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
108-95-2	Phenol	ND		ug/L	2.78	5.56	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 21:37	OW
129-00-0	Pyrene	ND		ug/L	0.0556	0.0556	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:17	OW
Surrogate Recoveries		Result			Acceptance Range						
367-12-4	Surrogate: SURR: 2-Fluorophenol	33.7 %			19.7-63.1						
4165-62-2	Surrogate: SURR: Phenol-d5	16.7 %			10.1-41.7						
4165-60-0	Surrogate: SURR: Nitrobenzene-d5	46.2 %	S-08		50.2-113						
321-60-8	Surrogate: SURR: 2-Fluorobiphenyl	55.5 %			39.9-105						
118-79-6	Surrogate: SURR: 2,4,6-Tribromophenol	73.4 %			39.3-151						
1718-51-0	Surrogate: SURR: Terphenyl-d14	67.4 %			30.7-106						

Metals, RCRA (no Hg) by 6020

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
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Sample Information

Client Sample ID: GW-3/SB-3 (7.70')

York Sample ID: 20I0640-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Metals, RCRA (no Hg) by 6020

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include Arsenic (3.28), Barium (199), Cadmium (ND), Chromium (65.1), Lead (15.5), Selenium (ND), Silver (ND).

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 water

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Row includes Mercury (ND).

Sample Information

Client Sample ID: GW-4/SB-4 (7.55')

York Sample ID: 20I0640-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include 1,1,1,2-Tetrachloroethane (ND), 1,1,1-Trichloroethane (ND), 1,1,2,2-Tetrachloroethane (ND).



Sample Information

Client Sample ID: GW-4/SB-4 (7.55')

York Sample ID: 20I0640-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Contains 25 rows of data for various chemical compounds.



Sample Information

Client Sample ID: GW-4/SB-4 (7.55')

York Sample ID: 20I0640-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-13-1	Acrylonitrile	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
71-43-2	Benzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
74-97-5	Bromochloromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:41	TMP
75-27-4	Bromodichloromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
75-25-2	Bromoform	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
74-83-9	Bromomethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
75-15-0	Carbon disulfide	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
56-23-5	Carbon tetrachloride	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
108-90-7	Chlorobenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
75-00-3	Chloroethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
67-66-3	Chloroform	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
74-87-3	Chloromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
110-82-7	Cyclohexane	140		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:41	TMP
124-48-1	Dibromochloromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
74-95-3	Dibromomethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:41	TMP
75-71-8	Dichlorodifluoromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:41	TMP
100-41-4	Ethyl Benzene	650		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
87-68-3	Hexachlorobutadiene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:41	TMP
98-82-8	Isopropylbenzene	120		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
79-20-9	Methyl acetate	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:41	TMP



Sample Information

Client Sample ID: GW-4/SB-4 (7.55')

York Sample ID: 20I0640-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
108-87-2	Methylcyclohexane	280		ug/L	2.0	5.0	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:41	TMP
75-09-2	Methylene chloride	ND		ug/L	10	20	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
104-51-8	n-Butylbenzene	94		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
103-65-1	n-Propylbenzene	360		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
95-47-6	o-Xylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/16/2020 06:19	09/16/2020 14:41	TMP
179601-23-1	p- & m- Xylenes	36		ug/L	5.0	10	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	09/16/2020 06:19	09/16/2020 14:41	TMP
99-87-6	p-Isopropyltoluene	18		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
135-98-8	sec-Butylbenzene	24		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
100-42-5	Styrene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/L	5.0	10	10	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	09/16/2020 06:19	09/16/2020 14:41	TMP
98-06-6	tert-Butylbenzene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
127-18-4	Tetrachloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
108-88-3	Toluene	2.0	J	ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
110-57-6	trans-1,4-dichloro-2-butene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
79-01-6	Trichloroethylene	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
75-69-4	Trichlorofluoromethane	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
75-01-4	Vinyl Chloride	ND		ug/L	2.0	5.0	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP
1330-20-7	Xylenes, Total	36		ug/L	6.0	15	10	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	09/16/2020 06:19	09/16/2020 14:41	TMP

Surrogate Recoveries

Result

Acceptance Range



Sample Information

Client Sample ID: GW-4/SB-4 (7.55')

York Sample ID: 20I0640-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
17060-07-0	Surrogate: SURRE: 1,2-Dichloroethane-d4	82.7 %			69-130						
2037-26-5	Surrogate: SURRE: Toluene-d8	102 %			81-117						
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	100 %			79-122						

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
92-52-4	1,1-Biphenyl	6.53		ug/L	2.56	5.13	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
95-50-1	1,2-Dichlorobenzene	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
122-66-7	1,2-Diphenylhydrazine (as Azobenzene)	ND	CCV-L	ug/L	2.56	5.13	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
541-73-1	1,3-Dichlorobenzene	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
106-46-7	1,4-Dichlorobenzene	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
58-90-2	2,3,4,6-Tetrachlorophenol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
95-95-4	2,4,5-Trichlorophenol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
88-06-2	2,4,6-Trichlorophenol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
120-83-2	2,4-Dichlorophenol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
105-67-9	2,4-Dimethylphenol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
51-28-5	2,4-Dinitrophenol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
121-14-2	2,4-Dinitrotoluene	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
606-20-2	2,6-Dinitrotoluene	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
91-58-7	2-Chloronaphthalene	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW



Sample Information

Client Sample ID: GW-4/SB-4 (7.55')

York Sample ID: 20I0640-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-57-8	2-Chlorophenol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
91-57-6	2-Methylnaphthalene	827		ug/L	128	256	50	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/17/2020 12:10	OW
95-48-7	2-Methylphenol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
88-74-4	2-Nitroaniline	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
88-75-5	2-Nitrophenol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
65794-96-9	3- & 4-Methylphenols	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
91-94-1	3,3-Dichlorobenzidine	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
99-09-2	3-Nitroaniline	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
101-55-3	4-Bromophenyl phenyl ether	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
59-50-7	4-Chloro-3-methylphenol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
106-47-8	4-Chloroaniline	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
100-01-6	4-Nitroaniline	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
100-02-7	4-Nitrophenol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
83-32-9	Acenaphthene	1.09		ug/L	0.0513	0.0513	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:49	OW
208-96-8	Acenaphthylene	0.503		ug/L	0.0513	0.0513	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:49	OW
98-86-2	Acetophenone	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
62-53-3	Aniline	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
120-12-7	Anthracene	0.441		ug/L	0.0513	0.0513	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:49	OW
1912-24-9	Atrazine	ND		ug/L	0.513	0.513	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:49	OW
100-52-7	Benzaldehyde	ND	CCV-L	ug/L	2.56	5.13	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW



Sample Information

Client Sample ID: GW-4/SB-4 (7.55')

York Sample ID: 20I0640-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
92-87-5	Benzidine	ND	CCV-L	ug/L	10.3	20.5	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
56-55-3	Benzo(a)anthracene	0.0923		ug/L	0.0513	0.0513	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:49	OW
50-32-8	Benzo(a)pyrene	ND		ug/L	0.0513	0.0513	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:49	OW
205-99-2	Benzo(b)fluoranthene	0.0513		ug/L	0.0513	0.0513	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:49	OW
191-24-2	Benzo(g,h,i)perylene	0.0923		ug/L	0.0513	0.0513	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:49	OW
207-08-9	Benzo(k)fluoranthene	ND		ug/L	0.0513	0.0513	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:49	OW
65-85-0	Benzoic acid	ND		ug/L	25.6	51.3	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
100-51-6	Benzyl alcohol	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
85-68-7	Benzyl butyl phthalate	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
111-44-4	Bis(2-chloroethyl)ether	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
117-81-7	Bis(2-ethylhexyl)phthalate	5.57		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
105-60-2	Caprolactam	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
86-74-8	Carbazole	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
218-01-9	Chrysene	0.0923		ug/L	0.0513	0.0513	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:49	OW
53-70-3	Dibenzo(a,h)anthracene	ND		ug/L	0.0513	0.0513	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 19:49	OW
132-64-9	Dibenzofuran	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
84-66-2	Diethyl phthalate	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
131-11-3	Dimethyl phthalate	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
84-74-2	Di-n-butyl phthalate	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW
117-84-0	Di-n-octyl phthalate	ND		ug/L	2.56	5.13	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/16/2020 07:53	09/16/2020 22:07	OW



Sample Information

Client Sample ID: GW-4/SB-4 (7.55')

York Sample ID: 20I0640-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
122-39-4	* Diphenylamine	ND		ug/L	2.56	5.13	1	EPA 8270D	09/16/2020 07:53	09/16/2020 22:07	OW
								Certifications:			
206-44-0	Fluoranthene	0.390		ug/L	0.0513	0.0513	1	EPA 8270D	09/16/2020 07:53	09/16/2020 19:49	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
86-73-7	Fluorene	2.04		ug/L	0.0513	0.0513	1	EPA 8270D	09/16/2020 07:53	09/16/2020 19:49	OW
								Certifications:	NELAC-NY10854,NJDEP,PADEP		
118-74-1	Hexachlorobenzene	ND		ug/L	0.0205	0.0205	1	EPA 8270D	09/16/2020 07:53	09/16/2020 19:49	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
87-68-3	Hexachlorobutadiene	ND		ug/L	0.513	0.513	1	EPA 8270D	09/16/2020 07:53	09/16/2020 19:49	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
77-47-4	Hexachlorocyclopentadiene	ND		ug/L	2.56	5.13	1	EPA 8270D	09/16/2020 07:53	09/16/2020 22:07	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
67-72-1	Hexachloroethane	ND		ug/L	0.513	0.513	1	EPA 8270D	09/16/2020 07:53	09/16/2020 19:49	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/L	0.0513	0.0513	1	EPA 8270D	09/16/2020 07:53	09/16/2020 19:49	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
78-59-1	Isophorone	ND		ug/L	2.56	5.13	1	EPA 8270D	09/16/2020 07:53	09/16/2020 22:07	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
91-20-3	Naphthalene	756	B	ug/L	128	256	50	EPA 8270D	09/16/2020 07:53	09/17/2020 12:10	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
98-95-3	Nitrobenzene	ND		ug/L	0.256	0.256	1	EPA 8270D	09/16/2020 07:53	09/16/2020 19:49	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
62-75-9	N-Nitrosodimethylamine	ND		ug/L	0.513	0.513	1	EPA 8270D	09/16/2020 07:53	09/16/2020 19:49	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
621-64-7	N-nitroso-di-n-propylamine	ND		ug/L	2.56	5.13	1	EPA 8270D	09/16/2020 07:53	09/16/2020 22:07	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
86-30-6	N-Nitrosodiphenylamine	ND		ug/L	2.56	5.13	1	EPA 8270D	09/16/2020 07:53	09/16/2020 22:07	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
87-86-5	Pentachlorophenol	ND		ug/L	0.256	0.256	1	EPA 8270D	09/16/2020 07:53	09/16/2020 19:49	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
85-01-8	Phenanthrene	2.63		ug/L	0.0513	0.0513	1	EPA 8270D	09/16/2020 07:53	09/16/2020 19:49	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
108-95-2	Phenol	ND		ug/L	2.56	5.13	1	EPA 8270D	09/16/2020 07:53	09/16/2020 22:07	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
129-00-0	Pyrene	0.615		ug/L	0.0513	0.0513	1	EPA 8270D	09/16/2020 07:53	09/16/2020 19:49	OW
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
	Surrogate Recoveries	Result			Acceptance Range						
367-12-4	Surrogate: SURR: 2-Fluorophenol	26.3 %			19.7-63.1						
4165-62-2	Surrogate: SURR: Phenol-d5	16.8 %			10.1-41.7						
4165-60-0	Surrogate: SURR: Nitrobenzene-d5	123 %	S-08		50.2-113						
321-60-8	Surrogate: SURR: 2-Fluorobiphenyl	50.2 %			39.9-105						
118-79-6	Surrogate: SURR: 2,4,6-Tribromophenol	62.4 %			39.3-151						



Sample Information

Client Sample ID: GW-4/SB-4 (7.55')

York Sample ID: 20I0640-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0640

1810 Cropsey Ave Brooklyn, NY 11214

Water

September 11, 2020 12:00 am

09/15/2020

Semi-Volatiles, 8270 - Comprehensive

Log-in Notes:

Sample Notes: EXT-D, EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1718-51-0	Surrogate: SURR: Terphenyl-d14	59.7 %			30.7-106						

Metals, RCRA (no Hg) by 6020

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	39.4		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:50	BML
7440-39-3	Barium	899		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:50	BML
7440-43-9	Cadmium	1.56		ug/L	0.556	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:50	BML
7440-47-3	Chromium	388		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:50	BML
7439-92-1	Lead	242		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:50	BML
7782-49-2	Selenium	ND		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:50	BML
7440-22-4	Silver	ND		ug/L	1.11	1	EPA 6020B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 12:12	09/17/2020 14:50	BML

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 water

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/L	0.00020	1	EPA 7473 Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	09/17/2020 13:26	09/17/2020 14:25	SY



Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
20I0640-01	SB-1/S3 (8'-10')	40mL 01_Clear Vial Cool to 4° C
20I0640-02	SB-2/S3 (8'-10')	40mL 01_Clear Vial Cool to 4° C
20I0640-03	SB-3/S3 (8'-10')	40mL 01_Clear Vial Cool to 4° C
20I0640-04	SB-4/S3 (8'-10')	40mL 01_Clear Vial Cool to 4° C
20I0640-05	GW-1/SB-1 (8.47')	1000mL Amber Glass Cool to 4° C
20I0640-06	GW-2/SB-2 (8.05')	1000mL Amber Glass Cool to 4° C
20I0640-07	GW-3/SB-3 (7.70')	1000mL Amber Glass Cool to 4° C
20I0640-08	GW-4/SB-4 (7.55')	1000mL Amber Glass Cool to 4° C



Sample and Data Qualifiers Relating to This Work Order

S-08	The recovery of this surrogate was outside of QC limits.
S-01	The surrogate recovery for this sample may not be available due to sample dilution required from high analyte concentration and/or matrix interferences.
QL-02	This LCS analyte is outside Laboratory Recovery limits due to the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
M-MBLK	Analyte was detected in the batch method blank above the Reporting Limit.
M-CRL	The RL check for this element recovered outside of control limits.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
EXT-EM	The sample exhibited emulsion formation during the extraction process. This may affect surrogate recoveries.
EXT-D	The sample submitted contained sediment. The aqueous portion was decanted off, the volume measured and used for the extraction. The sediment was not included in the extraction.
CCV-L	The value reported is estimated due to its behavior during continuing calibration verification (>20% difference for average RF or >20% drift for linear or quadratic fit.) This value may be biased low.
CCV-H	The value reported is estimated due to its behavior during continuing calibration verification (>20% difference for average RF or >20% drift for linear or quadratic fit.) This value may be biased high.
CCV-E	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

Definitions and Other Explanations

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



High Bias High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.

Non-Dir. Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

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

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

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

Certification for pH is no longer offered by NYDOH ELAP.

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

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



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



YOUR INFORMATION

Company: *Dele Environmental Group*
 Address: *132-02 89th Ave, Ste 20*
Richmond 4111, NY 11418
 Phone: *(718) 438-2200*
 Contact: *DANNY SINGH*
 E-mail: *danny@deleenvironmental.com*

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

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

Field Chain-of-Custody Record

YORK Project No. *2010640*

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

Page *1* of *1*

Report To:

Company: _____
 Address: _____
 Phone: _____
 Contact: _____
 E-mail: _____

YOUR Project Number

*1810 Cropsey Avenue,
 Brooklyn, NY 11214*
YOUR Project Name
*1810 Cropsey Avenue,
 Brooklyn, NY 11214*

Turn-Around Time

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

Report To:

Company: _____
 Address: _____
 Phone: _____
 Contact: _____
 E-mail: _____

Report / EDD Type (circle selections)

Summary Report Standard Excel EDD
 QA Report EQUIS (Standard)
 NY ASP A Package NYSDEC EQUIS
 NY ASP B Package NJDEP SRP HazSite
 NUDKQP Other: _____

Matrix Codes

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

Samples From

New York
 New Jersey
 Connecticut
 Pennsylvania
 Other: _____

Sample Identification

SB-1 / SB-3 (8'-10')
SB-2 / SB-3 (8'-10')
SB-3 / SB-3 (8'-10')
SB-4 / SB-3 (8'-10')
GW-1 / SB-1 (8.47')
GW-2 / SB-2 (8.05')
GW-3 / SB-3 (7.70')
GW-4 / SB-4 (7.55')

Analysis Requested

8260, 8270
8260, 8270 (Full)
8260, 8270 (List)
8260, 8270
8260, 8270 (Full List + RECA M (WAFI))
8260, 8270 + RECA M (WAFI)
8260, 8270 + RECA M (WAFI)
8260, 8270 + RECA M (WAFI)

Sample Matrix

S
S
S
S
GW
GW
GW
GW

Date/Time Sampled

9/14/20
9/14/20
9/14/20
9/14/20
9/14/20
9/14/20
9/14/20
9/14/20

Container Description

1) 802 (1) TC
2) 605 (1) 605 (1) 605 (1) 605 (1)

YORK Reg. Comp

Compared to the following Regulation(s): (please fill in)

Comments:

** 48 Hour RUSH **

** 8260s retained in Queens (S)*

Preservation: (check all that apply)

HCl _____ MeOH _____ HNO₃ _____ H₂SO₄ _____ NaOH _____ ZnAc _____
 Ascorbic Acid _____ Other: _____

Special Instruction

Field Filtered Lab to Filter _____

Samples Relinquished by / Company

ENVIRONMENTAL
RECEIVED BY
9/14/20

Samples Relinquished by / Company

Touff / Job
9/14/20

Date/Time

1957
9/14/20

Samples Relinquished by / Company

Touff / Job

Date/Time

9/15/20

Date/Time

9/15/20 1930

Samples Received by / Company

RECEIVED BY
9/15/20

Samples Received by / Company

RECEIVED BY
9/15/20

Date/Time

9/15/20

Samples Received by / Company

RECEIVED BY
9/15/20

Date/Time

9/15/20

Date/Time

9/15/20 1930



Technical Report

prepared for:

RSK Environmental Group
36-11 14th Suite 508B
Brooklyn NY, 11218
Attention: Danny Singh

Report Date: 09/16/2020
Client Project ID: 1810 Cropsey Ave Brooklyn, N.Y. 11214
York Project (SDG) No.: 20I0602

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

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(203) 325-1371

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FAX (203) 357-0166

RICHMOND HILL, NY 11418
ClientServices@yorklab.com

Report Date: 09/16/2020
Client Project ID: 1810 Cropsey Ave Brooklyn, N.Y. 11214
York Project (SDG) No.: 20I0602

RSK Environmental Group
36-11 14th Suite 508B
Brooklyn NY, 11218
Attention: Danny Singh

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on September 14, 2020 with a temperature of C. The project was identified as your project: **1810 Cropsey Ave Brooklyn, N.Y. 11214.**

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

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

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

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

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

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
20I0602-01	OA-1 (OUTSIDE)	Outdoor Ambient Ai	09/14/2020	09/14/2020
20I0602-02	IA-1 (1st FLOOR)	Indoor Ambient Air	09/14/2020	09/14/2020
20I0602-03	SI-1 (CELLAR)	Soil Vapor	09/14/2020	09/14/2020
20I0602-04	IA-2 (CELLAR)	Indoor Ambient Air	09/14/2020	09/14/2020

General Notes for York Project (SDG) No.: 20I0602

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

Approved By:



Benjamin Gulizia
Laboratory Director

Date: 09/16/2020





Sample Information

Client Sample ID: OA-1 (OUTSIDE)

York Sample ID: 2010602-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

2010602

1810 CROPSY AVE BROOKLYN, N.Y. 11214

Outdoor Ambient Air September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m ³	0.69	0.998	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 02:13	LLJ
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	0.54	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	0.69	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	0.76	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	0.54	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.40	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.099	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	0.74	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m ³	0.49	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
106-93-4	1,2-Dibromoethane	ND		ug/m ³	0.77	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	0.60	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.40	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.46	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	0.70	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m ³	0.49	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
106-99-0	1,3-Butadiene	ND		ug/m ³	0.66	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	0.60	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	0.46	0.998	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 02:13	LLJ
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	0.60	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
123-91-1	1,4-Dioxane	ND		ug/m ³	0.72	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
78-93-3	2-Butanone	0.56		ug/m ³	0.29	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ



Sample Information

Client Sample ID: OA-1 (OUTSIDE)

York Sample ID: 20I0602-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Outdoor Ambient Air September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
591-78-6	* 2-Hexanone	ND		ug/m ³	0.82	0.998	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 02:13	LLJ
107-05-1	3-Chloropropene	ND		ug/m ³	1.6	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	0.41	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
67-64-1	Acetone	8.3		ug/m ³	0.47	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
107-13-1	Acrylonitrile	ND		ug/m ³	0.22	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
71-43-2	Benzene	0.48		ug/m ³	0.32	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
100-44-7	Benzyl chloride	ND		ug/m ³	0.52	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
75-27-4	Bromodichloromethane	ND		ug/m ³	0.67	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
75-25-2	Bromoform	ND		ug/m ³	1.0	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
74-83-9	Bromomethane	ND		ug/m ³	0.39	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
75-15-0	Carbon disulfide	ND		ug/m ³	0.31	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
56-23-5	Carbon tetrachloride	0.50		ug/m ³	0.16	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
108-90-7	Chlorobenzene	ND		ug/m ³	0.46	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
75-00-3	Chloroethane	ND		ug/m ³	0.26	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
67-66-3	Chloroform	ND		ug/m ³	0.49	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
74-87-3	Chloromethane	1.8	TO-CC V, TO-LC S-H	ug/m ³	0.21	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m ³	0.099	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.45	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
110-82-7	Cyclohexane	ND		ug/m ³	0.34	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
124-48-1	Dibromochloromethane	ND		ug/m ³	0.85	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
75-71-8	Dichlorodifluoromethane	1.7		ug/m ³	0.49	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ



Sample Information

Client Sample ID: OA-1 (OUTSIDE)

York Sample ID: 20I0602-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Outdoor Ambient Air September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
141-78-6	* Ethyl acetate	ND		ug/m ³	0.72	0.998	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 02:13	LLJ
100-41-4	Ethyl Benzene	ND		ug/m ³	0.43	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
87-68-3	Hexachlorobutadiene	ND		ug/m ³	1.1	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
67-63-0	Isopropanol	7.1		ug/m ³	0.49	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
80-62-6	Methyl Methacrylate	ND		ug/m ³	0.41	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.36	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
75-09-2	Methylene chloride	4.6		ug/m ³	0.69	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
142-82-5	n-Heptane	ND		ug/m ³	0.41	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
110-54-3	n-Hexane	0.46		ug/m ³	0.35	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
95-47-6	o-Xylene	ND		ug/m ³	0.43	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
179601-23-1	p- & m- Xylenes	ND		ug/m ³	0.87	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
622-96-8	* p-Ethyltoluene	ND		ug/m ³	0.49	0.998	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 02:13	LLJ
115-07-1	* Propylene	ND		ug/m ³	0.17	0.998	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 02:13	LLJ
100-42-5	Styrene	ND		ug/m ³	0.43	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
127-18-4	Tetrachloroethylene	ND		ug/m ³	0.68	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
109-99-9	* Tetrahydrofuran	ND		ug/m ³	0.59	0.998	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 02:13	LLJ
108-88-3	Toluene	3.2		ug/m ³	0.38	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.40	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.45	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
79-01-6	Trichloroethylene	ND		ug/m ³	0.13	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
75-69-4	Trichlorofluoromethane (Freon 11)	1.5		ug/m ³	0.56	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
108-05-4	Vinyl acetate	ND		ug/m ³	0.35	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ



Sample Information

Client Sample ID: OA-1 (OUTSIDE)

York Sample ID: 20I0602-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Outdoor Ambient Air September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
593-60-2	Vinyl bromide	ND		ug/m ³	0.44	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
75-01-4	Vinyl Chloride	ND		ug/m ³	0.13	0.998	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 02:13	LLJ
Surrogate Recoveries		Result	Acceptance Range							
460-00-4	Surrogate: SURR: p-Bromofluorobenzene	104 %	70-130							

Sample Information

Client Sample ID: IA-1 (1st FLOOR)

York Sample ID: 20I0602-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Indoor Ambient Air September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m ³	0.63	0.911	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 04:11	LLJ
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	0.50	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	0.63	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	0.70	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	0.50	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.37	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.090	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	0.68	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
95-63-6	1,2,4-Trimethylbenzene	0.76		ug/m ³	0.45	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
106-93-4	1,2-Dibromoethane	ND		ug/m ³	0.70	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	0.55	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ



Sample Information

Client Sample ID: IA-1 (1st FLOOR)

York Sample ID: 20I0602-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Indoor Ambient Air

September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.37	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.42	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	0.64	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m ³	0.45	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
106-99-0	1,3-Butadiene	ND		ug/m ³	0.60	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	0.55	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	0.42	0.911	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 04:11	LLJ
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	0.55	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
123-91-1	1,4-Dioxane	ND		ug/m ³	0.66	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
78-93-3	2-Butanone	1.4		ug/m ³	0.27	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
591-78-6	* 2-Hexanone	ND		ug/m ³	0.75	0.911	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 04:11	LLJ
107-05-1	3-Chloropropene	ND		ug/m ³	1.4	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
108-10-1	4-Methyl-2-pentanone	0.45		ug/m ³	0.37	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
67-64-1	Acetone	16		ug/m ³	0.43	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
107-13-1	Acrylonitrile	ND		ug/m ³	0.20	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
71-43-2	Benzene	0.49		ug/m ³	0.29	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
100-44-7	Benzyl chloride	ND		ug/m ³	0.47	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
75-27-4	Bromodichloromethane	ND		ug/m ³	0.61	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
75-25-2	Bromoform	ND		ug/m ³	0.94	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
74-83-9	Bromomethane	ND		ug/m ³	0.35	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
75-15-0	Carbon disulfide	ND		ug/m ³	0.28	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
56-23-5	Carbon tetrachloride	0.52		ug/m ³	0.14	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ



Sample Information

Client Sample ID: IA-1 (1st FLOOR)

York Sample ID: 20I0602-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Indoor Ambient Air

September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-90-7	Chlorobenzene	ND		ug/m ³	0.42	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
75-00-3	Chloroethane	ND		ug/m ³	0.24	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
67-66-3	Chloroform	ND		ug/m ³	0.44	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
74-87-3	Chloromethane	1.8	TO-CC V, TO-LC S-H	ug/m ³	0.19	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m ³	0.090	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.41	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
110-82-7	Cyclohexane	ND		ug/m ³	0.31	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
124-48-1	Dibromochloromethane	ND		ug/m ³	0.78	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
75-71-8	Dichlorodifluoromethane	1.8		ug/m ³	0.45	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
141-78-6	* Ethyl acetate	ND		ug/m ³	0.66	0.911	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 04:11	LLJ
100-41-4	Ethyl Benzene	0.40		ug/m ³	0.40	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
87-68-3	Hexachlorobutadiene	ND		ug/m ³	0.97	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
67-63-0	Isopropanol	56		ug/m ³	0.45	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
80-62-6	Methyl Methacrylate	1.9		ug/m ³	0.37	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.33	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
75-09-2	Methylene chloride	10		ug/m ³	0.63	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
142-82-5	n-Heptane	0.56		ug/m ³	0.37	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
110-54-3	n-Hexane	0.96		ug/m ³	0.32	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
95-47-6	o-Xylene	0.44		ug/m ³	0.40	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
179601-23-1	p- & m- Xylenes	1.2		ug/m ³	0.79	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
622-96-8	* p-Ethyltoluene	ND		ug/m ³	0.45	0.911	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 04:11	LLJ



Sample Information

Client Sample ID: IA-1 (1st FLOOR)

York Sample ID: 20I0602-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Indoor Ambient Air

September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
115-07-1	* Propylene	ND		ug/m ³	0.16	0.911	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 04:11	LLJ
100-42-5	Styrene	ND		ug/m ³	0.39	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
127-18-4	Tetrachloroethylene	2.0		ug/m ³	0.62	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
109-99-9	* Tetrahydrofuran	0.64		ug/m ³	0.54	0.911	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 04:11	LLJ
108-88-3	Toluene	3.5		ug/m ³	0.34	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.36	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.41	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
79-01-6	Trichloroethylene	ND		ug/m ³	0.12	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
75-69-4	Trichlorofluoromethane (Freon 11)	1.6		ug/m ³	0.51	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
108-05-4	Vinyl acetate	ND		ug/m ³	0.32	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
593-60-2	Vinyl bromide	ND		ug/m ³	0.40	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
75-01-4	Vinyl Chloride	ND		ug/m ³	0.12	0.911	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 04:11	LLJ
	Surrogate Recoveries	Result					Acceptance Range			
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	104 %					70-130			

Sample Information

Client Sample ID: SI-1 (CELLAR)

York Sample ID: 20I0602-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Soil Vapor

September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m ³	2.6	3.808	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 00:21	LLJ
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	2.1	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ



Sample Information

Client Sample ID: SI-1 (CELLAR)

York Sample ID: 20I0602-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Soil Vapor

September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	2.6	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	2.9	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	2.1	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
75-34-3	1,1-Dichloroethane	ND		ug/m ³	1.5	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.38	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	2.8	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
95-63-6	1,2,4-Trimethylbenzene	120		ug/m ³	1.9	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
106-93-4	1,2-Dibromoethane	ND		ug/m ³	2.9	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	2.3	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
107-06-2	1,2-Dichloroethane	3.9		ug/m ³	1.5	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
78-87-5	1,2-Dichloropropane	ND		ug/m ³	1.8	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	2.7	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
108-67-8	1,3,5-Trimethylbenzene	43		ug/m ³	1.9	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
106-99-0	1,3-Butadiene	ND		ug/m ³	2.5	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	2.3	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	1.8	3.808	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 00:21	LLJ
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	2.3	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
123-91-1	1,4-Dioxane	ND		ug/m ³	2.7	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
78-93-3	2-Butanone	6.9		ug/m ³	1.1	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
591-78-6	* 2-Hexanone	ND		ug/m ³	3.1	3.808	EPA TO-15 Certifications:	09/14/2020 19:00	09/15/2020 00:21	LLJ
107-05-1	3-Chloropropene	ND		ug/m ³	6.0	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	1.6	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ



Sample Information

Client Sample ID: SI-1 (CELLAR)

York Sample ID: 20I0602-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Soil Vapor

September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-64-1	Acetone	69		ug/m ³	1.8	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
107-13-1	Acrylonitrile	ND		ug/m ³	0.83	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
71-43-2	Benzene	58		ug/m ³	1.2	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
100-44-7	Benzyl chloride	ND		ug/m ³	2.0	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
75-27-4	Bromodichloromethane	ND		ug/m ³	2.6	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
75-25-2	Bromoform	ND		ug/m ³	3.9	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
74-83-9	Bromomethane	ND		ug/m ³	1.5	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
75-15-0	Carbon disulfide	6.5		ug/m ³	1.2	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
56-23-5	Carbon tetrachloride	ND		ug/m ³	0.60	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
108-90-7	Chlorobenzene	ND		ug/m ³	1.8	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
75-00-3	Chloroethane	ND		ug/m ³	1.0	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
67-66-3	Chloroform	2.8		ug/m ³	1.9	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
74-87-3	Chloromethane	ND		ug/m ³	0.79	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
156-59-2	cis-1,2-Dichloroethylene	110		ug/m ³	0.38	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	1.7	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
110-82-7	Cyclohexane	24		ug/m ³	1.3	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
124-48-1	Dibromochloromethane	ND		ug/m ³	3.2	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
75-71-8	Dichlorodifluoromethane	2.8		ug/m ³	1.9	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
141-78-6	* Ethyl acetate	ND		ug/m ³	2.7	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
100-41-4	Ethyl Benzene	62		ug/m ³	1.7	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
87-68-3	Hexachlorobutadiene	ND		ug/m ³	4.1	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
67-63-0	Isopropanol	29		ug/m ³	1.9	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ



Sample Information

Client Sample ID: SI-1 (CELLAR)

York Sample ID: 20I0602-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Soil Vapor

