

464 WEST 130TH STREET

MANHATTAN, NEW YORK

Remedial Action Work Plan

NYC VCP Site Number: 13CVCP125M

E-Designation Site Number: 13EHAZ218M

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REMEDIAL ACTION WORK PLAN

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LIST OF ACRONYMS

Acronym	Definition
BCA	Brownfield Cleanup Agreement
BOA	Brownfield Opportunity Area
CAMP	Community Air Monitoring Plan
CHASP	Construction Health and Safety Plan
COC	Contaminants of Concern
DER	Division of Environmental Remediation
DNAPL	Dense Non-Aqueous Phase Liquid
DUSR	Data User Sampling Report
ECs/ICs	Engineering and Institutional Controls
EM	Electric Magnetic
EVOH	Ethylene Vinyl Alcohol
HASP	Health and Safety Plan
IRM	Interim Remedial Measure
LNAPL	Light Non-Aqueous Phase Liquid
mcg/m ³	Micrograms Per Cubic Meter
NOC	Notice of Completion
NYC DEP	New York City Department of Environmental Protection
NYC OER	New York City Office of Environmental Remediation
NYC VCP	New York City Voluntary Cleanup Program
NYCRR	New York Codes Rules and Regulations
NYS DOH	New York State Department of Health
NYS DOT	New York State Department of Transportation
NYSDEC	New York State Department of Environmental Conservation
ORC	Oxygen-Release Compound
OSHA	United States Occupational Health and Safety Administration
PE	Professional Engineer
PID	Photo Ionization Detector
PPE	Protective Personal Equipment

ppm	Parts Per Million
QA/QC	Quality Assurance/Quality Control
QEP	Qualified Environmental Professional
QHHEA	Qualitative Human Health Exposure Assessment
RAOs	Remedial Action Objectives
RAR	Remedial Action Report
RAWP	Remedial Action Work Plan or Plan
RCA	Recycled Concrete Aggregate
RI	Remedial Investigation
RIR	Remedial Investigation Report
SCOs	Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SMMP	Soils/Materials Management Plan
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SVOC	Semi-Volatile Organic Compound
TAL	Target Analyte List
TCL	Target Compound List
USGS	United States Geological Survey
UST	Underground Storage Tank
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound

CERTIFICATION

I, Matthew J. O'Neil, am a Professional Engineer licensed in the State of New York. I have primary direct responsibility for implementation of the remedial action for the 464 West 130th Street, Manhattan, NY Site NYCVCP 13CVCP125M, E-Designation number 13EHAZ218M.

I, Nicholas J Recchia am a Qualified Environmental Professional as defined in §43-140. I have primary direct responsibility for implementation of the remedial action for the 464 West 130th Street Site (NYC BCP Number C224162).

I certify that this Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Importation of all soil, fill and other material from off-Site will be in accordance with all applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Matthew J. O'Neil

Name

091317

NYS PE License Number

Signature

8/16/13

Date



Nicholas J. Recchia

QEP Name

QEP Signature

Date

Nicholas J. Recchia
8/16/13

EXECUTIVE SUMMARY

Big Apple Developers has applied to enroll in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a 3,900-square foot site located at 464 West 130th Street in Manhattan, New York. A remedial investigation (RI) was performed to compile and evaluate data and information necessary to develop this Remedial Action Work Plan (RAWP). The remedial action described in this document provides for the protection of public health and the environment consistent with the intended property use, complies with applicable environmental standards, criteria and guidance and conforms with applicable laws and regulations.

Site Location and Current Usage

The Site is located in the Manhattanville section of Manhattan, New York and is identified as Block 1969 and Lot 68 on the New York City Tax Map (see **Figure 1**). The Site is 3,900-square feet and is located on the south side of West 130th Street on the southwest corner Convent Avenue, and is adjoined by residential apartment buildings (some of which contain retail stores) to the south and east, and a two-story garage/warehouse building to the west. Currently, the Site is vacant, with the western portion of the property being used for parking and the eastern portion appearing to be used as a private garden.

Summary of Proposed Redevelopment Plan

The proposed use of the Site will consist of the construction of a residential apartment complex. Layout of the proposed site development is included in **Appendix 1**. The current zoning designation is residential, within district R7A.

The proposed project will include the construction of a six-story, 30-unit residential building including a basement, which will contain residential units, and a partial cellar for utilities only. The building footprint is approximately 3,500 square feet, and the total square footage of the building is approximately 24,000 square feet. Open areas will be covered with concrete pavement. The proposed building construction would not cover the entire property footprint. Excavation at the site is necessary to complete the portions of the basement and cellar of the structure. The excavation depths vary slightly across the site with a maximum depth of

approximately 11 feet for the cellar on the western portion of the property. The proposed excavation volume is 1,399 cubic yards. Development plans, including the excavation plans, are provided as **Appendix 1**. A vapor barrier will be installed at the base of the building's foundation and along the foundation sidewalls. Groundwater was not encountered within the planned depth of the excavation. No demolition is required to complete the construction of the proposed building.

The remedial action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

Summary of the Remedy

The proposed remedial action achieves protection of public health and the environment for the intended use of the property. The proposed remedial action achieves all of the remedial action objectives established for the project and addresses applicable standards, criterion, and guidance; is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants; is cost effective and implementable; and uses standards methods that are well established in the industry.

The proposed remedial action will consist of:

1. Preparation of a Community Protection Statement and performance of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan.
2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Establishment of Track 1 Soil Cleanup Objectives (SCOs).
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Excavation and removal of soil/fill exceeding Track 1 Unrestricted Use SCOs. Entire foot of the new building will be excavated to a depth of approximately 11 feet below grade or to bedrock for development purposes. Additional excavation will be performed in western edge of property to remove high semi-volatile organic compounds (SVOCs) in shallow soils.

6. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID. Appropriate segregation of excavated media on-Site.
7. Removal of underground storage tanks (USTs) (if encountered) and closure of petroleum spills (if evidence of a spill/leak is encountered during Site excavation) in compliance with applicable local, state and federal laws and regulations.
8. Transportation and off-Site disposal of all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media on-Site.
9. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of SCOs.
10. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
11. As part of development, installation of a vapor barrier/waterproofing system below the concrete slab underneath the building, as well as behind foundation walls of the proposed building. The vapor barrier will consist of Raven Industries' VaporBlock 20 Plus, which is a seven layer co-extruded barrier made from polyethylene and ethylene vinyl alcohol (EVOH) resins.
12. As part of development, construction and maintenance of an engineered composite cover consisting of 6-inch thick concrete slab across the footprint of the new building. Open areas will be covered with a concrete pavement surface.
13. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
14. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.
15. Submission of a Remedial Action Report (RAR) that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries,

and, if Track 1 SCO's are not achieved, lists any changes from this RAWP, and describes all Engineering Controls (ECs) and Institutional Controls (ICs) to be implemented at the Site.

16. If Track 1 Unrestricted Use SCOs are not achieved, submission of an approved Site Management Plan (SMP) in the RAR for long-term management of residual contamination, including plans for maintenance, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.

17. If Track 1 Unrestricted Use SCOs are not achieved, the property will continue to be registered with an E-Designation at the NYC Buildings Department. Establishment of ECs and ICs in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without NYC Office of Environmental Remediation (OER)-approval.

Community Protection Statement

The Office of Environmental Remediation created the New York City Voluntary Cleanup Program (NYC VCP) to provide governmental oversight for the cleanup of contaminated property in NYC. This Remedial Action Work Plan (“cleanup plan”) describes the findings of prior environmental studies that show the location of contamination at the site, and describes the plans to clean up the site to protect public health and the environment.

This cleanup plan provides a very high level of protection for neighboring communities and also includes many other elements that address common community concerns, such as community air monitoring, odor, dust and noise controls, hours of operation, good housekeeping and cleanliness, truck management and routing, and opportunities for community participation. The purpose of this Community Protection Statement is to explain these community protection measures in non-technical language to simplify community review.

Remedial Investigation and Cleanup Plan. Under the NYC VCP, a thorough cleanup study of this property (called a remedial investigation) has been performed to identify past property usage, to sample and test soils, groundwater and soil vapor, and identify contaminant sources present on the property. The cleanup plan has been designed to address all contaminant sources that have been identified during the study of this property.

Identification of Sensitive Land Uses. Prior to selecting a cleanup, the neighborhood was evaluated to identify sensitive land uses nearby, such as schools, day care facilities, hospitals and residential areas. The cleanup program was then tailored to address the special conditions of this community.

Qualitative Human Health Exposure Assessment. An important part of the cleanup planning for the Site is the performance of a study to find all of the ways that people might come in contact with contaminants at the Site now or in the future. This study is called a Qualitative Human Health Exposure Assessment (QHHEA). A QHHEA was performed for this project. This assessment has considered all known contamination at the Site and evaluated the potential for people to come in contact with this contamination. All identified public exposures will be addressed under this cleanup plan.

Health and Safety Plan (HASP). This cleanup plan includes a Construction Health and Safety Plan (CHASP) that is designed to protect community residents and on-Site workers. The elements of this plan are in compliance with safety requirements of the United States Occupational Safety and Health Administration (OSHA). This plan includes many protective elements including those discussed below.

Site Safety Coordinator. This project has a designated Site safety coordinator to implement the HASP. The safety coordinator maintains an emergency contact sheet and protocol for management of emergencies. The Site safety coordinator is Joseph Rastegar (Big Apple Developers) and can be reached at 516-482-4820 from 8:00 AM to 5:00 PM Monday through Friday.

Worker Training. Workers participating in cleanup of contaminated material on this project are required to be trained in a 40-hour hazardous waste operators training course and to take annual refresher training. This pertains to workers performing specific tasks including removing contaminated material and installing cleanup systems in contaminated areas.

Community Air Monitoring Plan. Community air monitoring will be performed during this cleanup project to ensure that the community is properly protected from, dust and odors. Air samples will be tested in accordance with a detailed plan called the Community Air Monitoring Plan or CAMP. Results will be regularly reported to the NYC Office of Environmental Remediation. This cleanup plan also has a plan to address any unforeseen problems that might occur during the cleanup (called a 'Contingency Plan').

Odor, Dust, and Noise Control. This cleanup plan includes actions for odor and dust control. These actions are designed to prevent off-Site odor and dust nuisances and includes steps to be taken if nuisances are detected. Generally, dust is managed by application of physical covers and by water sprays. Odors are controlled by limiting the area of open excavations, physical covers, spray foams, and by a series of other actions (called operational measures). The project is also required to comply with NYC noise control standards. If you observe problems in these areas, please contact the onsite Project Manager Joseph Rastegar (516) 482-4820, or NYC Office of Environmental Remediation Project Manager William Wong at 212 341-0659.

Quality Assurance. This cleanup plan requires that evidence be provided to illustrate that all cleanup work required under the plan has been completed properly. This evidence will be summarized in the final report, called the Remedial Action Report. This report will be submitted to the NYC Office of Environmental Remediation and will be thoroughly reviewed.

Storm-Water Management. To limit the potential for soil erosion and discharge, this cleanup plan has provisions for storm-water management. The main elements of the storm water management include physical barriers such as tarp covers and erosion fencing, and a program for frequent inspection.

Hours of Operation. The hours for operation of cleanup will comply with the NYC Department of Buildings construction code requirements or according to specific variances issued by that agency. For this cleanup project, the hours of operation are 7:00 AM to 5:00 PM Monday through Friday.

Signage. While the cleanup is in progress, a placard will be prominently posted at the main entrance of the property with a laminated project Fact Sheet that states that the project is in the NYC Voluntary Cleanup Program, provides project contact names and numbers, and locations of where project documents can be viewed.

Complaint Management. The contractor performing this cleanup is required to address all complaints. If you have any complaints, you can call the facility Project Manager Joseph Rastegar (516) 482-4820, the NYC Office of Environmental Remediation Project Manager William Wong at 212 341-0659, or call 311 and mention the Site is in the NYC Voluntary Cleanup Program.

Utility Mark-outs. To promote safety during excavation in this cleanup, the contractor is required to first identify all utilities and must perform all excavation and construction work in compliance with NYC Department of Buildings regulations.

Soil and Liquid Disposal. All soil and liquid material removed from the Site as part of the cleanup will be transported and disposed of in accordance with all applicable city, state and federal regulations and required permits will be obtained.

Soil Chemical Testing and Screening. All excavations will be supervised by a trained and properly qualified environmental professional. In addition to extensive sampling and chemical testing of soils on the Site, excavated soil will be screened continuously using hand-held instruments, by sight, and by smell to ensure proper material handling and management, and community protection.

Stockpile Management. Soil stockpiles will be kept covered with tarps to prevent dust, odors and erosion. Stockpiles will be frequently inspected. Damaged tarp covers will be promptly replaced. Stockpiles will be protected with silt fences. Hay bales will be used, as needed to protect storm water catch basins and other discharge points.

Trucks and Covers. Loaded trucks leaving the Site will be covered in compliance with applicable laws and regulations to prevent dust and odor. Trucks will be properly recorded in logs and records, and placarded in compliance with applicable city, state and federal laws, including those of the New York State Department of Transportation (NYS DOT). If loads contain wet material that can leak, truck liners will be used. All transport of materials will be performed by licensed truckers and in compliance with all laws and regulations.

Imported Material. It is not anticipated that any material will be imported to the Site. Should plans change, all fill materials proposed to be brought onto the Site will comply with rules outlined in this cleanup plan and will be inspected and approved by a qualified worker located on-Site. Waste materials will not be brought onto the Site. Trucks entering the Site with imported clean materials will be covered in compliance with applicable laws and regulations.

Equipment Decontamination. All equipment used for cleanup work will be inspected and washed, if needed, before it leaves the Site. Trucks will be cleaned at a truck inspection station on the property before leaving the Site.

Housekeeping. Locations where trucks enter or leave the Site will be inspected every day and cleaned regularly to ensure that they are free of dirt and other materials from the Site.

Truck Routing. Truck routes have been selected to: (a) limit transport through residential areas and past sensitive nearby properties; (b) maximize use of city-mapped truck routes; (c) limit total distance to major highways; (d) promote safety in entry to highways; (e) promote overall safety in trucking; and (f) minimize off-Site line-ups (queuing) of trucks entering the

property. Operators of loaded trucks leaving the Site will be instructed not to stop or idle in the local neighborhood.

Final Report. The results of all cleanup work will be fully documented in a final report (called a Remedial Action Report) that will be available for you to review in the public document repositories located at the New York Public Library, as well as in the document repository section with the OER website (www.nyc.gov/oer).

Long-Term Site Management. If long-term protection is required after the cleanup is complete, the property owner will be required to comply with an ongoing SMP that calls for continued inspection of protective controls, such as Site covers. The SMP is evaluated and approved by the NYC Office of Environmental Remediation. Requirements that the property owner must comply with are defined in the property's deed or established through a city environmental designation. A certification of continued protectiveness of the cleanup will be required from time to time to show that the approved cleanup is still effective.

REMEDIAL ACTION WORK PLAN

1.0 SITE BACKGROUND

Big Apple Developers has enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a property located at 464 West 130th Street in the Manhattanville section of Manhattan, New York (the “Site”). A Remedial Investigation (RI) was performed to compile and evaluate data and information necessary to develop this Remedial Action Work Plan (RAWP) in a manner that will render the Site protective of public health and the environment consistent with the contemplated end use. This RAWP establishes remedial action objectives, provides a remedial alternatives analysis that includes consideration of a permanent cleanup, and provides a description of the selected remedial action. The remedial action described in this document provides for the protection of public health and the environment, complies with applicable environmental standards, criteria and guidance, and applicable laws and regulations.

1.1 Site Location and Current usage

The Site is located in the Manhattanville section of Manhattan, New York and is identified as Block 1969 and Lot 68 on the New York City Tax Map (see **Figure 1**). The Site is 3,900-square feet and is located on the south side of West 130th Street on the southwest corner Convent Avenue, and is adjoined by residential apartment buildings (some of which contain retail stores) to the south and east, and a two-story garage/warehouse building to the west. Currently, the Site is vacant, with the western portion of the property being used for parking and the eastern portion appearing to be used as a private garden.

1.2 Proposed Redevelopment Plan

The proposed use of the Site will consist of the construction of a residential apartment complex. Layout of the proposed site development is included in **Appendix 1**. The current zoning designation is residential, within district R7A.

The proposed project will include the construction of a six-story, 30-unit residential building including a basement, which will contain residential units, and a partial cellar for utilities only. The building footprint is approximately 3,500 square feet, and the total square footage of the

building is approximately 24,000 square feet. Open areas will be covered with concrete pavement surfaces. The proposed building construction would not cover the entire property footprint. Excavation at the site is necessary to complete the portions of the basement and cellar of the structure. The excavation depths vary slightly across the site with a maximum depth of approximately 11 feet for the cellar on the western portion of the property. The proposed excavation volume is 1,399 cubic yards. Development plans, including the excavation plans, are provided as **Appendix 1**. A vapor barrier will be installed at the base of the building's foundation and along the foundation sidewalls. Groundwater was not encountered within the planned depth of the excavation. No demolition is required to complete the construction of the proposed building.

The remedial action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

1.3 Description of Surrounding Property

The Site is adjoined by residential apartment buildings (some of which contain retail stores) to the south and east, and a two-story garage/warehouse building to the west (see **Figure 2**). The Site is zoned for residential use and is included in Residential District R7A. This type of zoning typically produces high lot coverage, with seven- and eight-story apartment buildings, which often blend with existing buildings in established neighborhoods.

The area is characterized by numerous storage facilities, commercial shops and residential properties. The expansion of Columbia University is planned for the area with the construction of a new campus in the 17-acre tract from 125th and 133rd Streets between Broadway and Amsterdam Avenue.

Figure 2 shows the surrounding land usage.

1.4 Remedial Investigation

A remedial investigation was performed and the results are documented in a companion document called "*Remedial Investigation Report, 464 West 130th Street, Manhattan, New York*", dated March, 2013 (RIR).

According to information provided in the Phase I ESA (**Appendix 2**) dating back to 1902, the site has historically been vacant and has been used as a parking lot and private garden. Ownership of the site was reportedly transferred from the Commissioner of Finance to the City of New York on July 31, 1985. Ownership was subsequently transferred from the City of New York to David Manesh and finally to Parkside, Inc., on April 6, 2000.

A summary of work performed under the Remedial Investigation is provided below.

1. Conducted an electromagnetic (EM) survey to investigate for the existence of potential USTs or other anomalies;
2. Installed seven soil borings across the entire project Site, and collected 14 soil samples for chemical analysis from the soil borings to evaluate soil quality;
3. Installed three soil vapor probes around Site perimeter and collected three samples for chemical analysis; and
4. Monitoring wells were installed to the top of the underlying bedrock formation and monitored for the presence of groundwater. Groundwater was not encountered above the bedrock at the site.

The environmental findings of the remedial investigation are summarized as follows:

1. Elevation of the property ranges from approximately 63 to 74 feet.
2. Groundwater was not encountered at the Site. As a result, the depth to groundwater and groundwater flow direction were not determined.
3. Depth to bedrock ranges from approximately 9 feet to approximately 22 feet at the Site. It is believed that the bedrock surface closely follows the original land surface of the area prior to the placement of fill materials during the initial development. No perched groundwater was found on this bedrock surface.
4. The stratigraphy of the site, from the surface down, consists of urban-fill materials intermixed with re-worked and re-placed glacial deposits. The intermixed fill and glacial deposits overlie bedrock. The fill in the area consists predominantly of brick, glass, ash, and rock fragments as well as other urban-fill materials. The re-worked glacial deposits

are also apparently fill deposits since evidence indicates that they have been re-worked and mixed. The glacial deposits were generally characterized by fine-to-medium sand, with varying percentages fines, broken cobbles and gravel.

5. Soil/fill samples collected during the RI showed that VOCs, pesticides or PCBs were not detected in any of the soil samples above the Unrestricted Use SCOs. Low levels of SVOC compounds were detected in all soil borings except at one location (SB-2, 2 to 4-feet), where SVOCs exceeded Restricted Residential SCOs. These SVOCs were PAHs compounds and included benzo(a)anthracene (max 4.2 mg/Kg), benzo(a)pyrene (max. 2.9 mg/Kg), benzo(b)fluoranthene (max 4.2 mg/Kg), benzo(k)fluoranthene (maximum 4.55 mg/Kg), chrysene (max 4.74 mg/Kg), dibenzo(a,h)anthracene (max 0.9 mg/Kg), indeno(1,2,3-cd)pyrene (max 1.77 mg/Kg). Metals including barium (max. of 691 parts per million [ppm]), copper (max. of 62 ppm), lead (max. of 249 ppm) and zinc (max. of 415 ppm) were detected exceeding Unrestricted Use SCOs, and of these, barium also exceeded Restricted Residential Use SCOs in one shallow soil sample. Data collected during the RI is sufficient to delineate the vertical and horizontal distribution of contaminants in soil/fill at the Site.
6. Three groundwater wells were installed to the depth of bedrock. Since groundwater was not found in the unconsolidated soil and fill materials underlying on the site, no groundwater chemistry data is available.
7. Soil vapor samples collected during the RI showed low concentrations of petroleum related and chlorinated VOCs. Highest concentrations of any detected compounds were less than 22 µg/m³. Tetrachloroethene was detected in one of the soil vapor samples at 2.2 µg/m³. TCE, TCA and carbon tetrachloride were all detected at concentrations of less than 1 µg/m³. All detected values are below the New York State Department of Health (NYSDOH) Soil Vapor/Indoor Air Matrix action levels and warrant no further action. A vapor barrier is planned as part of the building's construction.

For more detailed results, consult the RIR. Based on an evaluation of the data and information from the RIR and this RAWP, disposal of significant amounts of hazardous waste is not suspected at this site.

2.0 REMEDIAL ACTION OBJECTIVES

Based on the results of the RI, the following Remedial Action Objectives (RAOs) have been identified for this Site:

Soil

- Prevent direct contact with contaminated soil.
- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

- Prevent exposure to contaminants in soil vapor.
- Prevent migration of soil vapor into dwelling and other occupied structures.

3.0 REMEDIAL ALTERNATIVES ANALYSIS

The goal of the remedy selection process is to select a remedy that is protective of human health and the environment taking into consideration the current, intended and reasonably anticipated future use of the property. The remedy selection process begins by establishing RAOs for media in which chemical constituents were found in exceedance of applicable standards, criteria and guidance values (SCGs). A remedy is then developed based on the following ten criteria:

- Protection of human health and the environment;
- Compliance with SCGs;
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community Acceptance;
- Land use; and
- Sustainability.

The following is a detailed description of the alternatives analysis and remedy selection to address impacted media at the Site. As required, a minimum of two remedial alternatives (including a Track 1 scenario) are evaluated, as follows:

Alternative 1 involves

- Establishment of Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs).
- Removal of all soil/ fill exceeding Track 1 Unrestricted Use SCOs throughout the Site and confirmation that Track 1 Unrestricted Use SCOs has been achieved with post-excavation endpoint sampling. Based on the results of the remedial investigation, additional excavation beyond what is planned for the building's construction would be required to remove all of the soil/fill containing analytes at concentrations above

Track 1 Unrestricted Use SCOs. Additional excavation will be performed as part of this Alternative to ensure complete removal of soil that does not currently meet Track 1 Unrestricted Use SCOs.

- No Engineering or Institutional Controls are required for a Track 1 cleanup, but a vapor and waterproof barrier would be installed beneath the basement foundation and behind foundation sidewalls of the new building as a part of development to prevent any potential future exposures from off-Site soil vapor.
- Placement of a final cover over the entire Site as part of construction.