September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
80-62-6	Methyl Methacrylate	ND		ug/m ³	1.6	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	1.4	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
75-09-2	Methylene chloride	ND		ug/m ³	2.6	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
142-82-5	n-Heptane	41		ug/m ³	1.6	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
110-54-3	n-Hexane	56		ug/m ³	1.3	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
95-47-6	o-Xylene	94		ug/m ³	1.7	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
179601-23-1	p- & m- Xylenes	220		ug/m ³	3.3	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
622-96-8	* p-Ethyltoluene	93		ug/m ³	1.9	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
115-07-1	* Propylene	3.7		ug/m ³	0.66	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
100-42-5	Styrene	ND		ug/m ³	1.6	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
127-18-4	Tetrachloroethylene	330		ug/m ³	2.6	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
109-99-9	* Tetrahydrofuran	ND		ug/m ³	2.2	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
108-88-3	Toluene	630		ug/m ³	1.4	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	1.5	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	1.7	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
79-01-6	Trichloroethylene	24		ug/m ³	0.51	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
75-69-4	Trichlorofluoromethane (Freon 11)	2.1		ug/m ³	2.1	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
108-05-4	Vinyl acetate	ND		ug/m ³	1.3	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
593-60-2	Vinyl bromide	ND		ug/m ³	1.7	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
75-01-4	Vinyl Chloride	ND		ug/m ³	0.49	3.808	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/14/2020 19:00	09/15/2020 00:21	LLJ
	Surrogate Recoveries	Result		Acceptance Range						
460-00-4	Surrogate: SURR: p-Bromofluorobenzene	114 %		70-130						



Sample Information

Client Sample ID: IA-2 (CELLAR)

York Sample ID: 20I0602-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Indoor Ambient Air

September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m ³	0.60	0.87	EPA TO-15 Certifications:	09/15/2020 09:00	09/15/2020 21:27	LLJ
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	0.47	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	0.60	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.67		ug/m ³	0.67	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	0.47	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.35	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.086	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	0.65	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
95-63-6	1,2,4-Trimethylbenzene	5.6		ug/m ³	0.43	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
106-93-4	1,2-Dibromoethane	ND		ug/m ³	0.67	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	0.52	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.35	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.40	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	0.61	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
108-67-8	1,3,5-Trimethylbenzene	2.1		ug/m ³	0.43	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
106-99-0	1,3-Butadiene	ND		ug/m ³	0.58	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	0.52	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	0.40	0.87	EPA TO-15 Certifications:	09/15/2020 09:00	09/15/2020 21:27	LLJ
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	0.52	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
123-91-1	1,4-Dioxane	ND		ug/m ³	0.63	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
78-93-3	2-Butanone	0.36		ug/m ³	0.26	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
591-78-6	* 2-Hexanone	ND		ug/m ³	0.71	0.87	EPA TO-15 Certifications:	09/15/2020 09:00	09/15/2020 21:27	LLJ



Sample Information

Client Sample ID: IA-2 (CELLAR)

York Sample ID: 20I0602-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Indoor Ambient Air

September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m ³	1.4	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	0.36	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
67-64-1	Acetone	6.1		ug/m ³	0.41	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
107-13-1	Acrylonitrile	ND		ug/m ³	0.19	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
71-43-2	Benzene	0.36		ug/m ³	0.28	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
100-44-7	Benzyl chloride	ND		ug/m ³	0.45	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
75-27-4	Bromodichloromethane	ND		ug/m ³	0.58	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
75-25-2	Bromoform	ND		ug/m ³	0.90	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
74-83-9	Bromomethane	ND		ug/m ³	0.34	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
75-15-0	Carbon disulfide	ND		ug/m ³	0.27	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
56-23-5	Carbon tetrachloride	0.55		ug/m ³	0.14	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
108-90-7	Chlorobenzene	ND		ug/m ³	0.40	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
75-00-3	Chloroethane	ND		ug/m ³	0.23	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
67-66-3	Chloroform	0.47		ug/m ³	0.42	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
74-87-3	Chloromethane	1.4	TO-CC V, TO-LC S-H	ug/m ³	0.18	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
156-59-2	cis-1,2-Dichloroethylene	0.24		ug/m ³	0.086	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.39	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
110-82-7	Cyclohexane	0.87		ug/m ³	0.30	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
124-48-1	Dibromochloromethane	ND		ug/m ³	0.74	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
75-71-8	Dichlorodifluoromethane	2.0		ug/m ³	0.43	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
141-78-6	* Ethyl acetate	ND		ug/m ³	0.63	0.87	EPA TO-15 Certifications:	09/15/2020 09:00	09/15/2020 21:27	LLJ



Sample Information

Client Sample ID: IA-2 (CELLAR)

York Sample ID: 20I0602-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

20I0602

1810 Cropsey Ave Brooklyn, N.Y. 11214

Indoor Ambient Air

September 14, 2020 6:05 pm

09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	Ethyl Benzene	1.5		ug/m ³	0.38	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
87-68-3	Hexachlorobutadiene	ND		ug/m ³	0.93	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
67-63-0	Isopropanol	18		ug/m ³	0.43	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
80-62-6	Methyl Methacrylate	ND		ug/m ³	0.36	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.31	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
75-09-2	Methylene chloride	5.3		ug/m ³	0.60	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
142-82-5	n-Heptane	4.3		ug/m ³	0.36	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
110-54-3	n-Hexane	2.9		ug/m ³	0.31	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
95-47-6	o-Xylene	0.38		ug/m ³	0.38	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
179601-23-1	p- & m- Xylenes	1.1		ug/m ³	0.76	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
622-96-8	* p-Ethyltoluene	0.94		ug/m ³	0.43	0.87	EPA TO-15 Certifications:	09/15/2020 09:00	09/15/2020 21:27	LLJ
115-07-1	* Propylene	ND		ug/m ³	0.15	0.87	EPA TO-15 Certifications:	09/15/2020 09:00	09/15/2020 21:27	LLJ
100-42-5	Styrene	ND		ug/m ³	0.37	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
127-18-4	Tetrachloroethylene	19		ug/m ³	0.59	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
109-99-9	* Tetrahydrofuran	ND		ug/m ³	0.51	0.87	EPA TO-15 Certifications:	09/15/2020 09:00	09/15/2020 21:27	LLJ
108-88-3	Toluene	1.9		ug/m ³	0.33	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.34	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.39	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
79-01-6	Trichloroethylene	0.89		ug/m ³	0.12	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
75-69-4	Trichlorofluoromethane (Freon 11)	2.4		ug/m ³	0.49	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
108-05-4	Vinyl acetate	ND		ug/m ³	0.31	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
593-60-2	Vinyl bromide	ND		ug/m ³	0.38	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ



Sample Information

Client Sample ID: IA-2 (CELLAR) **York Sample ID:** 20I0602-04
York Project (SDG) No. 20I0602 Client Project ID 1810 Cropsey Ave Brooklyn, N.Y. 11214 Matrix Indoor Ambient Air Collection Date/Time September 14, 2020 6:05 pm Date Received 09/14/2020

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/m ³	0.11	0.87	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	09/15/2020 09:00	09/15/2020 21:27	LLJ
Surrogate Recoveries		Result	Acceptance Range							
460-00-4	Surrogate: SURR: <i>p</i> -Bromofluorobenzene	108 %	70-130							





Sample and Data Qualifiers Relating to This Work Order

TO-LCS-H	The result reported for this compound may be biased high due to its behavior in the analysis batch LCS where it recovered greater than 130% of the expected value.
TO-CCV	The value reported is ESTIMATED for this compound due to its behavior during continuing calibration verification (>30% Difference from initial calibration).
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.

Definitions and Other Explanations

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

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

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

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

Certification for pH is no longer offered by NYDOH ELAP.



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

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



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

Field Chain-of-Custody Record - AIR

YORK Project No.

2010602

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

Your Page of

YOUR INFORMATION Company: <u>PSK ENVIRONMENTAL GROUP</u> Address: <u>130-02 87th Ave, Suite 211</u> Phone: <u>(718) 438-7200</u> Contact: <u>DASHI SINGH</u> E-mail: <u>DASHI@PSKENVIRONMENTAL.COM</u> <small>Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.</small>		Report To: Company: <u> </u> Address: <u> </u> Phone: <u> </u> Contact: <u> </u> E-mail: <u> </u>		Invoice To: Company: <u> </u> Address: <u> </u> Phone: <u> </u> Contact: <u> </u> E-mail: <u> </u>		YOUR Project Number <u>180 CROSBY AVENUE</u> <u>BRONX, N.Y. 10454</u> <u>180 CROSBY AVENUE</u> <u>BRONX, N.Y. 10454</u> YOUR POB:		Turn-Around Time <input checked="" type="checkbox"/> RUSH - Next Day <input type="checkbox"/> RUSH - Two Day <input type="checkbox"/> RUSH - Three Day <input type="checkbox"/> RUSH - Four Day <input type="checkbox"/> Standard (5-7 Day)					
Air Matrix Codes AI - Indoor Ambient Air AO - Outdoor Amb. Air AE - Vapor Extraction Well/ Process Gas/Effluent AS - Soil Vapor/Sub-Slab		Samples From New York New Jersey Connecticut Pennsylvania Other		Report / EDD Type (circle selections) Summary Report CT RCP CT RCP DQ/DUE NY ASP A Package NY ASP B Package Other:		Standard Excel EDD EQUS (Standard) NYSEDEC EQUS NJDEP SRP HazSite		YORK Reg. Comp. Compared to the following Regulation(s): (please fill in)					
Certified Canisters: Batch <u> </u> Individual <u> </u> Reporting Units: ug/m ³ <u> </u> ppbv <u> </u> ppmv <u> </u>													
Sample Identification <u>OA-1 (OUTSIDE)</u> <u>IA-1 (1ST FLOOR)</u> <u>SE-1 (CELLAR)</u> <u>IA-2 (CELLAR)</u>		Date/Time Sampled <u>08/14/20 6:05PM</u> <u>08/14/20 6:05PM</u> <u>08/14/20 6:05PM</u> <u>08/14/20 6:05PM</u>		Air Matrix <u>AO</u> <u>AI</u> <u>AS</u> <u>AI</u>		Canister Vacuum Before Sampling (in Hg) <u>-26</u> <u>-30</u> <u>-30</u> <u>-30</u>		Canister Vacuum After Sampling (in Hg) <u>-4</u> <u>-8</u> <u>-10</u> <u>-6</u>		Flow Cont. ID <u>7362</u> <u>5603</u> <u>5446</u> <u>5704</u>		Analysis Requested <u>10-15</u> <u>↓</u> <u>↓</u>	
Comments: <u>* 48 HOUR RUSH *</u> <u>RYAN SEBASTIAN</u> <u>PSK ENVIRONMENTAL</u> <u>7:33PM</u> <u>08/14/20</u> <u>RYAN SEBASTIAN</u> <u>08/14/20</u> <u>PSK ENVIRONMENTAL</u> <u>08/14/20</u>													
Detection Limits Required ≤ 1 ug/m ³ Routine Survey NYSEDEC V1 Limits Other		Sampling Media 6 Liter Canister Tedlar Bag		Samples Received by / Company Date/Time		Samples Relinquished by / Company Date/Time		Samples Received in LAB by Date/Time					

APPENDIX B – Health and Safety Plan



Environmental
Group

BROOKLYN: 3611 14TH AVE. Suite #551 Brooklyn NY 11218

QUEENS: 132-02 89TH AVE. Suite #222 Richmond Hill, NY 11418

SITE-SPECIFIC HEALTH AND SAFETY PLAN

For

**1810 Cropsey Ave LLC
1810-1818 Cropsey Avenue
Brooklyn, NY 11214
NYSDEC Site No.: 224320
NYSDEC Spill No.: 2007751**

Prepared for:

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

Prepared by:

RSK Environmental Group, LLC
132-02 89th Avenue, Suite 222
Richmond Hill, NY 11418

October 2021

SITE-SPECIFIC HEALTH AND SAFETY PLAN

Client: **1810 Cropsey Ave LLC**

Site Address: **1810-1818 Cropsey Avenue, Brooklyn, NY 11214 (“Site”)**

Site Spill Number: **2007751**

Date Prepared: **October 11, 2021**

Project Description: **Site characterization and delineation of contaminants**

RSK ENVIRONMENTAL GROUP, LLC AND ITS SUBCONTRACTORS DO NOT GUARANTEE THE HEALTH OR SAFETY OF ANY PERSON ENTERING THIS SITE. DUE TO THE NATURE OF THIS SITE AND THE ACTIVITY OCCURRING THEREON, IT IS NOT POSSIBLE TO DISCOVER, EVALUATE, AND PROVIDE PROTECTION FOR ALL POSSIBLE HAZARDS WHICH MAY BE ENCOUNTERED. STRICT ADHERENCE TO THIS HEALTH AND SAFETY GUIDELINES SET FORTH HEREIN WILL HELP REDUCE, BUT NOT ELIMINATE, THE POTENTIAL FOR ANY INJURY AT THIS SITE. THE HEALTH AND SAFETY GUIDELINES IN THIS PLAN WERE PREPARED SPECIFICALLY FOR THIS SITE AND SHOULD NOT BE USED ON ANY OTHER SITE(S) WITHOUT PRIOR RESEARCH AND EVALUATION.

CONSTRUCTION HEALTH AND SAFETY PLAN

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Figure 1 Route to Hospital (Appendix F)

APPENDICES

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APPENDIX B COVID-19 DISCLOSURE FORM

APPENDIX C SITE SAFETY PLAN AMENDMENTS

APPENDIX D CHEMICAL HAZARDS

APPENDIX E HOSPITAL INFORMATION, MAP AND FIELD ACCIDENT REPORT

STATEMENT OF COMMITMENT

This Site-Specific Health and Safety Plan (HASP) has been prepared to ensure that workers are not exposed to risks from hazardous materials during any investigative activities planned specifically for the site located at **1810-1818 Cropsey Avenue, Brooklyn, NY** (the Site). This HASP, which applies to persons present at the Site actually or potentially exposed to hazardous materials, describes emergency response procedures for actual and potential chemical hazards. This HASP is also intended to inform and guide personnel entering the work area or exclusion zone. Persons are to acknowledge that they understand the potential hazards and the contents of this Health and Safety policy by signing off on receipt of their individual copy of the document. The subcontractors are retained as independent contractors and are responsible for ensuring the health and safety of their own employees. The subcontractor has the option of adopting this HASP or providing its own for the planned scope of work.

1.0 INTRODUCTION

The Purpose and Policy of this Site-Specific Health and Safety Plan (HASP) has been developed to comply with the regulations under 26 CFR 1926, Construction, Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response (HAZWOPER), and COVID-19 Control and Prevention. It addresses safety and health hazards related to subsurface sample collection activities and is based on the best information available with the site work activities to be conducted at 1810-1818 Cropsey Avenue, Brooklyn, NY (the Site). This document describes the health and safety guidelines developed by RSK Environmental Group, LLC (RSK) for the implementation of a Site Characterization Work Plan (SCWP) for the Site, to protect on-site personnel, visitors, and the public from physical harm and exposure to hazardous materials or wastes during the subsurface investigation activities. The HASP may be revised by RSK at the request of the New York State Department of Environmental Conservation (NYSDEC) upon receipt of added information regarding site conditions. Changes will be documented by written amendments signed by RSK's Project Manager, Site Safety Officer and/or the RSK Health and Safety Consultant.

1.1 Scope

This HASP addresses the potential hazards related to the Site as described in the SCWP. The SCWP activities are as described below:

1. Site/subsurface investigation includes the installation of thirteen (13) borings for twenty-eight (28) soil samples, seven (7) groundwater samples, by conversion to permanent groundwater wells, four (4) sub-slab soil vapor samples and one (1) soil vapor sample for the Site.

1.2 Application

This HASP applies to all personnel involved in the above tasks who wish to gain access into the active work areas of the Site, including but not limited to:

- RSK employees and subcontractors.
- Client representatives; and
- Federal, state, or local representatives.

1.3 Site Safety Plan Acceptance, Acknowledgment and Amendments

The site safety officer is responsible for informing personnel (RSK employees and/or owner or owner's representatives) entering the work area of the contents of this plan and ensuring that each person signs the safety plan acknowledging the on-site hazards and procedures required to minimize exposure to adverse effects of these hazards. A copy of the Acknowledgement Form is included in **Appendix A**. Site conditions may warrant an amendment to this HASP. Amendments to this HASP are acknowledged by completing forms included in **Appendix C**.

1.4 Key Personnel - Roles and Responsibilities

Personnel responsible for implementing this Construction Health and Safety Plan are:

Name	Company/Title	Address	Contact Numbers
Drumita Dmello	RSK Environmental Project Manager	132-02 89 th Avenue Ste. #222 Richmond Hill, NY 11418	(718) 438-2200, Ext. 205 (646) 249-6129
Dhanraj Singh	RSK Environmental Sr. Project Manager	132-02 89 th Avenue Ste. #222 Richmond Hill, NY 11418	(718) 438-2200, Ext. 202 (347) 728-0768
Bradley Moore	RSK Environmental Staff Geologist	132-02 89 th Avenue Ste. #222 Richmond Hill, NY 11418	(718) 438-2200, Ext. 201 (347) 345-9075
Ryan Seemungal	RSK Environmental Site Safety Officer	132-02 89 th Avenue Ste. #222 Richmond Hill, NY 11418	(718) 438-2200, Ext. 209 (347) 302-7214
Ted Yen, P.E.	Ted Yen & Associates, P.E.	132-02 89 th Avenue Ste. #222 Richmond Hill, NY 11418	(917) 584-6299

The project manager is responsible for overall project administration and, with guidance from the site safety officer, for supervising the implementation of this HASP. The site safety officer will conduct daily (tail gate or toolbox) safety meetings at the project site and oversee daily safety issues. Each subcontractor and supplier (defined as an OSHA employer) is also responsible for the health and safety of its employees. If there is any dispute about health and safety or project activities, on-site personnel will attempt to resolve the issue. If the issue cannot be resolved at the site, then the project manager will be consulted.

The site safety officer is also responsible for coordinating health and safety activities related to hazardous material exposure on-site. The site safety officer is responsible for the following:

1. Educating personnel about information in this HASP and other safety requirements to be observed during site operations, including, but not limited to, decontamination procedures, designation of work zones and levels of protection, air monitoring, fit testing, and emergency procedures dealing with fire and first aid.
2. Coordinating site safety decisions with the project manager.
3. Designating exclusion, decontamination, and support zones on a daily basis.
4. Monitoring the condition and status of known on-site hazards and maintaining and implementing the air quality monitoring program specified in this HASP.
5. Maintaining the work zone entry/exit log and site entry/exit log.
6. Maintaining records of safety problems, corrective measures and documentation of chemical exposures or physical injuries (the site safety officer will document these conditions in a bound notebook and maintain a copy of the notebook on-site). The person who observes safety concerns and potential hazards that have not been addressed in the daily safety meetings should immediately report their observations/concerns to the site safety officer or appropriate key personnel.

2.0 SITE BACKGROUND AND SCOPE OF WORK

The Site is located at 1810-1818 Cropsey Avenue, Brooklyn, NY 11215 (identified in Block: 3463 & Lot: 137). The Site consists of a rectangular-shaped parcel with a lot area of approximately 7,798-square feet in size and is developed with a one-story commercial building with a full cellar which has a total area of 4,680-square feet. The Site is situated south of Cropsey Avenue (a.k.a. Victor V. Allegretti Way), north of Shore Parkway, east of 18th Avenue, and west of Bay 19th Street (a Site location map is attached as Figure 1). The site is currently owned by Cropsey Golden Court LLC and is currently vacant.

2.1 Prior Investigations

Records Search/Risk Assessment (RSRA):

A RSRA conducted for the Site by Bison Environmental LLC (BE) and dated August 21, 2020, identified the following:

- A Records Search/ Risk Assessment (RSRA) was conducted for the Site by Bison Environmental LLC (BE) dated August 31, 2020, where the property was considered to be of a high environmental risk. BE concluded the presence of a dry cleaner at 1812 Cropsey Avenue from at least 1960 through 1983, and recommended a Phase-I investigation to determine any indications of a discharge onsite and if the dry-cleaner might have been a drop-off location only.

Phase-I Environmental Site Assessment:

- A Phase-I Environmental Site Assessment was performed by RSK Environmental Group for the Site dated September 14, 2020, to address the risk mentioned by BE in the RSRA. As part of the site history research, two (2) Recognized Environmental Conditions (RECs) and four (4) Business Environmental Risks (BERs) were identified for the Site. The Sanborn Maps and City Directory search for the Site depicted the presence of a dry-cleaning facility on-site using the address as 1812 Cropsey Avenue from 1960 to at least 1976. The EDR Radius Map review depicted various spills that occurred on the north-northwest and northeast section of the property at a higher elevation. These offsite spills were suspected to have impacted the subsurface quality beneath the Site due to its proximity and elevation, and warranted a Phase-II subsurface investigation.

Phase-II Site Investigation:

- A Phase-II investigation was conducted by RSK Environmental Group at the Site dated September 21, 2020, to address the suspected subsurface impacts by the historic usage as a dry-cleaning facility on-site and offsite spills. Soil, soil vapors and groundwater were sampled to determine the presence and extent of the suspected contamination from dry-cleaning solvents and offsite petroleum spills. Four (4) soil borings (SB-1 through SB-4) were installed in the corners of the cellar at a depth of 10-feet below cellar grade and retrieved every 2-feet. The four soil borings were converted into temporary groundwater wells for sampling (GW-1 through GW-4). High PID readings were observed for the retrieved groundwater samples. A total of four (4) samples were taken from the Site; one (1) sub-slab (SI-1) from beneath the cellar; two (2) indoor air samples were collected from the 1st floor (IA-1) and cellar (IA-2), and one outdoor sample (OA-1). Analytical results did not identify contamination in the soil samples or were well below the NYSDEC UUSCOs. Groundwater analysis depicted a consistency of contaminants in all four (4) samples (GW-1 through GW-4), predominately GW-1, GW-3, and GW-4, eleven (11) VOCs, four (4) SVOCs and three (3) RCRA metals exceeded NYSDEC Groundwater Quality Standards. Soil Vapor Analytical results identified contamination in the sub slab air samples for thirteen (13) VOCs, and consistent contamination in all four (4) air samples (SI-1, IA-1, IA-2, OA-1) for four (4) VOCs which exceed the NYSDOH Background standards for Indoor Air. Based on these findings and results, a NYSDEC spill number (2007751) was generated for the Site and a review of the Phase-I ESA and Phase-II SIR by the state.

2.2 Redevelopment Plans

There is no proposed redevelopment plan for the Site at this time.

3.0 HAZARD ASSESSMENT

This section identifies the hazards associated with the proposed scope of work, general physical hazards that can be expected at most sites; and presents a summary of documented or potential chemical hazards at the site. Every effort must be made to reduce or eliminate these hazards. Those that cannot be eliminated must be guarded against using engineering controls and/or personal protective equipment.

3.1 Physical Hazards

3.1.1 Tripping Hazards

An area of risk associated with on-site activities are presented by uneven ground, concrete, curbstones, or equipment which may be present at the site thereby creating a potential tripping hazard. During intrusive work, care should be taken to mark or remove any obstacles within the exclusion zone.

3.1.2 Climbing Hazards

During site activities, workers may have to work on drilling equipment by climbing. The drilling contractor will conform with any applicable NIOSH and OSHA requirements or climbing activities.

3.1.3 Cuts and Lacerations

Field activities that involve drilling activities usually involve contact with certain technical drilling machinery and tooling. A first aid kit approved by the American Red Cross will be available during all intrusive activities.

3.1.4 Lifting Hazards

Improper lifting by workers is one of the leading causes of industrial injuries. Field workers in the drilling program may be required to lift heavy objects. Therefore, all members of the field crew should be trained in the proper methods of lifting heavy objects. All workers should be cautioned against lifting objects too heavy for one person.

3.1.5 Utility Hazards

Before conducting any drilling, the drilling contractor will be responsible for locating and verifying all existing utilities at each boring location.

3.1.6 Traffic Hazards

All traffic, vehicular and pedestrian, shall be maintained and protected at all times consistent with local, state, and federal agency regulations regarding such traffic and in accordance with DOT guidelines. The drilling contractor shall execute his operations without undue interference or delays to traffic. The drilling contractor shall furnish all labor, materials, guards, barricades, signs, lights, and anything else necessary to maintain traffic and to protect his work and the public, during operations.

3.2 Work in Extreme Temperatures

Work under extremely hot or cold weather conditions requires special protocols to minimize the chance that employees will be affected by heat or cold stress.

3.2.1 Heat Stress

The combination of high ambient temperature, high humidity, physical exertion, and personal protective apparel, which limits the dissipation of body heat and moisture, can cause heat stress. The following prevention, recognition and treatment strategies will be implemented to protect personnel from heat stress. Personnel will be trained to recognize the symptoms of heat stress and to apply the appropriate treatment.

1. Prevention
 - a. Provide plenty of fluids. Available in the support zone will be a 50% solution of fruit punch and water or plain water.

- b. Work in Pairs. Individuals should avoid undertaking any activity alone.
- c. Provide cooling devices. A spray hose and a source of water will be provided to reduce body temperature, cool protective clothing and/or function as a quick-drench shower in case of an exposure incident.
- d. Adjustment of the work schedule. As is practical, the most labor-intensive tasks should be conducted during the coolest part of the day.

2. Recognition and Treatment

a. Heat Rash (or prickly heat):

Cause: Continuous exposure to hot and humid air, aggravated by chafing clothing.
 Symptoms: Eruption of red pimples around sweat ducts accompanied by intense itching and tingling.
 Treatment: Remove source of irritation and cool skin with water or wet cloths.

b. Heat Cramps (or heat prostration)

Cause: Profuse perspiration accompanied by inadequate replenishment of body water and electrolytes.
 Symptoms: Muscular weakness, staggering gait, nausea, dizziness, shallow breathing, pale and clammy skin, normal body temperature.
 Treatment: Perform the following while making arrangement for transport to a medical facility. Remove the worker to a contamination reduction zone. Remove protective clothing. Lie worker down on back in a cool place and raise feet 6 to 12 inches. Keep warm but loosen all clothing. If conscious, provide sips of salt-water solution, using one teaspoon of salt in 12 ounces of water. Transport to a medical facility.

c. Heat Stroke

Cause: Same as heat exhaustion. This is also an extremely serious condition.
 Symptoms: Dry hot skin, dry mouth, dizziness, nausea, headache, rapid pulse.
 Treatment: Cool worker immediately by immersing or spraying with cool water or sponge bare skin after removing protective clothing. Transport to hospital.

3.2.2 Cold Exposure

Exposure to cold weather, wet conditions and extreme wind-chill factors may result in excessive loss of body heat (hypothermia) and/or frostbite. To guard against cold exposure and to prevent cold injuries, appropriate warm clothing should be worn, warm shelter must be readily available, rest periods should be adjusted as needed, and the physical conditions of on-site field personnel should be closely monitored. Personnel and supervisors working on-site will be made aware of the signs and symptoms of frostbite and hypothermia such as shivering, reduced blood pressure, reduced coordination, drowsiness, impaired judgment, fatigue, pupils dilated due to light and numbing of the toes and fingers.

3.3 Chemical Hazards

Chemical hazards will be full list of Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Pesticides/PCBs, Target Analyte List Metals, and Perfluoroalkyl Substances (PFAS). The primary routes of exposure to the identified contaminants in soil, groundwater or soil vapor to on-site workers are through inhalation, ingestion, and absorption.

Appendix D includes information sheets for chemicals that may be encountered at the site.

3.3.1 Respirable Dust

Dust may be generated from vehicular traffic and/or drilling activities. If visible observation detects elevated levels of dust, a program of wetting will be employed by the site safety officer. If elevated dust levels persist, the site safety office will employ dust monitoring using a particulate monitor. If monitoring detects concentrations greater than 150 µg/m³ over daily background, the site safety officer will take corrective actions as defined herein, including the use of water for dust suppression and if this is not effective, requiring workers to wear APRs with efficiency particulate air (HEPA) cartridges.

Absorption pathways for dust and direct contact with soils or groundwater will be mitigated with the implementation of latex gloves, hand washing and decontamination exercises when necessary.

3.3.2 Dust Control and Monitoring During Earthwork

Dust generated during site activities or other earthwork may contain contaminants identified in soils at the site. Dust will be controlled by wetting the working surface with water. Calcium chloride may be used if the problem cannot be controlled with water. Air monitoring and dust control techniques are specified in a site-specific Dust Control Plan (if applicable). Site workers will not be required to wear APR's unless dust concentrations are consistently over 150 µg/m³ over site-specific background in the breathing zone as measured by a dust monitor unless the site safety officer directs workers to wear APRs. The site safety officer will use visible dust as an indicator to implement the dust control plan.

3.3.3 Organic Vapors

The site safety officer will periodically monitor organic vapors with a Photo-ionization Detector (PID) during site activities to determine whether organic vapor concentrations exceed action levels shown in Section 5 and/or the Community Air Monitoring Plan.

4.0 PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) shall be selected in accordance with the site air monitoring program, OSHA 29 CFR 1910.120(c), (g), 1910.132, and COVID-19 requirements. Protective equipment shall be NIOSH approved and respiratory protection including face mask shall conform to OSHA 29 CFR Part 1910.133, 1910.134, and COVID-19 specifications; head protection shall conform to 1910.135; eye and face protection shall conform to 1910.133 and COVID-19; and foot protection shall conform to 1910.136. The only true difference among the levels of protection from D thru B is the addition of the type of respiratory protection. **It is anticipated that work will be performed in Level D PPE.**

4.1 Level D

Level D PPE shall be donned when the atmosphere contains no known hazards and work functions preclude splashes, immersion, or the potential for inhalation of, or contact with, hazardous concentrations of harmful chemicals. Level D PPE consists of:

- standard work clothes, coveralls, or Tyvek, as needed.
- steel toe and steel shank work boots.
- hard hat.
- gloves, as needed.
- safety glasses and/or face shield.
- face mask.
- hearing protection.
- equipment replacements are available as needed.

4.2 Level C

Level C PPE shall be donned when sustained concentrations of measured total organic vapors in the breathing zone exceed background concentrations (using a portable OVA, or equivalent), by more than 5 ppm. The specifications on the APR filters used must be appropriate for contaminants identified or expected to be encountered. Level C PPE shall be donned when the identified contaminants have adequate warning properties and criteria for using APR have been met. Level C PPE consists of:

- chemical resistant or coated Tyvek coveralls.
- steel-toe and steel-shank work boots.
- chemical resistant over-boots or disposable boots covers.
- disposable inner gloves (surgical gloves).
- disposable outer gloves.
- full face APR fitted with organic vapor/dust and mist filters or filters appropriate for the identified or expected contaminants.
- hard hat.
- face/splash shield, as needed; and,
- ankles/wrists taped with duct tape.

The site safety officer will verify if Level C is appropriate by checking organic vapor concentrations using compound and/or class-specific detector tubes.

The exact PPE ensemble is decided on a site-by-site basis by the Site Safety Officer with the intent to provide the most protective and efficient worker PPE.

4.3 Activity-Specific Levels of Personal Protection

The required level of PPE is activity-specific and is based on air monitoring results (Section 4.0) and properties of identified or expected contaminants. **It is expected that site work will be performed in Level D.** If air monitoring results indicate the necessity to upgrade the level of protection, engineering controls (i.e., Facing equipment away from the wind and placing site personnel upwind of drilling, active venting, etc.) will be implemented before requiring the use of respiratory protection.

5.0 AIR MONITORING AND ACTION LEVELS

29 CFR 1910.120(h) specifies that monitoring shall be performed where there may be a question of employee exposure to hazardous concentrations of hazardous substances in order to assure proper selection of engineering controls, work practices and personal protective equipment so that employees are not exposed to levels which exceed permissible exposure limits or published exposure levels if there are no permissible exposure limits, for hazardous substances.

5.1 Air Monitoring Requirements

If site work is performed, air will be monitored for VOCs with a portable MiniRAE 3000 Photo Ionization Detector (PID), or the equivalent. If necessary, Lower Explosive Limit (LEL) and oxygen will be monitored with a Combustible Gas Indicator (CGI). If appropriate, fugitive dust will be monitored using a MiniRAE Model PDM-3 aerosol monitor. Air will be monitored when any of the following conditions apply:

- initial site entry.
- during any work where a potential IDLH condition or flammable atmosphere could develop.
- work begins on another portion of the site.
- contaminants, other than those previously identified, have been discovered.
- each time a different task or activity is initiated.
- during boring, trenching and/or excavation work.

The designated site safety officer will record air monitoring data and ensure that air monitoring instruments are calibrated and maintained in accordance with manufacturer's specifications. Instruments will be zeroed daily and checked for accuracy. Monitoring results will be recorded in a field notebook and will be transferred to instrument reading logs.

5.2 Work Stoppage Responses

The following responses will be initiated whenever one or more of the action levels necessitating a work stoppage is exceeded:

1. The SSO will be consulted immediately.
2. All personnel (except as necessary for continued monitoring and contaminant migration, if applicable) will be cleared from the work area (e.g., from the exclusion zone).
3. Monitoring will be continued until intrusive work resumes.

5.3 Action Levels During Site Activities

Instrument readings will be taken in the breathing zone within the Site unless otherwise noted. Each action level is independent of all other action levels in determining responses.

Organic Vapors (PID)	LEL %	Responses
0-1 ppm above background	0%	<ul style="list-style-type: none">• Continue with site drilling activities• Level D protection• Continue monitoring every 10 minutes
1-50 ppm Above Background, Sustained Reading	1-30%	<ul style="list-style-type: none">• Continue with site drilling activities• Level D protection• Continue monitoring every 10 minutes
50-250 ppm Above Background, Sustained Reading	30-60%	<ul style="list-style-type: none">• Continue with site drilling activities• Level D protection and employ engineering controls• Continue monitoring for organic vapors 200 ft downwind• Continuous monitoring for LEL

>250 ppm Above Background, Sustained Reading	>60%	<ul style="list-style-type: none"> • Discontinue drilling activities, unless PID is only action level exceeded • Employ engineering controls • Continuous monitoring for organic vapors 200 ft downwind.
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Notes: Air monitoring will occur in the breathing zone 30 inches above the site grade.

If action levels for any one of the monitoring parameters are exceeded, the appropriate responses listed in the right-hand column should be taken.

6.0 SITE CONTROL

6.1 Work Zones

The primary purpose of site controls is to establish the perimeter of a hazardous area, to reduce the migration of contaminants into clean areas, and to prevent access or exposure to hazardous materials by unauthorized persons. When operations are to take place involving hazardous materials, the site safety officer will establish an exclusion zone, a decontamination zone, and a support zone. These zones "float" (move around the site) depending on the tasks being performed on any given day. The site safety officer will outline these locations before work begins and when zones change. The site safety officer records this information in the site logbook.

Due to the dimensions of the Site and the work area, it is expected that an exclusion zone will not be required.

All onsite workers during drilling activities must provide evidence of OSHA 40-hour Hazardous Waste Operations and Emergency Response Operations training to conduct work within the exclusion zone established by the site safety officer. The exclusion zone is defined by the site safety officer but will typically be a 50-foot area around work activities. Gross decontamination (as determined by the site Health and Safety Officer) is conducted in the exclusion zone; all other decontamination is performed in the decontamination zone or trailer, if provided.

Protective equipment is removed in the decontamination zone. Disposable protective equipment is stored in receptacles staged in the decontamination zone, and non-disposable equipment is decontaminated. All personnel and equipment exit the exclusion zone through the decontamination zone. If a decontamination trailer is provided the first aid equipment, an eye wash unit, and drinking water are kept in the decontamination trailer.

The support zone is used for vehicle parking, daily safety meetings, and supply storage. Eating, drinking, and smoking are permitted only in the support zone. When a decontamination trailer is not provided, the eye wash unit, first aid equipment, and drinking water are kept at a central location designated by the site safety officer.

7.0 CONTINGENCY PLAN/EMERGENCY RESPONSE PLAN

Site personnel must be prepared in the event of an emergency. Emergencies can take many forms: illnesses, injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants, or sudden changes in the weather.

Emergency telephone numbers and a map to the hospital will be posted in the command post. Site personnel should be familiar with the emergency procedures, and the locations of site safety, first aid, and communication equipment.

7.1 Emergency Equipment On-site

Private telephones:	Site personnel.
Two-way radios:	Site personnel where necessary.
Emergency Alarms:	On-site vehicle horns*.
First aid kits:	On-site, in vehicles or office.
Fire extinguisher:	On-site, in office or on equipment.

* Horns: Air horns will be supplied to personnel at the discretion of the project superintendent or site safety officer.

7.2 Emergency Telephone Numbers

General Emergencies	911
Fire Department	911
NYC Health + Hospitals/Coney Island	(718) 616-3000
NYSDEC Spills Hotline	(800) 457-7362
National Response Center	(800) 424-8802
Poison Control	(800) 222-1222
Project Manager	(646) 249-6129
Site Safety Officer	(347) 302-7214
Field Staff Scientist	(347) 302-7214

7.3 Personnel Responsibilities During an Emergency

The project manager is primarily responsible for responding to and correcting any emergency situations. However, in the absence of the project manager, the site safety officer shall function as the project manager's on-site designee and perform the following tasks:

- Take appropriate measures to protect personnel including withdrawal from the exclusion zone, evacuate and secure the site, or upgrade/downgrade the level of protective clothing and respiratory protection.
- Ensure that appropriate federal, state, and local agencies are informed, and emergency response plans are coordinated. In the event of fire or explosion, the local fire department should be summoned immediately. If toxic materials are released to the air, the local authorities should be informed in order to assess the need for evacuation.
- Ensure appropriate decontamination, treatment, or testing for exposed or injured personnel.
- Determine the cause of incidents and make recommendations to prevent recurrence; and,
- Ensure that all required reports have been prepared.

The following key personnel are planned for this project:

- Drumita Dmello, Project Manager (646) 249-6129
- Dhanraj Singh, Site Safety Officer (347) 302-7214

7.4 Medical Emergencies

A person who becomes ill or injured in the exclusion zone will be decontaminated to the maximum extent possible. If the injury or illness is minor, full decontamination will be completed and first aid administered prior to transport. First aid will be administered while waiting for an ambulance or paramedics. A Field Accident Report (**Appendix E**) must be filled out for any injury.

A person transporting an injured/exposed person to a clinic or hospital for treatment will take the directions to the hospital (**Appendix E**) and information on the chemical(s) to which they may have been exposed (**Appendix D**).

7.5 Fire or Explosion

In the event of a fire or explosion, the local fire department will be summoned immediately. The site safety officer or his designated alternate will advise the fire commander of the location, nature, and identification of the hazardous materials on-site. If it is safe to do so, site personnel may:

- use of firefighting equipment available on site; or,
- remove or isolate flammable or other hazardous materials that may contribute to the fire.

7.6 Evacuation Routes

Evacuation routes established by work area locations for each site will be reviewed prior to commencing site operations. As the work areas change, the evacuation routes will be altered accordingly, and the new route will be reviewed.

Under extreme emergency conditions, evacuation is to be immediate without regard for equipment. The evacuation signal will be a continuous blast of a vehicle horn, if possible, and/or by verbal/radio communication. When evacuating the site, personnel will follow these instructions:

- Keep upwind of smoke, vapors, or spill location.
- Exit through the decontamination corridor if possible.
- If evacuation through the decontamination corridor is not possible, personnel should remove contaminated clothing once they are in a safe location and leave it near the exclusion zone or in a safe place.
- The site safety officer will conduct a head count to ensure that all personnel have been evacuated safely. The head count will be correlated to the site and/or exclusion zone entry/exit log.
- If emergency site evacuation is necessary, all personnel are to escape the emergency situation and decontaminate to the maximum extent practical.

7.7 Spill Control Procedures

Spills associated with site activities may be attributed to project equipment and include gasoline, diesel, and hydraulic oil. In the event of a leak or a release, site personnel will inform their supervisor immediately, locate the source of spillage and stop the flow if it can be done safely. A spill containment kit including absorbent pads, booms and/or granulated speedy dry absorbent material will be available to site personnel to facilitate the immediate recovery of the spilled material. Daily inspections of site equipment components including hydraulic lines, fuel tanks, etc. will be performed by their respective operators as a preventative measure for equipment leaks and to ensure equipment soundness. In the event of a spill, site personnel will immediately notify the NYSDEC (1-800-457-7362), and a spill number will be generated.

7.8 Vapor Release Plan

If work zone organic vapor (excluding methane) exceeds 5 ppm, then a downwind reading will be made either 200 feet from the work zone or at the property line, whichever is closer. If readings at this location exceed 5 ppm over background, the work will be stopped.

If 5 ppm of VOCs are recorded over background on a PID at the property line, then an off-site reading will be taken within 20 feet of the nearest residential or commercial property, whichever is closer. If efforts to mitigate the emission source are unsuccessful for 30 minutes, then the designated site safety officer will:

- contact the local police.
- continue to monitor air every 30 minutes, 20 feet from the closest off-site property. If two successive readings are below 5 ppm (non-methane), off-site air monitoring will be halted.
- All property line and off-site air monitoring locations and results associated with vapor releases will be recorded in the site safety logbook.

APPENDIX A
SITE SAFETY ACKNOWLEDGEMENT FORM

DAILY BRIEFING SIGN-IN SHEET

Date: _____ Person Conducting Briefing: _____

Project Name and Location: _____

1. AWARENESS (topics discussed, special safety concerns, recent incidents, etc....): _____

2. OTHER ISSUES (HASP changes, attendee comments, etc....): _____

3. ATTENDEES (Print Name):

1.	11.
2.	12.
3.	13.
4.	14.
5.	15.
6.	16.
7.	17.
8.	18.
9.	19.
10.	20.

APPENDIX B
COVID-19 DISCLOSURE FORM

**DUE TO COVID-19
REGULATIONS: Everyone
must wear a mask at all times
and maintain social distancing.**

**DEBIDO A LAS
REGULACIONES DE COVID-
19: Todos deben usar una
mascara en todo momento y
mantener el distanciamiento
social.**

APPENDIX C
SITE SAFETY PLAN AMENDMENTS

SITE SAFETY PLAN AMENDMENT FORM

Site Safety Plan Amendment #: _____

Site Name: _____

Reason for Amendment: _____

Alternative Procedures: _____

Required Changes in PPE: _____

Project Superintendent (signature)

Date

Health and Safety Consultant (signature)

Date

Site Safety Officer (signature) Date

APPENDIX D

CHEMICAL HAZARDS

CHEMICAL HAZARDS




The attached International Chemical Safety Cards are provided for contaminants of concern that have been identified in soils and/or groundwater at the site.

1,2,4-TRIMETHYLBENZENE Pseudocumene	ICSC: 1433 June 2002
CAS #: 95-63-6	
UN #: 1993	
EC Number: 202-436-9	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Flammable. Above 44°C explosive vapour/air mixtures may be formed.	NO open flames, NO sparks and NO smoking. Above 44°C use a closed system, ventilation and explosion-proof electrical equipment. Prevent build-up of electrostatic charges (e.g., by grounding).	Use alcohol-resistant foam, dry powder, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

PREVENT GENERATION OF MISTS!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Confusion. Cough. Dizziness. Drowsiness. Headache. Sore throat. Vomiting.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Redness. Dry skin.	Protective gloves.	Rinse skin with plenty of water or shower.
Eyes	Redness. Pain.	Wear safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	See Inhalation.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations. Do NOT wash away into sewer. Do NOT let this chemical enter the environment.	According to UN GHS Criteria Transportation UN Classification UN Hazard Class: 3; UN Pack Group: III
STORAGE	
Fireproof. Separated from strong oxidants. Well closed. Keep in a well-ventilated room.	
PACKAGING	

 	Prepared by an international group of experts on behalf of ILO and WHO, with the financial assistance of the European Commission. © ILO and WHO 2021	
International Labour Organization World Health Organization		European Commission

1,2,4-TRIMETHYLBENZENE**ICSC: 1433****PHYSICAL & CHEMICAL INFORMATION****Physical State; Appearance**

COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers**Chemical dangers**

Decomposes on burning. This produces toxic and irritating fumes.
 Reacts violently with strong oxidants. This generates fire and explosion hazard.

Formula: C₉H₁₂

Molecular mass: 120,2

Boiling point: 169°C

Melting point: -44°C

Relative density (water = 1): 0.88

Solubility in water: very poor

Relative vapour density (air = 1): 4.1

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.01

Flash point: 44°C c.c.

Auto-ignition temperature: 500°C

Explosive limits, vol% in air: 0.9-6.4

Octanol/water partition coefficient as log Pow: 3.8

EXPOSURE & HEALTH EFFECTS**Routes of exposure**

The substance can be absorbed into the body by inhalation.

Effects of short-term exposure

The substance is irritating to the eyes, skin and respiratory tract. If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis. The substance may cause effects on the central nervous system.

Inhalation risk

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C; on spraying or dispersing, however, much faster.

Effects of long-term or repeated exposure

The substance defats the skin, which may cause dryness or cracking. Repeated or prolonged inhalation may cause effects on the lungs. This may result in chronic bronchitis. The substance may have effects on the central nervous system and blood. See Notes.

OCCUPATIONAL EXPOSURE LIMITSEU-OEL: 100 mg/m³, 20 ppm as TWA.MAK: 100 mg/m³, 20 ppm; peak limitation category: II(2); pregnancy risk group: C**ENVIRONMENT**

The substance is toxic to aquatic organisms. Bioaccumulation of this chemical may occur in fish.

NOTES

Use of alcoholic beverages enhances the harmful effect.

Depending on the degree of exposure, periodic medical examination is suggested.

See ICSCs 1155, 1362 and 1389.

1,3,5-Trimethylbenzene (Mesitylene) is classified as a marine pollutant.

ADDITIONAL INFORMATION**EC Classification**


Symbol: Xn, N; R: 10-20-36/37/38-51/53; S: (2)-26-61

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n-HEPTANE Heptane	ICSC: 0657 June 2015
CAS #: 142-82-5 UN #: 1206 EC Number: 205-563-8	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Highly flammable. Vapour/air mixtures are explosive.	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Prevent build-up of electrostatic charges (e.g., by grounding). Do NOT use compressed air for filling, discharging, or handling. Use non-sparking handtools.	Use alcohol-resistant foam, dry powder, carbon dioxide, water spray. In case of fire: keep drums, etc., cool by spraying with water.

PREVENT GENERATION OF MISTS!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Cough. Incoordination. Dizziness. Weakness. Nausea. Drowsiness.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Redness. Swelling. Pain.	Protective gloves.	Rinse and then wash skin with water and soap. Refer for medical attention if skin irritation occurs.
Eyes	Redness.	Wear safety goggles in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Aspiration hazard! Sore throat. Abdominal pain. Headache. Dizziness. Nausea. Vomiting. Unconsciousness.	Do not eat, drink, or smoke during work.	Rinse mouth. Give nothing to drink. Do NOT induce vomiting. Refer immediately for medical attention. See Notes.

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Remove all ignition sources. Consult an expert! Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Do NOT wash away into sewer. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. Carefully collect remainder. Then store and dispose of according to local regulations.	<p>According to UN GHS Criteria</p>  <p>DANGER</p> <p>Highly flammable liquid and vapour May be fatal if swallowed and enters airways Causes skin irritation May cause drowsiness or dizziness Very toxic to aquatic life with long lasting effects</p> <p>Transportation UN Classification UN Hazard Class: 3; UN Pack Group: II</p>
STORAGE	
Fireproof. Separated from strong oxidants. Store in an area without drain or sewer access. Provision to contain effluent from fire extinguishing.	
PACKAGING	
Marine pollutant.	



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n-HEPTANE

ICSC: 0657

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

VOLATILE COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

The vapour is heavier than air and may travel along the ground; distant ignition possible. As a result of flow, agitation, etc., electrostatic charges can be generated.

Chemical dangers

Reacts violently with strong oxidants. This generates fire and explosion hazard. Attacks many plastics.

Formula: C₇H₁₆ / CH₃(CH₂)₅CH₃

Molecular mass: 100.2

Boiling point: 98.4°C

Melting point: -90.7°C

Density (at 20°C): 0.68 g/ml

Solubility in water, mg/l at 25°C: 2.2 (very poor)

Vapour pressure, kPa at 20°C: 4.6

Relative vapour density (air = 1): 3.5

Flash point: -7°C c.c.

Auto-ignition temperature: 220°C

Explosive limits, vol% in air: 0.8-6.7

Octanol/water partition coefficient as log Pow: 4.66

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation of its vapour and by ingestion.

Effects of short-term exposure

The substance is irritating to the skin. The vapour is irritating to the respiratory tract. If swallowed the substance easily enters the airways and could result in aspiration pneumonitis. The substance may cause effects on the central nervous system.

Inhalation risk

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

The substance defats the skin, which may cause dryness or cracking.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 400 ppm as TWA; 500 ppm as STEL.

MAK: 2100 mg/m³, 500 ppm; peak limitation category: I(1); pregnancy risk group: D.

EU-OEL: 2085 mg/m³, 500 ppm as TWA

ENVIRONMENT

The substance is toxic to aquatic organisms. The substance may cause long-term effects in the aquatic environment. Bioaccumulation of this chemical may occur in fish. It is strongly advised not to let the chemical enter into the environment.

NOTES

The odour warning when the exposure limit value is exceeded is insufficient.

The symptoms of chemical pneumonitis do not become manifest until a few hours or even days have passed.

ADDITIONAL INFORMATION

EC Classification


Symbol: F, Xn, N; R: 11-38-50/53-65-67; S: (2)-9-16-29-33-60-61-62; Note: C

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ISOPROPYL ALCOHOL 1-methylethanol 2-hydroxypropane 2-Propanol Propan-2-ol Isopropanol Dimethylcarbinol	ICSC: 0554
CAS #: 67-63-0 UN #: 1219 EC Number: 200-661-7	July 2020

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Highly flammable. Vapour/air mixtures are explosive. Risk of explosion on contact with strong oxidants.	NO open flames, NO sparks and NO smoking. NO contact with strong oxidizing agents. Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling.	Use water, powder, alcohol-resistant foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Sore throat. Cough. Headache. Dizziness. Drowsiness. Further see Ingestion.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Dry skin.	Protective gloves.	First rinse with plenty of water for at least 15 minutes, then remove contaminated clothes and rinse again. See Notes.
Eyes	Redness. Pain. Blurred vision. Burns.	Wear safety spectacles or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	See Inhalation. Abdominal pain. Nausea. Vomiting. Ataxia. Convulsions. Laboured breathing. Low blood pressure. Cardiac dysrhythmia. Unconsciousness.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Give nothing to drink. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Evacuate danger area! Consult an expert! Remove all ignition sources. Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Collect leaking and spilled liquid in sealable non-plastic containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations. Wash away remainder with plenty of water.	<p>According to UN GHS Criteria</p> <div style="text-align: center;">  <p>DANGER</p> </div> <p>Highly flammable liquid and vapour Causes serious eye irritation May cause drowsiness or dizziness</p> <p>Transportation UN Classification UN Hazard Class: 3; UN Pack Group: II</p>
STORAGE	
Fireproof. Separated from strong oxidants. Cool. Well closed.	
PACKAGING	

ISOPROPYL ALCOHOL

ICSC: 0554

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

COLOURLESS LIQUID.

Physical dangers

The vapour mixes well with air, explosive mixtures are easily formed.

Chemical dangers

Reacts with strong oxidants. This generates explosion hazard.
 Decomposes on heating. This produces irritating fumes and flammable and toxic gas. Attacks some plastics and rubber.

Formula: C₃H₈O / CH₃CHOHCH₃

Molecular mass: 60.1

Boiling point: 83°C

Melting point: -90°C

Relative density (water = 1): 0.79

Solubility in water: miscible

Vapour pressure, kPa at 20°C: 4.4

Relative vapour density (air = 1): 2.1

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.05

Flash point: 11.7°C c.c.

Auto-ignition temperature: 456°C

Explosive limits, vol% in air: 2-12

Octanol/water partition coefficient as log Pow: 0.05

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation of its vapour.

Effects of short-term exposure

The substance is irritating to the eyes and respiratory tract. The substance may cause effects on the central nervous system. Exposure far above the OEL could cause unconsciousness.

Inhalation risk

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C; on spraying or dispersing, however, much faster.

Effects of long-term or repeated exposure

Repeated or prolonged contact with skin may cause dryness and cracking.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 200 ppm as TWA; 400 ppm as STEL; A4 (not classifiable as a human carcinogen); BEI issued.

MAK: 500 mg/m³, 200 ppm; peak limitation category: II(2); pregnancy risk group: C

ENVIRONMENT

Environmental effects of the substance have been adequately investigated, but no significant effects have been found.

NOTES

When large surface areas of skin and clothes are exposed to the pure substance the fire hazard is the main concern, for which rinsing first and then removing clothes is advised.

ADDITIONAL INFORMATION

EC Classification




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METHYL ISOBUTYL KETONE MIBK 4-Methyl-2-pentanone Isopropylacetone Hexone	ICSC: 0511 July 1997
CAS #: 108-10-1	
UN #: 1245	
EC Number: 203-550-1	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Highly flammable. Vapour/air mixtures are explosive.	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling.	Use powder, AFFF, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

PREVENT GENERATION OF MISTS!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Cough. Diarrhoea. Dizziness. Headache. Nausea. Sore throat. Unconsciousness. Vomiting. Weakness.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Dry skin. Redness. Pain.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention .
Eyes	Redness. Pain.	Wear safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Abdominal pain. Further see Inhalation.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	According to UN GHS Criteria Transportation UN Classification UN Hazard Class: 3; UN Pack Group: II
STORAGE	
Fireproof. Separated from strong oxidants. Well closed.	
PACKAGING	
Airtight.	

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METHYL ISOBUTYL KETONE

ICSC: 0511

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

The vapour mixes well with air, explosive mixtures are easily formed.

Chemical dangers

The substance can form explosive peroxides on exposure to air. Reacts violently with strong oxidants and strong reducing agents.

Formula: C₆H₁₂O / CH₃COCH₂CH(CH₃)₂

Molecular mass: 100.2

Boiling point: 117-118°C

Melting point: -84.7°C

Relative density (water = 1): 0.80

Solubility in water, g/100ml at 20°C: 1.91

Vapour pressure, kPa at 20°C: 2.1

Relative vapour density (air = 1): 3.45

Flash point: 14°C c.c.

Auto-ignition temperature: 460°C

Explosive limits, vol% in air: 1.4-7.5

Octanol/water partition coefficient as log Pow: 1.38

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation of its vapour and by ingestion.

Effects of short-term exposure

The substance and the vapour are irritating to the eyes, skin and respiratory tract. If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis. The substance may cause effects on the central nervous system at high concentrations. This may result in narcosis.

Inhalation risk

A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

Repeated or prolonged contact with skin may cause dermatitis.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 20 ppm as TWA; 75 ppm as STEL; A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued.

MAK: 83 mg/m³, 20 ppm; peak limitation category: I(2); skin absorption (H); pregnancy risk group: C.EU-OEL: 83 mg/m³, 20 ppm as TWA; 208 mg/m³, 50 ppm as STEL

ENVIRONMENT

NOTES

Check for peroxides prior to distillation; eliminate if found.

ADDITIONAL INFORMATION

EC Classification


Symbol: F, Xn; R: 11-20-36/37-66; S: (2)-9-16-29; Note: 6




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METHYL CHLORIDE Chloromethane Monochloromethane	ICSC: 0419 June 2015
CAS #: 74-87-3	
UN #: 1063	
EC Number: 200-817-4	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Highly flammable. Heating will cause rise in pressure with risk of bursting. Gas/air mixtures are explosive.	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Use non-sparking handtools.	Shut off supply; if not possible and no risk to surroundings, let the fire burn itself out. In other cases extinguish with water spray. In case of fire: keep cylinder cool by spraying with water. Combat fire from a sheltered position.

STRICT HYGIENE!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Staggering gait. Dizziness. Headache. Nausea. Vomiting. Convulsions. Unconsciousness. See Notes.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
Skin	MAY BE ABSORBED! ON CONTACT WITH LIQUID: FROSTBITE.	Cold-insulating gloves. Protective clothing.	ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Refer for medical attention .
Eyes	See Skin.	Wear safety goggles, face shield or eye protection in combination with breathing protection.	
Ingestion			

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Evacuate danger area! Consult an expert! Personal protection: complete protective clothing including self-contained breathing apparatus. Ventilation. NEVER direct water jet on liquid.	<p>According to UN GHS Criteria</p> <div style="text-align: center;">  </div> <p style="text-align: center;">DANGER</p> <p>Extremely flammable gas Contains gas under pressure; may explode if heated Suspected of damaging fertility or the unborn child May cause damage to central nervous system if inhaled May cause damage to central nervous system through prolonged or repeated exposure if inhaled</p> <p>Transportation UN Classification UN Hazard Class: 2.1</p>
STORAGE	
Fireproof. Ventilation along the floor.	
PACKAGING	

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METHYL CHLORIDE

ICSC: 0419

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance
COLOURLESS LIQUEFIED GAS.

Physical dangers

The gas is heavier than air and may travel along the ground; distant ignition possible. The gas is heavier than air and may accumulate in lowered spaces causing a deficiency of oxygen. See Notes.

Chemical dangers

Decomposes on burning. This produces toxic and corrosive fumes including hydrogen chloride and phosgene. Reacts violently with powdered aluminium, powdered zinc, aluminium trichloride and ethylene. This generates fire and explosion hazard. Attacks many metals in the presence of moisture.

Formula: CH₃Cl
Molecular mass: 50.5
Boiling point: -23.7°C
Melting point: -97°C
Relative density (water = 1): 0.91
Solubility in water, g/100ml at 25°C: 0.5
Vapour pressure, kPa at 25°C: 573
Relative vapour density (air = 1): 2.47
Flash point: Flammable gas
Auto-ignition temperature: 632°C
Explosive limits, vol% in air: 8.1-17.4
Octanol/water partition coefficient as log Pow: 0.91
Viscosity: 0.1834 cP at 20°C

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation and through the skin.

Effects of short-term exposure

The liquid may cause frostbite. The substance may cause effects on the central nervous system. Exposure far above the OEL could cause liver, cardiovascular system and kidney damage. Exposure could cause unconsciousness. Medical observation is indicated. The effects may be delayed.

Inhalation risk

A harmful concentration of this gas in the air will be reached very quickly on loss of containment.

Effects of long-term or repeated exposure

The substance may have effects on the central nervous system. This may result in effects measured using behavioural tests. Animal tests show that this substance possibly causes toxic effects upon human reproduction.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 50 ppm as TWA; 100 ppm as STEL; (skin); A4 (not classifiable as a human carcinogen).
MAK: 21 mg/m³, 10 ppm; peak limitation category: II(1); pregnancy risk group: D.
EU-OEL: 42 mg/m³, 20 ppm as TWA

ENVIRONMENT

NOTES

Following intoxication patient should be observed carefully for 48 hours.
Check oxygen content before entering area.

ADDITIONAL INFORMATION

EC Classification


Symbol: F+, Xn; R: 12-40-48/20; S: (2)-9-16-33




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ETHYL ACETATE Acetic acid, ethyl ester Acetic ether	ICSC: 0367 April 2014
CAS #: 141-78-6 UN #: 1173 EC Number: 205-500-4	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Highly flammable. Vapour/air mixtures are explosive. Heating will cause rise in pressure with risk of bursting.	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Use non-sparking handtools. Do NOT use compressed air for filling, discharging, or handling.	Use alcohol-resistant foam, foam, powder, carbon dioxide, fine water spray. In case of fire: keep drums, etc., cool by spraying with water.

PREVENT GENERATION OF MISTS!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Sore throat. Cough. Headache. Drowsiness.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Redness. Dry skin.	Protective gloves.	Rinse contaminated clothes (fire hazard) with plenty of water. Remove contaminated clothes. Rinse skin with plenty of water or shower.
Eyes	Redness.	Wear safety spectacles or eye protection in combination with breathing protection.	Rinse with plenty of water for several minutes (remove contact lenses if easily possible).
Ingestion		Do not eat, drink, or smoke during work.	Rinse mouth. Seek medical attention if you feel unwell.

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Remove all ignition sources. Evacuate danger area! Consult an expert! Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Do NOT wash away into sewer. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	<p>According to UN GHS Criteria</p> <div style="text-align: center;">  </div> <p>DANGER</p> <p>Highly flammable liquid and vapour May cause drowsiness or dizziness</p> <p>Transportation UN Classification UN Hazard Class: 3; UN Pack Group: II</p>
STORAGE	
Fireproof. Separated from strong oxidants, strong bases and strong acids.	
PACKAGING	

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ETHYL ACETATE

ICSC: 0367

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

The vapour is heavier than air and may travel along the ground; distant ignition possible.

Chemical dangers

Reacts with strong oxidants. This generates fire and explosion hazard.
 Reacts violently with strong bases and strong acids. Attacks rubber and some forms of plastic.

Formula: $C_4H_8O_2$ / $CH_3COOC_2H_5$

Molecular mass: 88.1

Boiling point: 77°C

Melting point: -84°C

Relative density (water = 1): 0.9

Solubility in water, g/100ml at 20°C: 8.7 (poor)

Vapour pressure, kPa at 20°C: 10

Relative vapour density (air = 1): 3.0

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.2

Flash point: -4°C c.c.

Auto-ignition temperature: 427°C

Explosive limits, vol% in air: 2.0-12.8

Octanol/water partition coefficient as log Pow: 0.73

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation of its vapour.

Effects of short-term exposure

The substance is mildly irritating to the eyes and respiratory tract. The substance may cause effects on the central nervous system. Exposure far above the OEL could cause lowering of consciousness.

Inhalation risk

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

The substance defats the skin, which may cause dryness or cracking.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 400 ppm as TWA.

MAK: 750 mg/m³, 200 ppm; peak limitation category: I(2); pregnancy risk group: C.EU-OEL: 734 mg/m³, 200 ppm as TWA; 1468 mg/m³, 400 ppm as STEL

ENVIRONMENT

NOTES

Do NOT take working clothes home.

ADDITIONAL INFORMATION

EC Classification

Symbol: F, Xi; R: 11-36-66-67; S: (2)-16-26-33




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METHYL METHACRYLATE Methacrylic acid methyl ester Methyl 2-methylpropenoate	ICSC: 0300 November 2003
CAS #: 80-62-6 UN #: 1247 EC Number: 201-297-1	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Highly flammable. Vapour/air mixtures are explosive.	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling.	Use foam, powder, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

AVOID ALL CONTACT!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Cough. Shortness of breath. Sore throat.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Redness.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes	Redness. Pain.	Wear safety goggles or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Nausea. Vomiting. Abdominal pain.	Do not eat, drink, or smoke during work.	Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: chemical protection suit and filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Remove all ignition sources. Do NOT wash away into sewer. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	According to UN GHS Criteria Transportation UN Classification UN Hazard Class: 3; UN Pack Group: II
STORAGE	
Fireproof. Separated from strong oxidants, strong bases and strong acids. Cool. Keep in the dark. Keep in a well-ventilated room. Store only if stabilized.	
PACKAGING	

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METHYL METHACRYLATE	ICSC: 0300
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PHYSICAL & CHEMICAL INFORMATION
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<p>Physical State; Appearance COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.</p> <p>Physical dangers The vapour mixes well with air, explosive mixtures are easily formed. Vapours are uninhibited and may polymerize, causing blockage of vents.</p> <p>Chemical dangers The substance may polymerize due to warming or due to heating, under the influence of light, polymerization catalysts and strong oxidants. This generates fire or explosion hazard. Reacts with strong acids and strong bases.</p>	<p>Formula: $\text{CH}_2\text{C}(\text{CH}_3)\text{COOCH}_3 / \text{C}_5\text{H}_8\text{O}_2$</p> <p>Molecular mass: 100.1</p> <p>Boiling point: 100.5°C</p> <p>Melting point: -48°C</p> <p>Relative density (water = 1): 0.94</p> <p>Solubility in water, g/100ml at 20°C: 1.6</p> <p>Vapour pressure, kPa at 20°C: 3.9</p> <p>Relative vapour density (air = 1): 3.5</p> <p>Relative density of the vapour/air-mixture at 20°C (air = 1): 1.09</p> <p>Flash point: 10°C o.c.</p> <p>Auto-ignition temperature: 421°C</p> <p>Explosive limits, vol% in air: 1.7-12.5</p> <p>Octanol/water partition coefficient as log Pow: 1.38</p>
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EXPOSURE & HEALTH EFFECTS

<p>Routes of exposure The substance can be absorbed into the body by inhalation, through the skin and by ingestion.</p> <p>Effects of short-term exposure The substance is irritating to the eyes, skin and respiratory tract.</p>	<p>Inhalation risk A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20°C.</p> <p>Effects of long-term or repeated exposure Repeated or prolonged contact may cause skin sensitization. The substance may have effects on the peripheral nervous system.</p>
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OCCUPATIONAL EXPOSURE LIMITS

TLV: 50 ppm as TWA; 100 ppm as STEL; (SEN); A4 (not classifiable as a human carcinogen).