Alternative 2 involves

- Establishment of Track 4 Site-Specific SCOs.
- Removal of all soils exceeding Track 4 Site-Specific SCOs and confirmation that Track 4 has been achieved with post-excavation endpoint sampling. Once the excavation for the building's foundation is complete, it is anticipated that remaining soils would be below Track 4 SCOs. However, if soil/fill containing SVOCs or metals at concentrations above Track 4 SCOs are still present at the base of the excavation, additional excavation would be performed to ensure complete removal of soil that does not meet SCOs.
- Placement of a composite cover over the entire site to eliminate exposure to remaining soil/fill.
- Placement of a vapor barrier beneath the foundation slab and along foundation side walls up to grade to prevent any potential future exposures from off-Site soil vapor.
- Establishment of use restrictions including prohibitions on the use of groundwater from the site and prohibitions on sensitive site uses, such as farming or vegetable gardening, to eliminate future exposure pathways.
- Establishment of an approved SMP to ensure long-term management of these engineering and institutional controls including the performance of periodic inspections and certification that the controls are performing as they were intended. SMP will note that the property owner and property owner's successors and assigns must comply with the approved SMP; and

- Continued registration as an “E” Designated property at the NYC Buildings Department to ensure that future owners of the site continue to maintain these controls as required.

3.1 THRESHOLD CRITERIA

Protection of Public Health and the Environment

This criterion is an evaluation of the remedy’s ability to protect public health and the environment, and an assessment of how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, and implementation of Engineering Controls or Institutional Controls. Protection of public health and the environment must be achieved for all approved remedial actions.

Alternative 1 would be protective of human health and the environment by removing soil/fill exceeding Track 1 Unrestricted Use SCOs, thus eliminating potential for direct contact with contaminated soil/fill once construction is complete and eliminating the risk of contamination leaching into groundwater.

Alternative 2 would achieve comparable protections of human health and the environment by excavating impacted material (soil and/or historic fill) at the Site and by ensuring that remaining soil/fill on-Site meets Track 4 Site-Specific SCOs as well as by placement of institutional and engineering controls, including a composite cover system. The composite cover system would prevent direct contact with any remaining on-Site soil/fill. Implementing institutional controls including continued registration as an “E” designated property and a SMP would ensure that the composite cover system remains intact and protective. Establishment of Track 4 Site-Specific SCOs would minimize the risk of contamination leaching into groundwater.

For both Alternatives, potential exposure to contaminated soils or groundwater during construction would be minimized by implementing an approved Soil/ Materials Management Plan and CAMP. Contact with potentially contaminated groundwater would be prevented as it would be prohibited by the deed notice. Potential future migration of off-Site soil vapors into the new building would be prevented by installing a vapor barrier below the new building's basement slab and continuing the vapor barrier around foundation walls.

3.2. BALANCING CRITERIA

Compliance with Standards, Criteria and Guidance (SCGs)

This evaluation criterion assesses the ability of the alternative to achieve applicable standards, criteria and guidance.

Alternative 1 would achieve compliance with the remedial goals, SCGs and RAOs for soil through removal to Track 1 Unrestricted Use SCOs. Compliance with SCGs for soil vapor would also be achieved by installing a vapor barrier below the new building's basement slab and continuing the vapor barrier around foundation walls, as part of development.

Alternative 2 would achieve compliance with the remedial goals, SCGs and RAOs for soil through removal of soil to meet Track 4 Site-Specific SCOs. Compliance with SCGs for soil vapor would also be achieved by installing a vapor barrier below the new building's basement slab and continuing the vapor barrier around foundation walls. A SMP would ensure that controls remained protective for the long term.

Health and safety measures contained in the CHASP and CAMP that comply with the applicable SCGs shall be implemented during Site redevelopment under this RAWP. For both Alternatives, focused attention on means and methods employed during the remedial action would ensure that handling and management of contaminated material would be in compliance with applicable SCGs. These measures will protect on-site workers and the surrounding community from exposure to Site-related contaminants.

Short-term effectiveness and impacts

This evaluation criterion assesses the effects of the alternative during the construction and implementation phase until remedial action objectives are met. Under this criterion, alternatives are evaluated with respect to their effects on public health and the environment during implementation of the remedial action, including protection of the community, environmental impacts, time until remedial response objectives are achieved, and protection of workers during remedial actions.

Both alternatives 1 and 2 have similar-short term effectiveness during their respective implementations, as each requires excavation of impacted material (soil and/or historic fill).

Both alternatives would result in short-term dust generation impacts associated with excavation, handling, load out of materials, and truck traffic. Short term impacts could potentially be higher for Alternative 1 if excavation of greater amounts of historical fill material is encountered below the excavation depth of the proposed building.

Both alternatives would employ appropriate measures to prevent short term impacts, including a CHASP, a CAMP and a Soil/Materials Management Plan (SMMP), during all on-Site soil disturbance activities and would minimize the release of contaminants into the environment. Both alternatives provide short term effectiveness in protecting the surrounding community by decreasing the risk of contact with on-Site contaminants. Construction workers operating under appropriate management procedures and a CHASP will be protected from on-Site contaminants (personal protective equipment would be worn consistent with the documented risks within the respective work zones).

Long-term effectiveness and permanence

This evaluation criterion addresses the results of a remedial action in terms of its permanence and quantity/nature of waste or residual contamination remaining at the Site after response objectives have been met, such as permanence of the remedial alternative, magnitude of remaining contamination, adequacy of controls including the adequacy and suitability of ECs/ICs that may be used to manage contaminant residuals that remain at the Site and assessment of containment systems and ICs that are designed to eliminate exposures to contaminants, and long-term reliability of Engineering Controls.

Alternative 1 would achieve long-term effectiveness and permanence related to on-site contamination by permanently removing all impacted soil/ fill and enabling unrestricted usage of the property.

Alternative 2 would provide long-term effectiveness by removing the majority, if not all, of the on-site contamination and attaining Track 4 SCOs, establishing engineering controls including a composite cover system across the Site, establishing Institutional Controls including use restrictions, a SMP, and continuation of the “E” designation to memorialize these controls for the long term. The SMP will ensure long-term effectiveness of all Engineering and Institutional Controls by requiring periodic inspection and certification that these controls and

use restrictions continue to be in place and functioning as they were intended assuring that protections designed into the remedy will provide continued high level of protection in perpetuity.

Both alternatives would result in removal of soil contamination exceeding the SCOs providing the highest level, most effective and permanent remedy over the long-term with respect to a remedy for contaminated soil, which will eliminate any migration to groundwater. Potential sources of soil vapor and groundwater contamination will also be eliminated as part of the remedy.

Reduction of toxicity, mobility, or volume of contaminated material

This evaluation criterion assesses the remedial alternative's use of remedial technologies that permanently and significantly reduce toxicity, mobility, or volume of contaminants as their principal element. The following is the hierarchy of source removal and control measures that are to be used to remediate a Site, ranked from most preferable to least preferable: removal and/or treatment, containment, elimination of exposure and treatment of source at the point of exposure. It is preferred to use treatment or removal to eliminate contaminants at a Site, reduce the total mass of toxic contaminants, cause irreversible reduction in contaminants mobility, or reduce the total volume of contaminated media.

Alternative 1 would permanently eliminate the toxicity, mobility, and volume of contaminants from on-site soil by removing all soil in excess of unrestricted use SCOs.

Alternative 2 would remove the majority, if not all, of the impacted soil/fill present on the Site, and any remaining soil/fill beneath the new building would meet Track 4 SCOs.

Alternative 1 would eliminate a greater total mass of contaminants on Site.

Implementability

This evaluation criterion addresses the technical and administrative feasibility of implementing an alternative and the availability of various services and materials required during its implementation, including technical feasibility of construction and operation, reliability of the selected technology, ease of undertaking remedial action, monitoring considerations,

administrative feasibility (e.g. obtaining permits for remedial activities), and availability of services and materials.

Both Alternatives are feasible and implementable. They use standard materials, services, and well-established technology. The reliability of these remedies is also high. There are no specific difficulties associated with any of the activities proposed, which utilize standard industry methods.

Cost effectiveness

This evaluation criterion addresses the cost of alternatives, including capital costs (such as construction costs, equipment costs, and disposal costs, engineering expenses) and site management costs (costs incurred after remedial construction is complete) necessary to ensure the continued effectiveness of a remedial action.

The capital costs associated with the both alternatives are roughly similar, since the soils in both scenarios have to be excavated to the depth of the building foundation for the proposed development. Some additional costs may be incurred if further excavation is required to meet the Track 1 SCOs. However, long-term costs for Alternative 2 are likely higher than Alternative 1 based on the required implementation of a SMP as part of Alternative 2.

The remedial plan creates an approach that combines the remedial action with the redevelopment of the Site, including the construction of the building foundation and subgrade structures. The remedial plan is also cost effective in that it will take into consideration the selection of the closest and most appropriate disposal facilities to reduce transportation and disposal costs during the excavation of historic fill and other soils during the redevelopment of the Site.

Community Acceptance

This evaluation criterion addresses community opinion and support for the remedial action. Observations here will be supplemented by public comment received on the RAWP.

Both remedial actions provide for protection of public health and the environment and minimize potential contaminant exposures. This RAWP will be subject to a public review under the NYC VCP and will provide the opportunity for detailed public input on the remedial

alternatives and the selected remedy. This public comment will be considered by OER prior to approval of this plan. The Citizen Participation Plan for the project is provided in **Appendix 3**.

Land use

This evaluation criterion addresses the proposed use of the property. This evaluation has considered reasonably anticipated future uses of the Site and takes into account: current use and historical and/or recent development patterns; applicable zoning laws and maps; NYS Department of State's Brownfield Opportunity Areas (BOA) pursuant to section 970-r of the general municipal law; applicable land use plans; proximity to real property currently used for residential use, and to commercial, industrial, agricultural, and/or recreational areas; environmental justice impacts, federal or state land use designations; population growth patterns and projections; accessibility to existing infrastructure; proximity of the site to important cultural resources and natural resources, potential vulnerability of groundwater to contamination that might emanate from the site, proximity to flood plains, geography and geology; and current Institutional Controls applicable to the site.

The proposed redevelopment of the Site is compatible with its current zoning. Following remediation, the Site will meet either Track 1 Unrestricted Use or Track 4 Site-Specific SCOs, both of which are appropriate for its planned residential use. Improvements in the current environmental condition of the property achieved by both alternatives are also consistent with the City's goals for cleanup of contaminated land, making them safer and bringing such properties into productive reuse. Both alternatives are equally protective of natural resources and cultural resources.

Sustainability of the Remedial Action

This criterion evaluates the overall sustainability of the remedial action alternatives and the degree to which sustainable means are employed to implement the remedial action including those that take into consideration NYC's sustainability goals defined in *PlaNYC: A Greener, Greater New York*. Sustainability goals may include: maximizing the recycling and reuse of non-virgin materials; reducing the consumption of virgin and non-renewable resources; minimizing energy consumption and greenhouse gas emissions; improving energy efficiency;

and promotion of the use of native vegetation and enhancing biodiversity during landscaping associated with Site development.

While Alternative 2 would potentially result in lower energy usage based on reducing the volume of material transported off-Site, both remedial alternatives are comparable with respect to the opportunity to achieve sustainable remedial action. The remedial plan would take into consideration the shortest trucking routes during off-Site disposal of historic fill and other soils, which would reduce greenhouse gas emissions and conserve energy used to fuel trucks. To the extent practicable, energy efficient building materials, appliances, and equipment will be utilized to complete the development.

4.0 REMEDIAL ACTION

4.1 Summary of Preferred Remedial Action

The preferred remedial action alternative is Alternative 2, the Track 4 Alternative. Although the Track 4 Alternative is the preferred Alternative, it is anticipated that end point sampling will indicate compliance with Track 1 Unrestricted Use SCOs. Therefore Track 1 SCOs will be established for the remedial action as noted below. The preferred remedial action alternative achieves protection of public health and the environment for the intended use of the property. The preferred remedial action alternative will achieve all of the remedial action objectives established for the project and addresses applicable SCGs. The preferred remedial action alternative is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants. The preferred remedial action alternative is cost effective and implementable and uses standard methods that are well established in the industry.

The proposed remedial action will consist of:

1. Preparation of a Community Protection Statement and performance of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan.
2. Performance of a CAMP for particulates and volatile organic carbon compounds.
3. Establishment of Track 1 SCOs.
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Excavation and removal of soil/fill exceeding Track 1 Unrestricted Use SCOs. Entire foot of the new building will be excavated to a depth of approximately 11 feet below grade or to bedrock for development purposes. Additional excavation will be performed in western edge of property to remove high SVOCs in shallow soils.
6. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a photo ionization detector (PID).
Appropriate segregation of excavated media on-Site.
7. Removal of underground storage tanks (if encountered) and closure of petroleum spills (if evidence of a spill/leak is encountered during Site excavation) in compliance with

- applicable local, state and federal laws and regulations.
8. Transportation and off-Site disposal of all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media on-Site.
 9. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of SCOs.
 10. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
 11. As part of development, installation of a vapor barrier/waterproofing system below the concrete slab underneath the building, as well as behind foundation walls of the proposed building. The vapor barrier will consist of Raven Industries' VaporBlock 20 Plus, which is a seven layer co-extruded barrier made from polyethylene and EVOH resins.
 12. As part of development, construction and maintenance of an engineered composite cover consisting of 6" thick concrete slab across the footprint of the new building. The open areas surrounding the building structure will be covered with a concrete pavement surface consistent with NYC building code. .
 13. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
 14. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.
 15. Submission of a Remedial Action Report (RAR) that describes the remedial activities certifies that the remedial requirements have been achieved, defines the Site boundaries, and, if Track 1 SCO's are not achieved, lists any changes from this RAWP, and describes all Engineering and Institutional Controls to be implemented at the Site.
 16. If Track 1 Unrestricted Use SCOs are not achieved, submission of an approved SMP in the RAR for long-term management of residual contamination, including plans for

maintenance, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.

17. If Track 1 Unrestricted Use SCOs are not achieved, the property will continue to be registered with an E-Designation at the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.

4.2 Soil Cleanup Objectives and Soil/Fill Management

It is anticipated that end point sampling will indicate compliance with Track 1 Unrestricted Use SCOs. The following Track 4 Soil Cleanup Objectives (SCOs) are proposed for this project as a contingency if Track 1 Unrestricted Use SCOs are not achieved as a result of the remedial action. The SCOs for this Site are listed in below.

<u>Contaminant</u>	<u>Track 4 SCOs</u>
Total SVOCs	250 ppm
Barium	750 ppm

Based on the results from the remedial investigation, on-site soil currently meets Residential Use SCOs, excluding shallow samples collected from two borings. Soil and materials management on-Site and off-Site, including excavation, handling and disposal, will be conducted in accordance with the Soil/Materials Management Plan in **Appendix 4**. The location of planned excavation is shown in development plans included in **Appendix 1**.

Discrete contaminant sources (such as hotspots) identified during the remedial action will be identified by GPS or surveyed. This information will be provided in the Remedial Action Report.

Estimated Soil/Fill Removal Quantities

The total quantity of soil/fill expected to be excavated and disposed off-Site is approximately 1,250 cubic yards, which is estimated to be approximately 1,900 tons.

Disposal facilities will be reported to OER when they are identified and prior to the start of remedial action.

End-Point Sampling

Removal actions for development purposes under this plan will be performed in conjunction with post-remediation end-point soil sampling. Two end-point samples will be collected from the base of the excavation at, or near the locations identified exceeding the SCOs during the Phase II investigation. To evaluate attainment of Track 1 – Unrestricted Use SCOs, samples will be collected and analyzed for SVOCs, TAL Metals. The sampling locations are shown on **Figure 3**. For comparison to Track 4 SCOs, analytes will only include trigger compounds and elements established on the Track 4 SCO list. The end-point samples will be collected immediately following the completion of excavation.

If additional hotspots are encountered, hotspot removal end-point sampling frequency will consist of the following:

1. For excavations less than 20 feet in total perimeter, at least one bottom sample and one sidewall sample biased in the direction of surface runoff.
2. For excavations 20 to 300 feet in perimeter:
 - For surface removals, one sample from the top of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.
 - For subsurface removals, one sample from each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.
3. For sampling of volatile organics, bottom samples should be taken within 24 hours of excavation, and should be taken from the zero to six-inch interval at the excavation floor. Samples taken after 24 hours should be taken at six to twelve inches.

4. For contaminated soil removal, post remediation soil samples for laboratory analysis should be taken immediately after contaminated soil removal. If the excavation is enlarged horizontally, additional soil samples will be taken pursuant to bullets 1-3 above.

Post-remediation end-point sample locations and depth will be biased towards the areas and depths of highest contamination identified during previous sampling episodes unless field indicators such as field instrument measurements or visual contamination identified during the remedial action indicate that other locations and depths may be more heavily contaminated. In all cases, post-remediation samples should be biased toward locations and depths of the highest expected contamination.

New York State ELAP certified labs will be used for all confirmation and end-point sample analyses. Labs performing confirmation and end-point sample analyses will be reported in the RAR. The RAR will provide a tabular and map summary of all confirmation and end-point sample results and will include all data including non-detects and applicable standards and/or guidance values. End-point samples will be analyzed for trigger analytes (those for which an SCO exceedance was identified) utilizing the following methodology:

Soil analytical methods will include:

- Semi-volatile organic compounds by EPA Method 8270; and,
- Target Analyte List metals.

If either light non-aqueous phase liquid (LNAPL) and/or dense non-aqueous phase liquid (DNAPL) are detected, appropriate samples will be collected for characterization and “finger print analysis” and required regulatory reporting (i.e. spills hotline) will be performed.

Quality Assurance/Quality Control

One duplicate soil sample for each of 20 samples collected will be analyzed to maintain property quality assurance and quality control (QA/QC) and detect any lab artifacts. One duplicate sample will be collected during the endpoint sampling for this project. The duplicate sample will be analyzed for the same parameters as the endpoint samples.

Import and Reuse of Soils

No import of soil is planned as part of redevelopment. Reuse of soils already onsite will be performed in conformance with the Soil/Materials Management Plan in **Appendix 4**. The estimated quantity of onsite soil/fill expected to be reused/relocated on Site is less than 200 cubic yards.

4.3 Engineering Controls

The excavation required for the proposed Site development will achieve Track 1 Unrestricted Use SCOs. No Engineering Controls are required to address residual contamination at the Site. However, the following elements will be incorporated into the foundation design as part of the development: composite cover system and soil vapor barrier. If Track 1 is not achieved, these two elements will constitute Engineering Controls that will be employed in the remedial action to address residual contamination remaining at the Site.

Composite Cover System

Exposure to residual soil/fill will be prevented by an engineered, composite cover system to be built on the Site. This composite cover system is comprised of:

- Concrete covered sidewalks or walkways; and,
- 6-inch concrete building slabs.
-

The various remedial cover type used on this Site are shown in the development plans **(Appendix 1)**

If Track 1 SCO's are not achieved at the Site, the composite cover system will be a permanent engineering. The system will be inspected and reported at specified intervals as required by this RAWP and the SMP. A Soil Management Plan will be included in the SMP and will outline the procedures to be followed in the event that the composite cover system and underlying residual soil/fill is disturbed after the remedial action is complete. Maintenance of this composite cover system will be described in the SMP in the RAR.

Vapor Barrier System

As part of development, mitigation of potential soil vapor from offsite in the future will be achieved with a combination of building slab and vapor barrier. A vapor barrier in the form of a waterproofing layer will be installed below the building floor slab and along the foundation walls. The vapor barrier will extend throughout the area occupied by the footprint of the new building which is to be constructed at the Site. The design specifications for the vapor barrier are included in the development plans **(Appendix 1)**.

The project's Professional Engineer licensed by the State of New York will have primary direct responsibility for overseeing the implementation of the vapor barrier. The Remedial Action Report will include photographs (maximum of two photos per page) of the installation process, PE/RA certified letter (on company letterhead) from primary contractor responsible for installation oversight and field inspections, and a copy of the manufacturers certificate of warranty.

4.4 Institutional Controls

Institutional Controls are not required on sites that achieve Track 1 Remedial Action. If Track 1 SCOs are not achieved, Institutional Controls (IC) will be utilized in this remedial action to manage residual soil/fill and other media and render the Site protective of public health and the environment. Institutional Controls are listed below. Long-term employment of EC/ICs will be implemented under a site-specific SMP that will be included in the RAR. The property will continue to be registered with an E-Designation by the NYC Buildings Department.

Institutional Controls for this remedial action are:

- The property will continue to be registered with an E-Designation at the NYC Buildings Department. This RAWP includes a description of all ECs and ICs and summarizes the requirements of the SMP which will note that the property owner and property owner's successors and assigns must comply with the approved SMP;
- Submittal of a SMP in the RAR for approval by OER that provides procedures for appropriate maintenance, inspection and certification of ECs. SMP will require that the property owner and property owner's successors and assigns will submit to OER a periodic written statement that certifies that: (1) controls employed at the Site are unchanged from the previous certification or that any changes to the controls were approved by OER; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. OER retains the right to enter the Site in order to evaluate the continued maintenance of any controls. This certification shall be submitted at a frequency to be determine by OER in the SMP and will comply with RCNY §43-1407(1)(3).

- Vegetable gardens and farming on the Site are prohibited in contact with residual soil materials;
- Use of groundwater underlying the Site is prohibited without treatment rendering it safe for its intended use;
- All future activities on the Site that will disturb residual material must be conducted pursuant to the soil management provisions in an approved SMP;
- The Site will be used for residential use and will not be used for a higher level of use without prior approval by OER.

4.5 Site Management Plan

Site Management is not required on sites that achieve Track 1 Remedial Action. However, if Track 1 Unrestricted Use SCOs are not achieved, site management will be performed and will be the last phase of remediation and begins with the approval of the Remedial Action Report and issuance of the Notice of Completion (NOC) for the Remedial Action. The SMP describes appropriate methods and procedures to ensure implementation of all ECs and ICs that are required by this RAWP. The SMP is submitted as part of the RAR but will be written in a manner that allows its use as an independent document. Site Management continues until terminated in writing by OER. The property owner is responsible to ensure that all Site Management responsibilities defined in the SMP are implemented.

The SMP will provide a detailed description of the procedures required to manage residual soil/fill left in place following completion of the remedial action in accordance with the Brownfield Cleanup Agreement with OER. This includes a plan for: (1) implementation of EC's and ICs; (2) implementation of monitoring programs; (3) operation and maintenance of EC's; (4) inspection and certification of EC's; and (5) reporting.

Site management activities, reporting, and EC/IC certification will be scheduled by OER on a periodic basis to be established in the SMP and will be subject to review and modification by OER. The SMP will be based on a calendar year and certification reports will be due for submission to OER by July 31 of the year following the reporting period.

4.6 Qualitative Human Health Exposure Assessment

The objective of the qualitative exposure assessment is to identify potential receptors and pathways for human exposure to the contaminants of concern (COC) that are present at, or migrating from, the Site. The identification of exposure pathways describes the route that the COC takes to travel from the source to the receptor. An identified pathway indicates that the potential for exposure exists; it does not imply that exposures actually occur.

Investigations reported in the RIR are sufficient to complete a QHHEA. As part of the Voluntary Cleanup Program (VCP) process, a QHHEA was performed to determine whether the Site poses an existing or future health hazard to the Site's exposed or potentially exposed population. The sampling data from the RI were evaluated to determine whether there is any health risk by characterizing the exposure setting, identifying exposure pathways, and evaluating contaminant fate and transport. This QHHEA was prepared in accordance with Appendix 3B and Section 3.3 (b) 8 of the New York State Department of Environmental Conservation (NYSDEC) Draft Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation.

Known and Potential Sources

Based on the results of the Remedial Investigation Report, the contaminants of concern found are:

Soil

- SVOCs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene exceeding Unrestricted Use SCOs in one shallow soil location.
- Metals, including barium, copper, lead, nickel, selenium and zinc were identified but only barium exceeded Track 2 Restricted Residential SCOs.

Soil vapor

- Chlorinated and petroleum related VOCs detected at low concentrations and below NYS DOH monitoring thresholds.

Nature, Extent, Fate and Transport of Contaminants

Low levels of SVOCs and barium are present sporadically across the Site. Metals, most of which are relatively low in concentration, are present throughout the Site. Groundwater was not encountered at the site and is not believed to be present above the shallow bedrock in the area. Chlorinated VOCs in soil vapor were either not detected or were detected well below guidance issued by New York State DOH and were not found in any of the on-Site soil samples collected.

Potential Routes of Exposure

An exposure pathway is the means by which receptor come into contact with a Site-derived contaminant. Three potential primary routes exist by which contaminants can enter the body:

1. Ingestion of water, fill or soil
2. Inhalation of vapors and particulates
3. Dermal contact with water, fill, soil or building materials

The work performed at the Site will include excavation of soil/fill material and general construction activities. The construction and remediation work at the Site will expose the contaminants to the on-Site workers in variety of ways listed above. These exposures will be limited to short durations through the intrusive work.

A CHASP, included as **Appendix 5**, will be implemented during remediation work for the safety of on-Site workers and off-Site local population. Upon completion of the remedial activities, the Site will be covered by the composite cover system (i.e., building footprint, concrete sidewalks and walkways, and vapor/moisture barrier). This will prevent direct exposure to humans from any residual on-Site or off-Site contamination.

Existence of Human Health Exposure

An exposure pathway begins with a source and mechanism of contaminant release resulting in the contamination of a receiving matrix (environmental medium). A complete exposure pathway also requires a point of potential contact with the contaminated matrix (i.e., exposure point), an exposure route (i.e., inhalation, ingestion, or dermal contact), and a receptor

population. If an exposure pathway is not complete because it does not include a contaminated matrix, a point of potential contact, an exposure route, or a receptor, then no risk exists.

Current Conditions: The potential for exposure to surficial historic fill exists under current conditions but is limited due the perimeter fence. Groundwater is not exposed at the Site, and because the Site is served by the public water supply and groundwater use for potable supply is prohibited, groundwater is not used at the Site and there is no potential for exposure. As there is currently no structure onsite, accumulation of soil vapor cannot pose an exposure threat.

Construction/ Remediation Activities: Once redevelopment activities begin, construction workers will come into direct contact with surface and subsurface soils and groundwater, as a result of on-Site construction and excavation activities. On-Site construction workers potentially could ingest, inhale or have dermal contact with any exposed impacted soil, and fill. Similarly, off-Site receptors could be exposed to dust and vapors from on-Site activities. During construction, on-Site and off-Site exposures to contaminated dust from on-Site will be addressed through the Soil/Materials Management Plan, dust controls, and through the implementation of the CAMP and a CHASP.

Proposed Future Conditions: Under future remediated conditions, all soils in excess of Track 1 SCOs will be removed. If Track 1 SCOs are not achieved, the Site will be fully capped, limiting potential direct exposure to soil and groundwater remaining in place, and a vapor barrier system will prevent any exposure to potential off-Site soil vapors in the future. The Site is served by a public water supply, and groundwater is not used at the Site for potable supply. There are no plausible off-Site pathways for ingestion, inhalation, or dermal exposure to contaminants derived from the Site under future conditions.

Receptor Populations

On-Site Receptors – The Site is currently vacant and uncapped. Access to Site is restricted by an 8 foot high, chained and locked, perimeter fence. On-Site receptors are limited to trespassers and site representatives and visitors granted access to the property. During redevelopment of the Site, the on-Site potential receptors will include construction workers, site representatives, and visitors.

Off-Site Receptors – Potential off-Site receptors within a 0.25-mile radius of the Site include: adult and child residents, and commercial and construction workers, pedestrians, trespassers, and cyclists, based on the following:

1. Commercial Businesses (up to 0.25 mile) – existing and future
2. Residential Buildings (up to 0.25 mile) – existing and future
3. Building Construction/Renovation (up to 0.25 mile) – existing and future
4. Pedestrians, Trespassers, Cyclists (up to .25 mile) – existing and future
5. Schools (up to .25 mile) – existing and future

Overall Human Health Exposure Assessment

There are potential complete exposure pathways for the current site condition. There is a potential complete exposure pathway that requires mitigation during implementation of the remedy. There is no complete exposure pathway under future conditions after the Site is developed. This assessment takes into consideration the reasonably anticipated use of the site, which includes a residential structure, Site-wide impervious surface cover cap, and a subsurface vapor barrier system for the building. Potential post-construction use of groundwater is not considered an option because groundwater in this area of New York City is not used as a potable water source. There are no surface waters in close proximity to the Site that could be impacted or threatened.

5.0 REMEDIAL ACTION MANAGEMENT

5.1 Project Organization and oversight

Principal personnel who will participate in the remedial action include Eric Curran or Su Ou, who will be acting as the field supervisor. The Professional Engineer (PE) and Qualified Environmental Professionals (QEP) for this project are Matthew J. O'Neil, P.E., and Nicholas J. Recchia, P.G., respectively.

5.2 Site Security

Site access will be controlled by construction fences and gated entrances.

5.3 Work Hours

The hours for operation of remedial construction will be from 7:00 AM to 5:00 PM. These hours conform to the New York City Department of Buildings construction code requirements.

5.4 Construction Health and Safety Plan

The CHASP is included in **Appendix 5**. The Site Safety Coordinator will be Joseph Rastegar (Big Apple Developers). Remedial work performed under this RAWP will be in full compliance with applicable health and safety laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements. Confined space entry, if any, will comply with OSHA requirements and industry standards and will address potential risks. The parties performing the remedial construction work will ensure that performance of work is in compliance with the HASP and applicable laws and regulations. The CHASP pertains to remedial and invasive work performed at the Site until the issuance of the Notice of Completion.

All field personnel involved in remedial activities will participate in training required under 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Site Safety Officer will be responsible for maintaining workers training records.

Personnel entering any exclusion zone will be trained in the provisions of the CHASP and be required to sign a CHASP acknowledgment. Site-specific training will be provided to field personnel. Additional safety training may be added depending on the tasks performed.

Emergency telephone numbers will be posted at the site location before any remedial work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; protective personal equipment (PPE) levels and other relevant safety topics. Meetings will be documented in a log book or specific form.

An emergency contact sheet with names and phone numbers is included in the CHASP. That document will define the specific project contacts for use in case of emergency.

5.5 Community Air Monitoring Plan

Real-time air monitoring for particulate levels at the perimeter of the exclusion zone or work area will be performed. Continuous monitoring will be performed for all ground intrusive activities and during the handling of contaminated or potentially contaminated media. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pit excavation or trenching, and the installation of soil borings or monitoring wells.

Exceedances of action levels observed during performance of the CAMP will be reported to the OER Project Manager and included in the Daily Report.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 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 techniques provided that downwind PM-10 particulate levels do not exceed $150 \text{ mcg}/\text{m}^3$ above the upwind level, and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m³ above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m³ of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for OER personnel to review.

5.6 Agency Approvals

All permits or government approvals required for remedial construction have been or will be obtained prior to the start of remedial construction. Approval of this RAWP by OER does not constitute satisfaction of these requirements and will not be a substitute for any required permit.

5.7 Site Preparation

Pre-Construction Meeting

OER will be invited to attend the pre-construction meeting at the Site with all parties involved in the remedial process prior to the start of remedial construction activities.

Mobilization

Mobilization will be conducted as necessary for each phase of work at the Site. Mobilization includes field personnel orientation, equipment mobilization (including securing all sampling equipment needed for the field investigation), marking/staking sampling locations and utility mark-outs. Each field team member will attend an orientation meeting to become familiar with the general operation of the Site, health and safety requirements, and field procedures.

Utility Marker Layouts, Easement Layouts

The presence of utilities and easements on the Site will be fully investigated prior to the performance of invasive work such as excavation or drilling under this plan by using, at a minimum, the One-Call System (811). Underground utilities may pose an electrocution, explosion, or other hazard during excavation or drilling activities. All invasive activities will be performed in compliance with applicable laws and regulations to assure safety. Utility companies

and other responsible authorities will be contacted to locate and mark the locations, and a copy of the Markout Ticket will be retained by the contractor prior to the start of drilling, excavation or other invasive subsurface operations. Overhead utilities may also be present within the anticipated work zones. Electrical hazards associated with drilling in the vicinity of overhead utilities will be prevented by maintaining a safe distance between overhead power lines and drill rig masts.

Proper safety and protective measures pertaining to utilities and easements, and compliance with all laws and regulations will be employed during invasive and other work contemplated under this RAWP. The integrity and safety of on-Site and off-Site structures will be maintained during all invasive, excavation or other remedial activity performed under the RAWP.

Equipment and Material Staging

Equipment and materials will be stored and staged in a manner that complies with applicable laws and regulations.

Stabilized Construction Entrance

Steps will be taken to ensure that trucks departing the Site will not track soil, fill or debris off-Site. Such actions may include use of cleaned asphalt or concrete roads or use of stone or other aggregate-based egress paths between the truck inspection station and the property exit. Measures will be taken to ensure that adjacent roadways will be kept clean of project related soils, fill and debris.

Truck Inspection Station

An outbound-truck inspection station will be set up close to the Site exit. Before exiting the NYC VCP Site, trucks will be required to stop at the truck inspection station and will be examined for evidence of contaminated soil on the undercarriage, body, and wheels. Soil and debris will be removed. Brooms, shovels and potable water will be utilized for the removal of soil from vehicles and equipment, as necessary.

5.8 Extreme Storm Preparedness and Response Contingency Plan

Damage from flooding or storm surge can include dislocation of soil and stockpiled materials, dislocation of site structures and construction materials and equipment, and dislocation of support of excavation structures. Damage from wind during an extreme storm event can create unsafe or unstable structures, damage safety structures and cause downed power lines creating dangerous site conditions and loss of power. In the event of emergency conditions caused by an extreme storm event, the enrollee will undertake the following steps for site preparedness prior to the event and response after the event.

Storm Preparedness

Preparations in advance of an extreme storm event will include the following: containerized hazardous materials and fuels will be removed from the property; loose materials will be secured to prevent dislocation and blowing by wind or water; heavy equipment such as excavators and generators will be removed from holes, trenches and depressions on the property to high ground or removed from the property; an inventory of the property with photographs will be performed to establish conditions for the site and equipment prior to the event; stockpile covers for soil and fill will be secured by adding weights such as sandbags for added security and worn or ripped stockpile covers will be replaced with competent covers; stockpiled hazardous wastes will be removed from the property; stormwater management systems will be inspected and fortified, including, as necessary: clean and reposition silt fences, haybales; clean storm sewer filters and traps; and secure and protect pumps and hosing.

Storm Response

At the conclusion of an extreme storm event, as soon as it is safe to access the property, a complete inspection of the property will be performed. A site inspection report will be submitted to OER at the completion of site inspection and after the site security is assessed. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. Damage from storm conditions that result in acute public safety threats, such as downed power lines or imminent collapse of buildings, structures or equipment will be reported to public safety authorities via appropriate means such as calling 911. Petroleum spills will be reported to NYSDEC within 2 hours of identification and consistent with State regulations. Emergency and spill conditions will also be reported to

OER. Public safety structures, such as construction security fences will be repaired promptly to eliminate public safety threats. Debris will be collected and removed. Dewatering will be performed in compliance with existing laws and regulations and consistent with emergency notifications, if any, from proper authorities. Eroded areas of soil including unsafe slopes will be stabilized and fortified. Dislocated materials will be collected and appropriately managed. Support of excavation structure will be inspected and fortified as necessary. Impacted stockpiles will be contained and damaged stockpile covers will be replaced. Storm-water control systems and structures will be inspected and maintained as necessary. If soil or fill materials are discharged off site to adjacent properties, property owners and OER will be notified and corrective measure plan designed to remove and clean dislocated material will be submitted to OER and implemented following approval by OER and granting of site access by the property owner. Impacted offsite areas may require characterization based on site conditions, at the discretion of OER. If onsite petroleum spills are identified, a qualified environmental professional will determine the nature and extent of the spill and report to NYSDEC's spill hotline at DEC 800-457-7362. If the source of the spill is ongoing and can be identified, it should be stopped if this can be done safely. Potential hazards will be addressed immediately, consistent with guidance issued by NYSDEC.

Storm Response Reporting

A site inspection report will be submitted to OER at the completion of site inspection. An inspection report established by OER is available on OER's website (www.nyc.gov/oer) and will be used for this purpose. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. The site inspection report will be sent to the OER project manager and will include the site name, address, tax block and lot, site primary and alternate contact name and phone number. Damage and soil release assessment will include: whether the project had stockpiles; whether stockpiles were damaged; photographs of damage and notice of plan for repair; report of whether soil from the Site was dislocated and whether any of the soil left the Site; estimates of the volume of soil that left the Site, nature of impact, and photographs; description of erosion damage; description of equipment damage; description of damage to the remedial program or the construction program, such as damage to the support of excavation; presence of onsite or off-Site exposure pathways caused by the storm; presence of petroleum or other spills and status of spill reporting

to NYSDEC; description of corrective actions; schedule for corrective actions. This report should be completed and submitted to OER project manager with photographs within 24 hours of the time of safe entry to the property after the storm event.

5.9 Traffic Control

Drivers of trucks leaving the NYC VCP Site with soil/fill will be instructed to proceed without stopping in the vicinity of the Site to prevent neighborhood impacts. The planned route on local roads for trucks leaving the Site is to proceed west along 130th Street, proceed north on Amsterdam Avenue, proceed west on 133rd Street, and then north on Broadway.

5.10 Demobilization

Demobilization will include:

- As necessary, restoration of temporary access areas and areas that may have been disturbed to accommodate support areas (e.g., staging areas, decontamination areas, storage areas, temporary water management areas, and access area);
- Removal of sediment from erosion control measures and truck wash and disposal of materials in accordance with applicable laws and regulations;
- Equipment decontamination; and,
- General refuse disposal.

Equipment will be decontaminated and demobilized at the completion of all field activities. Investigation equipment and large equipment (e.g., soil excavators) will be washed at the truck inspection station as necessary. In addition, all investigation and remediation derived waste will be appropriately disposed.

5.11 Reporting and Record Keeping

Daily Reports

Daily reports providing a general summary of activities for each day of *active remedial work* will be emailed to the OER Project Manager by the end of the following day. Those reports will include:

- Project number and statement of the activities and an update of progress made and locations of work performed;
- Quantities of material imported and exported from the Site;
- Status of on-Site soil/fill stockpiles;
- A summary of all citizen complaints, with relevant details (basis of complaint; actions taken; etc.);
- A summary of CAMP excursions, if any; and
- Photograph of notable Site conditions and activities.

The frequency of the reporting period may be revised in consultation with OER project manager based on planned project tasks. Daily email reports are not intended to be the primary mode of communication for notification to OER of emergencies (accidents, spills), requests for changes to the RAWP or other sensitive or time critical information. However, such information will be included in the daily reports. Emergency conditions and changes to the RAWP will be communicated directly to the OER project manager by personal communication. Daily reports will be included as an Appendix in the Remedial Action Report.

Record Keeping and Photo-Documentation

Job-site record keeping for all remedial work will be performed. These records will be maintained on-Site during the project and will be available for inspection by OER staff. Representative photographs will be taken of the Site prior to any remedial activities and during major remedial activities to illustrate remedial program elements and contaminant source areas. Photographs will be submitted at the completion of the project in the RAR in digital format (i.e. jpeg files).

5.12 Complaint Management

All complaints from citizens will be promptly reported to OER. Complaints will be addressed and outcomes will also be reported to OER in daily reports. Notices to OER will include the nature of the complaint, the party providing the complaint, and the actions taken to resolve any problems.

5.13 Deviations from the Remedial Action Work Plan

All changes to the RAWP will be reported to the OER Project Manager and will be documented in daily reports and reported in the RAR. The process to be followed if there are any deviations from the RAWP will include a request for approval for the change from OER noting the following:

- Reasons for deviating from the approved RAWP;
- Effect of the deviations on overall remedy; and
- Determination that the remedial action with the deviation(s) is protective of public health and the environment.

7.0 REMEDIAL ACTION REPORT

A Remedial Action Report (RAR) will be submitted to OER following implementation of the remedial action defined in this RAWP. The RAR will document that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The RAR will include:

- Information required by this RAWP;
- As-built drawings for all constructed remedial elements, required certifications, manifests and other written and photographic documentation of remedial work performed under this remedy;
- SMP;
- Description of any changes in the remedial action from the elements provided in this RAWP and associated design documents;
- Tabular summary of all end point sampling results and all material characterization results, QA/QC results for end-point sampling, and other sampling and chemical analysis performed as part of the remedial action and data usability sampling report (DUSR);
- Account of the source area locations and characteristics of all contaminated material removed from the Site including a map showing source areas if present;
- Account of the disposal destination of all contaminated material removed from the Site. Documentation associated with disposal of all material will include transportation and disposal records, and letters approving receipt of the material.
- Continue registration of the property with an E-Designation at the NYC Department of Buildings.
- Reports and supporting material will be submitted in digital form.

Remedial Action Report Certification

The following certification will appear in front of the Executive Summary of the Remedial Action Report. The certification will include the following statements:

I, Mathew O'Neil, am currently a professional engineer licensed by the State of New York. I had primary direct responsibility for implementation of the remedial program for the 464 West 130th Street Site NYC BCP Number C224162.

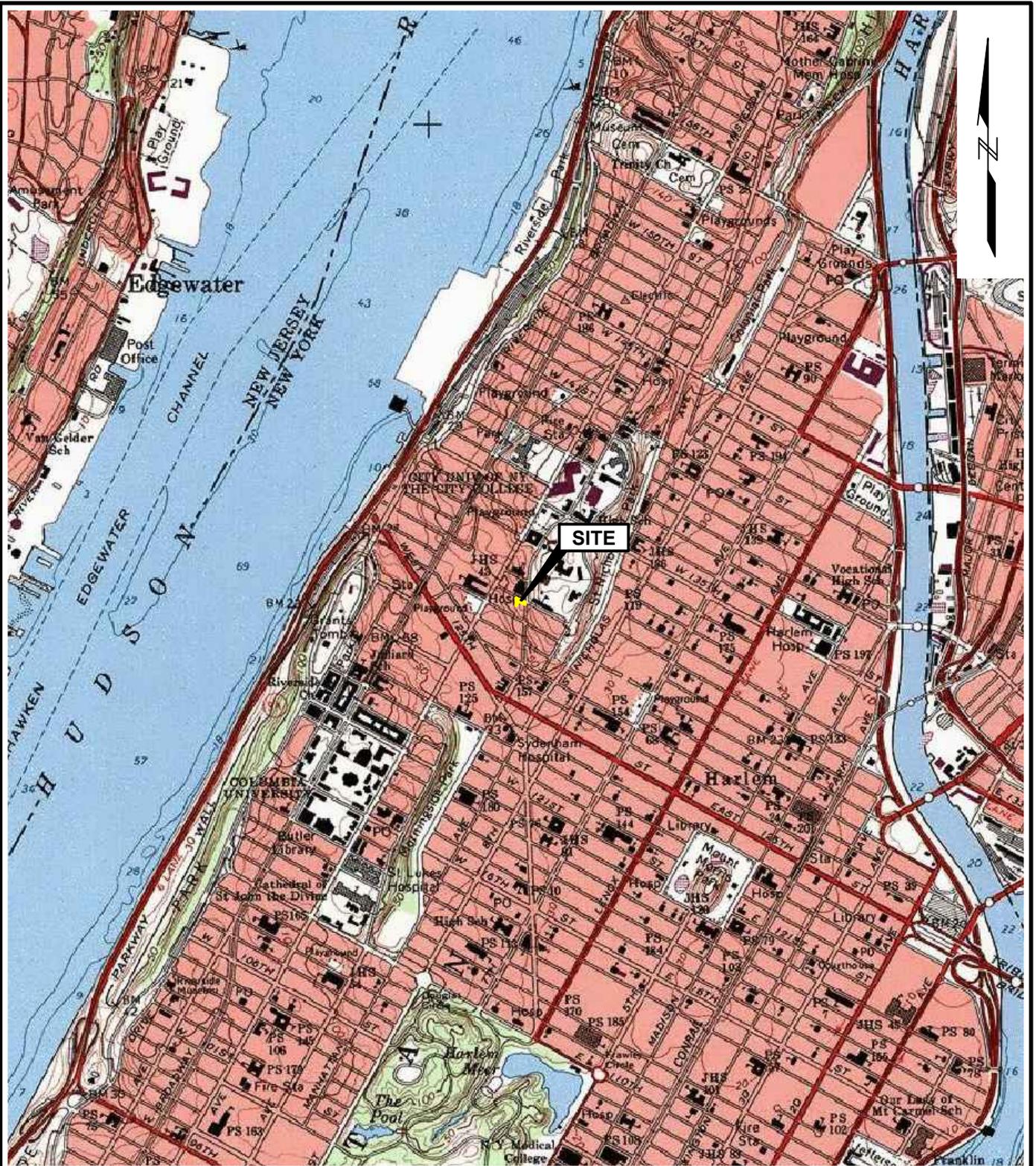
I certify that the OER-approved Remedial Action Work Plan dated month day year and Stipulations in a letter dated month day, year; if any were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

7.0 SCHEDULE

The table below presents a schedule for the proposed remedial action and reporting. If the schedule for remediation and development activities changes, it will be updated and submitted to OER. Currently, a two month remediation period is anticipated.

Schedule Milestone	Weeks from Remedial Action Start	Duration (weeks)
OER Approval of RAWP	0	-
Fact Sheet 2 announcing start of remedy	0	-
Mobilization	1	1
Remedial Excavation	3	4
Demobilization	1	5
Submit Remedial Action Report	3	8

Figures



SOURCE:

Map created with TOPO! © 2001 National Geographic
 (www.nationalgeographic.com/topo)

0 2000 4000



SCALE, FEET

SUBSURFACE INVESTIGATION
 WEST 130TH STREET
 NEW YORK, NEW YORK

BIG APPLE DEVELOPERS
 GREAT NECK, NEW YORK



SITE LOCATION MAP

Project 130030-1000

May 2013

Figure 1



SOURCES:

1. PHOTOGRAPH OBTAINED FROM GOOGLE™ EARTH PRO, ©2011 GOOGLE, IMAGERY DATE 06/02/2011, ACCESSED ON 04/25/2013.
2. SURVEY OF TAX BLOCK 1969, TAX LOT 68, CITY OF NEW YORK, COUNTY OF NEW YORK, BY MONTROSE SURVEYING CO., LLP., SCALE: 1" = 10', REV. DATE: 2/13/12.