MAK: 210 mg/m³, 50 ppm; peak limitation category: I(2); sensitization of skin (SH); pregnancy risk group: C.

EU-OEL: 50 ppm as TWA; 100 ppm as STEL

ENVIRONMENT

The substance is harmful to aquatic organisms.

NOTES

Usually contains hydroquinone, hydroquinone methyl ether and dimethyl t-butylphenol as inhibitors of polymerization.

An added stabilizer or inhibitor can influence the toxicological properties of this substance, consult an expert.

Do NOT take working clothes home.

ADDITIONAL INFORMATION

<p>EC Classification</p> <p>Symbol: F, Xi; R: 11-37/38-43; S: (2)-24-37-46; Note: D</p>
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n-HEXANE Hexyl hydride	ICSC: 0279 April 2000
CAS #: 110-54-3 UN #: 1208 EC Number: 203-777-6	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Highly flammable. Vapour/air mixtures are explosive.	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling. Use non-sparking handtools.	Use powder, AFFF, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Dizziness. Drowsiness. Lethargy. Headache. Nausea. Weakness. Unconsciousness.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Dry skin. Redness. Pain.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention .
Eyes	Redness. Pain.	Wear safety goggles, face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Abdominal pain. Further see Inhalation.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Rest. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Consult an expert! Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Remove all ignition sources. Do NOT wash away into sewer. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	According to UN GHS Criteria Transportation UN Classification UN Hazard Class: 3; UN Pack Group: II
STORAGE	
Fireproof. Separated from strong oxidants. Well closed.	
PACKAGING	

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n-HEXANE

ICSC: 0279

PHYSICAL & CHEMICAL INFORMATION**Physical State; Appearance**

VOLATILE COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

The vapour is heavier than air and may travel along the ground; distant ignition possible.

Chemical dangers

Reacts with strong oxidants. This generates fire and explosion hazard. Attacks some plastics, rubber and coatings.

Formula: C₆H₁₄

Molecular mass: 86.2

Boiling point: 69°C

Melting point: -95°C

Relative density (water = 1): 0.7

Solubility in water, g/100ml at 20°C: 0.0013

Vapour pressure, kPa at 20°C: 17

Relative vapour density (air = 1): 3.0

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.3

Flash point: -22°C c.c.

Auto-ignition temperature: 225°C

Explosive limits, vol% in air: 1.1-7.5

Octanol/water partition coefficient as log Pow: 3.9

EXPOSURE & HEALTH EFFECTS**Routes of exposure**

The substance can be absorbed into the body by inhalation of its vapour and by ingestion.

Effects of short-term exposure

The substance is irritating to the skin. If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis. Exposure at high levels could cause lowering of consciousness.

Inhalation risk

A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the central nervous system and peripheral nervous system. This may result in polyneuropathy. Animal tests show that this substance possibly causes toxic effects upon human reproduction.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 50 ppm as TWA; (skin); BEI issued.

MAK: 180 mg/m³, 50 ppm; peak limitation category: II(8); pregnancy risk group: C.EU-OEL: 72 mg/m³, 20 ppm as TWA**ENVIRONMENT**

The substance is toxic to aquatic organisms.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.

ADDITIONAL INFORMATION**EC Classification**


Symbol: F, Xn, N; R: 11-38-48/20-62-65-67-51/53; S: (2)-9-16-29-33-36/37-61-62

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ETHYLBENZENE Ethylbenzol Phenylethane EB	ICSC: 0268 November 2007
CAS #: 100-41-4 UN #: 1175 EC Number: 202-849-4	

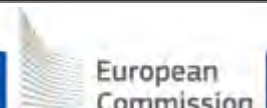
	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Highly flammable. Vapour/air mixtures are explosive.	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling.	Use dry powder, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

PREVENT GENERATION OF MISTS!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Cough. Sore throat. Dizziness. Drowsiness. Headache.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Redness.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes	Redness. Pain.	Wear safety goggles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Burning sensation in the throat and chest. Further see Inhalation.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Ventilation. Do NOT let this chemical enter the environment. Do NOT wash away into sewer. Collect leaking and spilled liquid in covered containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	<p>According to UN GHS Criteria</p>  <p>DANGER</p> <p>Highly flammable liquid and vapour Harmful if inhaled May be harmful if swallowed Causes mild skin irritation Causes eye irritation Suspected of causing cancer May cause respiratory irritation May cause drowsiness and dizziness May be harmful if swallowed and enters airways Toxic to aquatic life</p>
STORAGE	
Fireproof. Separated from strong oxidants. Provision to contain effluent from fire extinguishing. Store in an area without drain or sewer access.	
PACKAGING	
	<p>Transportation UN Classification UN Hazard Class: 3; UN Pack Group: II</p>



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ETHYLBENZENE

ICSC: 0268

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

COLOURLESS LIQUID WITH AROMATIC ODOUR.

Physical dangers

The vapour mixes well with air, explosive mixtures are easily formed.

Chemical dangers

Reacts with strong oxidants. Attacks plastics and rubber.

Formula: C₈H₁₀/C₆H₅C₂H₅

Molecular mass: 106.2

Boiling point: 136°C

Melting point: -95°C

Relative density (water = 1): 0.9

Solubility in water, g/100ml at 20°C: 0.015

Vapour pressure, kPa at 20°C: 0.9

Relative vapour density (air = 1): 3.7

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.02

Flash point: 18°C c.c.

Auto-ignition temperature: 432°C

Explosive limits, vol% in air: 1.0-6.7

Octanol/water partition coefficient as log Pow: 3.1

Viscosity: 0.6 mm²/s at 25°C

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation of its vapour and by ingestion.

Effects of short-term exposure

The substance is irritating to the eyes, skin and respiratory tract. If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis. The substance may cause effects on the central nervous system. Exposure above the OEL could cause lowering of consciousness.

Inhalation risk

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

This substance is possibly carcinogenic to humans. The substance may have effects on the kidneys and liver. This may result in impaired functions.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 20 ppm as TWA; A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued.

MAK: 88 mg/m³, 20 ppm; peak limitation category: II(2); skin absorption (H); carcinogen category: 4; pregnancy risk group: C.EU-OEL: 442 mg/m³, 100 ppm as TWA; 884 mg/m³, 200 ppm as STEL; (skin)

ENVIRONMENT

The substance is toxic to aquatic organisms. It is strongly advised not to let the chemical enter into the environment.

NOTES

The odour warning when the exposure limit value is exceeded is insufficient.

ADDITIONAL INFORMATION

EC Classification

Symbol: F, Xn; R: 11-20; S: (2)-16-24/25-29


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1,2-DICHLOROETHANE Ethylene dichloride 1,2-Ethylene dichloride Ethane dichloride	ICSC: 0250 April 2013
CAS #: 107-06-2	
UN #: 1184	
EC Number: 203-458-1	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Highly flammable. Gives off irritating or toxic fumes (or gases) in a fire. Vapour/air mixtures are explosive. Heating will cause rise in pressure with risk of bursting.	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Prevent build-up of electrostatic charges (e.g., by grounding). Do NOT use compressed air for filling, discharging, or handling.	Use water spray, foam, powder, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

AVOID ALL CONTACT! IN ALL CASES CONSULT A DOCTOR!

	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Sore throat. Nausea. Vomiting. Cough. Headache. Dizziness. Drowsiness. Unconsciousness.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Half-upright position. Administration of oxygen may be needed. Artificial respiration may be needed. Refer immediately for medical attention.
Skin	MAY BE ABSORBED! Redness.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer immediately for medical attention.
Eyes	Redness. Pain.	Wear safety goggles, face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	See Inhalation.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Give one or two glasses of water to drink. Refer immediately for medical attention.

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Evacuate danger area! Consult an expert! Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Ventilation. Do NOT let this chemical enter the environment. Do NOT wash away into sewer. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	<p>According to UN GHS Criteria</p> <div style="text-align: center;">  </div> <p style="text-align: center;">DANGER</p> <p>Highly flammable liquid and vapour Harmful if swallowed May be harmful in contact with skin Toxic if inhaled Causes skin and eye irritation Suspected of causing cancer Causes damage to lungs, liver and kidneys May cause drowsiness or dizziness May cause damage to liver and kidneys through prolonged or repeated exposure Harmful to aquatic life</p> <p>Transportation UN Classification UN Hazard Class: 3; UN Subsidiary Risks: 6.1; UN Pack Group: II</p>
STORAGE	
Fireproof. Separated from food and feedstuffs and incompatible materials. See Chemical Dangers. Cool. Dry. Well closed. Store in an area without drain or sewer access.	
PACKAGING	
Unbreakable packaging. Put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs.	



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1,2-DICHLOROETHANE**ICSC: 0250****PHYSICAL & CHEMICAL INFORMATION****Physical State; Appearance**

COLOURLESS VISCOUS LIQUID WITH CHARACTERISTIC ODOUR. TURNS DARK ON EXPOSURE TO AIR, MOISTURE AND LIGHT.

Physical dangers

The vapour is heavier than air and may travel along the ground; distant ignition possible. As a result of flow, agitation, etc., electrostatic charges can be generated.

Chemical dangers

Decomposes on heating and on burning. This produces toxic and corrosive fumes including hydrogen chloride (see ICSC 0163) and phosgene (see ICSC 0007). Reacts with alkali metals, powdered metals, ammonia, bases and strong oxidants. This generates fire and explosion hazard. Attacks many metals in the presence of water.

Formula: $\text{ClCH}_2\text{CH}_2\text{Cl}$ / $\text{C}_2\text{H}_4\text{Cl}_2$

Molecular mass: 98.96

Boiling point: 83.5°C

Melting point: -35.7°C

Relative density (water = 1): 1.2

Solubility in water, g/100ml: 0.87

Vapour pressure, kPa at 20°C: 8.7

Relative vapour density (air = 1): 3.42

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.2

Flash point: 13°C c.c.

Auto-ignition temperature: 440°C

Explosive limits, vol% in air: 4.2-16

Octanol/water partition coefficient as log Pow: 1.48

EXPOSURE & HEALTH EFFECTS**Routes of exposure**

The substance can be absorbed into the body by inhalation of its vapour, through the skin and by ingestion.

Effects of short-term exposure

The vapour is irritating to the eyes, skin and respiratory tract. Inhalation may cause lung oedema. See Notes. The substance may cause effects on the kidneys and liver. This may result in impaired functions, liver damage and kidney damage. Exposure at high concentrations could cause lowering of consciousness and death. The effects may be delayed.

Inhalation risk

A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the liver and kidneys, resulting in impaired functions. This substance is possibly carcinogenic to humans.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 10 ppm as TWA; A4 (not classifiable as a human carcinogen).

MAK: skin absorption (H); carcinogen category: 2.

EU-OEL: 8.2 mg/m³, 2 ppm as TWA; (skin)

ENVIRONMENT

The substance is harmful to aquatic organisms.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.

The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential.

ADDITIONAL INFORMATION**EC Classification**

Symbol: F, T; R: 45-11-22-36/37/38; S: 53-45; Note: E

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p-XYLENE para-Xylene 1,4-Dimethylbenzene p-Xylol paraxylene	ICSC: 0086 August 2002
CAS #: 106-42-3	
UN #: 1307	
EC Number: 203-396-5	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Flammable. Above 27°C explosive vapour/air mixtures may be formed.	NO open flames, NO sparks and NO smoking. Above 27°C use a closed system, ventilation and explosion-proof electrical equipment. Prevent build-up of electrostatic charges (e.g., by grounding).	Use water spray, powder, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

STRICT HYGIENE! AVOID EXPOSURE OF (PREGNANT) WOMEN!

	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Dizziness. Drowsiness. Headache. Nausea.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Dry skin. Redness.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes	Redness. Pain.	Wear safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Burning sensation. Abdominal pain. Further see Inhalation.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Ventilation. Remove all ignition sources. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	<p>According to UN GHS Criteria</p> <p>Transportation UN Classification UN Hazard Class: 3; UN Pack Group: III</p>
STORAGE	
Fireproof. Separated from strong oxidants and strong acids.	
PACKAGING	



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p-XYLENE**ICSC: 0086****PHYSICAL & CHEMICAL INFORMATION****Physical State; Appearance**

COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

As a result of flow, agitation, etc., electrostatic charges can be generated.

Chemical dangers

Reacts with strong acids and strong oxidants.

Formula: $C_6H_4(CH_3)_2$ / C_8H_{10}

Molecular mass: 106.2

Boiling point: 138°C

Melting point: 13°C

Relative density (water = 1): 0.86

Solubility in water: none

Vapour pressure, kPa at 20°C: 0.9

Relative vapour density (air = 1): 3.7

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.02

Flash point: 27°C c.c.

Auto-ignition temperature: 528°C

Explosive limits, vol% in air: 1.1-7.0

Octanol/water partition coefficient as log Pow: 3.15

EXPOSURE & HEALTH EFFECTS**Routes of exposure**

The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

Effects of short-term exposure

The substance is irritating to the eyes and skin. The substance may cause effects on the central nervous system. If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis.

Inhalation risk

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the central nervous system. Exposure to the substance may increase noise-induced hearing loss. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 100 ppm as TWA; 150 ppm as STEL; A4 (not classifiable as a human carcinogen); BEI issued.

MAK: 220 mg/m³, 50 ppm; peak limitation category: II(2); skin absorption (H); pregnancy risk group: D.EU-OEL: 221 mg/m³, 50 ppm as TWA; 442 mg/m³, 100 ppm as STEL; (skin)**ENVIRONMENT**

The substance is toxic to aquatic organisms.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.

The recommendations on this Card also apply to technical xylene.

See ICSCs 0084 and 0085.

ADDITIONAL INFORMATION**EC Classification**

Symbol: Xn; R: 10-20/21-38; S: (2)-25; Note: C




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m-XYLENE meta-Xylene 1,3-Dimethylbenzene m-Xylol	ICSC: 0085 August 2002
CAS #: 108-38-3 UN #: 1307 EC Number: 203-576-3	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Flammable. Above 27°C explosive vapour/air mixtures may be formed.	NO open flames, NO sparks and NO smoking. Above 27°C use a closed system, ventilation and explosion-proof electrical equipment. Prevent build-up of electrostatic charges (e.g., by grounding).	Use water spray, powder, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

STRICT HYGIENE!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Dizziness. Drowsiness. Headache. Nausea.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Dry skin. Redness.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes	Redness. Pain.	Wear safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Burning sensation. Abdominal pain. Further see Inhalation.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Ventilation. Remove all ignition sources. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	According to UN GHS Criteria Transportation UN Classification UN Hazard Class: 3; UN Pack Group: III
STORAGE	
Fireproof. Separated from strong oxidants and strong acids.	
PACKAGING	

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m-XYLENE

ICSC: 0085

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

As a result of flow, agitation, etc., electrostatic charges can be generated.

Chemical dangers

Reacts with strong acids and strong oxidants.

Formula: $C_6H_4(CH_3)_2$ / C_8H_{10}

Molecular mass: 106.2

Boiling point: 139°C

Melting point: -48°C

Relative density (water = 1): 0.86

Solubility in water: none

Vapour pressure, kPa at 20°C: 0.8

Relative vapour density (air = 1): 3.7

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.02

Flash point: 27°C c.c.

Auto-ignition temperature: 527°C

Explosive limits, vol% in air: 1.1-7.0

Octanol/water partition coefficient as log Pow: 3.20

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

Effects of short-term exposure

The substance is irritating to the eyes and skin. The substance may cause effects on the central nervous system. If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis.

Inhalation risk

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the central nervous system. Exposure to the substance may increase noise-induced hearing loss. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 100 ppm as TWA; A4 (not classifiable as a human carcinogen); BEI issued.

EU-OEL: 150 ppm as STEL; 221 mg/m³, 50 ppm as TWA; 442 mg/m³, 100 ppm as STEL; (skin).

MAK: 220 mg/m³, 50 ppm; peak limitation category: II(2); skin absorption (H); pregnancy risk group: D

ENVIRONMENT

The substance is toxic to aquatic organisms.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.

The recommendations on this Card also apply to technical xylene.

See ICSCs 0084 and 0086.

ADDITIONAL INFORMATION

EC Classification

Symbol: Xn; R: 10-20/21-38; S: (2)-25; Note: C

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o-XYLENE ortho-Xylene 1,2-Dimethylbenzene o-Xylol	ICSC: 0084 August 2002
CAS #: 95-47-6 UN #: 1307 EC Number: 202-422-2	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Flammable. Above 32°C explosive vapour/air mixtures may be formed.	NO open flames, NO sparks and NO smoking. Above 32°C use a closed system, ventilation and explosion-proof electrical equipment. Prevent build-up of electrostatic charges (e.g., by grounding).	Use water spray, powder, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

STRICT HYGIENE! AVOID EXPOSURE OF (PREGNANT) WOMEN!

	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Dizziness. Drowsiness. Headache. Nausea.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Dry skin. Redness.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes	Redness. Pain.	Wear safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Burning sensation. Abdominal pain. Further see Inhalation.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Ventilation. Remove all ignition sources. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	According to UN GHS Criteria Transportation UN Classification UN Hazard Class: 3; UN Pack Group: III
STORAGE	
Fireproof. Separated from strong oxidants and strong acids.	
PACKAGING	

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o-XYLENE**ICSC: 0084****PHYSICAL & CHEMICAL INFORMATION****Physical State; Appearance**

COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

As a result of flow, agitation, etc., electrostatic charges can be generated.

Chemical dangers

Reacts with strong acids and strong oxidants.

Formula: C₆H₄(CH₃)₂ / C₈H₁₀

Molecular mass: 106.2

Boiling point: 144°C

Melting point: -25°C

Relative density (water = 1): 0.88

Solubility in water: none

Vapour pressure, kPa at 20°C: 0.7

Relative vapour density (air = 1): 3.7

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.02

Flash point: 32°C c.c.

Auto-ignition temperature: 463°C

Explosive limits, vol% in air: 0.9-6.7

Octanol/water partition coefficient as log Pow: 3.12

EXPOSURE & HEALTH EFFECTS**Routes of exposure**

The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

Effects of short-term exposure

The substance is irritating to the eyes and skin. The substance may cause effects on the central nervous system. If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis.

Inhalation risk

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the central nervous system. Exposure to the substance may increase noise-induced hearing loss. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 100 ppm as TWA; 150 ppm as STEL; A4 (not classifiable as a human carcinogen); BEI issued.

MAK: 220 mg/m³, 50 ppm; peak limitation category: II(2); skin absorption (H); pregnancy risk group: D.EU-OEL: 221 mg/m³, 50 ppm as TWA; 442 mg/m³, 100 ppm as STEL; (skin)**ENVIRONMENT**

The substance is toxic to aquatic organisms.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.

The recommendations on this Card also apply to technical xylene.

See ICSCs 0085 and 0086.

ADDITIONAL INFORMATION**EC Classification**


Symbol: Xn; R: 10-20/21-38; S: (2)-25; Note: C




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TETRACHLOROETHYLENE PER Ethylene Tetrachloride PERC Tetracap 1,1,2,2-tetrachloroethene 1,1,2,2-Tetrachloroethylene Perchloroethylene Tetrachloroethene	ICSC: 0076 April 2013
CAS #: 127-18-4 UN #: 1897 EC Number: 204-825-9	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire. Risk of fire and explosion on contact with metals. See Chemical Dangers.	NO open flames, NO sparks and NO smoking. NO contact with hot surfaces or finely divided metals. NO contact with metals. See Chemical Dangers	In case of fire in the surroundings, use appropriate extinguishing media.

STRICT HYGIENE! PREVENT GENERATION OF MISTS!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Cough. Dizziness. Headache. Drowsiness. Nausea. Unconsciousness.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer immediately for medical attention.
Skin	Dry skin. Redness. Burning sensation.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes	Redness. Burning sensation. Pain.	Wear safety goggles or face shield.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Sore throat. Aspiration hazard! See Inhalation. Cardiac dysrhythmia. Respiratory arrest.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer immediately for medical attention.

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance and complete protective clothing. Ventilation. Do NOT let this chemical enter the environment. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	<p>According to UN GHS Criteria</p>  <p style="text-align: center;">WARNING</p> <p>Causes skin irritation Suspected of causing cancer May be harmful if swallowed and enters airways May cause drowsiness or dizziness Toxic to aquatic life with long lasting effects</p> <p>Transportation UN Classification UN Hazard Class: 6.1; UN Pack Group: III</p>
STORAGE	
Separated from metals, ignition sources and food and feedstuffs. See Chemical Dangers. Keep in the dark. Keep in a well-ventilated room. Dry. Cool.	
PACKAGING	
Do not transport with food and feedstuffs. Marine pollutant.	

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TETRACHLOROETHYLENE

ICSC: 0076

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

The vapour is heavier than air and may accumulate in lowered spaces causing a deficiency of oxygen.

Chemical dangers

Decomposes on contact with hot surfaces or flames. This produces toxic and corrosive fumes of hydrogen chloride, phosgene and chlorine. Decomposes slowly on contact with moisture. This produces trichloroacetic acid and hydrochloric acid. Reacts violently with finely divided metals. This generates fire and explosion hazard.

Formula: C₂Cl₄ / Cl₂C=CCl₂

Molecular mass: 165.8

Boiling point: 121°C

Melting point: -22°C

Density (at 20°C): 1.62 g/cm³

Solubility in water, g/100ml at 20°C: 0.015

Vapour pressure, kPa at 20°C: 1.9

Relative vapour density (air = 1): 5.7

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.09

Octanol/water partition coefficient as log Pow: 3.4

Auto-ignition temperature: > 650°C

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation, by ingestion and through the skin.

Effects of short-term exposure

The substance is irritating to the eyes, skin and respiratory tract. If swallowed the substance may cause vomiting and could result in aspiration pneumonitis. The substance may cause effects on the central nervous system. Exposure at high levels could cause unconsciousness.

Inhalation risk

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the liver, kidneys and central nervous system. This substance is probably carcinogenic to humans.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 25 ppm as TWA; 100 ppm as STEL; A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued.

MAK: 69 mg/m³, 10 ppm; peak limitation category: II(2); skin absorption (H); carcinogen category: 3; pregnancy risk group: C.EU-OEL: 138 mg/m³, 20 ppm as TWA; 275 mg/m³, 40 ppm as STEL; (skin)

ENVIRONMENT

The substance is toxic to aquatic organisms. The substance may cause long-term effects in the aquatic environment. It is strongly advised not to let the chemical enter into the environment.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.

The odour warning when the exposure limit value is exceeded is insufficient.

Do NOT use in the vicinity of a fire or a hot surface, or during welding.

Use of alcoholic beverages enhances the harmful effect.

ADDITIONAL INFORMATION

EC Classification


Symbol: Xn, N; R: 40-51/53; S: (2)-23-36/37-61

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STYRENE Vinylbenzene Phenylethylene Ethenylbenzene	ICSC: 0073 April 2006
CAS #: 100-42-5 UN #: 2055 EC Number: 202-851-5	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Flammable. Gives off irritating or toxic fumes (or gases) in a fire. Above 31°C explosive vapour/air mixtures may be formed. See Notes.	NO open flames, NO sparks and NO smoking. Above 31°C use a closed system, ventilation and explosion-proof electrical equipment.	Use dry powder. Use foam. Use carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

STRICT HYGIENE!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Dizziness. Drowsiness. Headache. Nausea. Vomiting. Weakness. Unconsciousness.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Redness. Pain.	Protective clothing. Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes	Redness. Pain.	Wear safety goggles or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Nausea. Vomiting.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Give one or two glasses of water to drink. Rest.

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: chemical protection suit including self-contained breathing apparatus. Remove all ignition sources. Do NOT let this chemical enter the environment. Do NOT wash away into sewer. Collect leaking and spilled liquid in covered containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	<p>According to UN GHS Criteria</p> <div style="text-align: center;">  <p>DANGER</p> </div> <p>Flammable liquid and vapour Harmful if inhaled Causes skin and eye irritation Suspected of causing cancer Causes damage to the central nervous system and the liver through prolonged or repeated exposure Toxic to aquatic life</p> <p>Transportation UN Classification UN Hazard Class: 3; UN Pack Group: III</p>
STORAGE	
Fireproof. Separated from incompatible materials. See Chemical Dangers. Cool. Keep in the dark. Store only if stabilized. Store in an area without drain or sewer access.	
PACKAGING	
Airtight. Marine pollutant.	



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STYRENE

ICSC: 0073

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

COLOURLESS-TO-YELLOW OILY LIQUID.

Physical dangers
Chemical dangers

The substance can form explosive peroxides. The substance may polymerize due to warming, under the influence of light, oxidants, oxygen and peroxides. This generates fire and explosion hazard. Reacts violently with strong acids and strong oxidants. This generates fire and explosion hazard. Attacks rubber, copper and copper alloys.

Formula: C₈H₈ / C₆H₅CHCH₂

Molecular mass: 104.2

Boiling point: 145°C

Melting point: -30.6°C

Relative density (water = 1): 0.91

Solubility in water, g/100ml at 20°C: 0.03

Vapour pressure, kPa at 20°C: 0.67

Relative vapour density (air = 1): 3.6

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.02

Flash point: 31°C c.c.

Auto-ignition temperature: 490°C

Explosive limits, vol% in air: 0.9-6.8

Octanol/water partition coefficient as log Pow: 3.0

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation of its vapour.

Effects of short-term exposure

The substance is irritating to the eyes, skin and respiratory tract. If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis. The substance may cause effects on the central nervous system. Exposure at high levels could cause unconsciousness.

Inhalation risk

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the central nervous system. Exposure to the substance may increase noise-induced hearing loss. This substance is possibly carcinogenic to humans. See Notes.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 10 ppm as TWA; 20 ppm as STEL; (OTO); A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued.

MAK: 86 mg/m³, 20 ppm; peak limitation category: II(2); carcinogen category: 5; pregnancy risk group: C

ENVIRONMENT

The substance is toxic to aquatic organisms. It is strongly advised not to let the chemical enter into the environment.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.

Check for peroxides prior to distillation; eliminate if found.

Styrene monomer vapours are uninhibited and may form polymers in vents or flame arresters of storage tanks, resulting in blockage of vents.

Do NOT take working clothes home.

ADDITIONAL INFORMATION

EC Classification


Symbol: Xn; R: 10-20-36/38; S: (2)-23; Note: D

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DICHLOROMETHANE Methylene chloride DCM	ICSC: 0058 April 2017
CAS #: 75-09-2 UN #: 1593 EC Number: 200-838-9	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Flammable under specific conditions. See Notes. Gives off irritating or toxic fumes (or gases) in a fire. Explosive under specific conditions. See Notes. Heating will cause rise in pressure with risk of bursting. Risk of fire and explosion.	NO contact with incompatible substances. See Chemical Dangers. See Notes.	In case of fire in the surroundings, use appropriate extinguishing media. In case of fire: keep drums, etc., cool by spraying with water.

AVOID ALL CONTACT! IN ALL CASES CONSULT A DOCTOR!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Dizziness. Drowsiness. Headache. Nausea. Weakness. Unconsciousness.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Administration of oxygen may be needed. Artificial respiration may be needed. Refer immediately for medical attention.
Skin	MAY BE ABSORBED! Dry skin. Redness. Burning sensation.	Protective gloves. Protective clothing.	Wear protective gloves when administering first aid. Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes	Pain. Redness.	Wear safety spectacles or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Abdominal pain. Further see Inhalation.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Administration of oxygen may be needed. Refer immediately for medical attention.

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Evacuate danger area! Consult an expert! Personal protection: self-contained breathing apparatus. Ventilation. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	<p>According to UN GHS Criteria</p> <div style="text-align: center;">  <p>DANGER</p> </div> <p>Harmful if swallowed Fatal if inhaled Causes skin and eye irritation May cause drowsiness or dizziness Causes damage to central nervous system, blood, liver, the heart and lungs May be harmful if swallowed and enters airways Causes damage to the central nervous system through prolonged or repeated exposure if inhaled May cause cancer</p> <p>Transportation UN Classification UN Hazard Class: 6.1; UN Pack Group: III</p>
STORAGE	
Separated from food and feedstuffs and incompatible materials. See Chemical Dangers. Well closed. Cool. Ventilation along the floor.	
PACKAGING	
Do not transport with food and feedstuffs. Unbreakable packaging. Put breakable packaging into closed unbreakable container.	

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DICHLOROMETHANE

ICSC: 0058

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

VERY VOLATILE COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

The vapour is heavier than air. As a result of flow, agitation, etc., electrostatic charges can be generated.

Chemical dangers

Decomposes on heating or on burning and on contact with hot surfaces. This produces toxic and corrosive fumes including hydrogen chloride (see ICSC 0163), phosgene (see ICSC 0007) and carbon monoxide (see ICSC 0023). Reacts violently with strong oxidants, strong bases and metals such as aluminium powder and magnesium powder. This generates fire and explosion hazard. Attacks some forms of plastic, rubber and coatings.

Formula: CH₂Cl₂

Molecular mass: 84.9

Boiling point: 40°C

Melting point: -97°C

Relative density (water = 1): 1.3 (20°C)

Solubility in water, g/100ml at 20°C: 1.3 (moderate)

Vapour pressure, kPa at 20°C: 47.4

Relative vapour density (air = 1): 2.9

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.9

Auto-ignition temperature: 605°C

Explosive limits, vol% in air: 13-22

See Notes.

Octanol/water partition coefficient as log Pow: 1.25

Viscosity: 0.32 mm²/s at 20°C

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation, by ingestion and through the skin.

Effects of short-term exposure

The substance is irritating to the eyes, skin and respiratory tract. If swallowed the substance may cause vomiting and could result in aspiration pneumonitis. The substance may cause effects on the central nervous system, blood, liver, heart and lungs. Exposure could cause carbon monoxide poisoning. This may result in impaired functions. Exposure at high concentrations could cause lowering of consciousness and death. The effects may be delayed.

Inhalation risk

A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

The substance may have effects on the central nervous system. This substance is probably carcinogenic to humans.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 50 ppm as TWA; A3 (confirmed animal carcinogen with unknown relevance to humans); (skin).

MAK: 180 mg/m³, 50 ppm; peak limitation category: II(2); skin absorption (H); carcinogen category: 5; pregnancy risk group: B.

EU-OEL: 353 mg/m³, 100 ppm as TWA; 706 mg/m³, 200 ppm as STEL; (skin)

ENVIRONMENT

NOTES

Do NOT use in the vicinity of a fire or a hot surface, or during welding.

The odour warning when the exposure limit value is exceeded is insufficient.

Depending on the degree of exposure, periodic medical examination is suggested.

ADDITIONAL INFORMATION

EC Classification

Symbol: Xn; R: 40; S: (2)-23-24/25-36/37




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TRICHLOROFLUOROMETHANE Trichloromonofluoromethane Fluorotrichloromethane CFC 11 R 11	ICSC: 0047 July 2002
CAS #: 75-69-4	
EC Number: 200-892-3	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings, use appropriate extinguishing media. In case of fire: keep drums, etc., cool by spraying with water.

	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Irregular heartbeat. Confusion. Drowsiness. Unconsciousness.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
Skin	ON CONTACT WITH LIQUID: FROSTBITE. Dry skin.	Cold-insulating gloves.	ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Refer for medical attention .
Eyes	Redness. Pain.	Wear safety goggles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion		Do not eat, drink, or smoke during work.	

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Ventilation.	According to UN GHS Criteria Transportation UN Classification
STORAGE	
Separated from incompatible materials. See Chemical Dangers. Cool.	
PACKAGING	

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TRICHLOROFLUOROMETHANE

ICSC: 0047

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

COLOURLESS GAS OR HIGHLY VOLATILE LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

The gas is heavier than air. The vapour is heavier than air and may accumulate in lowered spaces causing a deficiency of oxygen.