SUBSURFACE INVESTIGATION
WEST 130TH STREET
NEW YORK, NEW YORK

BIG APPLE DEVELOPERS
GREAT NECK, NEW YORK

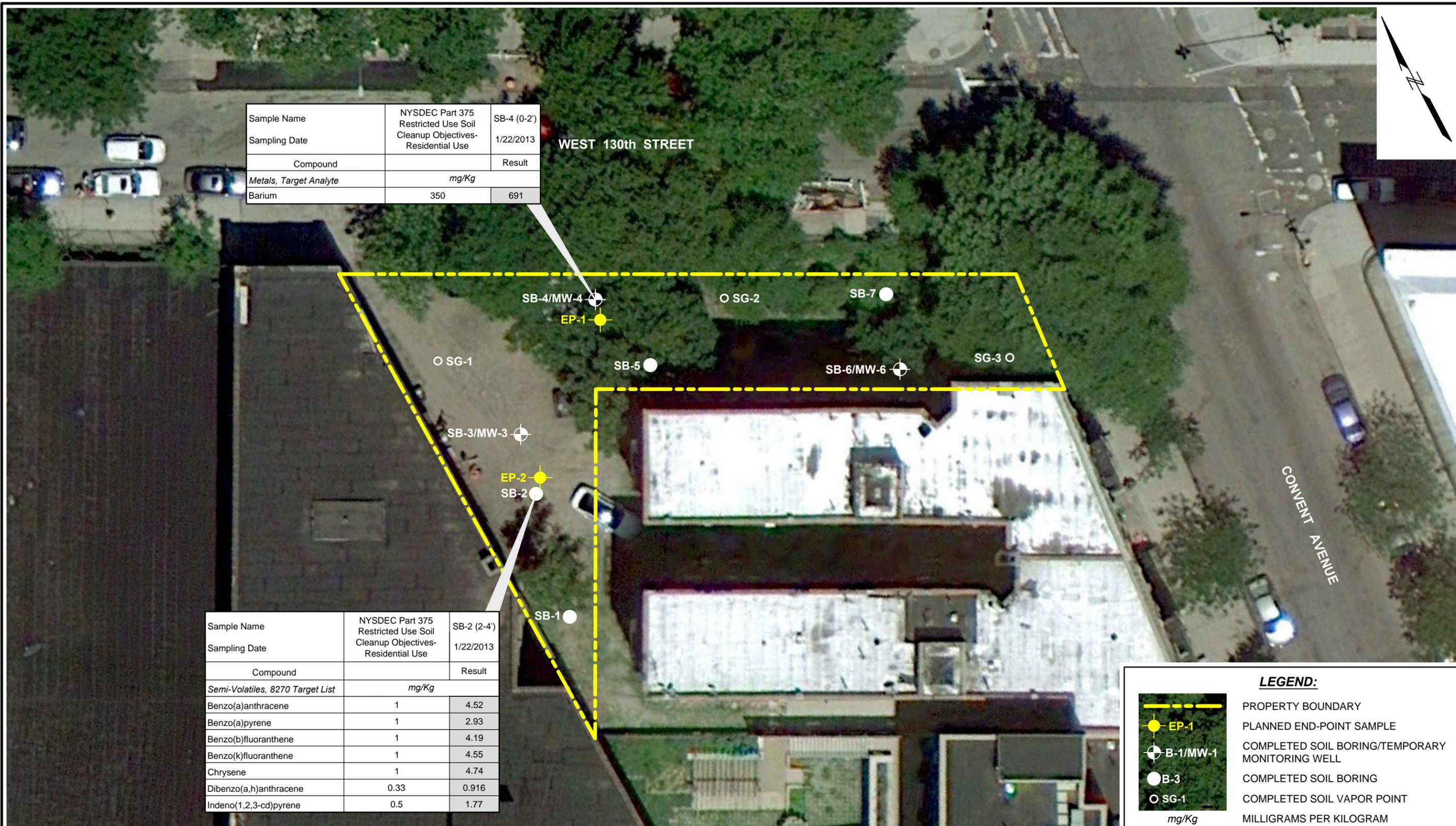


Project 130030-1000

SITE MAP

May 2013

Figure 2



Sample Name	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives- Residential Use	SB-4 (0-2')
Sampling Date		1/22/2013
Compound		Result
Metals, Target Analyte	mg/Kg	
Barium	350	691

Sample Name	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives- Residential Use	SB-2 (2-4')
Sampling Date		1/22/2013
Compound		Result
Semi-Volatiles, 8270 Target List	mg/Kg	
Benzo(a)anthracene	1	4.52
Benzo(a)pyrene	1	2.93
Benzo(b)fluoranthene	1	4.19
Benzo(k)fluoranthene	1	4.55
Chrysene	1	4.74
Dibenzo(a,h)anthracene	0.33	0.916
Indeno(1,2,3-cd)pyrene	0.5	1.77

LEGEND:

- PROPERTY BOUNDARY
- EP-1 PLANNED END-POINT SAMPLE
- B-1/MW-1 COMPLETED SOIL BORING/TEMPORARY MONITORING WELL
- B-3 COMPLETED SOIL BORING
- SG-1 COMPLETED SOIL VAPOR POINT

mg/Kg
MILLIGRAMS PER KILOGRAM

SOURCES:

1. PHOTOGRAPH OBTAINED FROM GOOGLE™ EARTH PRO, ©2011 GOOGLE, IMAGERY DATE 06/02/2011, ACCESSED ON 12/14/2012.
2. SURVEY OF TAX BLOCK 1969, TAX LOT 68, CITY OF NEW YORK, COUNTY OF NEW YORK, BY MONTROSE SURVEYING CO., LLP., SCALE: 1" = 10', REV. DATE: 2/13/12.



SUBSURFACE INVESTIGATION
WEST 130TH STREET
NEW YORK, NEW YORK

BIG APPLE DEVELOPERS
GREAT NECK, NEW YORK



**SAMPLE LOCATION MAP
AND ANALYTICAL SUMMARY**

Project 130030-1000

May 2013

Figure 3

Tables

Table 1
464 West 130th Street
Phase II Investigation
Soil Analytical Results

SampleID	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives- Residential Use	SB-1 (0-2')		SB-1 (2-4')		SB-2 (0-2')		SB-2 (2-4')		SB-3 (0-2')		SB-3 (8-10')		SB-4 (0-2')		SB-4 (7-9')		SB-5 (0-2')		SB-5 (4-6')		SB-6 (0-2')		SB-6 (6-8')		SB-7 (0-2')		SB-7 (6-8')			
		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013			
		S		S		S		S		S		S		S		S		S		S		S		S		S		S			
DilutionFactor		5		5		5		5		5		5		5		5		5		5		5		5		5		5			
RptUnits		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry			
Compound		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q										
Volatiles Organics, B260 List																															
1,1,1,2-Tetrachloroethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,1,1-Trichloroethane	100	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,1,2,2-Tetrachloroethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,1,2-Trichloroethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,1-Dichloroethane	19	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,1-Dichloroethylene	100	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,2-Dichloropropane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,2,3-Trichlorobenzene	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,2,3-Trichloropropane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,2,4-Trichlorobenzene	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,2,4-Trimethylbenzene	47	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,2-Dibromo-3-chloropropane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,2-Dibromoethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,2-Dichlorobenzene	100	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,2-Dichloroethane	23	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,2-Dichloropropane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,3,5-Trimethylbenzene	47	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,3-Dichlorobenzene	17	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,3-Dichloropropane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,4-Dichlorobenzene	9.8	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
1,4-Dioxane	9.8	0.0093	U	0.016	U	0.011	U	0.013	U	0.015	U	0.011	U	0.012	U	0.0097	U	0.0080	U	0.018	U	0.0070	U	0.013	U	0.0073	U	0.0090	U		
2,2-Dichloropropane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
2-Butanone	100	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
2-Chlorotoluene	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
4-Chlorotoluene	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Acetone	100	0.0019	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Benzene	2.9	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Bromobenzene	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Bromochloromethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Bromodichloromethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Bromoform	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Bromomethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Carbon tetrachloride	1.4	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Chlorobenzene	100	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Chloroethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Chloroform	10	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Chloromethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
cis-1,2-Dichloroethylene	59	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
cis-1,3-Dichloropropylene	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Dibromochloromethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U		
Dibromomethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022																	

Table 1
464 West 130th Street
Phase II Investigation
Soil Analytical Results

SampleID	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives- Residential Use	SB-1 (0-2')		SB-1 (2-4')		SB-2 (0-2')		SB-2 (2-4')		SB-3 (0-2')		SB-3 (8-10')		SB-4 (0-2')		SB-4 (7-9')		SB-5 (0-2')		SB-5 (4-6')		SB-6 (0-2')		SB-6 (6-8')		SB-7 (0-2')		SB-7 (6-8')			
		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013			
		S		S		S		S		S		S		S		S		S		S		S		S		S		S			
DilutionFactor		5		5		5		5		5		5		5		5		5		5		5		5		5		5			
RptUnits		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry			
Compound		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q										
Semi-Volatiles, 8270 Target List																															
1,2,4-Trichlorobenzene	--	0.517	U	0.544	U	0.107	U	0.515	U	0.109	U	0.0987	U	0.507	U	0.0952	U	0.0981	U	0.103	U	0.0990	U	0.535	U	0.0974	U	0.0955	U		
1,2-Dichlorobenzene	100	0.934	U	0.982	U	0.194	U	0.930	U	0.196	U	0.178	U	0.916	U	0.172	U	0.177	U	0.185	U	0.179	U	0.967	U	0.176	U	0.173	U		
1,3-Dichlorobenzene	17	0.451	U	0.475	U	0.0935	U	0.450	U	0.0948	U	0.0862	U	0.443	U	0.0831	U	0.0856	U	0.0896	U	0.0865	U	0.467	U	0.0850	U	0.0834	U		
1,4-Dichlorobenzene	9.8	0.880	U	0.925	U	0.182	U	0.876	U	0.185	U	0.168	U	0.863	U	0.162	U	0.167	U	0.175	U	0.169	U	0.911	U	0.166	U	0.163	U		
2,4,5-Trichlorophenol	--	1.11	U	1.17	U	0.230	U	1.10	U	0.233	U	0.212	U	1.09	U	0.204	U	0.210	U	0.220	U	0.212	U	1.15	U	0.209	U	0.205	U		
2,4,6-Trichlorophenol	--	0.726	U	0.763	U	0.150	U	0.723	U	0.152	U	0.138	U	0.712	U	0.134	U	0.138	U	0.144	U	0.139	U	0.751	U	0.137	U	0.134	U		
2,4-Dichlorophenol	--	1.17	U	1.23	U	0.241	U	1.16	U	0.245	U	0.222	U	1.14	U	0.215	U	0.221	U	0.231	U	0.223	U	1.21	U	0.220	U	0.215	U		
2,4-Dimethylphenol	--	1.00	U	1.05	U	0.207	U	0.996	U	0.210	U	0.191	U	0.981	U	0.184	U	0.190	U	0.199	U	0.192	U	1.03	U	0.188	U	0.185	U		
2,4-Dinitrophenol	--	1.20	U	1.26	U	0.249	U	1.20	U	0.252	U	0.229	U	1.18	U	0.221	U	0.228	U	0.238	U	0.230	U	1.24	U	0.226	U	0.222	U		
2,5-Dinitrotoluene	--	0.631	U	0.664	U	0.131	U	0.629	U	0.133	U	0.121	U	0.619	U	0.116	U	0.120	U	0.125	U	0.121	U	0.653	U	0.119	U	0.117	U		
2,6-Dinitrotoluene	--	0.734	U	0.772	U	0.150	U	0.731	U	0.154	U	0.140	U	0.720	U	0.135	U	0.139	U	0.146	U	0.141	U	0.760	U	0.138	U	0.136	U		
2-Chloronaphthalene	--	0.771	U	0.811	U	0.160	U	0.768	U	0.162	U	0.147	U	0.756	U	0.142	U	0.146	U	0.153	U	0.148	U	0.798	U	0.145	U	0.142	U		
2-Chlorophenol	--	0.471	U	0.496	U	0.0976	U	0.469	U	0.0990	U	0.0900	U	0.462	U	0.0868	U	0.0894	U	0.0936	U	0.0903	U	0.488	U	0.0888	U	0.0871	U		
2-Methylnaphthalene	--	1.10	U	1.15	U	0.227	U	1.09	U	0.230	U	0.209	U	1.08	U	0.202	U	0.208	U	0.218	U	0.210	U	1.14	U	0.207	U	0.203	U		
2-Methylphenol	100	0.543	U	0.571	U	0.112	U	0.541	U	0.114	U	0.104	U	0.532	U	0.0999	U	0.103	U	0.108	U	0.104	U	0.562	U	0.102	U	0.100	U		
2-Nitroaniline	--	1.25	U	1.31	U	0.258	U	1.24	U	0.262	U	0.238	U	1.22	U	0.229	U	0.236	U	0.247	U	0.239	U	1.29	U	0.235	U	0.230	U		
2-Nitrophenol	--	0.389	U	0.409	U	0.0805	U	0.387	U	0.0816	U	0.0742	U	0.381	U	0.0715	U	0.0737	U	0.0771	U	0.0744	U	0.402	U	0.0732	U	0.0718	U		
3,3'-Dichlorobenzidine	--	0.749	U	0.787	U	0.155	U	0.745	U	0.157	U	0.143	U	0.734	U	0.138	U	0.142	U	0.149	U	0.143	U	0.775	U	0.141	U	0.138	U		
3- & 4-Methylphenols	--	0.620	U	0.652	U	0.128	U	0.617	U	0.130	U	0.118	U	0.608	U	0.114	U	0.118	U	0.123	U	0.119	U	0.642	U	0.117	U	0.114	U		
3-Nitroaniline	--	1.42	U	1.49	U	0.294	U	1.41	U	0.298	U	0.271	U	1.39	U	0.261	U	0.269	U	0.282	U	0.272	U	1.47	U	0.267	U	0.262	U		
4,6-Dinitro-2-methylphenol	--	1.80	U	1.89	U	0.373	U	1.79	U	0.378	U	0.344	U	1.77	U	0.331	U	0.341	U	0.357	U	0.345	U	1.86	U	0.339	U	0.332	U		
4-Bromophenyl phenyl ether	--	0.689	U	0.724	U	0.143	U	0.686	U	0.145	U	0.131	U	0.675	U	0.127	U	0.131	U	0.137	U	0.132	U	0.713	U	0.130	U	0.127	U		
4-Chloro-3-methylphenol	--	0.963	U	1.01	U	0.199	U	0.959	U	0.202	U	0.184	U	0.944	U	0.177	U	0.183	U	0.191	U	0.184	U	0.996	U	0.181	U	0.178	U		
4-Chloroaniline	--	0.391	U	0.391	U	0.0769	U	0.370	U	0.0780	U	0.0709	U	0.364	U	0.0684	U	0.0705	U	0.0737	U	0.0711	U	0.384	U	0.0700	U	0.0686	U		
4-Chlorophenyl phenyl ether	--	0.837	U	0.880	U	0.173	U	0.834	U	0.176	U	0.160	U	0.821	U	0.154	U	0.159	U	0.166	U	0.160	U	0.866	U	0.158	U	0.155	U		
4-Nitroaniline	--	0.591	U	0.622	U	0.122	U	0.589	U	0.124	U	0.113	U	0.580	U	0.109	U	0.112	U	0.117	U	0.113	U	0.612	U	0.111	U	0.109	U		
4-Nitrophenol	--	0.537	U	0.565	U	0.111	U	0.535	U	0.113	U	0.103	U	0.527	U	0.0989	U	0.102	U	0.107	U	0.103	U	0.556	U	0.101	U	0.0992	U		
Acenaphthene	100	0.517	U	0.544	U	0.107	U	0.519	U	0.109	U	0.0987	U	0.507	U	0.0952	U	0.0981	U	0.103	U	0.0990	U	0.535	U	0.0974	U	0.0955	U		
Acenaphthylene	100	0.686	U	0.721	U	0.142	U	0.683	U	0.144	U	0.131	U	0.672	U	0.126	U	0.130	U	0.136	U	0.131	U	0.710	U	0.129	U	0.127	U		
Aniline	--	0.817	U	0.859	U	0.169	U	0.814	U	0.172	U	0.156	U	0.801	U	0.150	U	0.155	U	0.162	U	0.156	U	0.846	U	0.154	U	0.151	U		
Anthracene	100	0.780	U	0.820	U	0.162	U	1.23	U	0.164	U	0.149	U	0.765	U	0.144	U	0.148	U	0.155	U	0.149	U	0.807	U	0.147	U	0.144	U		
Benzo(a)anthracene	1	0.534	U	0.562	U	0.111	U	4.52	U	0.194	U	0.128	U	0.524	U	0.0983	U	0.101	U	0.106	U	0.102	U	0.553	U	0.101	U	0.0987	U		
Benzo(a)pyrene	1	0.566	U	0.595	U	0.117	U	2.93	U	0.186	U	0.153	U	0.555	U	0.104	U	0.107	U	0.166	U	0.108	U	0.585	U	0.107	U	0.104	U		
Benzo(b)fluoranthene	1	1.20	U	1.26	U	0.248	U	4.19	U	0.251	U	0.228	U	1.17	U	0.220	U	0.227	U	0.238	U	0.229	U	1.24	U	0.225	U	0.221	U		
Benzo(g,h,i)perylene	100	0.474	U	0.499	U	0.0982	U	1.97	U	0.115	U	0.122	U	0.465	U	0.0873	U	0.0900	U	0.0942	U	0.0908	U	0.491	U	0.0893	U	0.0876	U		
Benzo(k)fluoranthene	1	1.43	U	1.50	U	0.296	U	4.55	U	0.300	U	0.273	U	1.40	U	0.263	U	0.271	U	0.284	U	0.274	U	1.48	U	0.269	U	0.264	U		
Benzyl alcohol	--	1.43	U	1.50	U	0.296	U	1.42	U	0.300	U	0.273	U	1.40	U	0.263	U	0.271	U	0.284	U	0.274	U	1.48	U	0.269	U	0.264	U		
Benzyl butyl phthalate	--	0.789	U	0.829	U	0.163	U	0.785	U	0.166	U	0.150	U	0.773	U	0.145	U	0.150	U	0.157	U	0.151	U	0.816	U	0.149	U	0.146	U		
Bis(2-chloroethoxy)methane	--	0.491	U	0.512	U	0.102	U	0.489	U	0.103	U	0.0938	U	0.482	U	0.0904	U	0.0932	U	0.0976	U	0.0941	U	0.509	U	0.0926	U	0.0907	U		
Bis(2-chloroethyl)ether	--	0.729	U	0.766	U	0.151	U	0.726	U	0.153	U	0.139	U	0.714	U	0.134	U	0.138	U	0.145	U	0.140	U	0.754	U	0.137	U	0.135	U		
Bis(2-chloroisopropyl)ether	--	0.503	U	0.529	U	0.104	U	0.501	U	0.106	U	0.0960	U	0.493	U	0.0925	U	0.0954	U	0.0998	U	0.0963	U	0.520	U	0.0947	U	0.0929	U		
Bis(2-ethylhexyl)phthalate	--	0.986	U	1.04	U	0.204	U	0.982	U	0.207	U	0.188	U	0.967	U	0.181	U	0.187	U	0.196	U	0.189	U	1.02	U	0.186	U	0.182	U		
Chrysene	1	0.657	U	0.691	U	0.136	U	4.74	U	0.206	U	0.132	U	0.644	U	0.121	U	0.125	U	0.130	U	0.126	U	0.680	U	0.124	U	0.121	U		
Di-n-butyl phthalate	--	0.580	U	0.610	U	0.120	U	0.578	U	0.122	U	0.111	U	0.569	U	0.107	U	0.110	U	0.115	U	0.111	U	0.600	U	0.109					

Table 1
464 West 130th Street
Phase II Investigation
Soil Analytical Results

SampleID	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives- Residential Use	SB-1 (0-2')		SB-1 (2-4')		SB-2 (0-2')		SB-2 (2-4')		SB-3 (0-2')		SB-3 (8-10')		SB-4 (0-2')		SB-4 (7-9')		SB-5 (0-2')		SB-5 (4-6')		SB-6 (0-2')		SB-6 (6-8')		SB-7 (0-2')		SB-7 (6-8')			
		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013			
		5		5		5		5		5		5		5		5		5		5		5		5		5		5			
DilutionFactor		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry			
RptUnits	mg/Kg	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q										
Pesticides/PCBs, EPA 8081/8082 List																															
4,4'-DDD	2.6	0.00206	D	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
4,4'-DDE	1.8	0.00678	D	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
4,4'-DDT	1.7	0.0403	D	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	D	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Aldrin	0.019	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
alpha-BHC	0.097	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Aroclor 1016	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U		
Aroclor 1221	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U		
Aroclor 1232	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U		
Aroclor 1242	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U		
Aroclor 1248	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U		
Aroclor 1254	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U		
Aroclor 1260	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U		
beta-BHC	0.072	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Chlordane, total	--	0.0267	D	0.00793	U	0.00781	U	0.00751	U	0.00792	U	0.00720	U	0.00740	U	0.00694	U	0.00715	U	0.00749	U	0.00722	U	0.00781	U	0.00710	U	0.00696	U		
delta-BHC	100	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Dieldrin	0.039	0.00242	D	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Endosulfan I	4.8	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Endosulfan II	4.8	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Endosulfan sulfate	4.8	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Endrin	2.2	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Endrin aldehyde	--	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Endrin ketone	--	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
gamma-BHC (Lindane)	0.28	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Heptachlor	0.42	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Heptachlor epoxide	--	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U		
Methoxychlor	--	0.00943	U	0.00991	U	0.00976	U	0.00939	U	0.00990	U	0.00900	U	0.00925	U	0.00868	U	0.00894	U	0.00936	U	0.00903	U	0.00976	U	0.00888	U	0.00871	U		
Total PCBs	1	0.00777	U	0.00817	U	0.00805	U	0.00774	U	0.00816	U	0.00742	U	0.00762	U	0.00715	U	0.00737	U	0.00771	U	0.00744	U	0.00804	U	0.00732	U	0.00718	U		
Toxaphene	--	0.0954	U	0.100	U	0.0988	U	0.0950	U	0.100	U	0.0911	U	0.0936	U	0.0878	U	0.0905	U	0.0947	U	0.0914	U	0.0988	U	0.0899	U	0.0881	U		
Metals, Target Analyte																															
Aluminum	--	4710		2830		3790		6210		3480		10100		6040		16900		6580		2890		5740		3890		6090		13800			
Antimony	--	0.750		4.79		0.260	U	1.20		0.264	U	0.240	U	0.247	U	0.231	U	0.238	U	0.250	U	0.241	U	0.260	U	0.237	U	0.232	U		
Arsenic	16	7.01		8.14		10.5		11.0		4.86		4.23		4.88		4.12		2.52		3.57		2.02		4.24		1.93		1.76			
Barium	350	287		191		56.5		339		86.7		691		223		50.5		87.0		51.2		121		42.1		123					
Beryllium	14	0.114	U	0.120	U	0.118	U	0.114	U	0.120	U	0.109	U	0.112	U	0.105	U	0.108	U	0.113	U	0.109	U	0.118	U	0.108	U	0.106	U		
Cadmium	2.5	0.587	U	0.120	U	0.118	U	0.114	U	0.120	U	0.109	U	0.112	U	0.105	U	0.108	U	0.113	U	0.109	U	0.118	U	0.108	U	0.106	U		
Calcium	--	5900		5030		24600		3350		2310		2260		7540		1470		2710		2840		2960		2150		1430		10600			
Chromium	--	11.4		19.1		20.6		6.10		18.1		13.3		26.5		12.6		6.62		11.7		8.55		10.6		20.1					
Cobalt	--	5.27		4.75		5.64		5.86		6.39		9.29		7.53		5.42		5.26		5.33		6.55		5.65		18.0					
Copper	270	40.1		35.3		62.1		54.4		20.4		25.8		33.2		13.0		30.8		13.3		35.2		11.8		13.8					
Iron	--	6830		11800		8330		12600		5430		17000		11700		33600	E	12100		7050		11500		11400		13000		21400</			

Table 2
464 West 130th Street
Phase II Investigation
Soil Vapor Analytical Results

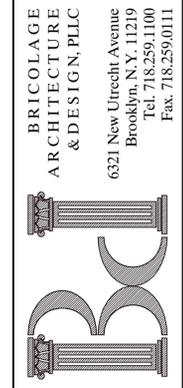
SampleID	SG-1		SG-2		SG-3	
Sampling Date	1/22/2013		1/22/2013		1/22/2013	
DilutionFactor	1.909		1.625		1.826	
Matrix	Soil Vapor		Soil Vapor		Soil Vapor	
RptUnits	ug/m ³		ug/m ³		ug/m ³	
Compound	Result	Q	Result	Q	Result	Q
Volatile Organics, EPA TO15 Full List						
1,1,1-Trichloroethane	1.1	U	0.90	U	1.0	U
1,1,2-Tetrachloroethane	1.3	U	1.1	U	1.3	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1.5	U	1.3	U	1.4	U
1,1,2-Trichloroethane	1.1	U	0.90	U	1.0	U
1,1-Dichloroethane	0.79	U	0.67	U	0.75	U
1,1-Dichloroethylene	0.77	U	0.66	U	0.74	U
1,2,4-Trichlorobenzene	1.4	U	1.2	U	1.4	U
1,2,4-Trimethylbenzene	0.95	U	0.81	U	0.91	U
1,2-Dibromoethane	1.5	U	1.3	U	1.4	U
1,2-Dichlorobenzene	1.2	U	0.99	U	1.1	U
1,2-Dichloroethane	0.79	U	0.67	U	0.75	U
1,2-Dichloropropane	0.90	U	0.76	U	0.86	U
1,2-Dichlorotetrafluoroethane	1.4	U	1.2	U	1.3	U
1,3,5-Trimethylbenzene	0.95	U	0.81	U	0.91	U
1,3-Butadiene	0.84	U	0.72	U	0.81	U
1,3-Dichlorobenzene	1.2	U	0.99	U	1.1	U
1,4-Dichlorobenzene	1.2	U	0.99	U	1.1	U
1,4-Dioxane	0.70	U	0.60	U	0.67	U
2-Butanone	0.57	U	0.49	U	0.55	U
2-Hexanone	0.80	U	0.68	U	0.76	U
4-Methyl-2-pentanone	0.80	U	0.68	U	0.76	U
Acetone	20	D	3.6	D	4.0	D
Benzene	6.7	D	1.3	D	0.59	U
Benzyl chloride	1.0	U	0.86	U	0.96	U
Bromodichloromethane	1.2	U	1.0	U	1.2	U
Bromoform	2.0	U	1.7	U	1.9	U
Bromomethane	0.75	U	0.64	U	0.72	U
Carbon disulfide	0.60	U	3.0	D	9.5	D
Carbon tetrachloride	0.61	U	0.52	U	0.58	U
Chlorobenzene	0.89	U	0.76	U	0.85	U
Chloroethane	0.51	U	0.44	U	0.49	U
Chloroform	0.95	U	0.81	U	0.91	U
Chloromethane	0.40	U	0.34	U	0.38	U
cis-1,2-Dichloroethylene	0.77	U	0.66	U	0.74	U
cis-1,3-Dichloropropylene	0.88	U	0.75	U	0.84	U
Cyclohexane	0.67	U	0.57	U	0.64	U
Dibromochloromethane	1.6	U	1.3	U	1.5	U
Dichlorodifluoromethane	0.96	U	0.82	U	0.92	U
Ethyl acetate	0.70	U	0.60	U	0.67	U
Ethyl Benzene	0.84	U	0.72	U	0.81	U
Hexachlorobutadiene	2.1	U	1.8	U	2.0	U
Isopropanol	0.48	U	0.41	U	0.46	U
Methyl Methacrylate	0.79	U	0.68	U	0.76	U
Methyl tert-butyl ether (MTBE)	0.70	U	0.59	U	0.67	U
Methylene chloride	0.67	U	0.57	U	0.97	D
n-Heptane	0.80	U	0.68	U	0.76	U
n-Hexane	0.68	U	1.2	D	0.65	U
o-Xylene	0.84	U	0.72	U	0.81	U
p- & m- Xylenes	0.84	U	0.72	U	1.2	D
p-Ethyltoluene	4.8	U	4.1	U	4.6	U
Propylene	0.33	U	0.28	U	0.32	U
Styrene	0.83	U	0.70	U	0.79	U
Tetrachloroethylene	2.2	D	1.1	U	1.3	U
Tetrahydrofuran	0.57	U	0.49	U	0.55	U
Toluene	22	D	3.7	D	7.4	D
trans-1,2-Dichloroethylene	0.77	U	0.66	U	0.74	U
trans-1,3-Dichloropropylene	0.88	U	0.75	U	0.84	U
Trichloroethylene	0.52	U	0.44	U	0.50	U
Trichlorofluoromethane (Freon 11)	1.1	U	1.4	D	1.0	U
Vinyl acetate	0.68	U	0.58	U	0.65	U
Vinyl Chloride	0.50	U	0.42	U	0.47	U

NOTES:

Q is the Qualifier Column with definitions as follows:
 U=analyte not detected at or above the level indicated
 D=result is from an analysis that required a dilution

Appendix 1
Proposed Development Plans

CONVENT AVENUE



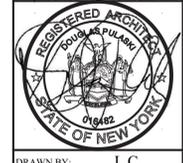
BRICOLAGE ARCHITECTURE & DESIGN, PLLC
 6321 New Utrecht Avenue
 Brooklyn, N.Y. 11219
 Tel: 718.259.1100
 Fax: 718.259.0111

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR THE CONSTRUCTION OF THE WORK UNLESS HE OR SHE HAS REVIEWED THE TECHNICAL SPECIFICATIONS OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. FOR THE ACTS OR OMISSIONS OF THE PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE RESPONSIBLE AS SHOWN. DRAWINGS ARE NOT TO BE SCALED.

Cover Sheet
 Proposed New Building, Seventh (7) Story & Cellar,
 Thirty (30) Family Dwelling, Located @ Convent
 Avenue, Manhattan, N.Y.

Client:
 Dorovan Haslam
 APPROVED Under Directive of 3/75
 Date: Dec 11, 2012 - 10:57 AM
 NYC Development Hub

REVISIONS:



DRAWN BY: L.C.
 PROJECT No.: 12-107
 DATE: 04-05-12
DRAWING No.:
A000.00
 OF

ABBREVIATIONS

& L @	AND ANGLE AT CENTERLINE FOUND OR NUMBER PROPERTY LINE	E.	EAST	KIT.	KITCHEN
ACC.	AIR CONDITIONING ACCESSORY	EA.	EACH	KIT'TE	KITCHENETTE
ACT.	ACOUSTICAL CEILING TILE	E.I.F.S.	EXT. INSUL. & FINISH SYSTEM	L.	LENGTH
ADJ.	ADJUSTABLE	E.J.	EXPANSION JOINT	LAM.	LAMINATE
A.F.F.	ABOVE FINISHED FLOOR	ELEV.	ELEVATION	LAV.	LAVATORY
ALUM.	ALUMINUM	ELEC.	ELECTRIC	LNDRY.	LAUNDRY
ALLOW.	ALLOWABLE	EMER.	EMERGENCY	L.P.	LOW POINT
APPL.	APPLICATION	ENCL.	ENCLOSURE	LTG.	LIGHTING
APPRX.	APPROXIMATE	EQ.	EQUAL	M.	MEN
ARCH.	ARCHITECTURAL	EQPT.	EQUIPMENT	MAS.	MASONRY
ASPH.	ASPHALT	E.U.	EXIT UNIT(S)	MAT.	MATERIAL
B.	BOILER	E.W.	EACH WAY	MAX.	MAXIMUM
B.C.	BOTTOM OF CURB BOARD	E.W.C.	ELECTRIC WATER COOLER	MECH.	MECHANICAL
BD.	BITUMINOUS	EXH.	EXHAUST	MED.	MEDIUM
BLDG.	BUILDING	EXP.	EXPANSION	MEMB.	MEMBRANE
BLK.	BLOCK	EXPO.	EXPOSED	MET.	METAL
BLKG.	BLOCKING	EXT.	EXISTING	MFG.	MANUFACTURER
BM.	BEAM	EXT.	EXTERIOR	MIN.	MINIMUM
BOT.	BOTTOM	F.	FLUSH	MISC.	MISCELLANEOUS
B.O.	BOTTOM OF BEARING	FABR.	FABRICATOR / FABRICATED	M.O.	MASONRY OPENING
BRG.	BETWEEN BUILT-UP ROOFING	F.C.	FURRING CHANNEL	M.R.	MARBLE SADDLE
B.U.R.		F.D.	FLOOR DRAIN	M.S.	MOUNTED
CT	CERAMIC TILE CABINET	FDN.	FOUNDATION	MTG.	MOUNTING
CAB.	CANTILEVER	F.E.	FIRE ESCAPE	MTL.	METAL
C.B.	CATCH BASIN	F/E	FIRE EXTINGUISHER	MTL.S.	METAL SADDLE
CEIL'G	CEILING	F.E.C.	FIRE EXTINGUISHER CABINET	N.	NORTH
CEM.	CEMENT	FIN.	FINISH	N. & FS.	NEAR AND FAR SIDE
CER.	CERAMIC	FL.	FLOOR	N.I.C.	NOT IN CONTRACT
C.F.	COLD FORMED	FLASH.	FLASHING	NO. or #	NUMBER
C.G.	CORNER GUARD	FLUOR.	FLUORESCENT	NOM.	NOMINAL
C.I.	CAST IRON	F.O.(XX)	FACE OF (XX)	N.T.S.	NOT TO SCALE
C.J.	CONTROL JOINT	F.O.C.	FACE OF CONCRETE	O.A.	OVER ALL
CL'G.	CAULKING	F.O.F.	FACE OF FINISH	OBS.	OBSCURE
CLR.	CLEAR	F.O.M.	FACE OF MASONRY	O.C.	ON CENTER
CMU	CONCRETE MASONRY UNIT	F.O.S.	FACE OF STUDS	OCC.	OCCUPANT(S)
CNTR.	COUNTER	F.P.S.C.	FIRE PROOF SELF CLOSING	O.D.	OUTSIDE DIMENSION
C.O.	CASED OPENING	FR.TR.	FIRE-RETARDANT TREATED	O.H.	OVER HANG
COL.	COLUMN	F.S.	FIBER STRENGTH	OPEN'G	OPENING
CONC.	CONCRETE	FT.	FOOT OF FEET	OPP.	OPPOSITE
CONN.	CONNECTION	FTG.	FOOTING	PLT.	PLATE
CONST.	CONSTRUCTION	FURR.	FURRING	PARTN.	PARTITION
CONT.	CONTINUOUS	GA.	GAUGE	P.L.	PROPERTY LINE
CORR.	CORRIDOR	GALV.	GALVANIZED	PL.LAM.	PLASTIC LAMINATE
CTR.	CENTER	G.C.	GENERAL CONTRACTOR	PLAS.	PLASTER
CTSCK.	COUNTERSUNK COLD WATER	G.G.	GRADE	PLMB.	PLUMBING
C.W.		I.G.	GLASS	PLYVD.	PLYWOOD
D.	DEPTH	G.R.	GYP'SUM WALL BOARD	P.O.C.	POINT OF CONNECTION
DBL.	DOUBLE	G.W.B.	GYP'SUM BOARD	P	4"x4" POST
DEPT.	DEPARTMENT	H.R.	HOSE BIBB	PP	4"x6" POST
D.F.	DRINKING FOUNTAIN	H.C.	HOLLOW CORE	PR.	PAIR
DET.	DETAIL	HD.	HOOD	PRCST.	PRE-CAST
DIA.	DIAMETER	H.D.	HEAVY DUTY	PRTR.	PRESSURE TREATED
DIM.	DIMENSION	HDR.	HEADER	P.S.F.	POUNDS/ SQ. FEET
DISP.	DISPENSER	HDWD.	HARDWOOD	P.S.I.	POUNDS/ SQ. INCHES
DN.	DOWN	HDWE.	HARDWARE	P/T	PRESSURE TREATED
D.O.	DOOR OPENING	H.M.	HOLLOW METAL	PT.	POINT
DR.	DOOR	HORIZ.	HORIZONTAL	PTD.	PAINTED
DS.	DOWNSPOUT	H.P.	HIGH POINT	P.V.C.	POLYVINYL CHLORIDE
DWG.	DRAWING	HR.	HOUR	Q.T.	QUARRY TILE
DWR.	DRAWER	H.S.S.	HOLLOW STEEL SECTION	QTR.	QUARTER
DURO.	DURANODIC	HT.	HEIGHT		
		HVAC.	HEATG. VENTILAT'G & AIR COND.		
		H.W.	HOT WATER		
		H.W.H.	HOT WATER HEATER		
		I.D.	INSIDE DIMENSION		
		I.G.	INSULATING GLASS		
		INFO.	INFORMATION		
		INSUL.	INSULATION		
		INT.	INTERIOR		
		INV.	INVERT		
		JAN.	JANITOR		
		JT.	JOINT		

SYMBOLS

	EQUIPMENT		RISER
	PLAN NOTE		RADIUS
	WALL TYPE		ROOF DRAIN
	DOOR TYPE		RECEPTACLE
	ROOM No.		REFERENCE
	WINDOW TYPE		REFRIGERATOR
	REVISIONS		REINFORCED REQUIRED
	ELEVATIONS		RESILIENT
	SECTION		RETAINING ROOM
	DETAIL		ROUND
	ELEVATION HEIGHT		ROUGH OPENING
	APPROVED TYPE EXIT LIGHT AND SIGN		ROOF TOP HVAC UNITS
	APPROVED DIRECTIONAL TYPE EXIT LIGHT AND SIGN		RAINWATER CONDUCTOR
	DENOTES U.L. LISTED HARD WIRED SMOKE & CARBON MONOXIDE DETECTOR		SOUTH
	DENOTES MIN 50cfm (2cfm /sq.ft. min. for Kitchette) EXHAUST FAN DUCTED TO OUT DOORS PROVIDE FUSIBLE-LINK FIRE DAMPER WHERE EXHAUST DUCTS PASS THRU RATED CONSTRUCTION		SELF CLOSING SOLID CORE
	2" DIA. FLOOR DRAIN		SCHEDULE(D)
	3" DIA. AREA DRAIN		SECTION
	DENOTES APPROVED TYPE PENDANT TYPE SPRINKLER HEAD MEA NO. 354-01-E, CENTRAL SPRINKLER		SHEET
			SIMILAR
			SAWCUT JOINT
			SPECIFICATION
			SPECIFIED (SECTION)
			STAINLESS STEEL
			STANDPARD
			STEEL
			STORAGE
			STRUCTURAL
			SUSPENDED
			TOP AND BOTTOM
			TOP OF CURB
			TELEPHONE
			TONGUE AND GROOVE
			TEMPERED GLASS
			THICK
			THRESHOLD
			TEMPERED INSULATING GLASS
			TOP OF
			TOP OF SLAB
			TOP OF PAVEMENT
			TUBE STEEL
			TELEVISION
			TOP OF WALL
			TYPICAL
			UNFINISHED UNDERGROUND
			UNLESS OTHERWISE NOTED
			URINAL
			VINYL COMPOSITION TILE
			VERTICAL VESTIBULE
			VERIFY IN FIELD
			VENT THRU ROOF
			VINYL WALL COVERING
			WEST
			WITH
			WATER CLOSET
			WOOD
			WOOD SADDLE
			WIDTH
			WALK IN CLOSET
			WITHOUT
			WOMEN
			WATERPROOF
			WAINSCOT
			WEIGHT
			WELDED WIRE MESH

DRAWING LIST

A000	- COVER SHEET
Z001	- VICINITY MAP, ZONING COMPUTATION AND PLOT PLAN
A002	- FLOOR AREA CALCULATIONS
A003	- DEDUCTIONS CALCULATIONS
A004	- GENERAL NOTES
A005	- GENERAL NOTES
A006	- COMCHECK
A007	- HEIGHT & SETBACK DIAGRAM
A100	- CELLAR FLOOR PLAN
A101	- BASEMENT FLOOR PLAN
A102	- FIRST FLOOR PLAN
A103	- SECOND THRU FIFTH FLOOR PLAN
A104	- SIXTH FLOOR PLAN
A105	- ROOF PLAN & BULKHEAD
A200	- BUILDING ELEVATION
A201	- BUILDING ELEVATION
A202	- BUILDING ELEVATION
A300	- BUILDING SECTION
A400	- WALL TYPE DETAILS
A401	- WALL SECTION DETAILS
A402	- H.C. ACCESSIBILITY DETAILS
A403	- H.C. ACCESSIBILITY DETAILS
A404	- D.O.T. DETAILS
A500	- RISER DIAGRAMS & SCHEDULES

LEGEND

	DENOTES 4 HOUR RATED 12" THICK CONCRETE FOUNDATION WALL SEE WALL DETAIL F4 ON PAGE A400.
	DENOTES EXTERIOR WALL CONSTRUCTED OF 6" 16 GA. MTL. STUDS @ 16" O.C. WITH 1 LAYER 5/8" TYPE 'x' G.W.B ON THE INTERIOR SIDE & 1/2" CEMENT BOARD ON EXTERIOR W/ 4 " BRICK VENEER OVER PROVIDE GALV. DRIP TIES @ 16" O.C. BOTH WAYS ATTACHED TO STUDS W/APPROVED TYPE GALV. SCREWS. SEE WALL DETAIL W11 ON PAGE 400.
	DENOTES EXTERIOR WALL CONSTRUCTED OF 6" 16 GA. MTL. STUDS @ 16" O.C. WITH 1 LAYER 5/8" TYPE 'x' G.W.B ON THE INTERIOR SIDE & ONE LAYER 1/2" DUROCK CEMENT BOARD ON EXTERIOR W/ R 21 BATT INSULATION THROUGHOUT STUD CAVITIES & PROVIDE FURRED-OUT FRAMING AS NECESSARY & THREE STEP STUCCO FINISH OVER WIRE MESH TO MEET BRICK VENEER @ FIRST FLOOR. SEE WALL DETAIL W12 PAGE A400.
	DENOTES MASONRY BEARING WALL. SEE WALL DETAIL W9 ON PAGE A400.
	DENOTES UNFINISHED MASONRY BEARING WALL. SEE WALL DETAIL W10 ON PAGE A400.
	DENOTES STUCCO OVER MASONRY BEARING WALL. SEE WALL DETAIL W15 ON PAGE A400.
	DENOTES STUCCO OVER INSULATED MASONRY BEARING WALL. SEE WALL DETAIL W17 ON PAGE A400.
	DENOTES NON-RATED NON BEARING PARTITION CONSTRUCTED OF 2" X 4" METAL STUDS @ 16" O.C. WITH 1 LAYER 5/8" G.W.B EACH SIDE. IN WET AREAS BATH, KITCHEN AND LAUNDRY USE M.R. G.W.B.(GA FILE#: WP 1200). SEE WALL DETAIL P5 ON PAGE A400.
	DENOTES 2 HR. FIRE RATED SOUNDPROOF DRYWALL ASSEMBLY (MASONRY EQUIVALENT). SEE WALL DETAIL P21 ON PAGE A400.

ZONING CALCULATIONS

FAR - FLOOR AREA RATIO DU - DWELLING UNIT
 LC - LOT COVERAGE RES - RESIDENTIAL
 ITALICS = DOES NOT COUNT AS F.A.

ZONE:	R7A (Quality Housing)
MA.P.:	6a
BLOCK:	1969
LOT:	68

LOT AREA COMPUTATION	PROJECT	12-107
LOT AREA AS PER ZR 23-145 (CORNER LOT)		2,734.64 SF
LOT AREA AS PER ZR 23-145 (INTERIOR LOT)		2,406.46 SF
TOTAL		5,141.10 SF

Note: See Architectural Dwg's for Area Breakdown

FLOOR AREA RATIO		
MAX. FAR (ZR 23-145) FOR RESIDENTIAL		4.00 OF LOT AREA
MAX. FAR	4.00 x 5,141.10	20,564.40 SF

Note: See Architectural Dwg's for Area Breakdown

LOT COVERAGE RATIO		
MAX. LC (ZR 23-145) FOR RESIDENTIAL INTERIOR LOT		65.00 %
MAX. LC	0.65 x 2,406.46	1,564.20 SF
MAX. LC (ZR 23-145) FOR RESIDENTIAL CORNER LOT		80.00 %
MAX. LC	0.80 x 2,734.64	2,187.71 SF
TOTAL LOT COVERAGE		3,751.91 SF
ACTUAL LC:		3,553.40 SF

Note: See Architectural Dwg's for Area Breakdown

PROPOSED FLOOR AREA			
PROPOSED GROSS RESIDENTIAL F.A.			
Cellar	0	1,261.25 = 762.64	0.00 SF
Basement	3	2,790.77	2,790.77 SF
1st	5	3,553.40	3,553.40 SF
2nd	5	3,553.40	3,553.40 SF
3rd	5	3,553.40	3,553.40 SF
4th	5	3,553.40	3,553.40 SF
5th	5	3,553.40	3,553.40 SF
6th	2	2,166.30	2,166.30 SF
30 DU			22,724.07 SF

Note: See Architectural Dwg's for Area Breakdown

ALLOWABLE DEDUCTION AREA							
CORRIDOR (ZR 28-25)	100%	100%	50%	50%	50%	50%	
Basement	197.47	29.58	51	30.83	36.66	71.97	417.51 SF
1st	106.25			39.79	36.66	60.66	271.07 SF
2nd	106.25			39.79	36.66	60.66	271.07 SF
3rd	106.25			39.79	36.66	60.66	271.07 SF
4th	106.25			39.79	36.66	60.66	271.07 SF
5th	106.25			39.79	36.66	60.66	271.07 SF
6th	106.25			84.96			191.21 SF
TOTAL CORRIDORS							1,964.07 SF

Note: See Architectural Dwg's for Area Breakdown

PROPOSED RECREATION ROOM (ZR 18-31)			
REQUIRED AREA	3.30% x 20,564.40	678.63	MAX. REQUIRED F.A.
Basement FLOOR	INTERIOR RECREATION SPA CE	22.00 x 17.75	390.50 SF
6th FLOOR ROOF	EXTERIOR RECREATION SPA CE	28.08 x 13.75	386.10 SF
TOTAL RECREATION AREA			776.60 SF

Note: See Architectural Dwg's for Area Breakdown

PROPOSED LAUNDRY FACILITY (ZR 28-24)			
REQUIRED	1 Washer per 20 DU and 1 Dyer per 40 DU	4 Each Provided	
Basement FLOOR	Laundry Room		107.76 SF
TOTAL LAUNDRY AREA			107.76 SF

Note: See Architectural Dwg's for Area Breakdown

PROPOSED BICYCLE PARKING (ZR 28-85)			
REQUIRED PARKING	50.00% x 30.00	15	PROVIDED
Basement FLOOR	Bicycle Parking	15.00 x 15.00	225.00 SF
TOTAL BICYCLE AREA			225.00 SF

Note: See Architectural Dwg's for Area Breakdown

REFUSE ROOM (ZR 28-23)			
12 S.F. OF SUCH REFUSE STORAGE ROOM SHALL BE EXCLUDED FROM THE DEFINITION OF FLOOR AREA			
REFUSE ROOM AT Basement-6th FLOOR	7	12.00	84.00 SF
TOTAL REFUSE ROOM			84.00 SF

Note: See Architectural Dwg's for Area Breakdown

NET FLOOR AREA				
TOTAL GROSS FLOOR AREA			22,724.07 SF	
DEDUCTIONS				
CORRIDORS			1,964.07 SF	
INTERIOR RECREATION SPA CE Basement FLOOR			390.50 SF	
REFUSE ROOM Basement TRIBU 6th FLOOR			84.00 SF	
TOTAL DEDUCTIONS			2,438.57 SF	
ACTUAL NET RESIDENTIAL F.A.:	22,724.07	- 2,438.57	20,285.50 SF	
MAX. NET RESIDENTIAL F.A.:			20,564.40 SF	
	20,285.50	IS LESS THAN	20,564.40 SF	
			3.95 F.A.R.	4.00 F.A.R.