Chemical dangers

Decomposes on contact with hot surfaces or flames. This produces toxic and corrosive gases of hydrogen chloride (see ICSC 0163), phosgene (see ICSC 0007), hydrogen fluoride (see ICSC 0283) and carbonyl fluoride (see ICSC 0633). Reacts with powdered aluminium, powdered zinc, magnesium shavings, lithium shavings and granular barium.

Formula: CCl₃F

Molecular mass: 137.4

Boiling point: 24°C

Melting point: -111°C

Relative density (water = 1): 1.49

Solubility in water, g/100ml at 20°C: 0.1

Vapour pressure, kPa at 20°C: 89.0

Relative vapour density (air = 1): 4.7

Relative density of the vapour/air-mixture at 20°C (air = 1): 4.4

Octanol/water partition coefficient as log Pow: 2.53

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation.

Effects of short-term exposure

The liquid may cause frostbite. The substance may cause effects on the cardiovascular system and central nervous system. This may result in cardiac disorders and central nervous system depression. Exposure could cause lowering of consciousness. See Notes.

Inhalation risk

On loss of containment this substance can cause suffocation by lowering the oxygen content of the air in confined areas.

Effects of long-term or repeated exposure

The substance defats the skin, which may cause dryness or cracking.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 1000 ppm as STEL; A4 (not classifiable as a human carcinogen).

MAK: 5700 mg/m³, 1000 ppm; peak limitation category: II(2); pregnancy risk group: C

ENVIRONMENT

Avoid release to the environment because of its impact on the ozone layer.

NOTES

High concentrations in the air cause a deficiency of oxygen with the risk of unconsciousness or death.

Check oxygen content before entering area.

The occupational exposure limit value should not be exceeded during any part of the working exposure.

The odour warning when the exposure limit value is exceeded is insufficient.

Do NOT use in the vicinity of a fire or a hot surface, or during welding.

Turn leaking cylinder with the leak up to prevent escape of gas in liquid state.

ADDITIONAL INFORMATION

EC Classification




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CHLOROFORM Trichloromethane Methane trichloride Formyl trichloride	ICSC: 0027 November 2000
CAS #: 67-66-3	
UN #: 1888	
EC Number: 200-663-8	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Not combustible. See Notes. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings, use appropriate extinguishing media. In case of fire: keep drums, etc., cool by spraying with water.

STRICT HYGIENE! AVOID EXPOSURE OF ADOLESCENTS AND CHILDREN!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Cough. Dizziness. Drowsiness. Headache. Nausea. Unconsciousness.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
Skin	Redness. Pain. Dry skin.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention .
Eyes	Redness. Pain.	Wear face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Abdominal pain. Vomiting. Further see Inhalation.	Do not eat, drink, or smoke during work.	Rinse mouth. Give one or two glasses of water to drink. Rest. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Evacuate danger area! Consult an expert! Personal protection: complete protective clothing including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	According to UN GHS Criteria Transportation UN Classification UN Hazard Class: 6.1; UN Pack Group: III
STORAGE	
Separated from food and feedstuffs and incompatible materials. See Chemical Dangers. Ventilation along the floor.	
PACKAGING	
Unbreakable packaging. Put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs.	

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CHLOROFORM**ICSC: 0027****PHYSICAL & CHEMICAL INFORMATION****Physical State; Appearance**

VOLATILE COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

The vapour is heavier than air.

Chemical dangers

Decomposes on contact with hot surfaces or flames. This produces toxic and corrosive fumes of hydrogen chloride (see ICSC 0163), phosgene (see ICSC 0007) and chlorine (see ICSC 0126). Reacts violently with strong bases, strong oxidants and some metals such as aluminium, magnesium and zinc. This generates fire and explosion hazard. Attacks plastics, rubber and coatings.

Formula: CHCl_3

Molecular mass: 119.4

Boiling point: 62°C

Melting point: -64°C

Solubility in water, g/100ml at 20°C: 0.8

Vapour pressure, kPa at 20°C: 212

Relative vapour density (air = 1): 4.12

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.7

Octanol/water partition coefficient as log Pow: 1.97

EXPOSURE & HEALTH EFFECTS**Routes of exposure**

The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

Effects of short-term exposure

The substance is irritating to the eyes. The substance may cause effects on the central nervous system, liver and kidneys. The effects may be delayed. Medical observation is indicated.

Inhalation risk

A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the liver and kidneys. This substance is possibly carcinogenic to humans.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 10 ppm as TWA; A3 (confirmed animal carcinogen with unknown relevance to humans).

MAK: 2.5 mg/m³, 0.5 ppm; peak limitation category: II(2); skin absorption (H); carcinogen category: 4; pregnancy risk group: C.EU-OEL: 10 mg/m³, 2 ppm as TWA; (skin)**ENVIRONMENT**

The substance is toxic to aquatic organisms.

NOTES

Turns combustible on addition of small amounts of a flammable substance or an increase in the oxygen content of the air.

Use of alcoholic beverages enhances the harmful effect.

Depending on the degree of exposure, periodic medical examination is suggested.

The odour warning when the exposure limit value is exceeded is insufficient.

Do NOT use in the vicinity of a fire or a hot surface, or during welding.

ADDITIONAL INFORMATION**EC Classification**

Symbol: Xn; R: 22-38-40-48/20/22; S: (2)-36/37




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CARBON TETRACHLORIDE Tetrachloromethane Tetrachlorocarbon Tetra	ICSC: 0024 November 2000
CAS #: 56-23-5	
UN #: 1846	
EC Number: 200-262-8	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings, use appropriate extinguishing media. In case of fire: keep drums, etc., cool by spraying with water.

AVOID ALL CONTACT!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Dizziness. Drowsiness. Headache. Nausea. Vomiting.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
Skin	MAY BE ABSORBED! Redness. Pain.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention .
Eyes	Redness. Pain.	Wear face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Abdominal pain. Diarrhoea. Further see Inhalation.	Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: complete protective clothing including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in covered containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	According to UN GHS Criteria Transportation UN Classification UN Hazard Class: 6.1; UN Pack Group: II
STORAGE	
Separated from food and feedstuffs and metals. See Chemical Dangers. Ventilation along the floor. Cool.	
PACKAGING	
Unbreakable packaging. Put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs. Marine pollutant.	

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CARBON TETRACHLORIDE**ICSC: 0024****PHYSICAL & CHEMICAL INFORMATION****Physical State; Appearance**

COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

The vapour is heavier than air.

Chemical dangers

Decomposes on contact with hot surfaces or flames. This produces toxic and corrosive fumes of hydrogen chloride (see ICSC 0163), chlorine (see ICSC 0126) and phosgene (see ICSC 0007). Reacts with some metals such as aluminium, magnesium and zinc. This generates fire and explosion hazard.

Formula: CCl₄

Molecular mass: 153.8

Boiling point: 76.5°C

Melting point: -23°C

Relative density (water = 1): 1.59

Solubility in water, g/100ml at 20°C: 0.1 (poor)

Vapour pressure, kPa at 20°C: 12.2

Relative vapour density (air = 1): 5.3

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.5

Octanol/water partition coefficient as log Pow: 2.64

EXPOSURE & HEALTH EFFECTS**Routes of exposure**

The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

Effects of short-term exposure

The substance is irritating to the eyes. The substance may cause effects on the liver, kidneys and central nervous system. This may result in unconsciousness. Medical observation is indicated.

Inhalation risk

A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

Repeated or prolonged contact with skin may cause dermatitis. This substance is possibly carcinogenic to humans.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 5 ppm as TWA; 10 ppm as STEL; (skin); A2 (suspected human carcinogen).

MAK: 3.2 mg/m³, 0.5 ppm; peak limitation category: II(2); skin absorption (H); carcinogen category: 4; pregnancy risk group: C.EU-OEL: 6.4 mg/m³, 1 ppm as TWA; 32 mg/m³, 5 ppm as STEL; (skin)**ENVIRONMENT**

The substance is harmful to aquatic organisms. Avoid release to the environment because of its impact on the ozone layer.

NOTES

Use of alcoholic beverages enhances the harmful effect.

Depending on the degree of exposure, periodic medical examination is suggested.

The odour warning when the exposure limit value is exceeded is insufficient.

Do NOT use in the vicinity of a fire or a hot surface, or during welding.

ADDITIONAL INFORMATION**EC Classification**

Symbol: T, N; R: 23/24/25-40-48/23-52/53-59; S: (1/2)-23-36/37-45-59-61

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CHRYSENE	ICSC: 1672 Peer-Review Status: 12.10.2006 Validated
Benzo[a]phenanthrene 1,2-Benzophenanthrene 1,2,5,6-Dibenzonaphthalene	
CAS #: 218-01-9 RTECS #: GC0700000 UN #: 3077 EC #: 601-048-00-0 EINECS #: 205-923-4	Formula: C ₁₈ H ₁₂ Molecular mass: 228.3

TYPES OF HAZARD / EXPOSURE	ACUTE HAZARDS / SYMPTOMS	PREVENTION	FIRST AID / FIRE-FIGHTING
FIRE	Combustible.	NO open flames.	Use water spray, dry powder, foam, carbon dioxide.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Prevent deposition of dust.	
EXPOSURE	See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.	AVOID ALL CONTACT!	
Inhalation		Use local exhaust or breathing protection.	Fresh air, rest.
Skin		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes		Wear safety goggles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.	EC Classification Symbol: T, N; R: 45-68-50/53; S: 53-45-60-61 UN Classification UN Hazard Class: 9; UN Pack Group: III GHS Classification Signal: Warning Suspected of causing cancer Very toxic to aquatic life Toxic to aquatic life with long lasting effects



EMERGENCY RESPONSE

SAFE STORAGE

Transport Emergency Card: TEC (R)-90GM7-III.

Separated from strong oxidants. Store in an area without drain or sewer access. Provision to contain effluent from fire extinguishing.

IMPORTANT DATA

Physical State; Appearance
COLOURLESS-TO-BEIGE CRYSTALS OR POWDER.

Physical dangers
Dust explosion possible if in powder or granular form, mixed with air.

Chemical dangers
Decomposes on burning. This produces toxic fumes.
Reacts violently with strong oxidants.

Occupational exposure limits
TLV: A3 (confirmed animal carcinogen with unknown relevance to humans); (ACGIH 2006).
MAK: Carcinogen category: 2; Skin absorption (H); (DFG 2007).

Routes of exposure
The substance can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion.

Inhalation risk
A harmful concentration of airborne particles can be reached quickly when dispersed.

Effects of short-term exposure

Effects of long-term or repeated exposure
This substance is possibly carcinogenic to humans.

PHYSICAL PROPERTIES

ENVIRONMENTAL DATA

Boiling point: 448°C
Melting point: 254 - 256°C
Density: 1.3 g/cm³
Solubility in water: very poor
Octanol/water partition coefficient as log Pow: 5.9

The substance is very toxic to aquatic organisms. Bioaccumulation of this chemical may occur in seafood. It is strongly advised not to let the chemical enter into the environment.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.
Do NOT take working clothes home.
This substance does not usually occur as a pure substance but as a component of polyaromatic hydrocarbon (PAH) mixtures.
Human population studies have associated PAH's exposure with cancer and cardiovascular diseases.
TLV Note: Exposure by all routes should be carefully controlled to levels as low as possible.

ADDITIONAL INFORMATION

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PERFLUOROOCCTANOIC ACID Pentadecafluorooctanoic acid Pentadecafluoro-n-octanoic acid Perfluorocaprylic acid PFOA	ICSC: 1613 April 2017
CAS #: 335-67-1	
UN #: 3261	
EC Number: 206-397-9	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire. Risk of fire and explosion on contact with bases, oxidants or reducing agents.	NO contact with incompatible substances. See Chemical Dangers.	Use water spray, carbon dioxide, dry powder, foam.

AVOID ALL CONTACT! IN ALL CASES CONSULT A DOCTOR!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Cough. Sore throat.	Use local exhaust or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
Skin	MAY BE ABSORBED! Redness. Pain.	Protective gloves. Protective clothing.	Wear protective gloves when administering first aid. Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes	Redness. Pain.	Wear safety goggles or eye protection in combination with breathing protection if powder.	Rinse with plenty of water for several minutes (remove contact lenses if easily possible). Refer immediately for medical attention.
Ingestion	Abdominal pain. Nausea. Vomiting. Diarrhoea.	Do not eat, drink, or smoke during work.	Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered non-metallic containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.	<p>According to UN GHS Criteria</p> <div style="text-align: center;">  <p>DANGER</p> </div> <p>Harmful if swallowed Toxic if inhaled Causes serious eye irritation May cause damage to immune system and liver through prolonged or repeated exposure May damage fertility or the unborn child May cause harm to breast-fed children Suspected of causing cancer</p> <p>Transportation UN Classification UN Hazard Class: 8; UN Pack Group: III</p>
STORAGE	
Store only in original container. Separated from food and feedstuffs and incompatible materials. See Chemical Dangers.	
PACKAGING	
Do not transport with food and feedstuffs. Unbreakable packaging. Put breakable packaging into closed unbreakable container.	



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PERFLUOROCTANOIC ACID

ICSC: 1613

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

WHITE POWDER WITH PUNGENT ODOUR.

Physical dangers

No data.

Chemical dangers

Decomposes on heating above 300°C . This produces toxic and corrosive gases including hydrogen fluoride (See ICSC 0283). The solution is a weak acid. Reacts with bases, oxidants and reducing agents. This produces flammable/explosive gas (hydrogen - see ICSC 0001). Attacks many metals.

Formula: C₈HF₁₅O₂

Molecular mass: 414.1

Boiling point: 189°C

Melting point: 52-54°C

Density: 1.79 g/cm³

Solubility in water: none

Octanol/water partition coefficient as log Pow: 6.3

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion.

Effects of short-term exposure

The substance is irritating to the eyes, skin and respiratory tract.

Inhalation risk

A harmful concentration of airborne particles can be reached quickly when dispersed.

Effects of long-term or repeated exposure

The substance may have effects on the liver and immune system. This substance is possibly carcinogenic to humans. May cause toxicity to human reproduction or development.

OCCUPATIONAL EXPOSURE LIMITS

MAK: (inhalable fraction): 0.005 mg/m³; peak limitation category: II(8); skin absorption (H); carcinogen category: 4; pregnancy risk group: C

ENVIRONMENT

NOTES

ADDITIONAL INFORMATION

EC Classification

Symbol: T, Xn; R: 40-61-48/23-48/21/22-41-64; S: 53-45

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BENZO(k)FLUORANTHENE		ICSC: 0721
Peer-Review Status: 25.03.1999 Validated		
Dibenzo(b,jk)fluorene 8,9-Benzofluoranthene 11,12-Benzofluoranthene		
CAS #: 207-08-9 DF6350000 EC #: 601-036-00-5 EINECS #: 205-916-6	RTECS #: Formula: C ₂₀ H ₁₂ Molecular mass: 252.3	

TYPES OF HAZARD / EXPOSURE	ACUTE HAZARDS / SYMPTOMS	PREVENTION	FIRST AID / FIRE-FIGHTING
FIRE			In case of fire in the surroundings, use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT!	
Inhalation		Use local exhaust or breathing protection.	Fresh air, rest.
Skin		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes		Wear safety spectacles or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion		Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention .

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations. Do NOT let this chemical enter the environment.	EC Classification Symbol: T, N; R: 45-50/53; S: 53-45-60-61 UN Classification GHS Classification

EMERGENCY RESPONSE	SAFE STORAGE
	Provision to contain effluent from fire extinguishing. Well closed.

IMPORTANT DATA

Physical State; Appearance
YELLOW CRYSTALS.

Physical dangers

Chemical dangers

Upon heating, toxic fumes are formed. Decomposes on heating. This produces toxic fumes.

Occupational exposure limits

TLV (NOT-ESTABLISHED):.

MAK: Carcinogen category: 2; Germ cell mutagen group: 3A; Skin absorption (H); (DFG 2007).

Routes of exposure

The substance can be absorbed into the body by inhalation of its aerosol and through the skin.

Inhalation risk

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.

Effects of short-term exposure

Effects of long-term or repeated exposure

This substance is possibly carcinogenic to humans.

PHYSICAL PROPERTIES

Boiling point: 480°C

Melting point: 217°C

Solubility in water: none

Octanol/water partition coefficient as log Pow: 6.84

ENVIRONMENTAL DATA

This substance may be hazardous to the environment. Special attention should be given to air quality and water quality. Bioaccumulation of this chemical may occur in crustacea and fish.

NOTES

Benzo(k)fluoranthene is present as a component of polycyclic aromatic hydrocarbons (PAH) content in the environment usually resulting from the incomplete combustion or pyrolysis of organic matters, especially fossil fuels and tobacco. ACGIH recommends environment containing benzo(k)fluoranthene should be evaluated in terms of the TLV-TWA for coal tar pitch volatile, as benzene soluble 0.2 mg/m³. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken. Card has been partly updated in October 2005. See section Occupational Exposure Limits.

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BENZO(b)FLUORANTHENE**ICSC: 0720**

Peer-Review Status: 25.03.1999 Validated

Benz(e)acephenanthrylene
 2,3-Benzofluoranthene
 Benzo(e)fluoranthene
 3,4-Benzofluoranthene

CAS #: 205-99-2 RTECS #:
 CU1400000
 EC #: 601-034-00-4
 EINECS #: 205-911-9

Formula: C₂₀H₁₂
 Molecular mass: 252.3

TYPES OF HAZARD / EXPOSURE	ACUTE HAZARDS / SYMPTOMS	PREVENTION	FIRST AID / FIRE-FIGHTING
FIRE			In case of fire in the surroundings, use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT!	
Inhalation		Use local exhaust or breathing protection.	Fresh air, rest.
Skin		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes		Wear safety spectacles or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion		Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention .

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations. Do NOT let this chemical enter the environment.	EC Classification Symbol: T, N; R: 45-50/53; S: 53-45-60-61 UN Classification GHS Classification

EMERGENCY RESPONSE	SAFE STORAGE
	Provision to contain effluent from fire extinguishing. Well closed.

IMPORTANT DATA

Physical State; Appearance
COLOURLESS CRYSTALS.

Physical dangers

Chemical dangers

Upon heating, toxic fumes are formed. Decomposes on heating. This produces toxic fumes.

Occupational exposure limits

TLV: A2 (suspected human carcinogen); (ACGIH 2004).
MAK: Carcinogen category: 2; Germ cell mutagen group: 3A; Skin absorption (H); (DFG 2007).

Routes of exposure

The substance can be absorbed into the body by inhalation of its aerosol and through the skin.

Inhalation risk

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.

Effects of short-term exposure

Effects of long-term or repeated exposure

This substance is possibly carcinogenic to humans. May cause genetic damage in humans.

PHYSICAL PROPERTIES

Boiling point: 481°C
Melting point: 168°C
Solubility in water: none
Octanol/water partition coefficient as log Pow: 6.12

ENVIRONMENTAL DATA

This substance may be hazardous to the environment. Special attention should be given to air quality and water quality.

NOTES

Benzo(b)fluoranthene is present as a component of polycyclic aromatic hydrocarbons (PAH) content in the environment usually resulting from the incomplete combustion or pyrolysis of organic matters, especially fossil fuels and tobacco. ACGIH recommends environment containing benzo(b)fluoranthene should be evaluated in terms of the TLV-TWA for coal tar pitch volatile, as benzene soluble 0.2 mg/m³.

TLV Note: Exposure by all routes should be carefully controlled to levels as low as possible.

Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.

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DIBENZO(a,h)ANTHRACENE	ICSC: 0431 Peer-Review Status: 23.10.1995 Validated
1,2:5,6-Dibenzanthracene	
CAS #: 53-70-3 RTECS #: HN2625000 EC #: 601-041-00-2 EINECS #: 200-181-8	Formula: C ₂₂ H ₁₄ Molecular mass: 278.4

TYPES OF HAZARD / EXPOSURE	ACUTE HAZARDS / SYMPTOMS	PREVENTION	FIRST AID / FIRE-FIGHTING
FIRE	Combustible.	NO open flames.	Use water spray, powder.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT!	
Inhalation		Use local exhaust or breathing protection.	Fresh air, rest.
Skin	Redness. Swelling. Itching.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes	Redness.	Wear face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion		Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.	EC Classification Symbol: T, N; R: 45-50/53; S: 53-45-60-61 UN Classification GHS Classification

EMERGENCY RESPONSE	SAFE STORAGE
	Well closed.




IMPORTANT DATA	
Physical State; Appearance COLOURLESS CRYSTALLINE POWDER.	Routes of exposure The substance can be absorbed into the body by inhalation,

Physical dangers	through the skin and by ingestion.
Chemical dangers	Inhalation risk Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.
Occupational exposure limits TLV (NOT-ESTABLISHED): MAK: Carcinogen category: 2; Germ cell mutagen group: 3A; Skin absorption (H); (DFG 2007).	Effects of short-term exposure Effects of long-term or repeated exposure The substance may have effects on the skin. This may result in photosensitization. This substance is probably carcinogenic to humans.

PHYSICAL PROPERTIES	ENVIRONMENTAL DATA
Boiling point: 524°C Melting point: 267°C Relative density (water = 1): 1.28 Solubility in water: none Octanol/water partition coefficient as log Pow: 6.5	Bioaccumulation of this chemical may occur in seafood.

NOTES
<p>This is one of many polycyclic aromatic hydrocarbons - standards are usually established for them as mixtures, e.g., coal tar pitch volatiles.</p> <p>However, it may be encountered as a laboratory chemical in its pure form.</p> <p>Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.</p> <p>Do NOT take working clothes home.</p> <p>DBA is a commonly used name.</p> <p>This substance is one of many polycyclic aromatic hydrocarbons (PAH).</p> <p>Card has been partly updated in October 2005.</p> <p>See section EU classification.</p>

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BENZ(a)ANTHRACENE		ICSC: 0385
		Peer-Review Status: 23.10.1995 Validated
1,2-Benzoanthracene Benzo(a)anthracene 2,3-Benzphenanthrene Naphthanthracene		
CAS #: 56-55-3 CV9275000 EC #: 601-033-00-9 EINECS #: 200-280-6	RTECS #: Formula: C ₁₈ H ₁₂ Molecular mass: 228.3	

TYPES OF HAZARD / EXPOSURE	ACUTE HAZARDS / SYMPTOMS	PREVENTION	FIRST AID / FIRE-FIGHTING
FIRE	Combustible.		Use water spray, powder. In case of fire in the surroundings, use appropriate extinguishing media.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Prevent deposition of dust.	
EXPOSURE		AVOID ALL CONTACT!	
Inhalation		Use local exhaust or breathing protection.	Fresh air, rest.
Skin		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes		Wear safety goggles, face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion		Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Personal protection: complete protective clothing including self-contained breathing apparatus. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.	EC Classification Symbol: T, N; R: 45-50/53; S: 53-45-60-61 UN Classification GHS Classification




EMERGENCY RESPONSE	SAFE STORAGE
	Well closed.

IMPORTANT DATA	
<p>Physical State; Appearance COLOURLESS-TO-YELLOW-BROWN FLUORESCENT FLAKES OR POWDER.</p> <p>Physical dangers Dust explosion possible if in powder or granular form, mixed with air.</p> <p>Chemical dangers</p> <p>Occupational exposure limits TLV: A2 (suspected human carcinogen); (ACGIH 2004). MAK: Carcinogen category: 2; Skin absorption (H); (DFG 2007).</p>	<p>Routes of exposure The substance can be absorbed into the body by inhalation, through the skin and by ingestion.</p> <p>Inhalation risk Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.</p> <p>Effects of short-term exposure</p> <p>Effects of long-term or repeated exposure This substance is probably carcinogenic to humans.</p>

PHYSICAL PROPERTIES	ENVIRONMENTAL DATA
<p>Sublimation point: 435°C Melting point: 162°C Relative density (water = 1): 1.274 Solubility in water: none Vapour pressure, Pa at 20°C: 292 Octanol/water partition coefficient as log Pow: 5.61</p>	<p>Bioaccumulation of this chemical may occur in seafood.</p>

NOTES
<p>This substance is one of many polycyclic aromatic hydrocarbons - standards are usually established for them as mixtures, e.g., coal tar pitch volatiles. However, it may be encountered as a laboratory chemical in its pure form. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken. Do NOT take working clothes home. Tetraphene is a common name. TLV Note: Exposure by all routes should be carefully controlled to levels as low as possible.</p>

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BENZO(a)PYRENE		ICSC: 0104
		Peer-Review Status: 11.04.2014 Validated
Benz(a)pyrene 3,4-Benzopyrene Benzo(d,e,f)chrysene		
CAS #: 50-32-8 RTECS #: DJ3675000 UN #: 3077 EC #: 601-032-00-3 EINECS #: 200-028-5	Formula: C ₂₀ H ₁₂ Molecular mass: 252.3	

TYPES OF HAZARD / EXPOSURE	ACUTE HAZARDS / SYMPTOMS	PREVENTION	FIRST AID / FIRE-FIGHTING
FIRE	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings, use appropriate extinguishing media.
EXPLOSION			
EXPOSURE	See Notes.	AVOID ALL CONTACT! PREVENT DISPERSION OF DUST!	
Inhalation		Use closed system and ventilation.	Fresh air, rest.
Skin		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes		Wear safety spectacles or eye protection in combination with breathing protection.	Rinse with plenty of water (remove contact lenses if easily possible).
Ingestion		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Do NOT wash away into sewer. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.	Marine pollutant. EC Classification Symbol: T, N; R: 45-46-60-61-43-50/53; S: 53-45-60-61 UN Classification UN Hazard Class: 9; UN Pack Group: III GHS Classification Signal: Danger May cause an allergic skin reaction May cause cancer May cause genetic defects May damage fertility or the unborn child Very toxic to aquatic life with long lasting effects



EMERGENCY RESPONSE

SAFE STORAGE

Provision to contain effluent from fire extinguishing. Separated from strong oxidants. Store in an area without drain or sewer access. Cool. Dry.

IMPORTANT DATA

Physical State; Appearance
PALE YELLOW CRYSTALS.

Physical dangers

Chemical dangers

Reacts with strong oxidants. Decomposes on heating. This produces toxic fumes.

Occupational exposure limits

TLV (Exposure by all routes should be carefully controlled to levels as low as possible): A2 (suspected human carcinogen); BEI issued; (ACGIH 2014).

MAK: Carcinogen category: 2; Germ cell mutagen group: 2; Skin absorption (H); (DFG 2014).

Routes of exposure

Exposure mainly occurs via inhalation.

Inhalation risk

A harmful concentration of airborne particles can be reached quickly when dispersed.

Effects of short-term exposure

See Notes.

Effects of long-term or repeated exposure

Repeated or prolonged contact may cause skin sensitization. This substance is carcinogenic to humans. May cause heritable genetic damage to human germ cells. May cause toxicity to human reproduction or development.

PHYSICAL PROPERTIES

Boiling point: 496°C
Melting point: 178.1°C
Density (at 20°C): 1.4 g/cm³
Solubility in water, g/100ml at 20°C: < 0.1 (poor)
Vapour pressure at 20°C: negligible
Octanol/water partition coefficient as log Pow: 6.04

ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms. Bioaccumulation of this chemical may occur in fish, plants and molluscs. The substance may cause long-term effects in the aquatic environment. It is strongly advised not to let the chemical enter into the environment.

NOTES

Do NOT take working clothes home.

Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken. Benzo(a)pyrene is present as a component of polycyclic aromatic hydrocarbons (PAHs) in the environment, usually resulting from the incomplete combustion or pyrolysis of organic matters, especially fossil fuels and tobacco.

ADDITIONAL INFORMATION

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o-XYLENEortho-Xylene
1,2-Dimethylbenzene
o-Xylol

ICSC: 0084

August 2002

CAS #: 95-47-6

UN #: 1307

EINECS #: 202-422-2

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Flammable. Above 32°C explosive vapour/air mixtures may be formed.	NO open flames, NO sparks and NO smoking. Above 32°C use a closed system, ventilation and explosion-proof electrical equipment. Prevent build-up of electrostatic charges (e.g., by grounding).	Use water spray, powder, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

STRICT HYGIENE! AVOID EXPOSURE OF (PREGNANT) WOMEN!

	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Dizziness. Drowsiness. Headache. Nausea.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Dry skin. Redness.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes	Redness. Pain.	Wear safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Burning sensation. Abdominal pain. Further see Inhalation.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Ventilation. Remove all ignition sources. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	According to UN GHS Criteria Transportation UN Classification UN Hazard Class: 3; UN Pack Group: III
STORAGE	
Fireproof. Separated from strong oxidants and strong acids.	
PACKAGING	

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OrganizationPrepared by an international group of experts on behalf of ILO and WHO, with the financial assistance of the European Commission.
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PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

COLOURLESS LIQUID WITH CHARACTERISTIC ODOUR.

Physical dangers

As a result of flow, agitation, etc., electrostatic charges can be generated.

Chemical dangers

Reacts with strong acids and strong oxidants.

Formula: $C_6H_4(CH_3)_2$ / C_8H_{10}

Molecular mass: 106.2

Boiling point: 144°C

Melting point: -25°C

Relative density (water = 1): 0.88

Solubility in water: none

Vapour pressure, kPa at 20°C: 0.7

Relative vapour density (air = 1): 3.7

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.02

Flash point: 32°C c.c.

Auto-ignition temperature: 463°C

Explosive limits, vol% in air: 0.9-6.7

Octanol/water partition coefficient as log Pow: 3.12

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

Effects of short-term exposure

The substance is irritating to the eyes and skin. The substance may cause effects on the central nervous system. If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis.

Inhalation risk

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the central nervous system. Exposure to the substance may increase noise-induced hearing loss. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 100 ppm as TWA; 150 ppm as STEL; A4 (not classifiable as a human carcinogen).

MAK: 440 mg/m³, 100 ppm; peak limitation category: II(2); skin absorption (H); pregnancy risk group: D. BEI issued.

EU-OEL: 221 mg/m³, 50 ppm as TWA; 442 mg/m³, 100 ppm as STEL; (skin)

ENVIRONMENT

The substance is toxic to aquatic organisms.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.

The recommendations on this Card also apply to technical xylene.

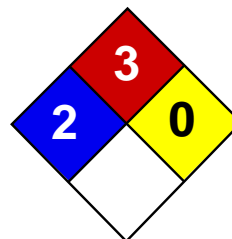
See ICSCs 0085 and 0086.

ADDITIONAL INFORMATION

EC Classification

Symbol: Xn; R: 10-20/21-38; S: (2)-25; Note: C

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Health	2
Fire	3
Reactivity	0
Personal Protection	J

Material Safety Data Sheet m-Xylene MSDS

Section 1: Chemical Product and Company Identification

Product Name: m-Xylene

Catalog Codes: SLX1066

CAS#: 108-38-3

RTECS: ZE2275000

TSCA: TSCA 8(b) inventory: m-Xylene

CI#: Not applicable.

Synonym: m-Methyltoluene

Chemical Name: 1,3-Dimethylbenzene

Chemical Formula: C₆H₄(CH₃)₂

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
{m-}Xylene	108-38-3	100

Toxicological Data on Ingredients: m-Xylene: ORAL (LD50): Acute: 5000 mg/kg [Rat.]. DERMAL (LD50): Acute: 14100 mg/kg [Rabbit.].

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant). Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant). Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to blood, kidneys, the nervous system, liver. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Not available.

Ingestion:

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 527°C (980.6°F)

Flash Points: CLOSED CUP: 25°C (77°F). OPEN CUP: 28.9°C (84°F) (Cleveland).

Flammable Limits: LOWER: 1.1% UPPER: 7%

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards:

Explosive in the form of vapor when exposed to heat or flame. Vapor may travel considerable distance to source of ignition and flash back. When heated to decomposition it emits acrid smoke and irritating fumes.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Flammable liquid, insoluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes Keep away from incompatibles such as oxidizing agents.

Storage:

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Splash goggles. Lab coat. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 100 STEL: 150 (ppm) from ACGIH (TLV) TWA: 434 STEL: 651 (mg/m3) from ACGIH Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid. (Liquid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 106.17 g/mole

Color: Colorless.

pH (1% soln/water): Not applicable.

Boiling Point: 139.3°C (282.7°F)

Melting Point: -47.87°C (-54.2°F)

Critical Temperature: Not available.

Specific Gravity: 0.86 (Water = 1)

Vapor Pressure: 6 mm of Hg (@ 20°C)

Vapor Density: 3.7 (Air = 1)

Volatility: Not available.

Odor Threshold: 0.62 ppm

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether.