Note: See Architectural Dwg's for Area Breakdown

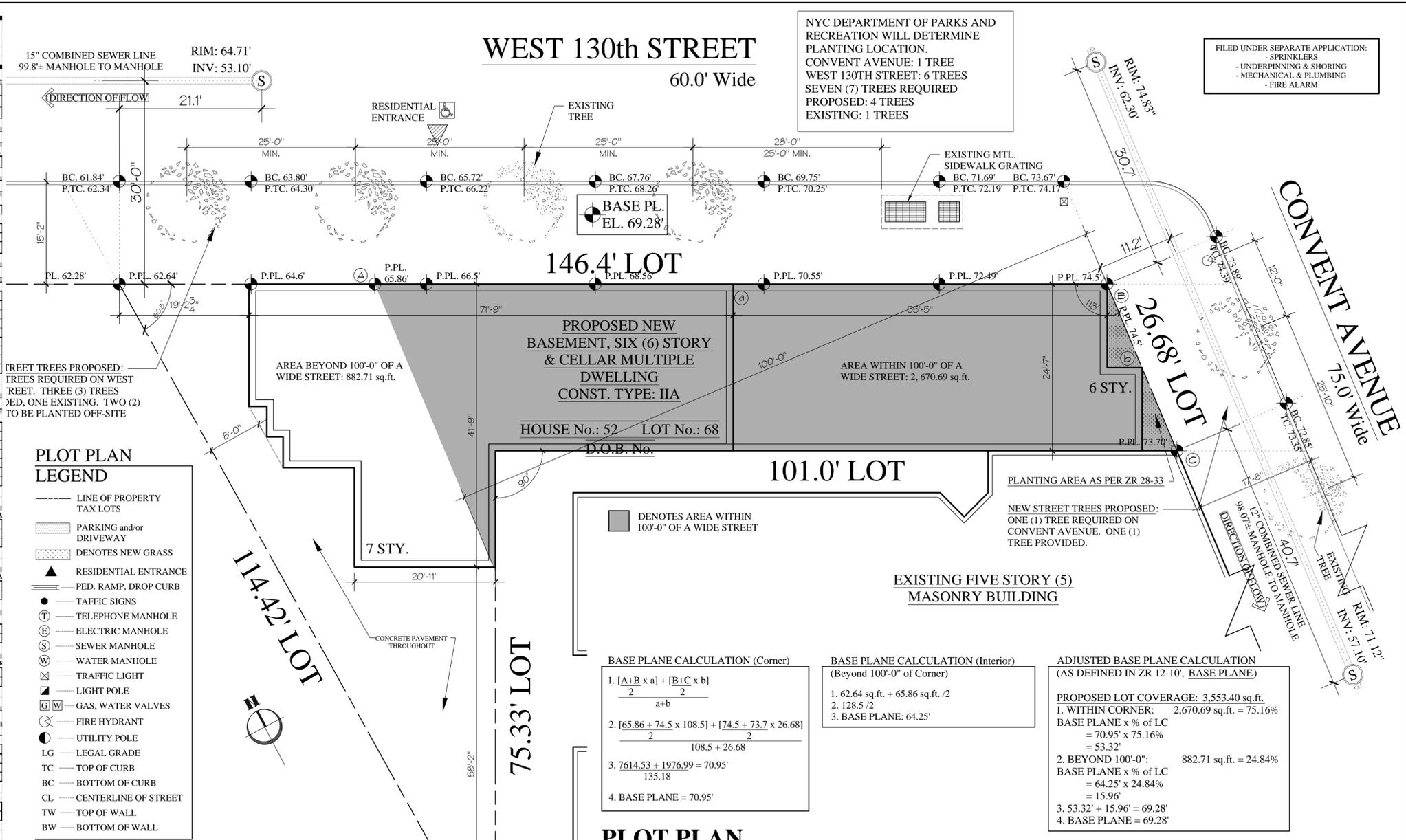


TABLE 601 FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENT (hours)

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPE IV		TYPE V ¹	
	A	B	A ^d	B	A ^d	B	HT	A ^d	B	
Structural frame ² Including columns, girders, trusses	3 ^b	2 ^b	1	0	1	0	HT	1	0	
Bearing walls Exterior ^{2e} Interior	3	2	1	0	2	2	2	1	0	
Nonbearing walls and partitions Exterior Interior	0	0	0	0	0	0	See Section 602.4.6	0	0	
Floor construction ³ Including supporting beams and joists	2	2	1	0	1	0	HT	1	0	
Roof construction Including supporting beams and joists	1 1/2 ^f	1 ^f	1 ^f	0	1 ^f	0	HT	1 ^f	0	

For SE: 1 foot = 304.8 mm.

a. The structural frame shall be considered to be the columns and the girders, beams, trusses and spandrels having direct connections to the columns and bracing members designed to carry gravity loads. The members of floor or roof panels which have no connection to the columns shall be considered secondary members and not a part of the structural frame.

b. Roof supports: Fire-resistance ratings of structural frame and bearing walls are permitted to be reduced by 1 hour where supporting a roof only.

c. 1. Except in Factory-Industrial (F-1), Hazardous (H), Mercantile (M) and Moderate-Hazard Storage (S-1) occupancies, fire protection of structural members shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.
 2. Except in Factory-Industrial (F) occupancies subject to regulation under Sections 264(1) and 264(2) of the New York State Labor Law, and in Group I-1, R-1, and Group R-2 occupancies, in all occupancies heavy timber shall be allowed where a 1-hour or less fire-resistance rating is required.
 3. Except in Factory-Industrial (F) occupancies subject to regulation under Sections 264(1) and 264(2) of the New York State Labor Law, and in Group I-1, R-1, and Group R-2 occupancies, in Type I and II construction, fire-retardant-treated wood shall be allowed in buildings including girders and trusses as part of the roof construction when the building is:
 i. Type II construction of any height;
 ii. Type I construction two stories or less; or
 iii. over two stories, the vertical distance from the upper floor to the roof is 20 feet or more.

d. An approved automatic sprinkler system in accordance with Section 903.3.1.1 shall be allowed to be substituted for 1-hour fire-resistance-rated construction, provided such system is not otherwise required by other provisions of the code or used for an allowable area increase in accordance with Section 506.3 or an allowable height increase in accordance with Section 504.2. The 1-hour substitution for the fire resistance of exterior walls shall not be permitted.

e. Not less than the fire-resistance rating required by other sections of this code.

f. Not less than the fire-resistance rating based on fire separation distance (see Table 602).

g. See footnote (d) of Table 602.

h. See Section 711.3 for additional requirements.

i. Type V construction is not permitted inside fire districts except as provided for in section D105.1 of Appendix D.

SPECIAL INSPECTION ITEMS

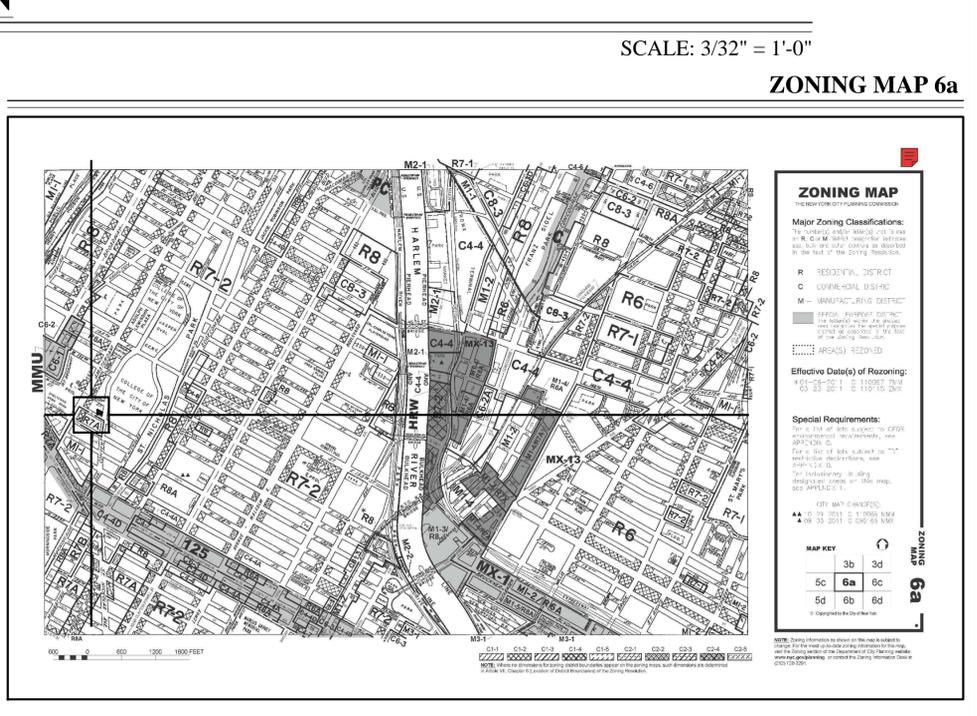
- ALL MATERIALS DESIGNATED FOR "CONTROLLED INSPECTION" SHALL BE INSPECTED AND/OR TESTED TO VERIFY COMPLIANCE WITH CODE REQUIREMENTS, UNLESS OTHERWISE SPECIFICALLY PROVIDED BY CODE PROVISIONS. ALL REQUIRED INSPECTIONS AND TESTS OF MATERIAL SHALL BE MADE AND/OR WITNESSED BY OR UNDER THE DIRECT SUPERVISION OF AN ARCHITECT OR ENGINEER RETAINED BY OR ON BEHALF OF THE OWNER OR LESSEE.

SOIL - SITE PREPARATION
 SOIL - INVESTIGATIONS (BORINGS/TEST PITS)
 FIRESTOP, DRAFTSTOP AND FIREBLOCK SYSTEMS
 MECHANICAL SYSTEMS
 SOIL PERCOLATION TEST - DRYWELL
 MASONRY
 CONCRETE CAST-IN-PLACE
 CONCRETE TEST CYLINDERS
 CONCRETE DESIGN MIX
 SPRINKLER SYSTEMS
 SMOKE CONTROL SYSTEMS
 STRUCTURAL SAFETY - STRUCTURAL STABILITY
 STRUCTURAL COLD-FORMED STEEL
 UNDERPINNING
 EXCAVATION - SHEETING - SHORING AND BRACING
 FIRE ALARM TEST

PROGRESS INSPECTION ITEMS

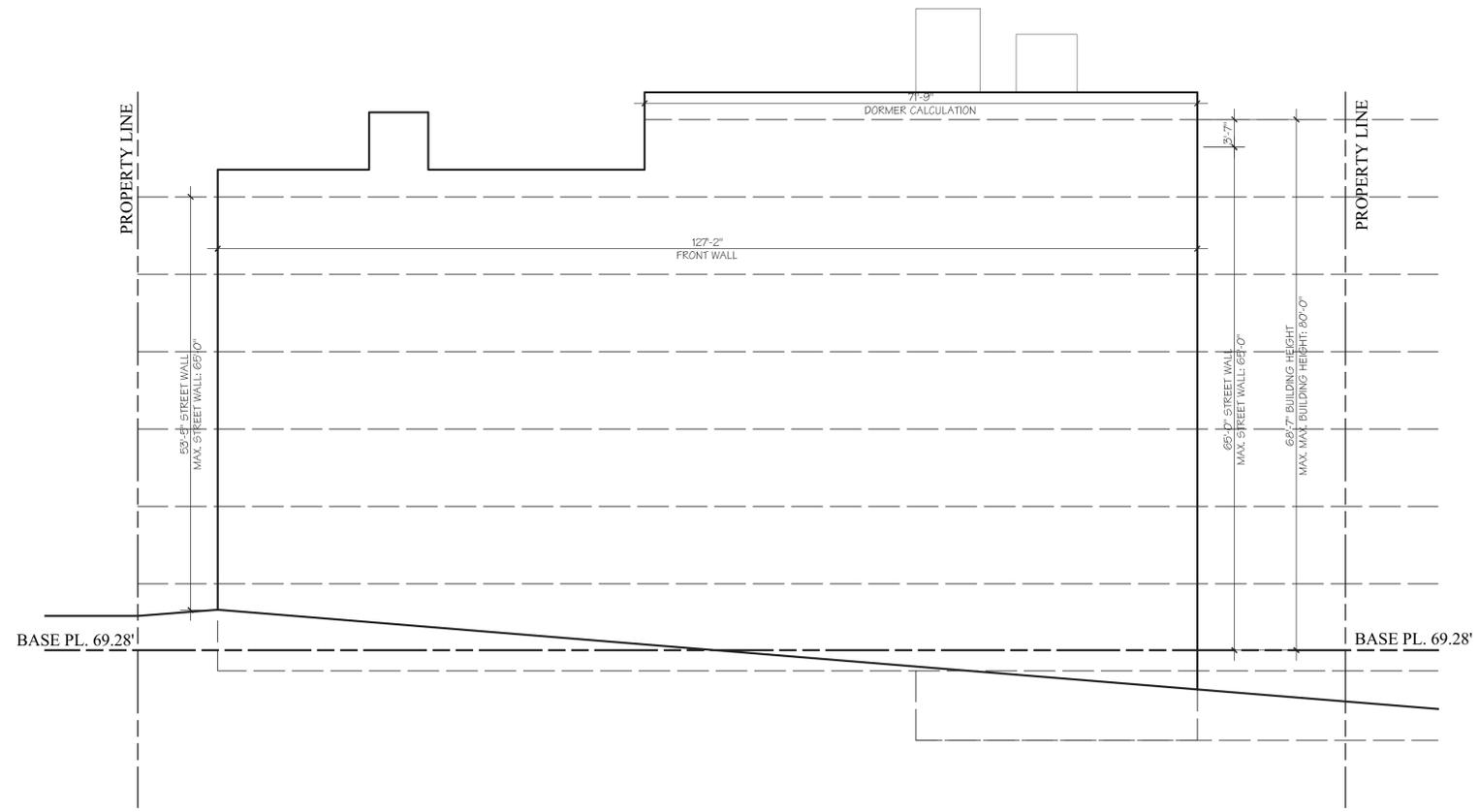
FOOTING AND FOUNDATION
 ENERGY CODE COMPLIANCE INSPECTIONS
 FIRE-RESISTIVE RATED CONSTRUCTION

BC 1704.7.1
 BC 1704.7.4
 BC 1704.7.5
 BC 1704.15
 BC 1704.20.1
 BC 1704.5
 BC 1704.3.4
 BC 1905.6
 BC 1905.6
 BC 1704.21
 BC 1704.14
 BC 1704.19
 BC 1704.3.4
 BC 1704.9.1
 BC 1704.19, BC 3304.4.1
 BC 907, BC 1704.13



HEIGHT & SETBACK DIAGRAM SCALE: 3/32"=1'-0"

OCCUPANT LOAD



DORMER CALCULATIONS 6th FLOOR:

(PERMITTED OBSTRUCTION AS PER Z.R. 23-621(c))
 = 60 % STREET WALL LENGTH BELOW MAX. BASE HT. REDUCE WIDTH BY 1% PER EVERY FT. OF HEIGHT ABOVE MAX. BASE HEIGHT

DORMER :
 HEIGHT ABOVE MAX BASE HT= 3'-7" = 3.58'
 60% - 3.58% = 56.42%

127'-2" (FRONT WALL LENGTH) X 56.42% = 71'-9" (MAXIMUM DORMER LENGTH)
 DORMER = 71'-9" = 71'-9"

TABLE 1004.1.2 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

USE OF SPACES: RESIDENTIAL		
FLOOR:	AREA:	# OF PERSONS
BASEMENT	1809.49 / 200 = 9.04	9
1st FLOOR	981.29 / 200 = 4.90	5
2nd FLOOR	3553.40 / 200 = 17.76	18
3rd FLOOR	3553.40 / 200 = 17.76	18
4th FLOOR	3553.40 / 200 = 17.76	18
5th FLOOR	3553.40 / 200 = 17.76	18
6th FLOOR	3553.40 / 200 = 17.76	18
7th FLOOR	2166.30 / 200 = 10.83	11
TOTAL		115

BRICOLAGE ARCHITECTURE & DESIGN, PLLC
 6321 New Utrecht Avenue
 Brooklyn, N.Y. 11219
 Tel: 718.259.1100
 Fax: 718.259.0111

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Height & Setback Diagram
 Proposed New Building, Seventh (7) Story & Cellar, Thirty (30) Family Dwelling, Located @ Convent Avenue, Manhattan, N.Y.
 Client:

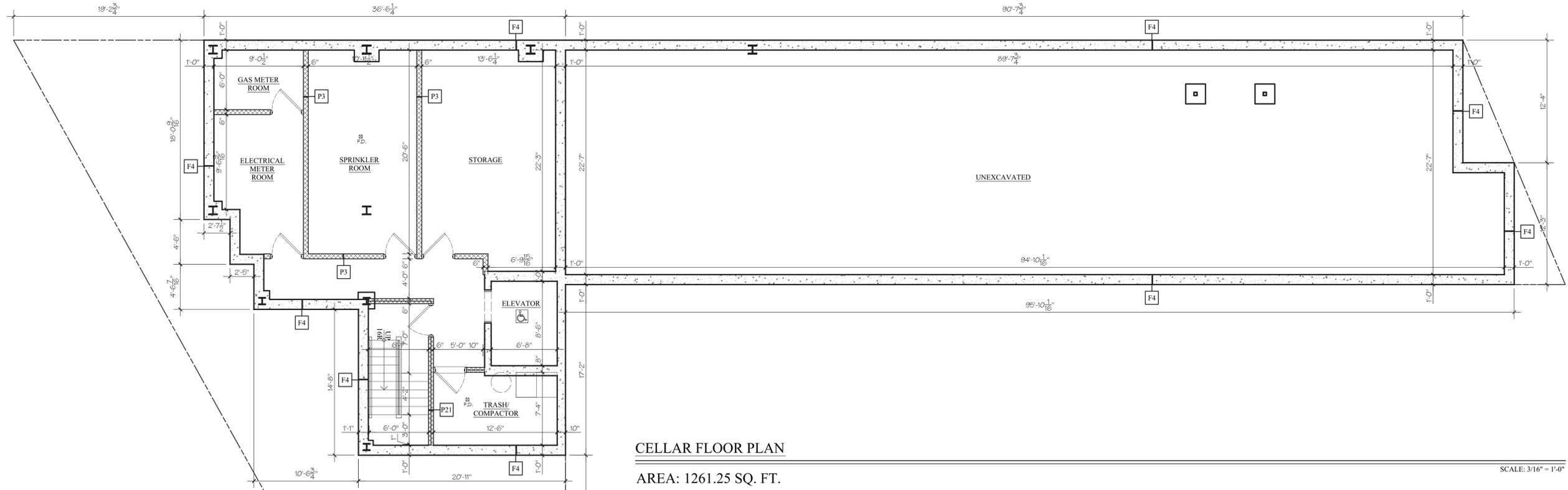
Dorovan Haslam
 APPROVED Under Directive of 1975
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 PROJECT No.: 12-107
 DATE: 04-05-12
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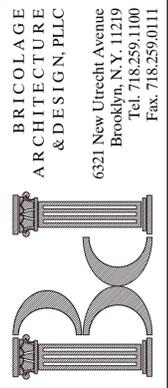
CELLAR FLOOR PLAN

AREA: 1261.25 SQ. FT.

SCALE: 3/16" = 1'-0"

CELLAR PLAN NOTES

1. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS NOT TO BE SCALED.
2. F.D. DENOTES FLOOR DRAIN.
3. H.R. DENOTES HANDRAIL (SHALL COMPLY WITH SECTION C27-275(F)).
4. M.S. DENOTES MARBLE SADDLE.
5. PROVIDE MECHANICAL VENTILATION FOR INTERIOR BATHS/KITCHENETTES. FOR ADDITIONAL INFORMATION, SEE NOTE NUMBER 60, DRAWING NUMBER N-1.
6. AREA OF DUCT SPACE NOT TO EXCEED TWO (2) SQUARE FEET. SEE PARTITION LEGEND, DRAWING NUMBER D-1.
7. STORAGE ROOM AND GARAGE CEILING TO BE PROVIDED WITH TWO (2) LAYERS OF FIRE CODE TYPE "X" SHEETROCK (TWO HOUR FIRE RATED).
8. FOOTINGS TO SIT ON VIRGIN UNDISTURBED SOIL, HAVING A MINIMUM BEARING CAPACITY OF TWO (2) TONS PER SQUARE FOOT.
9. FOOTING AT FRONT OF BUILDING TO BE CARRIED DOWN BELOW THE LEVEL OF HOUSE SEWER, WHERE HOUSE SEWER PASSES THROUGH FOUNDATION WALL.
10. PRIOR TO THE PLACEMENT OF CELLAR CONCRETE FLOOR SLAB, CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO DETERMINE THE BEARING CAPACITY OF THE SOIL UNDER THE SLAB. HIS FINDINGS SHALL BE REPORTED TO THE ARCHITECT IN WRITING. ANY CHANGE IN SLAB DESIGN FROM THAT SHOWN ON THE APPROVED, SHALL BE FILED AS AN AMENDMENT BY A LICENSED PROFESSIONAL ENGINEER.
11. PROVIDE WEB STIFFENERS WHERE ONE PIECE OF STEEL FRAMES INTO ANOTHER.
12. FOR CONSTRUCTION OF BEARING PARTITIONS, WHERE APPLICABLE, SEE PARTITION LEGEND DRAWING NUMBER D-1.
13. FIREPROOF ALL INTERIOR COLUMNS PER DETAIL , WHERE APPLICABLE.



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Cellar Floor Plan
 Proposed New Building, Seventh (7) Story & Cellar,
 Thirty (30) Family Dwelling, Located @ Convent
 Avenue, Manhattan, N.Y.

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WEST 130TH STREET ELEVATION

SCALE: 3/16" = 1'-0"

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Building Elevation
 Proposed New Building, Seventh (7) Story & Cellar, Thirty (30) Family Dwelling, Located @ Convent Avenue, Manhattan, N.Y.