Solubility:

Easily soluble in methanol, diethyl ether. Insoluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Eye contact.

Toxicity to Animals:

Acute oral toxicity (LD50): 5000 mg/kg [Rat.]. Acute dermal toxicity (LD50): 14100 mg/kg [Rabbit.].

Chronic Effects on Humans: The substance is toxic to blood, kidneys, the nervous system, liver.

Other Toxic Effects on Humans:

Very hazardous in case of skin contact (irritant). Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

0347 Animal: embryotoxic, foetotoxic, passes through the placental barrier. 0900 Detected in maternal milk in human. Narcotic effect; may cause nervous system disturbances.

Special Remarks on other Toxic Effects on Humans: Material is irritating to mucous membranes and upper respiratory tract.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: Class 3: Flammable liquid.

Identification: : Xylene : UN1307 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

Pennsylvania RTK: m-Xylene Massachusetts RTK: m-Xylene TSCA 8(b) inventory: m-Xylene SARA 313 toxic chemical notification and release reporting: m-Xylene CERCLA: Hazardous substances.: m-Xylene

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

R10- Flammable. R38- Irritating to skin. R41- Risk of serious damage to eyes.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: j

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References:

-Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987. -Material safety data sheet emitted by: la Commission de la Santé et de la Sécurité du Travail du Québec. -SAX, N.I. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984. -The Sigma-Aldrich Library of Chemical Safety Data, Edition II. -Guide de la loi et du règlement sur le transport des marchandises dangereuses au Canada. Centre de conformité internationale. 1986.

Other Special Considerations: Not available.

Created: 10/10/2005 08:33 PM

Last Updated: 05/21/2013 12:00 PM

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ETHYLBENZENEEthylbenzol
Phenylethane
EB

ICSC: 0268

November 2007

CAS #: 100-41-4


UN #: 1175

EINECS #: 202-849-4

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Highly flammable. Vapour/air mixtures are explosive.	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling.	Use dry powder, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

PREVENT GENERATION OF MISTS!

	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Cough. Sore throat. Dizziness. Drowsiness. Headache.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Redness.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes	Redness. Pain.	Wear safety goggles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
Ingestion	Burning sensation in the throat and chest. Further see Inhalation.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Ventilation. Do NOT let this chemical enter the environment. Do NOT wash away into sewer. Collect leaking and spilled liquid in covered containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.	<p>According to UN GHS Criteria</p>  <p>DANGER</p> <p>Highly flammable liquid and vapour Harmful if inhaled May be harmful if swallowed Causes mild skin irritation Causes eye irritation Suspected of causing cancer May cause respiratory irritation May cause drowsiness and dizziness May be harmful if swallowed and enters airways Toxic to aquatic life</p> <p>Transportation UN Classification UN Hazard Class: 3; UN Pack Group: II</p>
STORAGE	
Fireproof. Separated from strong oxidants. Provision to contain effluent from fire extinguishing. Store in an area without drain or sewer access.	
PACKAGING	

International
Labour
OrganizationWorld Health
OrganizationPrepared by an international group of experts on behalf of ILO and WHO, with the financial assistance of the European Commission.
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Commission

PHYSICAL & CHEMICAL INFORMATION

Physical State; Appearance

COLOURLESS LIQUID WITH AROMATIC ODOUR.

Physical dangers

The vapour mixes well with air, explosive mixtures are easily formed.

Chemical dangers

Reacts with strong oxidants. Attacks plastics and rubber.

Formula: C₈H₁₀/C₆H₅C₂H₅

Molecular mass: 106.2

Boiling point: 136°C

Melting point: -95°C

Relative density (water = 1): 0.9

Solubility in water, g/100ml at 20°C: 0.015

Vapour pressure, kPa at 20°C: 0.9

Relative vapour density (air = 1): 3.7

Relative density of the vapour/air-mixture at 20°C (air = 1): 1.02

Flash point: 18°C c.c.

Auto-ignition temperature: 432°C

Explosive limits, vol% in air: 1.0-6.7

Octanol/water partition coefficient as log Pow: 3.1

Viscosity: 0.6 mm²/s at 25°C

EXPOSURE & HEALTH EFFECTS

Routes of exposure

The substance can be absorbed into the body by inhalation of its vapour and by ingestion.

Effects of short-term exposure

The substance is irritating to the eyes, skin and respiratory tract. If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis. The substance may cause effects on the central nervous system. Exposure above the OEL could cause lowering of consciousness.

Inhalation risk

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

Effects of long-term or repeated exposure

This substance is possibly carcinogenic to humans. The substance may have effects on the kidneys and liver. This may result in impaired functions.

OCCUPATIONAL EXPOSURE LIMITS

TLV: 20 ppm as TWA; A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued.

MAK: 88 mg/m³, 20 ppm; peak limitation category: II(2); skin absorption (H); carcinogen category: 4; pregnancy risk group: C.

EU-OEL: 442 mg/m³, 100 ppm as TWA; 884 mg/m³, 200 ppm as STEL; (skin)

ENVIRONMENT

The substance is toxic to aquatic organisms. It is strongly advised not to let the chemical enter into the environment.

NOTES

The odour warning when the exposure limit value is exceeded is insufficient.

ADDITIONAL INFORMATION

EC Classification

Symbol: F, Xn; R: 11-20; S: (2)-16-24/25-29

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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 5.0 Revision Date 29.10.2012

Print Date 19.04.2017

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifiers**

Product name : Arsenic

Product Number : 267961
Brand : Aldrich
Index-No. : 033-001-00-X
CAS-No. : 7440-38-2**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheetCompany : Sigma-Aldrich Israel Ltd.
3 PARK RABIN, PLAUT
7670603 REHOVOT
ISRAELTelephone : +972 8948-4222
Fax : +972 8948-4200**1.4 Emergency telephone number**

Emergency Phone # : +972 (8) 948-4222

2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)
Acute toxicity, Inhalation (Category 3)
Acute toxicity, Oral (Category 3)**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Toxic by inhalation and if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements**Labelling according Regulation (EC) No 1272/2008 [CLP]**

Pictogram



Signal word : Danger

Hazard statement(s)

H301 : Toxic if swallowed.
H331 : Toxic if inhaled.
H410 : Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261 : Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 : Avoid release to the environment.
P301 + P310 : IF SWALLOWED: Immediately call a POISON CENTER or doctor/

P311 physician.
 Call a POISON CENTER or doctor/ physician.
 P501 Dispose of contents/ container to an approved waste disposal plant.
 Supplemental Hazard Statements none

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)



R-phrase(s)

R23/25

Toxic by inhalation and if swallowed.

R50/53

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)

S20/21

When using do not eat, drink or smoke.

S28

After contact with skin, wash immediately with plenty of soap and water.

S45

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S60

This material and its container must be disposed of as hazardous waste.

S61

Avoid release to the environment. Refer to special instructions/ Safety data sheets.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula : As
 Molecular Weight : 74,92 g/mol

Component	Concentration
Arsenic	
CAS-No. 7440-38-2	-
EC-No. 231-148-6	
Index-No. 033-001-00-X	

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Arsenic oxides

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end uses

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Immersion protection

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: > 480 min

Material tested: Dermatril® (Aldrich Z677272, Size M)

Splash protection

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: > 30 min

Material tested: Dermatril® (Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- | | |
|---|------------------------------------|
| a) Appearance | Form: powder
Colour: grey |
| b) Odour | no data available |
| c) Odour Threshold | no data available |
| d) pH | no data available |
| e) Melting point/freezing point | Melting point/range: 817 °C - lit. |
| f) Initial boiling point and boiling range | 613 °C - lit. |
| g) Flash point | not applicable |
| h) Evaporation rate | no data available |
| i) Flammability (solid, gas) | no data available |
| j) Upper/lower flammability or explosive limits | no data available |
| k) Vapour pressure | no data available |
| l) Vapour density | no data available |
| m) Relative density | 5,727 g/mL at 25 °C |
| n) Water solubility | no data available |
| o) Partition coefficient: n-octanol/water | no data available |

- p) Autoignition temperature no data available
- q) Decomposition temperature no data available
- r) Viscosity no data available
- s) Explosive properties no data available
- t) Oxidizing properties no data available

9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Heat. Exposure to air may affect product quality.

10.5 Incompatible materials

Oxidizing agents, Halogens, Palladium undergoes a violent reaction with arsenic, Zinc, Platinum oxide, Nitrogen trichloride, Bromine azide

10.6 Hazardous decomposition products

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 763 mg/kg

Remarks: Behavioral:Ataxia. Diarrhoea

LD50 Oral - mouse - 145 mg/kg

Remarks: Behavioral:Ataxia. Diarrhoea

Inhalation: no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

IARC: 1 - Group 1: Carcinogenic to humans (Arsenic)

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation	Toxic if inhaled. May cause respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

Additional Information

RTECS: CG0525000

12. ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 9,9 mg/l - 96,0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 3,8 mg/l - 48 h

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**14.1 UN number**

ADR/RID: 1558

IMDG: 1558

IATA: 1558

14.2 UN proper shipping name

ADR/RID: ARSENIC

IMDG: ARSENIC

IATA: Arsenic

14.3 Transport hazard class(es)			
ADR/RID: 6.1	IMDG: 6.1		IATA: 6.1
14.4 Packaging group			
ADR/RID: II	IMDG: II		IATA: II
14.5 Environmental hazards			
ADR/RID: yes	IMDG Marine pollutant: yes		IATA: no
14.6 Special precautions for user			
no data available			

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

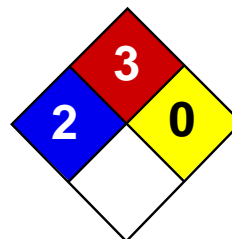
15.2 Chemical Safety Assessment
no data available

16. OTHER INFORMATION

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.



Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet Toluene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Toluene

Catalog Codes: SLT2857, SLT3277

CAS#: 108-88-3

RTECS: XS5250000

TSCA: TSCA 8(b) inventory: Toluene

CI#: Not available.

Synonym: Toluol, Tolu-Sol; Methylbenzene; Methacide; Phenylmethane; Methylbenzol

Chemical Name: Toluene

Chemical Formula: C6-H5-CH3 or C7-H8

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Toluene	108-88-3	100

Toxicological Data on Ingredients: Toluene: ORAL (LD50): Acute: 636 mg/kg [Rat]. DERMAL (LD50): Acute: 14100 mg/kg [Rabbit]. VAPOR (LC50): Acute: 49000 mg/m 4 hours [Rat]. 440 ppm 24 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, kidneys, the nervous system, liver, brain, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 480°C (896°F)

Flash Points: CLOSED CUP: 4.4444°C (40°F). (Setaflash) OPEN CUP: 16°C (60.8°F).

Flammable Limits: LOWER: 1.1% UPPER: 7.1%

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances:

Flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards:

Toluene forms explosive reaction with 1,3-dichloro-5,5-dimethyl-2,4-imidazolididione; dinitrogen tetraoxide; concentrated nitric acid, sulfuric acid + nitric acid; N₂O₄; AgClO₄; BrF₃; Uranium hexafluoride; sulfur dichloride. Also forms an explosive mixture with tetranitromethane.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Toxic flammable liquid, insoluble or very slightly soluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage**Precautions:**

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage:

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection**Engineering Controls:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 200 STEL: 500 CEIL: 300 (ppm) from OSHA (PEL) [United States] TWA: 50 (ppm) from ACGIH (TLV) [United States] SKIN TWA: 100 STEL: 150 from NIOSH [United States] TWA: 375 STEL: 560 (mg/m³) from NIOSH [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweet, pungent, Benzene-like.

Taste: Not available.

Molecular Weight: 92.14 g/mole

Color: Colorless.

pH (1% soln/water): Not applicable.

Boiling Point: 110.6°C (231.1°F)

Melting Point: -95°C (-139°F)

Critical Temperature: 318.6°C (605.5°F)

Specific Gravity: 0.8636 (Water = 1)

Vapor Pressure: 3.8 kPa (@ 25°C)

Vapor Density: 3.1 (Air = 1)

Volatility: Not available.

Odor Threshold: 1.6 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; $\log(\text{oil/water}) = 2.7$

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility:

Soluble in diethyl ether, acetone. Practically insoluble in cold water. Soluble in ethanol, benzene, chloroform, glacial acetic acid, carbon disulfide. Solubility in water: 0.561 g/l @ 25 deg. C.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources (flames, sparks, static), incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Incompatible with strong oxidizers, silver perchlorate, sodium difluoride, Tetranitromethane, Uranium Hexafluoride. Frozen Bromine Trifluoride reacts violently with Toluene at -80 deg. C. Reacts chemically with nitrogen oxides, or halogens to form nitrotoluene, nitrobenzene, and nitrophenol and halogenated products, respectively.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 636 mg/kg [Rat]. Acute dermal toxicity (LD50): 14100 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 440 24 hours [Mouse].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. May cause damage to the following organs: blood, kidneys, the nervous system, liver, brain, central nervous system (CNS).

Other Toxic Effects on Humans:

Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals:

Lowest Published Lethal Dose: LDL [Human] - Route: Oral; Dose: 50 mg/kg LCL [Rabbit] - Route: Inhalation; Dose: 55000 ppm/40min

Special Remarks on Chronic Effects on Humans:

Detected in maternal milk in human. Passes through the placental barrier in human. Embryotoxic and/or foetotoxic in animal. May cause adverse reproductive effects and birth defects (teratogenic). May affect genetic material (mutagenic)

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes mild to moderate skin irritation. It can be absorbed to some extent through the skin. Eyes: Causes mild to moderate eye irritation with a burning sensation. Splash contact with eyes also causes conjunctivitis, blepharospasm, corneal edema, corneal abrasions. This usually resolves in 2 days. Inhalation: Inhalation of vapor may cause respiratory tract irritation causing coughing and wheezing, and nasal discharge. Inhalation of high concentrations may affect behavior and cause central nervous system effects characterized by nausea, headache, dizziness, tremors, restlessness, lightheadedness, exhilaration, memory loss, insomnia, impaired reaction time, drowsiness, ataxia, hallucinations, somnolence, muscle contraction or spasticity, unconsciousness and coma. Inhalation of high concentration of vapor may also affect the cardiovascular system (rapid heart beat, heart palpitations, increased or decreased blood pressure, dysrhythmia,), respiration (acute pulmonary edema, respiratory depression, apnea, asphyxia), cause vision disturbances and dilated pupils, and cause loss of appetite. Ingestion: Aspiration hazard. Aspiration of Toluene into the lungs may cause chemical pneumonitis. May cause irritation of the digestive tract with nausea, vomiting, pain. May have effects similar to that of acute inhalation. Chronic Potential Health Effects: Inhalation and Ingestion: Prolonged or repeated exposure via inhalation may cause central nervous system and cardiovascular symptoms similar to that of acute inhalation and ingestion as well liver damage/failure, kidney damage/failure (with hematuria, proteinuria, oliguria, renal tubular acidosis), brain damage, weight loss, blood (pigmented or nucleated red blood cells, changes in white blood cell count), bone marrow changes, electrolyte imbalances (Hypokalemia, Hypophosphatemia), severe, muscle weakness and Rhabdomyolysis. Skin: Repeated or prolonged skin contact may cause defatting dermatitis.

Section 12: Ecological Information

Ecotoxicity:

Ecotoxicity in water (LC50): 313 mg/l 48 hours [Daphnia (daphnia)]. 17 mg/l 24 hours [Fish (Blue Gill)]. 13 mg/l 96 hours [Fish (Blue Gill)]. 56 mg/l 24 hours [Fish (Fathead minnow)]. 34 mg/l 96 hours [Fish (Fathead minnow)]. 56.8 ppm any hours [Fish (Goldfish)].

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Toluene UNNA: 1294 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Toluene California prop. 65 (no significant risk level): Toluene: 7 mg/day (value) California prop. 65 (acceptable daily intake level): Toluene: 7 mg/day (value) California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Toluene Connecticut hazardous material survey.: Toluene Illinois

toxic substances disclosure to employee act: Toluene Illinois chemical safety act: Toluene New York release reporting list: Toluene Rhode Island RTK hazardous substances: Toluene Pennsylvania RTK: Toluene Florida: Toluene Minnesota: Toluene Michigan critical material: Toluene Massachusetts RTK: Toluene Massachusetts spill list: Toluene New Jersey: Toluene New Jersey spill list: Toluene Louisiana spill reporting: Toluene California Director's List of Hazardous Substances.: Toluene TSCA 8(b) inventory: Toluene TSCA 8(d) H and S data reporting: Toluene: Effective date: 10/04/82; Sunset Date: 10/0/92 SARA 313 toxic chemical notification and release reporting: Toluene CERCLA: Hazardous substances.: Toluene: 1000 lbs. (453.6 kg)

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R11- Highly flammable. R20- Harmful by inhalation. S16- Keep away from sources of ignition - No smoking. S25- Avoid contact with eyes. S29- Do not empty into drains. S33- Take precautionary measures against static discharges.

HMS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

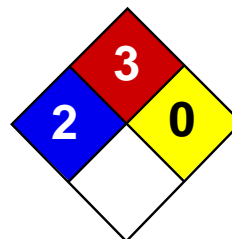
References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:30 PM

Last Updated: 05/21/2013 12:00 PM

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Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet p-Xylene MSDS

Section 1: Chemical Product and Company Identification

Product Name: p-Xylene

Catalog Codes: SLX1120

CAS#: 106-42-3

RTECS: ZE2625000

TSCA: TSCA 8(b) inventory: p-Xylene

CI#: Not applicable.

Synonym: p-Methyltoluene

Chemical Name: 1,4-Dimethylbenzene

Chemical Formula: C₆H₄(CH₃)₂

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
{p-}Xylene	106-42-3	100

Toxicological Data on Ingredients: p-Xylene: ORAL (LD50): Acute: 5000 mg/kg [Rat.]. DERMAL (LD50): Acute: 12400 mg/kg [Rabbit.]. VAPOR (LC50): Acute: 4550 ppm 4 hour(s) [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant). Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant). Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to blood, kidneys, the nervous system, liver. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Not available.

Ingestion:

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 527°C (980.6°F)

Flash Points: CLOSED CUP: 25°C (77°F). OPEN CUP: 28.9°C (84°F) (Cleveland).

Flammable Limits: LOWER: 1.1% UPPER: 7%

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards:

Explosive in the form of vapor when exposed to heat or flame. Vapor may travel considerable distance to source of ignition and flash back. When heated to decomposition it emits acrid smoke and irritating fumes.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Toxic flammable liquid, insoluble or very slightly soluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes Keep away from incompatibles such as oxidizing agents.

Storage:

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 100 STEL: 150 (ppm) from ACGIH (TLV) TWA: 434 STEL: 651 (mg/m3) from ACGIH Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid. (Liquid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 106.17 g/mole

Color: Colorless.

pH (1% soln/water): Not applicable.

Boiling Point: 138°C (280.4°F)

Melting Point: 12°C (53.6°F)

Critical Temperature: Not available.

Specific Gravity: 0.86 (Water = 1)

Vapor Pressure: 9 mm of Hg (@ 20°C)

Vapor Density: 3.7 (Air = 1)

Volatility: Not available.

Odor Threshold: 0.62 ppm

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether.

Solubility:

Easily soluble in methanol, diethyl ether. Insoluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Eye contact.

Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 5000 mg/kg [Rat.]. Acute dermal toxicity (LD50): 12400 mg/kg [Rabbit.]. Acute toxicity of the vapor (LC50): 4550 ppm 4 hour(s) [Rat].

Chronic Effects on Humans: The substance is toxic to blood, kidneys, the nervous system, liver.

Other Toxic Effects on Humans:

Very hazardous in case of skin contact (irritant). Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

0347 Animal: embryotoxic, foetotoxic, passes through the placental barrier. 0900 Detected in maternal milk in human. Narcotic effect; may cause nervous system disturbances.

Special Remarks on other Toxic Effects on Humans: Material is irritating to mucous membranes and upper respiratory tract.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: Class 3: Flammable liquid.

Identification: : Xylene : UN1307 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

Pennsylvania RTK: p-Xylene Florida: p-Xylene Massachusetts RTK: p-Xylene New Jersey: p-Xylene TSCA 8(b) inventory: p-Xylene SARA 313 toxic chemical notification and release reporting: p-Xylene CERCLA: Hazardous substances.: p-Xylene

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

R10- Flammable. R38- Irritating to skin. R41- Risk of serious damage to eyes. R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References:

-Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987. -Material safety data sheet emitted by: la Commission de la Sant   et de la S  curit   du Travail du Qu  bec. -SAX, N.I. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984. -The Sigma-Aldrich Library of Chemical Safety Data, Edition II. -Guide de la loi et du r  glement sur le transport des marchandises dangereuses au Canada. Centre de conformit   international Lt  e. 1986.

Other Special Considerations: Not available.

Created: 10/10/2005 08:33 PM

Last Updated: 05/21/2013 12:00 PM

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Perfluoropentanoic acid

sc-250679



The Power is Question

Material Safety Data Sheet

Hazard Alert Code
Key:

EXTREME

HIGH

MODERATE

LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

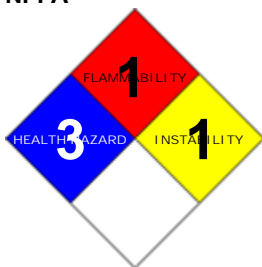
PRODUCT NAME

Perfluoropentanoic acid

STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

NFPA



SUPPLIER

Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800

EMERGENCY

ChemWatch

Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

SYNONYMS

C5HF9O2, CF3(CF2)3CO2H

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

	Min	Max	
Flammability:	1		
Toxicity:	0		
Body Contact:	4		Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4
Reactivity:	1		
Chronic:	2		

CANADIAN WHMIS SYMBOLS



EMERGENCY OVERVIEW

RISK

Causes severe burns.
Risk of serious damage to eyes.
Harmful to aquatic organisms.
Vapours potentially cause drowsiness and dizziness*.
Cumulative effects may result following exposure*.
Limited evidence of a carcinogenic effect*.
* (limited evidence).

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

! Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident.
! The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.

EYE

! The material can produce severe chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.
! If applied to the eyes, this material causes severe eye damage.
! Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns.
Mild burns of the epithelia generally recover rapidly and completely.

SKIN

! The material can produce severe chemical burns following direct contact with the skin.
! Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue.
! Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.
! Open cuts, abraded or irritated skin should not be exposed to this material.
! Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

! The material can cause respiratory irritation in some persons.
The body's response to such irritation can cause further lung damage.
! Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage.
There may be dizziness, headache, nausea and weakness.
! Inhalation of vapours may cause drowsiness and dizziness.
This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.
! Inhalation hazard is increased at higher temperatures.
! The material has NOT been classified by EC Directives or other classification systems as "harmful by inhalation". This is because of the lack of corroborating animal or human evidence.
! Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.

CHRONIC HEALTH EFFECTS

! Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. Chronic exposure may inflame the skin or conjunctiva.
Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.
There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.
Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
Long chain PCFAs are present in the environment of most developed countries, and have the potential to adversely affect animal and human health. In tests on laboratory animals, one PFCA (perfluorooctanoic acid, PFOA) has been shown to cause tumours and damage the immune system, and cause moderate to high toxicity in the medium term if given by mouth. Because they are cleared more slowly and have more potential to accumulate in the body, longer chain PFCAs are expected to be of greater concern than PFOA.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
nonafluoropentanoic acid	2706-90-3	>98

Section 4 - FIRST AID MEASURES

SWALLOWED

- For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

EYE

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.

SKIN

If skin or hair contact occurs:

- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- Transport to hospital, or doctor.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.
- Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).
- As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.
- Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.

NOTES TO PHYSICIAN

! Treat symptomatically.

For acute or short term repeated exposures to strong acids:

- Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
- Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling
- Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.
- Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the desiccating action of the acid on proteins in specific tissues.

Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG):	Not Available
Upper Explosive Limit (%):	Not available.
Specific Gravity (water=1):	1.713
Lower Explosive Limit (%):	Not available

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use fire fighting procedures suitable for surrounding area.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 800 metres in all directions.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.
- Heating may cause expansion or decomposition leading to violent rupture of containers.

Combustion products include: carbon monoxide (CO), carbon dioxide (CO₂), hydrogen fluoride, other pyrolysis products typical of burning organic material.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
- Check regularly for spills and leaks.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- DO NOT allow clothing wet with material to stay in contact with skin
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.

RECOMMENDED STORAGE METHODS

- DO NOT use aluminium or galvanised containers
- Check regularly for spills and leaks
- Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- Packing as recommended by manufacturer.

For low viscosity materials

- Drums and jerricans must be of the non-removable head type.
- Where a can is to be used as an inner package, the can must have a screwed enclosure.

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STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m!	STEL ppm	STEL mg/m!	Peak ppm	Peak mg/m!	TWA F/CC	Notes
US ACGIH Threshold Limit Values (TLV)	nonafluoropentanoic acid (Fluorides, as F)		2.5						TLV® Basis: Bone dam; fluorosis ; BEI

PERSONAL PROTECTION



RESPIRATOR

- Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure
- Chemical goggles whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted
- Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection.
- Alternatively a gas mask may replace splash goggles and face shields.

HANDS/FEET

- Elbow length PVC gloves
 - When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:
- frequency and duration of contact,
 - chemical resistance of glove material,
 - glove thickness and
 - dexterity
 - Neoprene gloves

OTHER

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.

ENGINEERING CONTROLS

! Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Does not mix with water.

Sinks in water.

Corrosive.

Acid.

State	LIQUID	Molecular Weight	264.05
Melting Range (°F)	Not available	Viscosity	Not Available
Boiling Range (°F)	284	Solubility in water (g/L)	Partly miscible
Flash Point (°F)	None	pH (1% solution)	Not applicable
Decomposition Temp (°F)	Not available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available	Vapour Pressure (mmHG)	Not Available
Upper Explosive Limit (%)	Not available.	Specific Gravity (water=1)	1.713
Lower Explosive Limit (%)	Not available	Relative Vapour Density (air=1)	>1
Volatile Component (%vol)	Not Available	Evaporation Rate	Not applicable

APPEARANCE

Liquid; does not mix well with water.

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Contact with alkaline material liberates heat
- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

STORAGE INCOMPATIBILITY

- Avoid strong bases.
- Segregate from alkalies, oxidising agents and chemicals readily decomposed by acids, i.e. cyanides, sulfides, carbonates.
- Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

nonafluoropentanoic acid

TOXICITY AND IRRITATION

! Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound.

No significant acute toxicological data identified in literature search.

CARCINOGEN

Fluorides, as F	US ACGIH Threshold Limit Values (TLV) - Carcinogens	Carcinogen Category	A4
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Section 12 - ECOLOGICAL INFORMATION

Harmful to aquatic organisms.

This material and its container must be disposed of as hazardous waste.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
nonafluoropentanoic acid	HIGH	No Data Available	LOW	MED

Section 13 - DISPOSAL CONSIDERATIONS

US EPA Waste Number & Descriptions

A. General Product Information

Corrosivity characteristic: use EPA hazardous waste number D002 (waste code C)

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Treat and neutralise at an approved treatment plant. Treatment should involve: Neutralisation with soda-ash or soda-lime followed by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus
- Decontaminate empty containers with 5% aqueous sodium hydroxide or soda ash, followed by water. Observe all label safeguards until containers are cleaned and destroyed.

Section 14 - TRANSPORTATION INFORMATION

DOT:

Symbols:	None	Hazard class or Division:	8
Identification Numbers:	UN3265	PG:	II
Label Codes:	8	Special provisions:	B2, IB2, T11, TP2, TP27
Packaging: Exceptions:	154	Packaging: Non-bulk:	202
Packaging: Exceptions:	154	Quantity limitations: Passenger aircraft/rail:	1 L
Quantity Limitations: Cargo aircraft only:	30 L	Vessel stowage: Location:	B
Vessel stowage: Other:	40		

Hazardous materials descriptions and proper shipping names:
Corrosive liquid, acidic, organic, n.o.s.

Air Transport IATA:

ICAO/IATA Class:	8	ICAO/IATA Subrisk:	None
UN/ID Number:	3265	Packing Group:	II
Special provisions:	A3		
Cargo Only			
Packing Instructions:	855	Maximum Qty/Pack:	30 L
Passenger and Cargo		Passenger and Cargo	
Packing Instructions:	851	Maximum Qty/Pack:	1 L
Passenger and Cargo Limited Quantity		Passenger and Cargo Limited Quantity	
Packing Instructions:	Y840	Maximum Qty/Pack:	0.5 L

Shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (contains nonafluoropentanoic acid)

Maritime Transport IMDG:

IMDG Class:	8	IMDG Subrisk:	None
UN Number:	3265	Packing Group:	II
EMS Number:	F-A,S-B	Special provisions:	274
Limited Quantities:	1 L		

Shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (contains nonafluoropentanoic acid)

Section 15 - REGULATORY INFORMATION



nonafluoropentanoic acid (CAS: 2706-90-3) is found on the following regulatory lists;

"Canada - Alberta Ambient Air Quality Guidelines", "Canada - Alberta Ambient Air Quality Objectives", "Canada - Prince Edward Island Occupational Exposure Limits", "Canada List of Prohibited and Restricted Cosmetic Ingredients (The Cosmetic Ingredient ""Hotlist""), "Canada Non-Domestic Substances List (NDSL)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "US - California Air Toxics ""Hot Spots"" List (Assembly Bill 2588) Substances for Which Emissions Must Be Quantified", "US - Georgia Primary Maximum Contaminant Levels for Drinking Water - Inorganics", "US - Hawaii Air Contaminant Limits", "US - Massachusetts Drinking Water - Inorganic Maximum Contaminant Levels (MCLs)", "US - Massachusetts Drinking Water - Secondary Contaminants Maximum Contaminant Levels (MCLs)", "US - North Dakota Air Pollutants - Guideline Concentrations", "US - South Dakota Drinking Water Standards - Inorganic Chemicals", "US - Utah Primary Drinking Water Standards - Inorganic Contaminants", "US - Utah Secondary Drinking Water Standards - Inorganic Contaminants", "US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values", "US ACGIH Threshold Limit Values (TLV)", "US ACGIH Threshold Limit Values (TLV) - Carcinogens", "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory", "WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water"

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE

- ! Cumulative effects may result following exposure*.
 - ! Limited evidence of a carcinogenic effect*.
 - ! Vapours potentially cause drowsiness and dizziness*.
- *(limited evidence).

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
nonafluoropentanoic acid	2706- 90- 3	Xn; R22

! Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

! The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

! For detailed advice on Personal Protective Equipment, refer to the following U.S. Regulations and Standards:

OSHA Standards - 29 CFR:

1910.132 - Personal Protective Equipment - General requirements

1910.133 - Eye and face protection

1910.134 - Respiratory Protection

1910.136 - Occupational foot protection

1910.138 - Hand Protection

Eye and face protection - ANSI Z87.1

Foot protection - ANSI Z41

Respirators must be NIOSH approved.

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www.Chemwatch.net

Issue Date: Jan-28-2009

Print Date:Mar-20-2012

Perfluorooctanesulfonic acid

Safety Data Sheet 6164308

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 12/10/2015 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Substance
 Substance name : Perfluorooctanesulfonic acid
 CAS No : 1763-23-1
 Product code : 6164-3-08
 Formula : C₈HF₁₇O₃S
 Synonyms : 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-Heptaecafluorooctane-1-sulfonic acid
 Other means of identification : MFCD00042454

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Laboratory chemicals
 Manufacture of substances
 Scientific research and development

1.3. Details of the supplier of the safety data sheet

SynQuest Laboratories, Inc.
 P.O. Box 309
 Alachua, FL 32615 - United States of America
 T (386) 462-0788 - F (386) 462-7097
info@synquestlabs.com - www.synquestlabs.com

1.4. Emergency telephone number

Emergency number : (844) 523-4086 (3E Company - Account 10069)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Acute Tox. 4 (Oral) H302 - Harmful if swallowed
 Skin Corr. 1B H314 - Causes severe skin burns and eye damage
 Eye Dam. 1 H318 - Causes serious eye damage
 STOT SE 3 H335 - May cause respiratory irritation

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

GHS07

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H302 - Harmful if swallowed
 H314 - Causes severe skin burns and eye damage
 H335 - May cause respiratory irritation

Precautionary statements (GHS-US) :

P260 - Do not breathe dust, mist, spray
 P264 - Wash skin thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P271 - Use only outdoors or in a well-ventilated area
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P301+P312 - If swallowed: Call a POISON CENTER or doctor/ physician if you feel unwell
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P310 - Immediately call a POISON CENTER or doctor/ physician
 P321 - Specific treatment (see supplemental first aid instructions on this label)
 P330 - Rinse mouth

Perfluorooctanesulfonic acid

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P363 - Wash contaminated clothing before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container to an approved waste disposal plant

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type : Mono-constituent

Name	Product identifier	%	Classification (GHS-US)
Perfluorooctanesulfonic acid (Main constituent)	(CAS No) 1763-23-1	<= 100	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Move the affected personnel away from the contaminated area.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Get immediate medical advice/attention.