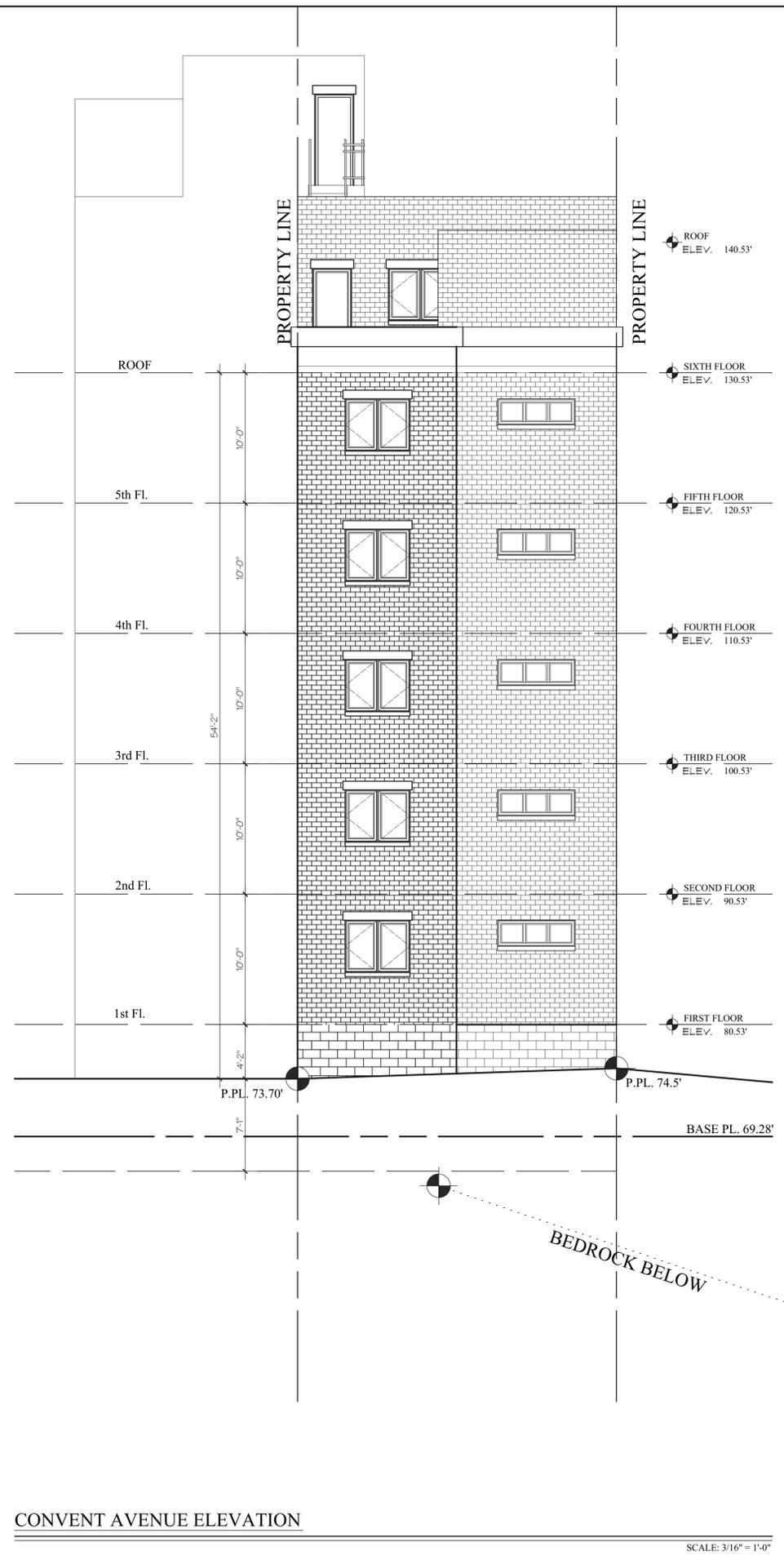
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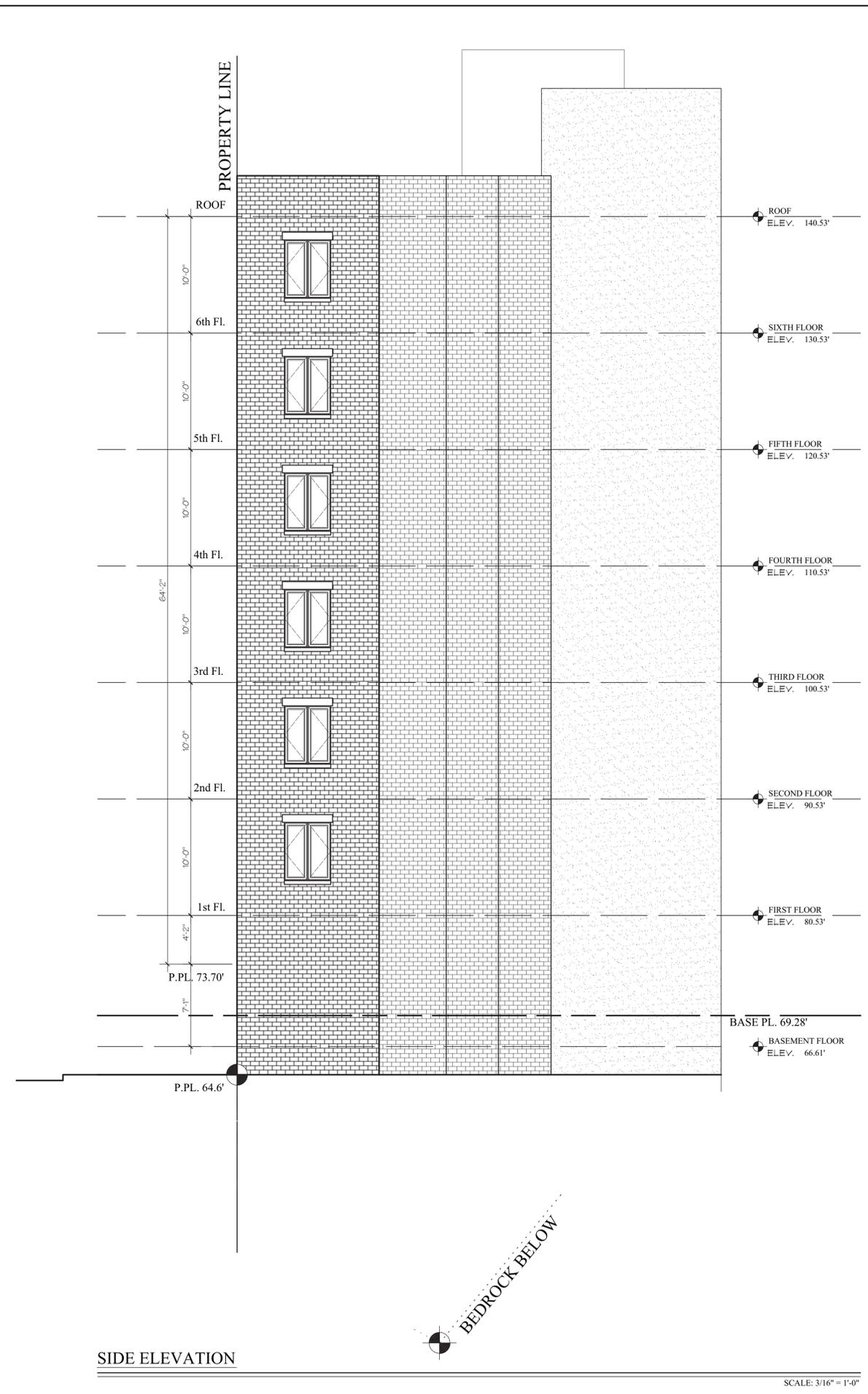
REGISTERED ARCHITECT
 STATE OF NEW YORK
 19162

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CONVENT AVENUE ELEVATION

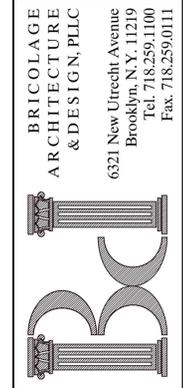
SCALE: 3/16" = 1'-0"



SIDE ELEVATION

SCALE: 3/16" = 1'-0"

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Building Elevation
 Proposed New Building, Seventh (7) Story & Cellar,
 Thirty (30) Family Dwelling, Located @ Convent
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PROPERTY LINE

PROPERTY LINE

PROPERTY LINE

ROOF
ELEV. 140.53'
10'-0"
SIXTH FLOOR
ELEV. 130.53'
10'-0"
FIFTH FLOOR
ELEV. 120.53'
10'-0"
FOURTH FLOOR
ELEV. 110.53'
10'-0"
THIRD FLOOR
ELEV. 100.53'
10'-0"
SECOND FLOOR
ELEV. 90.53'
10'-0"
FIRST FLOOR
ELEV. 80.53'
11'-9"
BASEMENT FLOOR
ELEV. 66.61'
5'-11"

66'-7" BUILDING HEIGHT
MAX. MAX. BUILDING HEIGHT: 80'-0"

BASE PL. 69.28'

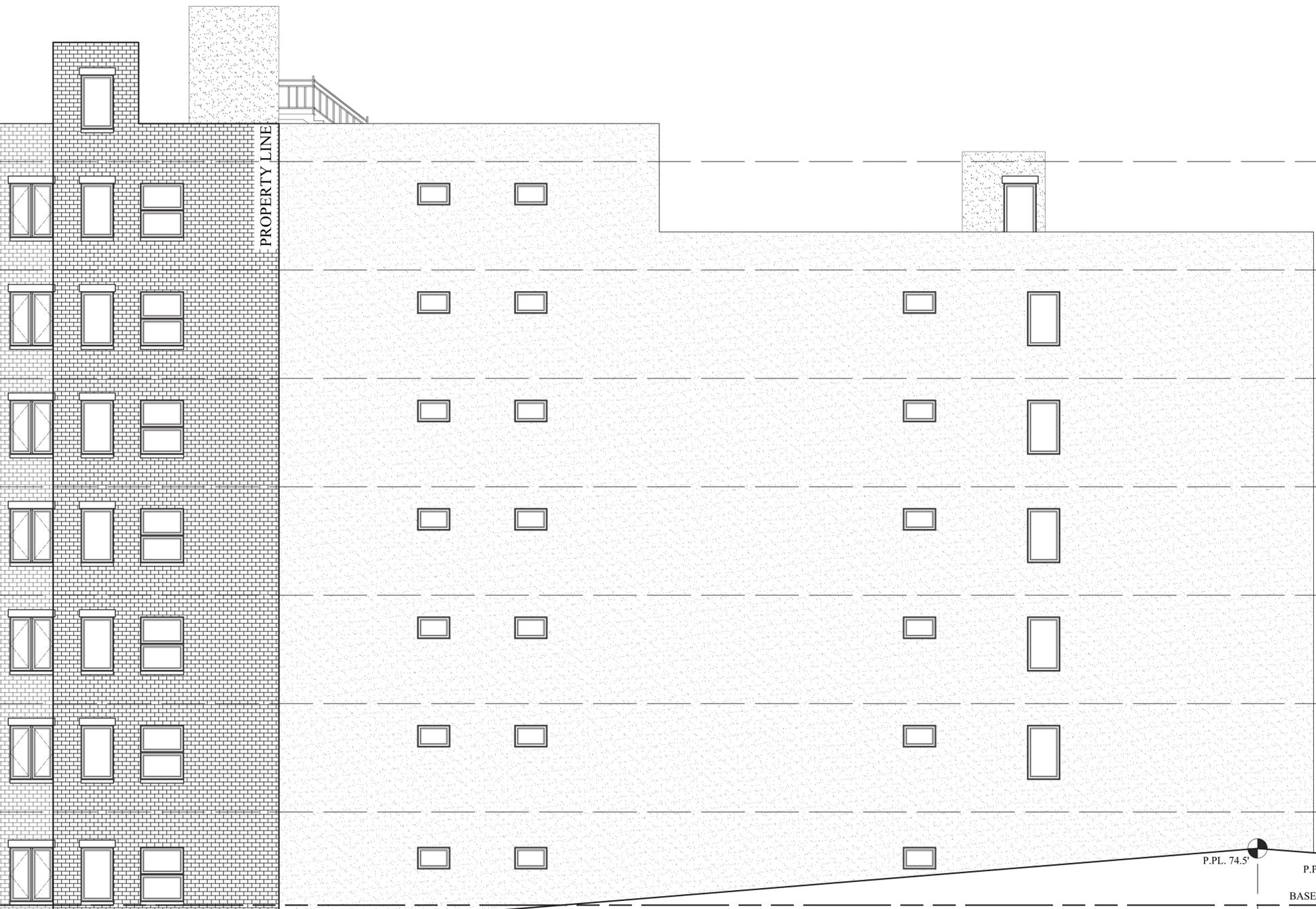
P.P.L. 62.64'

59'-5" STREET WALL
MAX. STREET WALL: 60'-0"

P.P.L. 74.5'

P.P.L. 73.70'

BASE PL. 69.28'



REAR ELEVATION

SCALE: 3/16" = 1'-0"

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Building Elevation
Proposed New Building, Seventh (7) Story & Cellar,
Thirty (30) Family Dwelling, Located @ Convent
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Appendix 2

Previous Environmental Reports

PHASE I ENVIRONMENTAL SITE ASSESSMENT

**464 WEST 130TH STREET
BLOCK 1969, LOT #68
NEW YORK, N.Y.**

PREPARED FOR:

BIG APPLE DEVELOPERS

770 MIDDLE NECK ROAD, SUITE 4P

GREAT NECK, N.Y. 11024

PREPARED BY



**55 WATERMILL LANE, SUITE 200
GREAT NECK, NEW YORK 11021**

SEPTEMBER 2012

464 West 130th Street
Block 1969 Lot 68
New York, N.Y.

Phase I Environmental Site Assessment

A. INTRODUCTION	1
B. EXECUTIVE SUMMARY	2
C. REPORT OF FINDINGS	4
SITE HISTORY	4
SITE INSPECTION	7
REGULATORY AGENCY INFORMATION	8
D. SCOPE OF WORK	14
E. QUALIFICATIONS	15
F. DISCLAIMER	15

ATTACHMENT A - Figures

ATTACHMENT B - Photographs

**ATTACHMENT C - Executive Summary section of the Environmental
Data Resources, Inc. Radius Map Report.**

ATTACHMENT D - City Directory Abstract From Environmental Data Resources, Inc.

ATTACHMENT E- Environmental LienSearch from Environmental Data Resources, Inc.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

A. INTRODUCTION

EPDSCO, Inc., has performed a Phase I Environmental Site Assessment (ESA) of the property located at 464 West 130th Street, in the Borough of Manhattan, in the City of New York. This ESA was prepared in accordance with the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation E 1527-05).

The purpose of this ESA is to identify, to the extent feasible in accordance with ASTM E 1527-05, recognized environmental conditions in connection with the site with regard to hazardous materials as defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and petroleum products. Additionally, several ASTM "Non-Scope" items including asbestos-containing materials, lead-based paints, and radon are also discussed. Recognized Environmental Conditions are identified through research into the history and uses of the site and surrounding area, an inspection of the subject property and a survey of adjoining and nearby uses, and a review of available regulatory agency records and environmental databases. A detailed scope of work is included in Section IV of this report. Sanborn atlases and other pertinent figures are included in Attachment A. Photographs are located in Attachment B. Regulatory agency database information from Environmental Data Resources, Inc. (EDR) is included in Attachment C. The City Directory Abstract report from EDR is included in Attachment D, and the Environmental Liens report from EDR is included in Attachment E.

E. EXECUTIVE SUMMARY

The subject property consists of an unpaved, irregularly shaped lot, a total of 3,900+/- square feet in area. At the time of the site visit, the western portion of the property was being used for automobile parking, with eight cars parked on this portion of the lot at the time of the site inspection. The eastern portion of the site appeared to be in use as a private garden. No building foundations, concrete slabs or other visible indications of former on-site buildings or structures were observed at the site. At the time of inspection, the site was free of any obvious indications of past on-site storage, use, or disposal of hazardous materials (e.g., discarded drums or chemical containers, chemical/oil stained surfaces, dead or dying vegetation, etc.).

Research into the history of the property indicates that the site has been undeveloped since at least 1902. The site has been used for automobile parking since at least the 1950s and more recently, the eastern portion of the property has contained a private garden. There were not any former operations which typically involve the storage or use of hazardous materials or petroleum products identified at the site in the information reviewed for this report.

No trench drains, floor drains, drywells, pits, ponds or other drainage structures were observed at the subject property during the site visit.

No tank fill ports, vent lines or other visible indications of the presence of underground tanks were observed at the subject property, or in the sidewalk in front of the property during the site visit. No aboveground fuel oil tanks were observed at the site. The property does not appear in the New York State Department of Environmental Conservation (NYSDEC) Petroleum Bulk Storage (PBS) database, which lists all registered facilities with a total combined petroleum storage capacity in excess of 1,100 gallons.

No suspected asbestos-containing materials, lead-based paints or electrical equipment suspected of containing PCBs were observed at the property during the site inspection.

The property does not appear in the Federal or State environmental databases reviewed including the USEPA's Superfund, CERCLIS or ERNS databases, the RCRA Hazardous Waste Handlers list or hazardous waste Treatment/Storage/Disposal Facilities list, or the NYSDEC's Solid Waste Facilities database, PBS database, Spill Logs database or the Registry of Inactive Hazardous Waste Disposal Sites.

The New York City Department of Buildings records show that the site has been given an E-Designation for hazardous materials, which is a NYC Zoning Map designation that indicates the presence of an environmental requirement pertaining to the potential for hazardous materials at the site. An E-Designation requires special activities coordinated through the New York City Office of Environmental Remediation to be performed, including subsurface investigations, preparation of remedial action work plans, health and safety plans, etc.

The site is adjoined by residential apartment buildings (some of which contain first floor retail stores) to the north and east, and is adjoined by a 2-story garage/warehouse type building to the west. A buried gasoline tank vent line was observed protruding from the roof of this adjacent building during the site visit. Sanborn historical maps show three, 550-gallon buried gasoline

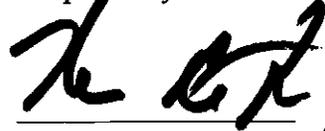
tanks at this site and indicate that the building was at one time used for auto repair operations. There are not any Active NYSDEC-reported spill incidents at this adjacent location. Land uses in the area immediately surrounding the site include residential and commercial/retail uses and public schools to the north and east, and garages, warehouses and public transportation repair facilities to the south and west. A review of Sanborn maps indicates that such surrounding land uses have existed in the general area since at least the 1950s.

Conclusions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-05 of 464 West 130th Street, New York, N.Y., the property. Any exceptions to or deletions from this standard are described in section A of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property, with the following exception:

- The subject property has been given an E-designation for hazardous materials, which may requires special activities coordinated through the New York City Office of Environmental Remediation to be performed at the site, including subsurface investigations, preparation of remedial action work plans, health and safety plans, etc.

Respectfully Submitted,



Hiram A. Rothkrug, Director

EPDSCO, Inc.

REPORT OF FINDINGS

The subject property was inspected on August 29th, 2012. Mr. Freddie Acevedo, a representative of the owner of the property was present to provide access to the building and property grounds, and to answer questions regarding past and present uses of the site.

Property Description

Property Address and Location

Subject Property:

*464 West 130th Street
New York, New York 10027
Block 1969, Lot 68*

The property is located on the south side of West 130th Street, between Convent Avenue and Amsterdam Avenue, in the Borough of Manhattan in the City of New York. The property appears on the USGS 7.5 Minute Series Topographic Map Central Park, New York Quadrangle (see Attachment A).

Site Description

The property, which is surrounded by chain link fencing with locking gates, consists of an unpaved, irregularly shaped lot, a total of 3,900+/- square feet in area. At the time of the site visit, the western portion of the property was being used for automobile parking, with eight cars parked on this portion of the lot, and the eastern portion of the site appeared to be in use as a private garden. No building foundations, concrete slabs or other visible indications of former on-site buildings or structures were observed at the site. At the time of inspection, the building and property grounds appeared to be free of any obvious indications of past on-site storage, use, or disposal of hazardous materials (e.g., discarded drums or chemical containers, chemical/oil stained surfaces, dead or dying vegetation, etc.).

Site History

Information regarding site history was obtained from a variety of standard historical sources including historical land use/fire insurance atlases such as those produced by Sanborn, Bromley and/or Belcher Hyde, New York City Buildings Department information including Certificates of Occupancy (CO), Building Permits, Alteration Permits, etc., and interviews with site owners, occupants or local residents. Additionally, historical aerial photographs of the site, a city directories abstract search and a search for environmental liens and activity use limitations (AULs) were obtained from EDR, Inc.

Historical Maps

The 1902, 1912, 1951, 1976, 1978, 1980, 1985, 1986, 1988, 1989, 1991, 1992, 1993, 1994, 1995, 1996, 2001, 2002, 2003, 2004 and 2005 Sanborn fire insurance/real estate maps were reviewed (see Attachment A). These maps provide information on the history of structures at the site, and may show property use including operations involving the storage or use of hazardous materials, and the presence of buried gasoline tanks.

The project site appears as vacant land with no identified site uses on the 1902 through 1995 Sanborn maps. The site is shown as a parking lot on the 1996 through 2005 Sanborn maps. There are not any buried gasoline tanks or indications of the on-site storage or use of hazardous materials/petroleum products shown at the subject site on any of the maps reviewed.

Historical Aerial Photographs

Historical aerial photographs for the years 1953, 1954, 1966, 1974, 1980, 1987, 1995, 2004, 2006 and 2008 were reviewed on-line at HistoricAerials.com. Aerial photographs provide an additional source of information regarding past on-site structures and may show areas of concern including excavations, filling activities, on-site dumping or debris piles, etc.

The property appears to be vacant with no buildings or other objects visible at the site on the 1953 and 1966 photographs. Several objects which appear to be automobiles are visible at the site on the 1954, 1974, 1980, 1987, 2004 and 2008 aerial photos. The poor resolution and quality of the 1995 and 2006 aerial photographs do not allow for the identification of any structures or objects at the site. There are not any visible indications of debris piles, excavations, pits, ponds, lagoons or indications of on-site waste disposal at the property on any of the historical aerial photographs reviewed.

N.Y.C. Department of Buildings and Department of Finance

New York City Department of Buildings (NYCDOB) records were reviewed for Certificates of Occupancy (CO), New Building permits, Demolition permits and other pertinent information regarding the subject property. No COs or Demolition permits were found on file for the site. A New Building permit was issued to the site in 1923 for an unspecified building. In addition, there were five unspecified Alteration permits issued to the site, in 1953, 1954, 1961, 1966 and 1975. The Department of Finance Building Classification for the building is V1 - Vacant Land. No additional pertinent information regarding the subject site was found in Building Department records reviewed.

The NYCDOB records show that the site contains an E-Designation for hazardous materials, which is a NYC Zoning Map designation that indicates the presence of an environmental requirement pertaining to the potential for hazardous materials at the site. An E-Designation requires special activities coordinated through the New York City Office of Environmental Remediation to be performed, including subsurface investigations, preparation of remedial action work plans, health and safety plans, etc.

According to information from the New York City Department of Finance, the site was transferred from the Commissioner of Finance to the City of New York on 7/31/85. The site was transferred from the City of New York to David Manesh on 4/6/2000. The site was transferred from David Manesh to Parkside, Inc. on 4/6/2000.

Interviews

Mr. Freddie Acevedo, the property owner's representative, was interviewed regarding past uses of the site. According to him and to the best of his knowledge, the property has always been vacant and used as a parking lot and private garden. Mr. Acevedo had no knowledge of any past operations at the site which involved the storage or use of hazardous materials.