First-aid measures after skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get immediate medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

Symptoms/injuries after inhalation : Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Thermal decomposition generates: Carbon oxides. Hydrogen fluoride. Sulfur oxides.

5.3. Advice for firefighters

Firefighting instructions : In case of fire: Evacuate area.

Protection during firefighting : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe dust.

6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene.

Perfluorooctanesulfonic acid

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so.
Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Minimize generation of dust.
Other information : For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe dust, mist, spray. Wear personal protective equipment. Avoid contact with skin and eyes.
Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.
Storage conditions : Keep container closed when not in use. Hygroscopic. Keep contents under inert gas.
Incompatible materials : Refer to Section 10 on Incompatible Materials.
Storage area : Store in dry, cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Hand protection : Protective gloves. 29 CFR 1910.138: Hand Protection.
Eye protection : Chemical goggles or safety glasses. Face shield. 29 CFR 1910.133: Eye and Face Protection.
Skin and body protection : Wear suitable protective clothing.
Respiratory protection : In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory Protection.
Other information : Safety shoes. 29 CFR 1910.136: Foot Protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Color : No data available
Odor : No data available
Odor threshold : No data available
pH : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : 145 °C (@ 10 mm Hg)
Flash point : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Flammability (solid, gas) : No data available
Explosion limits : No data available
Explosive properties : No data available

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Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: 1.25 (@ 25 °C)
Relative vapor density at 20 °C	: No data available
Molecular mass	: 500.13 g/mol
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Keep away from heat, sparks and flame.

10.5. Incompatible materials

Strong bases. Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of fire, see Section 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Oral: Harmful if swallowed.
Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Waste treatment methods : Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber.
Waste disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Recycle the material as far as possible.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

- Transport document description : UN3261 Corrosive solid, acidic, organic, n.o.s., 8, II
UN-No.(DOT) : UN3261
Proper Shipping Name (DOT) : Corrosive solid, acidic, organic, n.o.s.
Transport hazard class(es) (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT) : 8 - Corrosive



- Packing group (DOT) : II - Medium Danger
DOT Packaging Non Bulk (49 CFR 173.xxx) : 212
DOT Packaging Bulk (49 CFR 173.xxx) : 240
DOT Symbols : G - Identifies PSN requiring a technical name
DOT Special Provisions (49 CFR 172.102) : IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).
IP2 - When IBCs other than metal or rigid plastics IBCs are used, they must be offered for transportation in a closed freight container or a closed transport vehicle.
IP4 - Flexible, fiberboard or wooden IBCs must be sift-proof and water-resistant or be fitted with a sift-proof and water-resistant liner.
T3 - 2.65 178.274(d)(2) Normal..... 178.275(d)(2)
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 15 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 50 kg

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DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
Other information	: No supplementary information available.

TDG

No additional information available

Transport by sea

UN-No. (IMDG)	: 3261
Proper Shipping Name (IMDG)	: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
Class (IMDG)	: 8 - Corrosive substances
Packing group (IMDG)	: II - substances presenting medium danger

Air transport

UN-No. (IATA)	: 3261
Proper Shipping Name (IATA)	: Corrosive solid, acidic, organic, n.o.s.
Class (IATA)	: 8 - Corrosives
Packing group (IATA)	: II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Perfluorooctanesulfonic acid (1763-23-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	S - S - indicates a substance that is identified in a proposed or final Significant New Uses Rule.

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Perfluorooctanesulfonic acid (1763-23-1)
Listed on the Canadian NDSL (Non-Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Perfluorooctanesulfonic acid (1763-23-1)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on INSQ (Mexican national Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

SECTION 16: Other information

Perfluorooctanesulfonic acid

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Full text of H-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation

NFPA health hazard

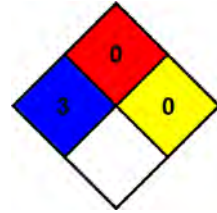
: 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard

: 0 - Materials that will not burn.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is offered solely for your consideration, investigation, and verification. It does not represent any guarantee of the properties of the product nor that the hazard precautions or procedures described are the only ones which exist. SynQuest shall not be held liable for any damage resulting from handling or from contact with the above product.

Safety Data Sheet

acc. to OSHA HCS

Printing date 03/23/2019

Version Number 2

Reviewed on 03/23/2019

1 Identification

- **Product identifier**
- **Trade name: Perfluorooctanoic Acid (PFOA)**
- **Part number:** N-1588
- **CAS Number:**
335-67-1
- **EC number:**
206-397-9
- **Index number:**
607-704-00-2
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA
- **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.
 Repr. 1B H360 May damage fertility or the unborn child.
 STOT RE 1 H372 Causes damage to the liver through prolonged or repeated exposure.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
 Acute Tox. 4 H332 Harmful if inhaled.

- **Label elements**

- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
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Trade name: Perfluorooctanoic Acid (PFOA)

(Contd. of page 1)

· Hazard pictograms

· Signal word Danger
· Hazard-determining components of labeling:

perfluorooctanoic acid (PFOA)

· Hazard statements

- Harmful if swallowed or if inhaled.
- Causes serious eye damage.
- Suspected of causing cancer.
- May damage fertility or the unborn child.
- Causes damage to the liver through prolonged or repeated exposure.

· Precautionary statements

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust/fume/gas/mist/vapors/spray.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves/protective clothing/eye protection/face protection.
- If swallowed: Call a poison center/doctor if you feel unwell.
- Rinse mouth.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Immediately call a poison center/doctor.
- IF exposed or concerned: Get medical advice/attention.
- Get medical advice/attention if you feel unwell.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:
· NFPA ratings (scale 0 - 4)

· HMIS-ratings (scale 0 - 4)

· Other hazards
· Results of PBT and vPvB assessment

- PBT: Not applicable.

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Trade name: Perfluorooctanoic Acid (PFOA)· **vPvB:** Not applicable.

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3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
335-67-1 perfluorooctanoic acid (PFOA)
- **Identification number(s)**
- **EC number:** 206-397-9
- **Index number:** 607-704-00-2

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

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Trade name: Perfluorooctanoic Acid (PFOA)

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- **Reference to other sections**
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

· PAC-1:	
	1.1 mg/m ³
· PAC-2:	
	12 mg/m ³
· PAC-3:	
	75 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 Thorough dedusting.
 Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.
 Avoid contact with the eyes.
 Avoid contact with the eyes and skin.
- **Breathing equipment:**
 When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
 Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.

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Trade name: Perfluorooctanoic Acid (PFOA)

(Contd. of page 4)

· Protection of hands:

Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: >4 hours

· Eye protection:


Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:

Form:	Solid
Color:	Not determined.
Odor:	Characteristic
Odor threshold:	Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/Melting range:	55-56 °C (131-132.8 °F)
Boiling point/Boiling range:	190 °C (374 °F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Product is not flammable.

· Decomposition temperature: Not determined.

· Auto igniting: Not determined.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapor pressure at 20 °C (68 °F): 0.69 hPa (0.5 mm Hg)

· Density at 20 °C (68 °F): 0.9 g/cm³ (7.5105 lbs/gal)

· Relative density Not determined.

· Vapor density Not applicable.

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US

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Reviewed on 03/23/2019

Trade name: Perfluorooctanoic Acid (PFOA)

(Contd. of page 5)

· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water at 20 °C (68 °F):	3.4 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
Solids content:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
ATE (Acute Toxicity Estimate)		
Oral	LD50	500 mg/kg
Inhalative	LC50/4 h	1.5 mg/L

- **Primary irritant effect:**

- **on the skin:** No irritant effect.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)	
	2B
· NTP (National Toxicology Program)	
Substance is not listed.	

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Trade name: Perfluorooctanoic Acid (PFOA)

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· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (Assessment by list): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.
 Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|--|
| <ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA | UN3261 |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT | Corrosive solid, acidic, organic, n.o.s. (perfluorooctanoic acid (PFOA)) |
| <ul style="list-style-type: none"> · IMDG, IATA | CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (perfluorooctanoic acid (PFOA)) |

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Trade name: Perfluorooctanoic Acid (PFOA)

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 · **Transport hazard class(es)**

 · **IATA**


· Class	8 Corrosive substances
· Label	8

· Environmental hazards:	Not applicable.
---------------------------------	-----------------

· Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Acids

· Transport in bulk according to Annex II of MARPOL/73/78 and the IBC Code	Not applicable.
---	-----------------

 · **Transport/Additional information:**

· DOT	
· Quantity limitations	On passenger aircraft/rail: 25 kg On cargo aircraft only: 100 kg

· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g

· UN "Model Regulation":	UN 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (PERFLUOROOCCTANOIC ACID (PFOA)), 8, III
---------------------------------	---

15 Regulatory information

 · **Safety, health and environmental regulations/legislation specific for the substance or mixture**
 · **Sara**

 · **Section 355 (extremely hazardous substances):**

Substance is not listed.

 · **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

 · **TSCA (Toxic Substances Control Act):**

Substance is listed.

 · **Proposition 65**

 · **Chemicals known to cause cancer:**

Substance is not listed.

 · **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

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Trade name: Perfluorooctanoic Acid (PFOA)

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· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is listed.

· Carcinogenic categories
· EPA (Environmental Protection Agency)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Date of preparation / last revision 03/23/2019 / 1

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Carc. 2: Carcinogenicity – Category 2

Repr. 1B: Reproductive toxicity – Category 1B

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

· * Data compared to the previous version altered.



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 13.02.2020

Version number 1

Revision: 13.02.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· 1.1 Product identifier

· **Product name:** 1H,1H,2H,2H-Perfluorohexanesulfonic acid

· **Part number:** DRE-C15986903

· **CAS Number:**
757124-72-4

· **EC number:**
816-391-3

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Reference material for laboratory use only

· 1.3 Details of the supplier of the safety data sheet

· **Manufacturer/Supplier:**

LGC Limited
Queens Road
Teddington
Middlesex TW11 0LY
UNITED KINGDOM

Tel : +44 (0) 20 8943 7000
Fax : +44 (0) 20 8943 2767
eMail : gb@lgcstandards.com
Web : www.lgcstandards.com

· **Further information obtainable from:**

Product safety department
eMail : sds-request@lgcgroup.com

· **1.4 Emergency telephone number:**

For Hazardous Materials or Dangerous Goods Incident
Spill, Leak, Fire Exposure, or Accident
Call CHEMTREC:
USA & Canada 1-800-424-9300
Rest of the world +1 703-741-5970

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

STOT SE 3 H335 May cause respiratory irritation.

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· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS05 GHS07

· **Signal word** *Danger*

· **Hazard statements**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

· **Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.1 Chemical characterisation: Substances**

· **CAS No. Description**

757124-72-4 1H,1H,2H,2H-Perfluorohexanesulfonic acid

· **Identification number(s)** None

· **EC number:** 816-391-3

· **RTECS:** -

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

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Symptoms of poisoning may occur even after several hours; therefore medical observation for at least 48 hours after the accident is recommended.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Rinse mouth. Do not induce vomiting.
Seek medical treatment.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable for surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Avoid formation of dust.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Use neutralising agent.
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Remove dust thoroughly.
Store in cool, dry place in tightly closed receptacles.
- **Information about fire - and explosion protection:** No special measures required.

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA. Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
- **Information about storage in one common storage facility:** *Store away from foodstuffs.*
- **Further information about storage conditions:** *Keep container tightly sealed.*
- **7.3 Specific end use(s)** *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** *No further data; see item 7.*
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** *Not required.*
- **Additional information:** *Lists used were valid at the time of SDS preparation.*
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
*Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.*
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**
*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374*



Protective gloves

- **Material of gloves** *Fluorocarbon rubber (Viton)*
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye protection:**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Solid
· Colour:	Off white
· Odour:	Odourless
· Odour threshold:	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

· Melting point/freezing point:	Not determined.
· Initial boiling point and boiling range:	Not determined.

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Not determined.

· **Ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Not determined.

· **Explosive properties:** Not determined.

· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· **Vapour pressure:** Not applicable.

· **Density:** Not determined.

· **Relative density:** Not determined.

· **Vapour density:** Not applicable.

· **Evaporation rate:** Not applicable.

· **Solubility in / Miscibility with**

· **water:** Not determined.

· **Partition coefficient: n-octanol/water:** Not determined.

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- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
Stable under normal conditions.
No further relevant information available.
- **10.2 Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**
Formation of toxic gases is possible during heating or in case of fire.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Heat.
- **10.5 Incompatible materials:** Strong oxidizing agents.
- **10.6 Hazardous decomposition products:**
Formation of toxic gases is possible during heating or in case of fire.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.
- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.

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- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **European waste catalogue**
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packaging:**
- **Recommendation:** Dispose of in accordance with national regulations.

SECTION 14: Transport information

- **14.1 UN-Number** UN3261
- **ADR, IMDG, IATA** 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
(1H,1H,2H,2H-Perfluorohexanesulfonic acid)
- **ADR** CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
(1H,1H,2H,2H-Perfluorohexanesulfonic acid)
- **IMDG, IATA**

- **14.3 Transport hazard class(es)**

- **ADR, IMDG, IATA**



- **Class** 8 Corrosive substances.
- **Label** 8

- **14.4 Packing group**

- **ADR, IMDG, IATA** II

- **14.5 Environmental hazards:** Not applicable.

- **14.6 Special precautions for user** Warning: Corrosive substances.

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· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Acids
· Stowage Category	B
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· Transport category	2
· Tunnel restriction code	E
· UN "Model Regulation":	UN 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (1H,1H,2H,2H-PERFLUOROHEXANESULFONIC ACID), 8, II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)

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PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources**

Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.

· **Data compared to the previous version altered.** All sections have been updated.

GB

Perfluorohexanoic acid

Safety Data Sheet 2121339

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 11/18/2015

Revision date: 12/06/2018

Version: 1.1

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Substance name	: Perfluorohexanoic acid
CAS No	: 307-24-4
Product code	: 2121-3-39
Formula	: C ₆ HF ₁₁ O ₂
Synonyms	: Undecafluorohexanoic acid
Other means of identification	: 2121-3-39

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	: Laboratory chemicals Manufacture of substances Scientific research and development
------------------------------	--

1.3. Details of the supplier of the safety data sheet

SynQuest Laboratories, Inc.
P.O. Box 309
Alachua, FL 32615 - United States of America
T (386) 462-0788 - F (386) 462-7097
info@synquestlabs.com - www.synquestlabs.com

1.4. Emergency telephone number

Emergency number : (844) 523-4086 (3E Company - Account 10069)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Skin Corr. 1B H314 - Causes severe skin burns and eye damage
Eye Dam. 1 H318 - Causes serious eye damage
STOT SE 3 H335 - May cause respiratory irritation

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H314 - Causes severe skin burns and eye damage
H335 - May cause respiratory irritation

Precautionary statements (GHS-US)

: P260 - Do not breathe fumes, mist, spray, vapors
P264 - Wash skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/ physician
P321 - Specific treatment (see supplemental first aid instructions on this label)
P363 - Wash contaminated clothing before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container to an approved waste disposal plant

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2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type : Mono-constituent

Name	Product identifier	%	Classification (GHS-US)
Perfluorohexanoic acid (Main constituent)	(CAS No) 307-24-4	<= 100	Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Move the affected personnel away from the contaminated area.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Get immediate medical advice/attention.
- First-aid measures after skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Get immediate medical advice/attention.
- First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
- First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get immediate medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.
- Symptoms/injuries after inhalation : Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Thermal decomposition generates: Carbon oxides. Hydrogen fluoride.
- Explosion hazard : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers.

5.3. Advice for firefighters

- Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
- Protection during firefighting : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No additional information available

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6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe fumes, mist, spray, vapors. Wear personal protective equipment. Avoid contact with skin and eyes.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Keep container closed when not in use.
- Incompatible materials : Refer to Section 10 on Incompatible Materials.
- Storage area : Store in dry, cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Hand protection : Protective gloves. 29 CFR 1910.138: Hand Protection.
- Eye protection : Chemical goggles or safety glasses. Face shield. 29 CFR 1910.133: Eye and Face Protection.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory Protection.
- Other information : Safety shoes. 29 CFR 1910.136: Foot Protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Low melting solid.
- Color : No data available
- Odor : No data available
- Odor threshold : No data available
- pH : No data available
- Melting point : 12 - 14 °C
- Freezing point : No data available
- Boiling point : 157 °C
- Flash point : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Flammability (solid, gas) : No data available
- Explosion limits : No data available
- Explosive properties : No data available
- Oxidizing properties : No data available
- Vapor pressure : No data available
- Relative density : No data available
- Relative vapor density at 20 °C : No data available
- Specific gravity / density : 1.762 g/ml (@ 20 °C)
- Molecular mass : 314.05 g/mol

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Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

Refractive index	: 1.298 (@ 20 °C)
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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Bases. Oxidizing agents. Reducing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of fire, see Section 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

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12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Waste treatment methods : Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber.
Waste disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Recycle the material as far as possible.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN3265 Corrosive liquid, acidic, organic, n.o.s., 8, II

UN-No.(DOT) : UN3265

Proper Shipping Name (DOT) : Corrosive liquid, acidic, organic, n.o.s.

Transport hazard class(es) (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136

Hazard labels (DOT) : 8 - Corrosive



Packing group (DOT) : II - Medium Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) : B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.

IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3)

TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: t_r is the maximum mean bulk temperature during transport, t_f is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (t_f) and the maximum mean bulk temperature during transportation (t_r) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d_{15} and d_{50} are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.

TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Other information : No supplementary information available.

TDG

No additional information available

Perfluorohexanoic acid

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Transport by sea

UN-No. (IMDG)	: 3265
Proper Shipping Name (IMDG)	: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Class (IMDG)	: 8 - Corrosive substances
Packing group (IMDG)	: II - substances presenting medium danger

Air transport

UN-No. (IATA)	: 3265
Proper Shipping Name (IATA)	: Corrosive liquid, acidic, organic, n.o.s.
Class (IATA)	: 8 - Corrosives
Packing group (IATA)	: II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Perfluorohexanoic acid (307-24-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Perfluorohexanoic acid (307-24-4)

Listed on the Canadian NDSL (Non-Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Perfluorohexanoic acid (307-24-4)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

SECTION 16: Other information

Revision date : 12/06/2018

Full text of H-phrases:

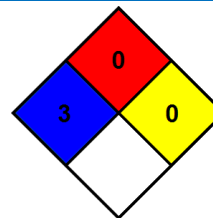
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation

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- NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
- NFPA fire hazard : 0 - Materials that will not burn.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

- Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
- Flammability : 0 Minimal Hazard - Materials that will not burn
- Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is offered solely for your consideration, investigation, and verification. It does not represent any guarantee of the properties of the product nor that the hazard precautions or procedures described are the only ones which exist. SynQuest shall not be held liable or any damage resulting from handling or from contact with the above product.



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.10.2020

Version number 1

Revision: 19.10.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier**Product name: Perfluorobutanesulfonic acid****Part number:** DRE-C15986515**CAS Number:**

375-73-5

EC number:

206-793-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

Application of the substance / the mixture Reference material for laboratory use only**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

LGC Limited

Queens Road

Teddington

Middlesex TW11 0LY

UNITED KINGDOM

Tel : +44 (0) 20 8943 7000

Fax : +44 (0) 20 8943 2767

eMail : gb@lgcstandards.comWeb : www.lgcstandards.com**Further information obtainable from:**

Product safety department

eMail : sds-request@lgcgroup.com**1.4 Emergency telephone number:**

For Hazardous Materials or Dangerous Goods Incident

Spill, Leak, Fire Exposure, or Accident

Call CHEMTREC:

USA & Canada 1-800-424-9300

Rest of the world +1 703-741-5970

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture**Classification according to Regulation (EC) No 1272/2008**

GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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Product name: Perfluorobutanesulfonic acid

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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05 GHS07

- **Signal word** *Danger*
- **Hazard statements**
H290 *May be corrosive to metals.*
H302 *Harmful if swallowed.*
H314 *Causes severe skin burns and eye damage.*
- **Precautionary statements**
P280 *Wear protective gloves/protective clothing/eye protection/face protection.*
P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*
P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
P310 *Immediately call a POISON CENTER/doctor.*
P405 *Store locked up.*
P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Additional information:**
EUH014 *Reacts violently with water.*
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*

SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description**
375-73-5 *Perfluoro-1-butanesulfonic acid*
- **Identification number(s)** *None*
- **EC number:** 206-793-1
- **RTECS:** EK5930000
- **Additional information:** *For the wording of the listed hazard phrases refer to section 16.*

· **SVHC**

CAS: 375-73-5	Perfluoro-1-butanesulfonic acid
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SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may occur even after several hours; therefore medical observation for at least 48 hours after the accident is recommended.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Rinse mouth. Do not induce vomiting.
Seek medical treatment.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable for surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Store in cool, dry place in tightly closed receptacles.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
*Please refer to the manufacturer's certificate for specific storage and transport temperature conditions.
Store only in the original receptacle unless other advice is given on the CoA.
Keep container in a well-ventilated place. Keep away from sources of ignition and heat.*
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
*Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.*
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** Lists used were valid at the time of SDS preparation.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
*Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.*
- **Respiratory protection:**
*Not required.
Use suitable respiratory protective device in case of insufficient ventilation.*
- **Protection of hands:**
*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374*

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Protective gloves

- **Material of gloves** Fluorocarbon rubber (Viton)
- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid
 Colour: Colourless

· **Odour:** Odourless

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: -21 °C
 Initial boiling point and boiling range: 198 °C

· **Flash point:** 177 °C

· **Flammability (solid, gas):** Not determined.

· **Ignition temperature:** 649 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Not determined.

· **Explosive properties:** Not determined.

· **Explosion limits:**

Lower: Not determined.
 Upper: Not determined.

· **Vapour pressure:** Not determined.

· **Density at 20 °C:** 1.824 g/cm³

· **Relative density:** Not determined.

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· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water at 20 °C:	Acetonitrile (Slightly), DMSO (Slightly), Methanol (Slightly) 1000 g/l
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
Stable under normal conditions.
No further relevant information available.
- **10.2 Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**
Formation of toxic gases is possible during heating or in case of fire.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Heat.
- **10.5 Incompatible materials:**
Strong oxidizing agents.
Metals.
- **10.6 Hazardous decomposition products:**
Formation of toxic gases is possible during heating or in case of fire.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity**
Harmful if swallowed.
 - **LD/LC50 values relevant for classification:**
- | | | |
|------|------|-----------------|
| Oral | LD50 | 430 mg/kg (rat) |
|------|------|-----------------|
- **Primary irritant effect:**
 - **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
 - **Serious eye damage/irritation**
Causes serious eye damage.
 - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
 - **Carcinogenicity** Based on available data, the classification criteria are not met.
 - **Reproductive toxicity** Based on available data, the classification criteria are not met.

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- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **European waste catalogue**
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packaging:**
- **Recommendation:** Dispose of in accordance with national regulations.

SECTION 14: Transport information

- | | |
|--------------------------|---|
| · 14.1 UN-Number | UN3265 |
| · ADR, IMDG, IATA | 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Perfluoro-1-butanesulfonic acid) |
| · ADR | |
| · IMDG, IATA | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Perfluoro-1-butanesulfonic acid) |

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· **14.3 Transport hazard class(es)**

· **ADR, IMDG, IATA**



· **Class** 8 Corrosive substances.
 · **Label** 8

· **14.4 Packing group**

· **ADR, IMDG, IATA** II

· **14.5 Environmental hazards:** Not applicable.

· **14.6 Special precautions for user** Warning: Corrosive substances.

· **Danger code (Kemler):** 80
 · **EMS Number:** F-A,S-B
 · **Segregation groups** Acids
 · **Stowage Category** B
 · **Stowage Code** SW2 Clear of living quarters.

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR**
 · **Limited quantities (LQ)** 1L
 · **Excepted quantities (EQ)** Code: E2
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 500 ml

· **Transport category** 2
 · **Tunnel restriction code** E

· **UN "Model Regulation":** UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (PERFLUORO-1-BUTANESULFONIC ACID), 8, II

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** Substance is not listed.

· **Seveso category O1** Substances or mixtures with hazard statement EUH014

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

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- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57**

CAS: 375-73-5 | Perfluoro-1-butanesulfonic acid

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Met. Corr.1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

- **Sources**

Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.

- **Data compared to the previous version altered.** All sections have been updated.

Issuing Date 20-Dec-2016

Revision Date 20-Dec-2016

Revision Number 1

This safety data sheet was created pursuant to the requirements of 29 CFR 1910.1200

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name PFAS Drinking Water
Product Number 960
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory use only
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Waters Corporation
Supplier Address 34 Maple St, Milford, MA 01757 USA
Non-Emergency Telephone Number +1-508-482-2000
E-mail address sdsinfo@waters.com

Emergency telephone number

Company Emergency Phone Number In case of EMERGENCY call CHEMTREC Day or Night
 Within USA and Canada: 800-424-9300
 International Call Collect: +1-703-527-3887

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Vapors)	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Specific target organ toxicity (single exposure)	Category 1
Flammable Liquids	Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Signal word	Danger
Hazard Statements	
Toxic if inhaled	
Causes damage to organs	
Highly flammable liquid and vapor	

**Appearance** Clear, colorless**Physical state** Solid containing liquid**Odor** Alcohol**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ ventilating/ lighting/ equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Precautionary Statements - Response

IF exposed: Call a POISON CENTER or doctor/physician
Specific treatment (see supplemental first aid instructions on this label)

Skin

Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

Other information

PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION

Interactions with Other Chemicals

Use of alcoholic beverages may enhance toxic effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Note: only the components contributing to the product's GHS hazard classification are listed in this section.

Chemical name	CAS No	weight-%
Methanol	67-56-1	99.3 - 100

4. FIRST AID MEASURES

First aid measures

General Advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Seek immediate medical attention/advice. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin contact

Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation

Remove to fresh air.

Ingestion

Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects

Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol resistant foam.

Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Uniform Fire Code

Highly Toxic: Liquid
Flammable Liquid: I-B

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge Yes.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Environmental precautions

Environmental precautions

See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment

A vapor suppressing foam may be used to reduce vapors.

Methods for cleaning up

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Do not breathe vapor or mist. Use only with adequate ventilation and in closed systems. Use personal protection equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions.

Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store away from other materials. Store locked up. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

Incompatible Products

None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methanol 67-56-1	STEL: 250 ppm TWA: 200 ppm S*	TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ (vacated) S*	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits Immediately Dangerous to Life or Health

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures

Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection

No special protective equipment required.

Skin and body protection

Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves. Antistatic boots.

Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. No information available. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not breathe the vapor or mist. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Solid containing liquid	Odor	Alcohol
Appearance	Clear, colorless	Odor Threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH	UNKNOWN		
Melting / freezing point	no data available	None known	
Boiling point / boiling range	> 37.7 °C / 99.9 °F		
Flash Point	< 22 °C / 72 °F		
Evaporation Rate	no data available	None known	
Flammability (solid, gas)	no data available	None known	
Flammability Limit in Air			
Upper flammability limit	no data available		
Lower flammability limit	no data available		
Vapor pressure	no data available	None known	
Vapor density	no data available	None known	
Specific Gravity	0.79		
Water Solubility	Soluble in water		
Solubility in other solvents	no data available	None known	
Partition coefficient: n-octanol/water	no data available	None known	
Autoignition temperature	no data available	None known	
Decomposition temperature	no data available	None known	
Kinematic viscosity	no data available	None known	
Dynamic viscosity	no data available	None known	
Explosive properties	no data available		
Oxidizing properties	no data available		

Other Information

Softening Point	no data available
VOC Content (%)	no data available
Particle Size	no data available
Particle Size Distribution	

10. STABILITY AND REACTIVITY

Reactivity

no data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Excessive heat. Heat, flames and sparks.

Incompatible materials

None known based on information supplied.

Hazardous Decomposition Products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Toxic by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available. Toxic in contact with skin. May be absorbed through the skin in harmful amounts. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. (based on components).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Methanol 67-56-1	= 6200 mg/kg (Rat)	= 15800 mg/kg (Rabbit)	= 64000 ppm (Rat) 4 h = 22500 ppm (Rat) 8 h

Information on toxicological effects

Symptoms Coughing and/ or wheezing. Difficulty in breathing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive toxicity No information available.

STOT - single exposure	Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). If this product is a mixture, the classification is not based on toxicology studies for this product, but is based solely on toxicology studies for ingredients found within this product. Detailed substance and/or ingredient information may be provided in other sections of this SDS. Target organs effects listed in this document may result from a single overexposure to this product. Causes damage to organs if swallowed. Causes damage to organs in contact with skin.
STOT - repeated exposure	No information available.
Chronic Toxicity	Effects from this product caused by acute exposure may cause permanent damage to target organs and/or may cause chronic conditions.
Target Organ Effects	Respiratory system. Systemic Toxicity.
Aspiration Hazard	No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)

100.00 mg/kg

ATEmix (dermal)

300.00 mg/kg (ATE)

ATEmix (inhalation-dust/mist)

0.50 mg/L

ATEmix (inhalation-vapor)

3.00 ATEmix

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Methanol 67-56-1		96h LC50: = 28200 mg/L (Pimephales promelas) 96h LC50: > 100 mg/L (Pimephales promelas) 96h LC50: 19500 - 20700 mg/L (Oncorhynchus mykiss) 96h LC50: 18 - 20 mL/L (Oncorhynchus mykiss) 96h LC50: 13500 - 17600 mg/L (Lepomis macrochirus)	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	

Persistence and Degradability

No information available.

Bioaccumulation

Chemical name	Log Pow
Methanol 67-56-1	-0.77

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
Contaminated Packaging	Dispose of contents/containers in accordance with local regulations.
US EPA Waste Number	D001 U154

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste
Methanol 67-56-1	Toxic Ignitable

14. TRANSPORT INFORMATION

Transportation classifications may vary depending on the quantity per package and may be influenced by regional or country variations in regulations.

DOT

UN-No.	UN1230
Proper Shipping Name	METHANOL
Hazard Class	3
Packing Group	II
Description	UN1230, METHANOL, 3, II
Emergency Response Guide Number	131

TDG

UN-No.	UN1230
Proper Shipping Name	METHANOL
Hazard Class	3, (6.1)
Subsidiary class	6.1
Packing Group	II
Description	UN1230, METHANOL, 3 (6.1), II

MEX

UN-No.	UN1230
Proper Shipping Name	METHANOL
Hazard Class	3
Subsidiary class	6.1
Packing Group	II
Description	UN1230, METHANOL, 3 (6.1), II

ICAO

UN-No.	UN1230
Proper Shipping Name	METHANOL
Hazard Class	3
Subsidiary class	6.1
Packing Group	II
Description	UN1230, METHANOL, 3 (6.1), II

IATA

UN-No.	UN1230
Proper Shipping Name	METHANOL

Hazard Class	3
Subsidiary class	6.1
Packing Group	II
Special Provisions	None
Description	UN1230, METHANOL, 3 (6.1), II

IMDG/IMO

UN-No.	UN1230
Proper Shipping Name	METHANOL
Hazard Class	3
Subsidiary class	6.1
Packing Group	II
EmS-No.	F-E, S-D
Special Provisions	None
Marine Pollutant	Not applicable
Description	UN1230, METHANOL, 3 (6.1), II

RID

UN-No.	UN1230
Proper Shipping Name	METHANOL
Hazard Class	3
Packing Group	II
Classification code	FT1
Special Provisions	None
Description	UN1230, METHANOL, 3 (6.1), II
ADR/RID-Labels	6.1

ADR

UN-No.	UN1230
Proper Shipping Name	METHANOL
Hazard Class	3
Packing Group	II
Classification code	FT1
Tunnel restriction code	(D/E)
Special Provisions	None
Description	UN1230, METHANOL, 3 (6.1), II
ADR/RID-Labels	3 6.1

ADN

UN-No.	UN1230
Proper Shipping Name	METHANOL
Hazard Class	3
Packing Group	II
Classification code	FT1
Special Provisions	279, 802
Description	UN1230, METHANOL, 3 (6.1), II
Hazard Labels	3 + 6.1
Limited Quantity	1 L
Ventilation	VE01, VE02

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	All components are listed either on the DSL or NDSL.
IECSC	-

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CAS No	weight-%	SARA 313 - Threshold Values %
Methanol - 67-56-1	67-56-1	99.3 - 100	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Methanol 67-56-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Methanol - 67-56-1	Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Methanol 67-56-1	X	X	X	X	X
Sodium Hydroxide 1310-73-2	X	X	X	X	

International Regulations**Mexico****National occupational exposure limits**

Component	Carcinogen Status	Exposure Limits
Methanol 67-56-1 (99.3 - 100)		Mexico: TWA 200 ppm Mexico: TWA 260 mg/m ³ Mexico: STEL 250 ppm Mexico: STEL 310 mg/m ³

Mexico - Occupational Exposure Limits - Carcinogens

Canada**WHMIS Hazard Class**

Not determined

16. OTHER INFORMATION

NFPA	Health Hazards 0	Flammability 3	Instability 0	Physical and Chemical Hazards - Personal Protection X
HMIS	Health Hazards 0	Flammability 3	Physical Hazard 0	

Prepared By Product Stewardship
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Latham, NY 12110
1-800-572-6501

Issuing Date 20-Dec-2016
Revision Date 20-Dec-2016
Revision Note No information available

Disclaimer

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End of Safety Data Sheet

1. Identification

Product identifier	Dieldrin	
Other means of identification		
Item	N-11688	
CAS number	60-57-1	
Synonyms	(1.alpha.,2.beta.,2a.alpha.,3.beta.,6.beta.,6a.alpha.,7.beta.,7a.alpha.)-3,4,5,6,9,9-Hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-2,7 : 3,6-dimethanonaphth[2,3-b]oxirene	
Recommended use	For Laboratory Use Only	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	Chem Service, Inc.	
Address	660 Tower Lane West Chester, PA 19380 United States	
Telephone	Toll Free	800-452-9994
	Direct	610-692-3026
Website	www.chemservice.com	
E-mail	info@chemservice.com	
Emergency phone number	Chemtrec US	800-424-9300
	Chemtrec outside US	+1 703-527-3887

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 2
	Acute toxicity, dermal	Category 1
	Acute toxicity, inhalation	Category 1
	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
	Carcinogenicity	Category 1B
	Reproductive toxicity	Category 1
	Specific target organ toxicity, repeated exposure	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements		



Signal word Danger

Hazard statement Fatal if swallowed. Fatal in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. Fatal if inhaled. May cause cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.

Response

If swallowed: Immediately call a poison center/doctor. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Take off immediately all contaminated clothing and wash it before reuse. Collect spillage.

Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

None.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Dieldrin	(1a.alpha.,2.beta.,2a.alpha.,3.beta.,6.beta.,6a.alpha.,7.beta.,7a.alpha.)-3,4,5,6,9,9-Hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-2,7 : 3,6-dimethanonaphth[2,3-b]oxirene	60-57-1	100

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.

Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact

Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms/effects, acute and delayed

Convulsions. Headache. Dizziness. Nausea, vomiting. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

Take off immediately all contaminated clothing. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Discard any shoes or clothing items that cannot be decontaminated.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Large Spills: Wet down with water and dike for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Shovel the material into waste container. Following product recovery, flush area with water. Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value
Dieldrin (CAS 60-57-1)	PEL	0.25 mg/m ³

US. ACGIH Threshold Limit Values

Material	Type	Value	Form
Dieldrin (CAS 60-57-1)	TWA	0.1 mg/m ³	Inhalable fraction and vapor.

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
Dieldrin (CAS 60-57-1)	TWA	0.25 mg/m ³

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

Dieldrin (CAS 60-57-1) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Dieldrin (CAS 60-57-1)

Skin designation applies.

US - Tennessee OELs: Skin designation

Dieldrin (CAS 60-57-1)

Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Dieldrin (CAS 60-57-1)

Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Dieldrin (CAS 60-57-1)

Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Dieldrin (CAS 60-57-1)

Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection**Hand protection**

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

Wear positive pressure self-contained breathing apparatus (SCBA).

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance****Physical state**

Solid.

Form

Crystalline.

Color

Colorless to light tan

Odor

Not available.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

347.9 °F (175.5 °C)

Initial boiling point and boiling range

Not available.

Flash point

Not available.

Evaporation rate

Not available.

Flammability (solid, gas)

Not available.

Upper/lower flammability or explosive limits**Flammability limit - lower (%)**

Not available.

Flammability limit - upper (%)

Not available.

Explosive limit - lower (%)

Not available.

Explosive limit - upper (%)

Not available.

Vapor pressure

0.000001 kPa (77 °F (25 °C))

Vapor density

13.2

Relative density

Not available.

Solubility(ies)**Solubility (water)**

0.2 mg/l

Partition coefficient (n-octanol/water)	5.4
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.75 g/cm ³
Explosive properties	Not explosive.
Molecular formula	C ₁₂ -H ₈ -Cl ₆ -O
Molecular weight	380.91 g/mol
Oxidizing properties	Not oxidizing.
Specific gravity	1.75

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong acids. Strong oxidizing agents. Phenols.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Fatal if inhaled.
Skin contact	Fatal in contact with skin. Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Fatal if swallowed. Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics Convulsions. Headache. Dizziness. Nausea, vomiting. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity	Fatal if inhaled. Fatal in contact with skin. Fatal if swallowed.
Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

 Dieldrin (CAS 60-57-1) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

 Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

 Not listed.

Reproductive toxicity May damage fertility or the unborn child.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard	Not an aspiration hazard.
Chronic effects	Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Product	Species	Test Results
Dieldrin (CAS 60-57-1)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna)
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

5.4

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

US RCRA Hazardous Waste P List: Reference

Dieldrin (CAS 60-57-1)

P037

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN2811
UN proper shipping name	Toxic solids, organic, n.o.s. (Dieldrin RQ = 1 LBS)
Transport hazard class(es)	
Class	6.1(PGI, II)
Subsidiary risk	-
Label(s)	6.1
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB8, IP2, IP4, T3, TP33
Packaging exceptions	153
Packaging non bulk	212
Packaging bulk	242

IATA

UN number	UN2811
UN proper shipping name	Toxic solid, organic, n.o.s. (Dieldrin)
Transport hazard class(es)	
Class	6.1(PGI, II)
Subsidiary risk	-

Packing group II
Environmental hazards No.
ERG Code 6L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Other information

Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN2811
UN proper shipping name TOXIC SOLID, ORGANIC, N.O.S. (Dieldrin)
Transport hazard class(es)
Class 6.1(PGI, II)
Subsidiary risk -
Packing group II
Environmental hazards
Marine pollutant No.
EmS F-A, S-A
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

DOT



IATA; IMDG



General information IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Dieldrin (CAS 60-57-1) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance
Priority pollutant
Bioaccumulative chemical of concern
Toxic pollutant

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Dieldrin (CAS 60-57-1)

Listed: July 1, 1988

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 09-27-2014
Revision date 08-30-2019
Version # 02
NFPA ratings Health: 4
Flammability: 0
Instability: 0

Disclaimer

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Persons not specifically and properly trained should not handle this chemical or its container. This product is furnished FOR LABORATORY USE ONLY! Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticide products, food additives or as household chemicals.

This Safety Data Sheet (SDS) is intended only for use with Chem Service, Inc. products and should not be relied on for use with materials from any other supplier even if the chemical name(s) on the product are identical! Whenever using an SDS for a solution or mixture the user should refer to the SDS for every component of the solution or mixture. Chem Service warrants that this SDS is based upon the most current information available to Chem Service at the time it was last revised. THIS WARRANTY IS EXCLUSIVE, AND CHEM SERVICE, INC. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. This SDS is provided gratis and CHEM SERVICE, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR CONTINGENT DAMAGES.

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This product is furnished FOR LABORATORY USE ONLY.

This document has undergone significant changes and should be reviewed in its entirety.

Revision information

1. Identification

Product identifier	Chlordane	
Other means of identification		
Item	N-11425	
CAS number	12789-03-6	
Recommended use	Not available.	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	Chem Service, Inc.	
Address	660 Tower Lane West Chester, PA 19380 United States	
Telephone	Toll Free	800-452-9994
	Direct	610-692-3026
Website	www.chemservice.com	
E-mail	info@chemservice.com	
Emergency phone number	Chemtrec US	800-424-9300
	Chemtrec outside US	+1 703-527-3887

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 4
	Carcinogenicity	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
OSHA defined hazards	Not classified.	

Label elements

Signal word	Warning
Hazard statement	Harmful if swallowed. Harmful in contact with skin. Suspected of causing cancer. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Take off contaminated clothing and wash before reuse. Collect spillage.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

Supplemental information 100% of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Chlordane		12789-03-6	100

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	<p>This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.</p>
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	This substance has no PEL, TLV, or other recommended exposure limit.
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Chemical respirator with organic vapor cartridge and full facepiece.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid
Color	Amber
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	219.2 - 221 °F (104 - 105 °C) trans isomer 222.8 - 224.6 °F (106 - 107 °C) cis isomer
Initial boiling point and boiling range	347 °F (175 °C) at 1mm Hg
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.000001 kPa (77 °F (25 °C))
Vapor density	Not available.
Relative density	Not available.

Solubility(ies)	
Solubility (water)	0.1 mg/l at 25 °C
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.59 - 1.63 at 25 °C
Explosive properties	Not explosive.
Molecular formula	C10H6Cl8
Molecular weight	409.8
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Harmful in contact with skin.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Harmful in contact with skin. Harmful if swallowed.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.
Aspiration hazard Not an aspiration hazard.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Product		Species	Test Results
Chlordane (CAS 12789-03-6)			
Aquatic			
Crustacea	EC50	Water flea (<i>Simocephalus serrulatus</i>)	0.012 - 0.032 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>)	0.0048 - 0.017 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN2810
UN proper shipping name Toxic, liquids, organic, n.o.s., MARINE POLLUTANT
Transport hazard class(es)
Class 6.1(PGIII)
Subsidiary risk -
Label(s) 6.1
Packing group III
Environmental hazards
Marine pollutant Yes
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions IB3, T7, TP1, TP28
Packaging exceptions 153
Packaging non bulk 203
Packaging bulk 241

IATA

UN number UN2810
UN proper shipping name Toxic liquid, organic, n.o.s.
Transport hazard class(es)
Class 6.1(PGIII)
Subsidiary risk -
Packing group III
Environmental hazards No.

ERG Code 6L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Other information
Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN2810
UN proper shipping name TOXIC LIQUID, ORGANIC, N.O.S., MARINE POLLUTANT
Transport hazard class(es)
Class 6.1(PGIII)
Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant Yes
EmS F-A, S-A
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

DOT



IATA; IMDG



Marine pollutant



General information IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes
	Delayed Hazard - Yes
	Fire Hazard - No
	Pressure Hazard - No
	Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	Yes
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SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)	Priority pollutant
	Bioaccumulative chemical of concern
	Toxic pollutant

Safe Drinking Water Act (SDWA)	Not regulated.
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US state regulations	California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.
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International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	10-08-2014
Revision date	09-09-2019
Version #	04
NFPA ratings	Health: 2 Flammability: 0 Instability: 0

Disclaimer

Chem Service, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The above information is believed to be correct on the date it was last revised and must not be considered all inclusive. The information has been obtained only by a search of available literature and is only a guide for handling the chemicals. OSHA regulations require that if other hazards become evident, an upgraded SDS must be made available to the employee within three months. RESPONSIBILITY for updates lies with the employer and not with CHEM SERVICE, Inc.

Persons not specifically and properly trained should not handle this chemical or its container. This product is furnished FOR LABORATORY USE ONLY! Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticide products, food additives or as household chemicals.

This Safety Data Sheet (SDS) is intended only for use with Chem Service, Inc. products and should not be relied on for use with materials from any other supplier even if the chemical name(s) on the product are identical! Whenever using an SDS for a solution or mixture the user should refer to the SDS for every component of the solution or mixture. Chem Service warrants that this SDS is based upon the most current information available to Chem Service at the time it was last revised. THIS WARRANTY IS EXCLUSIVE, AND CHEM SERVICE, INC. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. This SDS is provided gratis and CHEM SERVICE, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR CONTINGENT DAMAGES.

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This product is furnished FOR LABORATORY USE ONLY.

Physical & Chemical Properties: Multiple Properties
GHS: Classification

Revision information

1. Identification

Product identifier	4,4'-DDT	
Other means of identification		
Item	N-10876	
CAS number	50-29-3	
Synonyms	1,1,1-TRICHLORO-2,2-BIS(4-CHLOROPHENYL)ETHANE * 4,4'-Dichlorodiphenyl trichloroethane	
Recommended use	For Laboratory Use Only	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	Chem Service, Inc.	
Address	660 Tower Lane West Chester, PA 19380 United States	
Telephone	Toll Free	800-452-9994
	Direct	610-692-3026
Website	www.chemservice.com	
E-mail	info@chemservice.com	
Emergency phone number	Chemtrec US	800-424-9300
	Chemtrec outside US	+1 703-527-3887

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 3
	Acute toxicity, dermal	Category 3
	Carcinogenicity	Category 2
	Specific target organ toxicity, repeated exposure	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Toxic if swallowed. Toxic in contact with skin. Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin: Wash with plenty of water. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Take off immediately all contaminated clothing and wash it before reuse. Collect spillage.

Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
4,4'-DDT	1,1,1-TRICHLORO-2,2-BIS(4-CHLOROPHENYL)ETHANE 4,4'-Dichlorodiphenyl trichloroethane	50-29-3	100

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Wash off with soap and water. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Most important symptoms/effects, acute and delayed	Convulsions. Headache. Dizziness. Nausea, vomiting. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off immediately all contaminated clothing. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water spray. Foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

The product is immiscible with water and will spread on the water surface. Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value
4,4'-DDT (CAS 50-29-3)	PEL	1 mg/m ³

US. ACGIH Threshold Limit Values

Material	Type	Value
4,4'-DDT (CAS 50-29-3)	TWA	1 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
4,4'-DDT (CAS 50-29-3)	TWA	0.5 mg/m ³

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines**US - California OELs: Skin designation**

4,4'-DDT (CAS 50-29-3) Can be absorbed through the skin.

US - Tennessee OELs: Skin designation

4,4'-DDT (CAS 50-29-3) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

4,4'-DDT (CAS 50-29-3) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Physical state	Solid.
Form	Crystalline Solid
Color	Colorless
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	227.3 °F (108.5 °C)
Initial boiling point and boiling range	500 °F (260 °C)
	366.8 °F (186 °C) 0.006666 kPa
Flash point	162.0 - 171.0 °F (72.2 - 77.2 °C) Closed Cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 0.0000001 kPa (68 °F (20 °C))
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	6.91
Auto-ignition temperature	Not available.
Decomposition temperature	230 °F (110 °C)
Viscosity	Not available.
Other information	
Density	1.56 g/cm ³ at 15 °C
Explosive properties	Not explosive.
Molecular formula	C ₁₄ H ₉ Cl ₅
Molecular weight	354.49 g/mol
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the decomposition temperature. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Toxic in contact with skin.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Toxic if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Convulsions. Headache. Dizziness. Nausea, vomiting.

Information on toxicological effects

Acute toxicity	Toxic in contact with skin. Toxic if swallowed.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

4,4'-DDT (CAS 50-29-3) 2A Probably carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

4,4'-DDT (CAS 50-29-3) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Product	Species		Test Results
4,4'-DDT (CAS 50-29-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.0005 - 0.001 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	0.0013 - 0.002 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

6.91

Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
US RCRA Hazardous Waste U List: Reference	
4,4'-DDT (CAS 50-29-3)	U061
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	
UN number	UN2811
UN proper shipping name	Toxic solid, organic, n.o.s. (4,4'-DDT)
Transport hazard class(es)	
Class	6.1(PGIII)
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	6L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.
IMDG	
UN number	UN2811
UN proper shipping name	TOXIC SOLID, ORGANIC, N.O.S. (4,4'-DDT)
Transport hazard class(es)	
Class	6.1(PGIII)
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-A
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

IATA; IMDG



General information IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

4,4'-DDT (CAS 50-29-3) 0.1 % One-Time Export Notification only.

CERCLA Hazardous Substance List (40 CFR 302.4)

4,4'-DDT (CAS 50-29-3) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

4,4'-DDT (CAS 50-29-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance
Priority pollutant
Bioaccumulative chemical of concern
Toxic pollutant

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

4,4'-DDT (CAS 50-29-3) Listed: October 1, 1987

US - California Proposition 65 - CRT: Listed date/Developmental toxin

4,4'-DDT (CAS 50-29-3) Listed: May 15, 1998

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

4,4'-DDT (CAS 50-29-3) Listed: May 15, 1998

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

4,4'-DDT (CAS 50-29-3) Listed: May 15, 1998

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

4,4'-DDT (CAS 50-29-3)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	06-09-2014
Revision date	02-25-2020
Version #	02
NFPA ratings	Health: 3 Flammability: 0 Instability: 0

Disclaimer

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This product is furnished FOR LABORATORY USE ONLY.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.

1. Identification**Product identifier** 4,4'-DDE Solution**Other means of identification****Item** S-10875M1**Recommended use** Not available.**Recommended restrictions** None known.**Manufacturer/Importer/Supplier/Distributor information****Manufacturer****Company name** Chem Service, Inc.
Address 660 Tower Lane
West Chester, PA 19380
United States**Telephone** Toll Free 800-452-9994
Direct 610-692-3026**Website** www.chemservice.com**E-mail** info@chemservice.com**Emergency phone number** Chemtrec US 800-424-9300
Chemtrec outside US +1 703-527-3887**2. Hazard(s) identification**

Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral	Category 3
	Acute toxicity, dermal	Category 3
	Acute toxicity, inhalation	Category 3
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity	Category 1
	Specific target organ toxicity, single exposure	Category 1
	Specific target organ toxicity, repeated exposure	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		

**Signal word** Danger**Hazard statement** Highly flammable liquid and vapor. Toxic if swallowed. Toxic in contact with skin. Causes serious eye irritation. Toxic if inhaled. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.**Precautionary statement****Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response	If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor. If eye irritation persists: Get medical advice/attention. Take off immediately all contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish.
Storage	Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.
Supplemental information	99.99% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 99.99% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Methanol		67-56-1	99.99
4,4'-DDE		72-55-9	0.01

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. If swallowed, induce vomiting immediately as directed by medical personnel. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Most important symptoms/effects, acute and delayed	Headache. Dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off immediately all contaminated clothing. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Alcohol resistant foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Conditions for safe storage, including any incompatibilities Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Methanol (CAS 67-56-1)	PEL	260 mg/m ³ 200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Methanol (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Methanol (CAS 67-56-1)	STEL	325 mg/m ³ 250 ppm
	TWA	260 mg/m ³ 200 ppm

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Methanol (CAS 67-56-1)	15 mg/l	Methanol	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines**US - California OELs: Skin designation**

Methanol (CAS 67-56-1) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Methanol (CAS 67-56-1) Skin designation applies.

US - Tennessee OELs: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Physical state Liquid.

Form Liquid.

Color Not available.

Odor Not available.

Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-144.04 °F (-97.8 °C) estimated
Initial boiling point and boiling range	148.46 °F (64.7 °C) estimated
Flash point	53.6 °F (12.0 °C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	7.3 % estimated
Flammability limit - upper (%)	36 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	169.3 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	867.2 °F (464 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	0.7865 g/cm3 estimated
Explosive properties	Not explosive.
Flammability class	Flammable IB estimated
Oxidizing properties	Not oxidizing.
Percent volatile	99.99 % estimated
Specific gravity	0.79 estimated
VOC	99.99 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Toxic if inhaled. May cause damage to organs by inhalation. May cause damage to organs through prolonged or repeated exposure by inhalation.
Skin contact	Toxic in contact with skin.
Eye contact	Causes serious eye irritation.
Ingestion	Toxic if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Headache. Dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity Toxic if inhaled. Toxic in contact with skin. Toxic if swallowed.

Components	Species	Test Results
4,4'-DDE (CAS 72-55-9)		
Acute		
Oral		
LD50	Rat	880 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity May damage fertility or the unborn child.

Specific target organ toxicity - single exposure Causes damage to organs.

Specific target organ toxicity - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard Not an aspiration hazard.

Chronic effects Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
4,4'-DDE (CAS 72-55-9)		
Aquatic		
Crustacea	EC50	Brown shrimp (<i>Penaeus aztecus</i>) 0.028 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss) 0.026 - 0.04 mg/l, 96 hours
Methanol (CAS 67-56-1)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) > 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) > 100 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

4,4'-DDE	6.51
Methanol	-0.77

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information**DOT**

UN number	UN1230
UN proper shipping name	Methanol, solution (Methanol RQ = 5001 LBS)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T7, TP2
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN1230
UN proper shipping name	Methanol solution (Methanol)
Transport hazard class(es)	
Class	3
Subsidiary risk	6.1(PGI, II)
Packing group	II
Environmental hazards	No.
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1230
UN proper shipping name	METHANOL SOLUTION (Methanol)
Transport hazard class(es)	
Class	3
Subsidiary risk	6.1(PGI, II)
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-D
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not established.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

4,4'-DDE (CAS 72-55-9)

Listed.

Methanol (CAS 67-56-1)

Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Methanol	67-56-1	99.99

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

4,4'-DDE (CAS 72-55-9)

Methanol (CAS 67-56-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

4,4'-DDE (CAS 72-55-9) Listed: January 1, 1989

US - California Proposition 65 - CRT: Listed date/Developmental toxin

4,4'-DDE (CAS 72-55-9) Listed: March 30, 2010

Methanol (CAS 67-56-1) Listed: March 16, 2012

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

4,4'-DDE (CAS 72-55-9) Listed: March 30, 2010

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

4,4'-DDE (CAS 72-55-9)

Methanol (CAS 67-56-1)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 08-21-2014
Revision date 07-03-2019
Version # 03
NFPA ratings Health: 4
Flammability: 3
Instability: 0

Disclaimer

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Revision information

This document has undergone significant changes and should be reviewed in its entirety.

APPENDIX E
HOSPITAL INFORMATION, MAP AND
FIELD ACCIDENT REPORT

FIELD ACCIDENT REPORT

This report is to be filled out by the designated Site Safety Officer after EVERY accident.

PROJECT NAME _____ PROJECT. NO. _____

Date of Accident _____ Time _____ Report By _____

Type of Accident (Check One):

Vehicular Personal Property

Name of Injured _____ DOB or Age _____

How Long Employed _____

Names of Witnesses _____

Description of Accident _____

Action Taken _____

Did the Injured Lose Any Time? _____ How Much (Days/Hrs.)? _____

Was Safety Equipment in Use at the Time of the Accident (Hard Hat, Safety Glasses, Gloves, Safety Shoes, etc.)? _____

(If not, it is the EMPLOYEE'S sole responsibility to process his/her claim through his/her Health and Welfare Fund.)

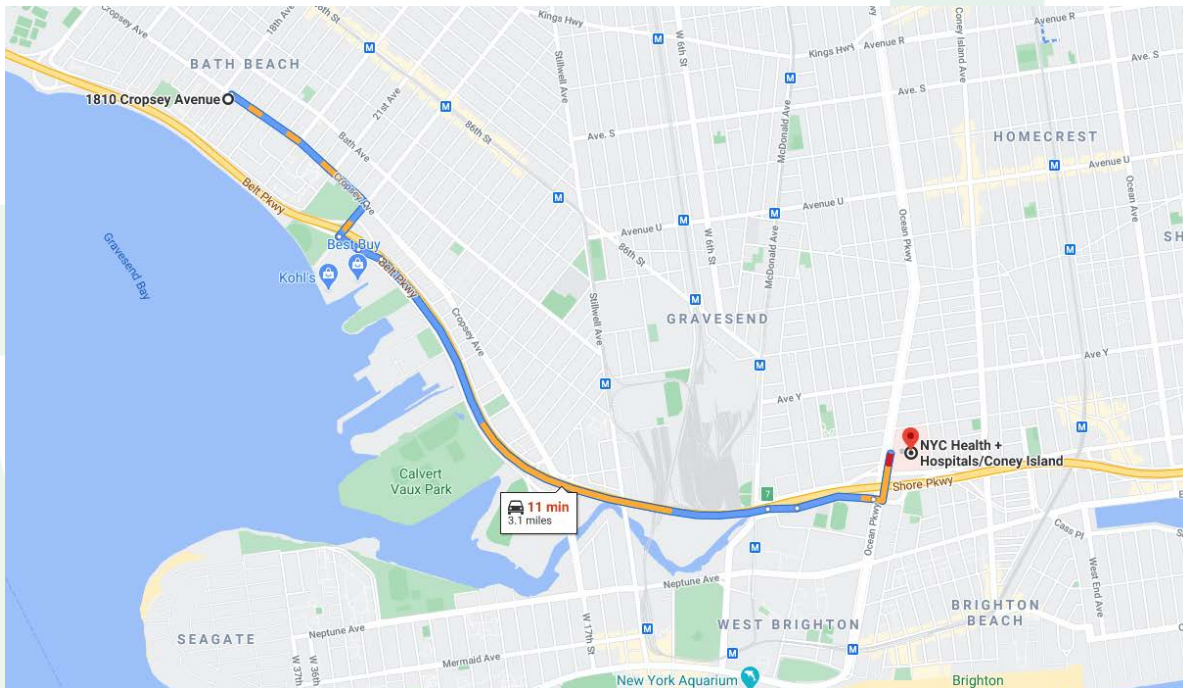
INDICATE STREET NAMES, DESCRIPTION OF VEHICLES, AND NORTH ARROW

HOSPITAL INFORMATION AND MAP

The hospital nearest the site is:

NYC Health + Hospitals/Coney Island
2601 Ocean Parkway, Brooklyn, NY 11235
(718) 616-3000
Emergency Room
2601 Ocean Parkway, Brooklyn, NY 11235
(718) 616-3000

Figure 1 – Directions



START

1. Head southeast on Cropsey Avenue/Victor V. Allegretti Way toward Bay 19th Street.
2. Turn right onto Bay Parkway
3. Turn left onto Shore Parkway
4. Take the Belt Parkway E ramp on the left to Kennedy Airport
5. Follow Belt Parkway/Leif Ericson Drive to Shore Parkway.
6. Take Exit 7 from Belt Parkway/Leif Ericson Drive/Shore Parkway
7. Merge onto Belt Parkway/Leif Ericson Drive/Shore Parkway
8. Take Exit 7 toward Ocean Parkway
9. Continue on Shore Parkway. Drive to Ocean Parkway Service Road
10. Merge onto Shore Parkway
11. Turn left onto Ocean Parkway Service Road
12. NYC Health + Hospitals/Coney Island **Emergency Room** – 2601 Ocean Parkway, Brooklyn, NY 11235

END

APPENDIX C – Community Air Monitoring Plan

Community Air Monitoring Plan
1810-1818 Cropsey Avenue, Brooklyn, NY 11214
Order of Consent Index # CO2-20210315-158
NYSDEC Spill # 2007751

1.0 INTRODUCTION

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for total organic vapors and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The intent of this CAMP is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the Site activities) from potential airborne contaminant releases as a direct result of remedial construction work activities and monitoring activities. The action levels specified herein require increased monitoring, corrective actions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities do not spread contamination off-site through the air.

The soil sampling activities described in the accompanying Site Characterization Work Plan will be completed with direct-push drilling techniques (i.e., a Geoprobe), which creates very little disturbance to the soils. Depending upon the nature of contamination, chemical- specific monitoring with appropriately sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring, or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH. Therefore, the monitoring of VOCs will be performed as described below; however, monitoring for particulates (i.e., dust) will not be performed unless a more obtrusive drilling technique is used. In that case, particulates will be monitored as discussed below.

Continuous Monitoring

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic Monitoring

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil samples, groundwater samples, and sub-slab vapor samples. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well bailing/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

1.1 PARTICULATE MONITORING

When deemed by RSK to be applicable, particulate (e.g., “dust”) emissions will be measured continuously at the upwind and downwind work zone boundaries. Real time monitoring equipment (e.g., Trak TSI Dust monitors or equivalent), with audible alarms and capable of measuring particulate matter less than 10 micrometers in size (PM-10), will be used. If the wind is calm, the monitors should be placed between each

work area and the nearest sensitive receptors. If the wind is variable, the monitors must be placed accordingly to ensure there is a monitor downwind of each work area at all times. Air monitoring locations will be selected daily based on prevailing wind conditions and specific locations where field-work is to be conducted.

- If the downwind particulate level is 100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) greater than background (upwind) for a 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression provided that downwind particulate levels do not exceed $150 \mu\text{g}/\text{m}^3$ above upwind levels and provided that no visible dust is migrating from the work area.
- If, after dust suppression techniques, downwind particulate levels are greater than $150 \mu\text{g}/\text{m}^3$ above upwind levels, work will be stopped and a re-evaluation of activities will be initiated. Work will resume, provided that dust suppression measures and other controls are successful in reducing downwind particulate concentrations to within $150 \mu\text{g}/\text{m}^3$ of the upwind level and in preventing visible dust migration.
- All readings must be recorded and be available for State (NYSDEC and NYSDOH) and County Health personnel to review.

1.2 VOC MONITORING

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.
- All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

- If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 ppm, monitoring should occur within the occupied structure(s). Depending upon the nature of contamination, chemical-specific colorimetric tubes of sufficient sensitivity may be necessary for comparing the exposure point concentrations with appropriate pre-determined response levels (response actions should also be pre-determined). Background readings in the occupied spaces must be taken prior to commencement of the planned work. Any unusual background readings should be discussed with NYSDOH prior to commencement of the work.
- If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m³, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m³ or less at the monitoring point.
- Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, carbon monoxide) may also need to be monitored. Response levels and actions should be pre-determined, as necessary, for each site.

Special Requirements for Indoor Work with Co-Located Residences or Facilities

Unless a self-contained, negative-pressure enclosure with proper emission controls will encompass the work area, all individuals not directly involved with the planned work must be absent from the room in which the work will occur. Monitoring requirements shall be as stated above under “Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures” except that in this instance “nearby/occupied structures” would be adjacent occupied rooms. Additionally, the location of all exhaust vents in the room and their discharge points, as well as potential vapor pathways (openings, conduits, etc.) relative to adjoining rooms, should be understood and the monitoring locations established accordingly. In these situations, exhaust fans or other engineering controls be used to create negative air pressure within the work area during remedial activities. Additionally, the planned work will be implemented during hours (e.g., weekends or evenings) when building occupancy is at a minimum.

Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

- Reasonable fugitive dust suppression techniques must be employed during all site activities
- which may generate fugitive dust.
- Particulate monitoring must be employed during the handling of waste or contaminated soil or

- when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.
- Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:
 - Objects to be measured: Dust, mists, or aerosols.
 - Measurement Ranges: 0.001 to 400 mg/m³ (1 to 400,000: ug/m³);
 - Precision (2-sigma) at constant temperature: +/- 10: g/m³ for one second averaging; and +/- 1.5 g/m³ for sixty second averaging.
 - Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3: m, g= 2.5, as aerosolized).
 - Resolution: 0.1% of reading or 1g/m³, whichever is larger.
 - Particle Size Range of Maximum Response: 0.1-10.
 - Total Number of Data Points in Memory: 10,000.
 - Logged Data: Each data point with average concentration, time/date, and data point number
 - Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number.
 - Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required
 - Operating Time: 48 hours (fully charged Ni-Cd battery); continuously with charger.
 - Operating Temperature: -10 to 50o C (14 to 122o F).
 - Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.
- In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.
- The action level will be established at 150 ug/m³ (15 minutes average). While conservative, Final DER-10 Page 208 of 226 Technical Guidance for Site Investigation and Remediation May 2010 this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m³, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m³ above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m³ continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.
- It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed

leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential-- such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

- The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:
 - Applying water on haul roads.
 - Wetting equipment and excavation faces.
 - Spraying water on buckets during excavation and dumping.
 - Hauling materials in properly tarped or watertight containers.
 - Restricting vehicle speeds to 10 mph.
 - Covering excavated areas and material after excavation activity ceases; and
 - Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m³ action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

- The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.