City Directories Abstract

A city directories abstract review was performed for the address of the subject property; 464 West 130th Street, New York, New York. A city directories abstract is a review of city directories, cross reference and telephone directories which list occupants at a corresponding address. These directories are reviewed at approximately five-year intervals from the 1920s to 2000. No listings for the address of the subject property were found in the city directories reviewed.

Environmental Liens/Activity and Use Limitations

An Environmental Liens and Activity and Use Limitations (AULs) search for the subject property was ordered from EDR, Inc. An Environmental Lien is a charge, security or encumbrance upon title to a property to secure the payment of a cost, damage, debt or obligation arising out of response actions, cleanup or other remediation of hazardous substances or petroleum products upon a property. AULs are legal or physical restrictions or limitations on the use of, or access to, a site. AULs include both *institutional* controls, which are typically administrative measures including groundwater use restrictions, construction restrictions and property use restrictions, and *engineering* controls such as various forms of caps, building foundations, liners and/or treatment methods to prevent contaminants from entering environmental media or affecting human health.

There were not any Environmental Liens or AULs found on file for the subject property (see Attachment E).

Previous Environmental Reports

There were not any previous environmental reports for the subject property provided to EPDSCO for review.

Data Failure

The ASTM Standard Practice E 1527-05 requires a discussion of any identified data failures as defined by the Practice. There were not any identified data failures in the information reviewed for this report.

Site Inspection

The subject property was inspected in order to identify potential recognized environmental conditions which may exist at the site. Such conditions include the on-site storage/use of hazardous materials, petroleum storage tanks, asbestos-containing materials, lead-based paints, as well as any visible indications of the past on-site storage/use/disposal of hazardous materials, etc.

Current Operations/Hazardous Materials

At the time of the site visit, the eastern portion of the site was occupied by a private garden and the western portion was an open lot used for automobile parking. There were not any businesses or operations which involve the storage or use of hazardous materials observed at the property. Additionally, there were not any indications of past on-site storage or use of hazardous materials such as discarded drums or chemical containers, chemical or oil stained surfaces, etc observed.

Drainage Structures

No trench drains, floor drains, drywells, pits, ponds or other drainage structures were observed at the subject property during the site visit.

Monitoring Wells

There were not any groundwater monitoring wells observed on the site.

Petroleum Storage Tanks

No tank fill ports, vent lines or other visible indications of the presence of underground tanks were observed at the property, or in the sidewalk in front of the property, during the site visit. No aboveground fuel oil tanks were observed at the site. The property does not appear in the New York State Department of Environmental Conservation (NYSDEC) Petroleum Bulk Storage (PBS) database, which lists all registered facilities with a total combined petroleum storage capacity in excess of 1,100 gallons.

Polychlorinated Biphenyls (PCBs)

Prior to 1979, PCBs were widely used in electrical equipment such as transformers, capacitors, fluorescent light ballasts, etc., for their cooling and insulating properties. The manufacture, processing and commercial distribution of PCBs was banned in 1979, under the Toxic Substances Control Act (40 CFR Part 761). No electrical transformers or other equipment suspected of containing PCBs were observed on the subject property during our site visit.

Asbestos-Containing Materials

Asbestos is a natural mineral fiber which was widely used in the manufacture of building and insulating materials prior to the late 1970s, primarily due to its good insulation and mechanical resistance properties. Materials made with asbestos include thermal system insulation (TSI), such as aircell pipe wrap, boiler insulation and breaching, hot water/expansion tank insulation, castable elbow packing, magnesia block insulation, etc., surfacing materials, such as spray-on fire proofing and sound proofing, and miscellaneous materials such as floor tiles and roofing materials.

No suspected asbestos-containing materials were observed at the property during the site visit.

Lead-Based Paint

Lead-based paint is hazardous when in a deteriorating condition (i.e., chipped, broken, crumbling, pulverized); and lead-based paint debris removed during construction/renovation work may be required to be disposed of as hazardous waste.

No suspected lead-based paints were observed during the site visit.

Potable Water Supply

Potable water is supplied to the area of the subject site through the New York City Municipal water supply system, which obtains water from upstate reservoirs. This water is tested on a daily basis at various distribution points.

Surrounding Land Uses

The site is adjoined by residential apartment buildings (some of which contain first floor retail stores) to the north and east, and is adjoined by a 2-story garage/warehouse type building to the west. A buried gasoline tank vent line was observed protruding from the roof of this adjacent building during the site visit. Sanborn historical maps show three 550-gallon buried gasoline tanks at this site and indicate that the building was at one time used for auto repair operations. Land uses in the area immediately surrounding the site include residential and commercial/retail uses and public schools to the north and east, and garages, warehouses and public transportation repair facilities to the south and west. A review of Sanborn maps indicates that such surrounding land uses have existed in the general area since at least the 1950s.

Regulatory Agency Information and Databases

Regulatory agency environmental database information regarding known or suspected hazardous waste storage or disposal sites, reported spill incidents, registered petroleum storage tanks, solid waste facilities and landfills, etc. for the subject properties and surrounding area is obtained from Environmental Data Resources, Inc. (EDR) of Milford, Ct. These documented sites and incidents are listed in the following section for descriptive purposes. Their inclusion does not necessarily suggest any potential impacts to the subject property, but provides an indication of the potential for general groundwater and soil contamination in the larger area.

Federal Databases

Superfund Sites

The U.S. Environmental Protection Agency's (USEPA) National Priorities List identifies confirmed hazardous waste sites, (Superfund sites) that are ranked for clean-up under the federal Superfund program. This program was authorized by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

The subject property is not on the U.S. Environmental Protection Agency's (USEPA) National Priorities List. There is one USEPA NPL site identified within an approximate one-mile radius of the subject property (see Appendix C). This site, the Hudson River PCBs site, is located approximately 1/2 mile west of the site. According to the USEPA Hudson River PCBs website, the Hudson River PCBs Site encompasses a nearly 200-mile stretch of

the Hudson River in eastern New York State from Hudson Falls, New York to the Battery in New York City and includes communities in fourteen New York counties and two counties in New Jersey. The site is divided into the Upper Hudson River, which runs from Hudson Falls to the Federal Dam at Troy (a distance of approximately 40 miles), and the Lower Hudson River, which runs from the Federal Dam at Troy to the southern tip of Manhattan at the Battery in New York City. Approximately 40 miles of the upper Hudson River from Hudson Falls to Troy contains the most contaminated areas of river bottom. This portion of the Hudson River is located more than 150 miles north of the site. Given the distance of this site from the property, and that it is a water body, it is considered unlikely that the Hudson River PCBs site would have any impact on the site.

CERCLIS Sites

A check was made of the USEPA's CERCLA Information System (CERCLIS). The CERCLIS is a comprehensive database and management system that inventories and tracks sites addressed or needing to be addressed by the Superfund program. Sites that the USEPA decide do not warrant further evaluation under the Superfund program are delisted.

The site is not on the USEPA's CERCLA Information System (CERCLIS) list. There are not any CERCLIS sites located within ½ mile of the subject site.

RCRA Treatment/Storage/Disposal Facilities

The USEPA's RCRA hazardous waste Treatment/Storage/Disposal (TSD) Facilities database includes facilities that transport, treat, store and/or dispose of hazardous wastes, or have engaged in these activities in the past. TSD operators, as with hazardous waste transporters or generators, are regulated under the Resource Conservation and Recovery Act (RCRA).

The site is not on the USEPA's RCRA hazardous waste TSD Facilities database list. There are not any RCRA TSD facilities listed within one-mile of the property.

RCRA CORRACTS

CORRACTS is a list of hazardous waste handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

The property is not on the list. There is one RCRA CORRACTS facility located within one mile of the subject property (see Attachment C). This site, Ashland, Inc. at 609 West 131st Street, is located approximately 1/4 mile northwest of the property. This site was assigned a low corrective action priority in 1994. Given this information, and the distance of this site from the property, it is considered unlikely that the Ashland, Inc. site would have impacted the project site.

RCRA Hazardous Waste Generators

RCRA Hazardous Waste Generators are regulated by the federal government under the Resource Conservation and Recovery Act (RCRA). An inventory of hazardous waste generators is useful to assess the kinds of hazardous materials/wastes that are handled, stored, and/or transported in the vicinity of the site, as well as on the subject property.

The property does not appear in the RCRA Hazardous Waste Generator database. There is one RCRA Hazardous Waste Generator identified at Convent Avenue and West 130th Street. This site is listed as ConEd, the local electric utility, and is listed as a Conditionally Exempt Small Quantity Generator. It is likely that this is a one time listing for the removal of materials from a utility vault below the street and is not an on-going operations which generates hazardous wastes. Therefore, it is considered unlikely that this adjacent RCRA Hazardous Waste Generator would have impacted the property.

Emergency Response Notification System

USEPA's Emergency Response Notification System (ERNS) database contains information from federal agencies on CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity.

There are no reported ERNS releases or spills listed at the site.

U.S. Institutional/Engineering Controls Lists

The U.S. Institutional Controls List is a database of sites with institutional controls in place, typically administrative controls such as groundwater use restrictions, construction restrictions, property use restrictions and post remediation care requirements intended to prevent exposure to contaminants remaining at a site. The U.S. Engineering Controls List is a database of site with engineering controls in place such as various forms of caps, building foundations, liners and/or treatment methods to prevent contaminants from entering environmental media or affect human health.

The property and adjoining properties are not listed in the U.S. Institutional Controls or the U.S. Engineering Controls databases. There are not any facilities listed in the U.S. Institutional Controls or the U.S. Engineering Controls databases within ½ mile of the site.

State Databases

Inactive Hazardous Waste Disposal Sites

A NYSDEC's Inactive Hazardous Waste Disposal Sites Registry contains information on potentially hazardous waste sites in New York State.

The property is not included in the Registry. There is one Inactive Hazardous Waste Disposal site located within one-mile of the property (see Attachment C). This site, 2350 Fifth Avenue, is located approximately one-mile east/northeast of the site. According to information in the database report, groundwater below this site flows in a northerly and easterly direction, towards the East River. Given the direction of groundwater flow at 2350

Fifth Avenue, and the distance of this site from the property, it is considered unlikely that 2350 Fifth Avenue would have impacted the site.

State Institutional/Engineering Controls Lists

The State Institutional Controls List is a database of sites with institutional controls in place, typically administrative controls such as groundwater use restrictions, construction restrictions, property use restrictions and post remediation care requirements intended to prevent exposure to contaminants remaining at a site. The State Engineering Controls List is a database of site with engineering controls in place such as various forms of caps, building foundations, liners and/or treatment methods to prevent contaminants from entering environmental media or affect human health.

The property and adjoining properties are not listed in the State Institutional Controls or the State Engineering Controls Lists. There are no State Institutional Controls or the State Engineering Controls sites located within ½ mile of the property.

Spill Logs

The NYSDEC spill logs database for Region 2 (New York City) was checked for reported spills of toxic or hazardous materials (including petroleum products) within ½ mile of the subject properties. Spill incidents listed as "Active" indicate that the spill is either still undergoing remediation, or awaiting completion of paperwork for closure. Spill incidents listed as "Closed" indicate that the NYSDEC required no additional remedial measures at the time of spill closure. Spills listed as tank failures or tank test failures indicate the possibility of oil or gasoline seepage to the surrounding soils or groundwater. Other spills (i.e., accidents, sloppy housekeeping, equipment failures, etc.) may only affect surface soils.

There are not any NYSDEC-reported spill incidents identified at the property in the database report. There are 57 leaking tank spill incidents identified within ½ mile of the site, all of which have been closed by the NYSDEC (see Attachment C). In addition to the leaking tank spill incidents, there are 17 spill incidents from other causes listed within 1/8 mile of the site. Of these spill incidents, 16 have been closed by the NYSDEC and one is active. The active spill incident is listed at 420 West 129th Street, approximately 600 feet southeast of the site (Spill Number 9314756). Based on a review of the information in the database report regarding this spill, and the distance from the property, it is considered unlikely that Spill Number 9314756 would have impacted the site.

Petroleum Bulk Storage Facilities

A check was made of the most recent NYSDEC Petroleum Bulk Storage (PBS) database. Petroleum bulk storage facilities have petroleum storage capacities in excess of eleven hundred (1,100) gallons, and less than four hundred thousand (400,000) gallons.

The property does not appear in the NYSDEC PBS database. There is one adjoining property identified in the PBS database; 48 Convent Avenue (see Attachment C). There are not any Active NYSDEC-reported spill incidents at this adjacent location.

Chemical Bulk Storage Facilities

The NYSDEC Chemical Bulk Storage (CBS) database was reviewed. Chemical bulk storage facilities store regulated hazardous substances in aboveground tanks with capacities of one hundred eighty-five (185) gallons or greater, and/or in underground tanks of any size.

The property and adjoining properties do not appear in the CBS database.

Solid Waste Facilities

A check was made of the NYSDEC database of solid waste facilities, including, but not limited to, landfills, incinerators, transfer stations, recycling centers.

The site is not identified in this database. There are not any Solid Waste Facility sites located within ½ mile of the property.

Voluntary Cleanup Program Sites

The New York State database of sites with Voluntary Cleanup Agreements was reviewed. The Voluntary Cleanup Program (VCP) was established to address the environmental, legal and financial barriers that often hinder the re-development and re-use of contaminated properties. The VCP enhances private sector cleanup of contaminated sites by enabling parties to remediate sites using private rather than public funds.

The site is not on the VCP database. There are no VCP sites listed within ½ mile of the property.

Brownfield Site List

The New York State list of Brownfield sites was reviewed. A Brownfield is any real property where re-development or re-use may be complicated by the presence of potential presence of a hazardous waste, petroleum, pollutant or contaminant.

The site is not on the list. There are not any Brownfield sites listed within ½ mile of the subject property.

Radon

Radon, a naturally occurring radioactive gas, is the product of the decay of radium. It is found most frequently in relatively high concentrations in rock formations containing uranium, granite, shale, phosphate, and pitchblende. Radon may also be found in soils contaminated with industrial waste from uranium and phosphate mining. Radon as a gas can move through the soil and water, and into the atmosphere, and is a potential health concern if confined in sufficiently high concentrations in indoor environments. The U.S. Environmental Protection Agency (USEPA) has set an "action level" of 4.0 picocuries per liter for continuous long-term exposure to radon gas. If radon gas is measured above this level, USEPA suggests follow-up testing and remediation measures.

According to Federal EPA Radon Information, New York County (i.e., Manhattan) falls within Radon Zone 3, which has an average indoor radon level below 2 picocuries per liter.

Based on these low average levels for Manhattan, it is unlikely that radon gas levels exceed the USEPA action level of 4.0 picocuries per liter, and therefore radon testing is typically not recommended.

Site Topography and Elevation

The site is mapped on the USGS 7.5 Minute Topographic Map Central Park, N.Y. Quadrangle (1995). The general elevation for the sites is depicted as between 60 and 70 feet above mean sea-level.

D. SCOPE OF WORK

Historical site research is important in the assessment of the likelihood of past releases of hazardous substances (which include petroleum products). Sources of historical information for the subject property include:

- Local library documents (historical, maps, atlases, address directories).
- Interviews with site contacts, current site operators, and site owners.
- USGS topographic maps, land use and zoning maps, flood plain maps.
- New York City Buildings Department for building history including construction, demolition, and alteration permits.

The following regulatory agency lists and databases of documented hazardous waste sites, waste handlers, and spills are checked for the vicinity of the subject property:

- U.S. Environmental Protection Agency for location of Superfund and CERCLIS sites, ERNS database, and RCRA Hazardous Waste Generators and Treatment/Storage/ Disposal Facilities (TSDF).
- New York State Department of Environmental Conservation, Region 2, for hazardous waste spill logs, Inactive Hazardous Waste Disposal Sites, and registered tank lists, Solid Waste Facilities.

The site visit involves a review of current operations, interviews with knowledgeable on-site occupants or building managers, and inspection of accessible areas of the building and inspection of the property for visible indications of any significant contamination by toxic or hazardous materials. The investigation includes the following objectives:

- To identify sources of potential on-site contamination, such as underground storage tanks, dry wells, interior floor drains, transformers (which may contain PCBs), suspected asbestos-containing materials, and suspected lead-based paints, etc.
- To examine the property for signs of potential contamination: stained soils, unusual odors, stressed or dead vegetation, improperly stored drums, oil slicks, on-site waste disposal/dumping, etc.
- To identify the quantity and type of toxic or hazardous substances (if any) used in the on-site operations.
- To determine if any on-site toxic and hazardous materials are stored, handled and disposed of in accordance with good practice, minimizing the potential for contamination.
- To identify potential off-site sources of contamination. Adjacent uses are noted, particularly auto-related and industrial sites.
- To identify on-site or adjacent off-site sensitive receptors, such as wetlands, surface waters, drinking water wells.

Not all of the objectives described above are applied to every site; investigations are tailored to the particular nature of the site. It should be noted that information requested from regulatory agencies may be incomplete or unavailable within a reasonable time period.

QUALIFICATIONS

EPDSCO, Inc. is an environmental consulting firm that has undertaken environmental site assessment studies since 1987. These site evaluation studies have been prepared for major lenders, public corporations, businesses, and governmental agencies.

Individual qualifications of personnel, including specific credentials of persons involved in the preparation of this report, can be provided upon request.

DISCLAIMER

This report is for use by Big Apple Developers, and is only to be used as a guide in determining the potential for contamination by toxic or hazardous materials on the subject property at the time of the site visit. This Phase I Environmental (ESA) is based principally on the review of historic and regulatory records (made available within a reasonable time period), relating to past occupants and usage of the subject property, as well as activities at nearby sites, and upon a visual assessment of the subject property, and makes no determinations with respect to portions of the subject property and its structures which were not inspected.

This Phase I ESA does not involve any sampling, testing, or laboratory analysis of subsurface soils, groundwater or building materials or other substances on-site, but constitutes only the professional opinion of our staff based on established procedures and protocols. This Phase I ESA is not, and should not be construed as, a guaranty, warranty, or certification of the presence or absence of toxic or hazardous substances, which can be made only with testing, and contains no formal plans or recommendations to rectify or remediate the presence of any toxic or hazardous substances, which may be subject to regulatory approval.

Any and all liability shall be limited solely to the cost of this Environmental Site Assessment report. EPDSCO Inc., shall have no liability for any other damages, whether consequential, compensatory, punitive, or special, arising out of incidental to, or as a result of, this assessment. We assume no liability for the use of this report by any person or entity other than the institution and/or entities or persons for whom it has been prepared.

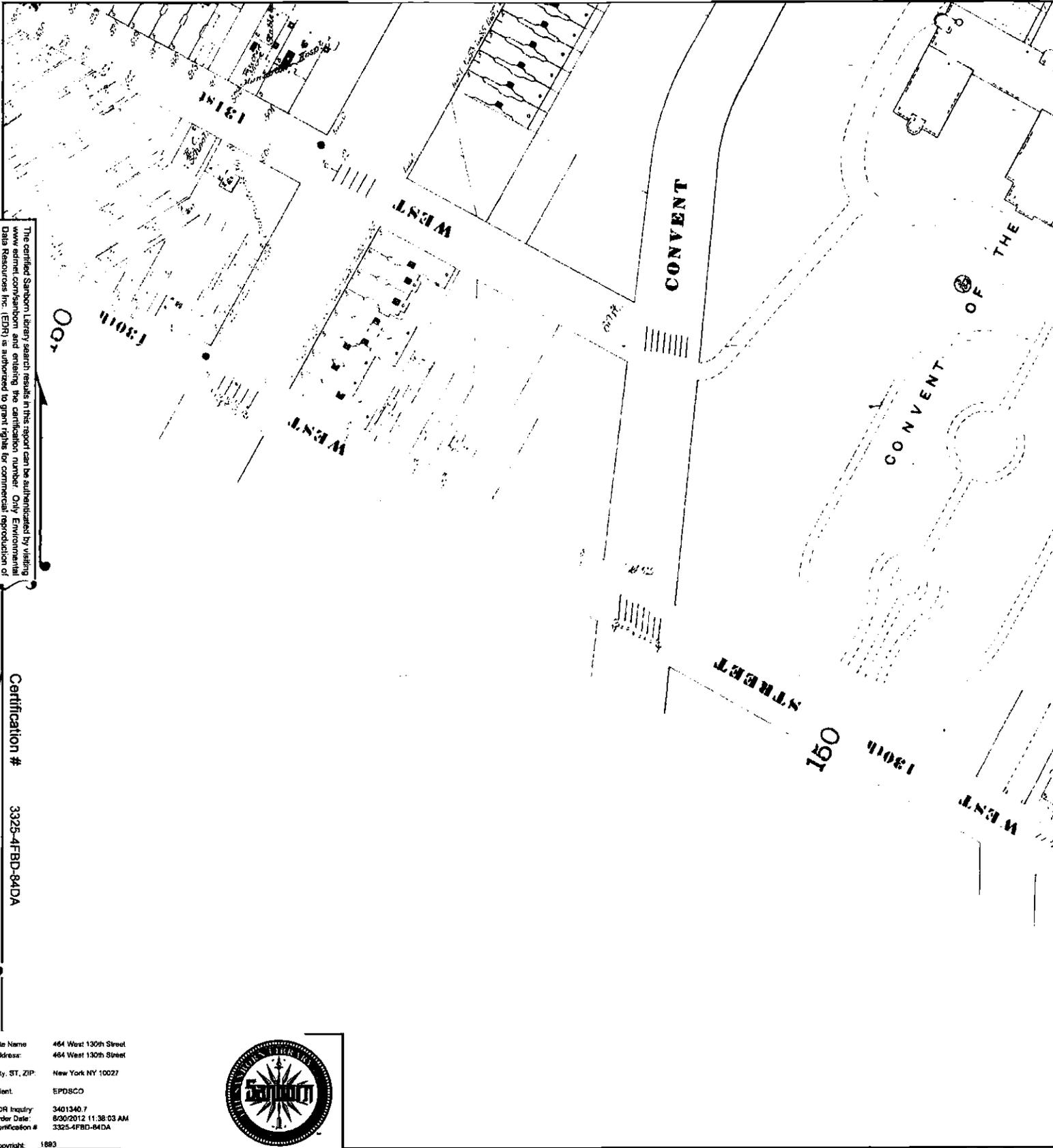
ATTACHMENT A

FIGURES



FIGURE 1
Subject Property Location
USGS 7.5 Minute Series Topographic Map
Central Park, N.Y. - N.J. Quadrangle (1995)

1893 Certified Sanborn Map



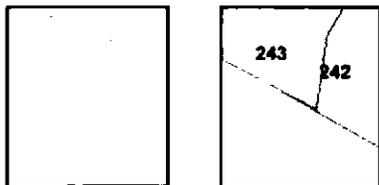
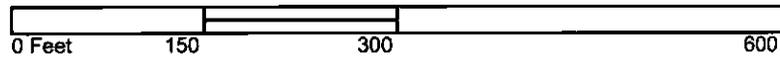
The certified Sanborn Library search results in this report can be authenticated by visiting www.edr.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Certification # 3325-4FBD-84DA

Site Name: 464 West 130th Street
 Address: 464 West 130th Street
 City, ST, ZIP: New York NY 10027
 Client: EPDSCO
 EDR Inquiry: 3401340.7
 Order Date: 8/30/2012 11:38:03 AM
 Certification #: 3325-4FBD-84DA
 Copyright: 1893



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

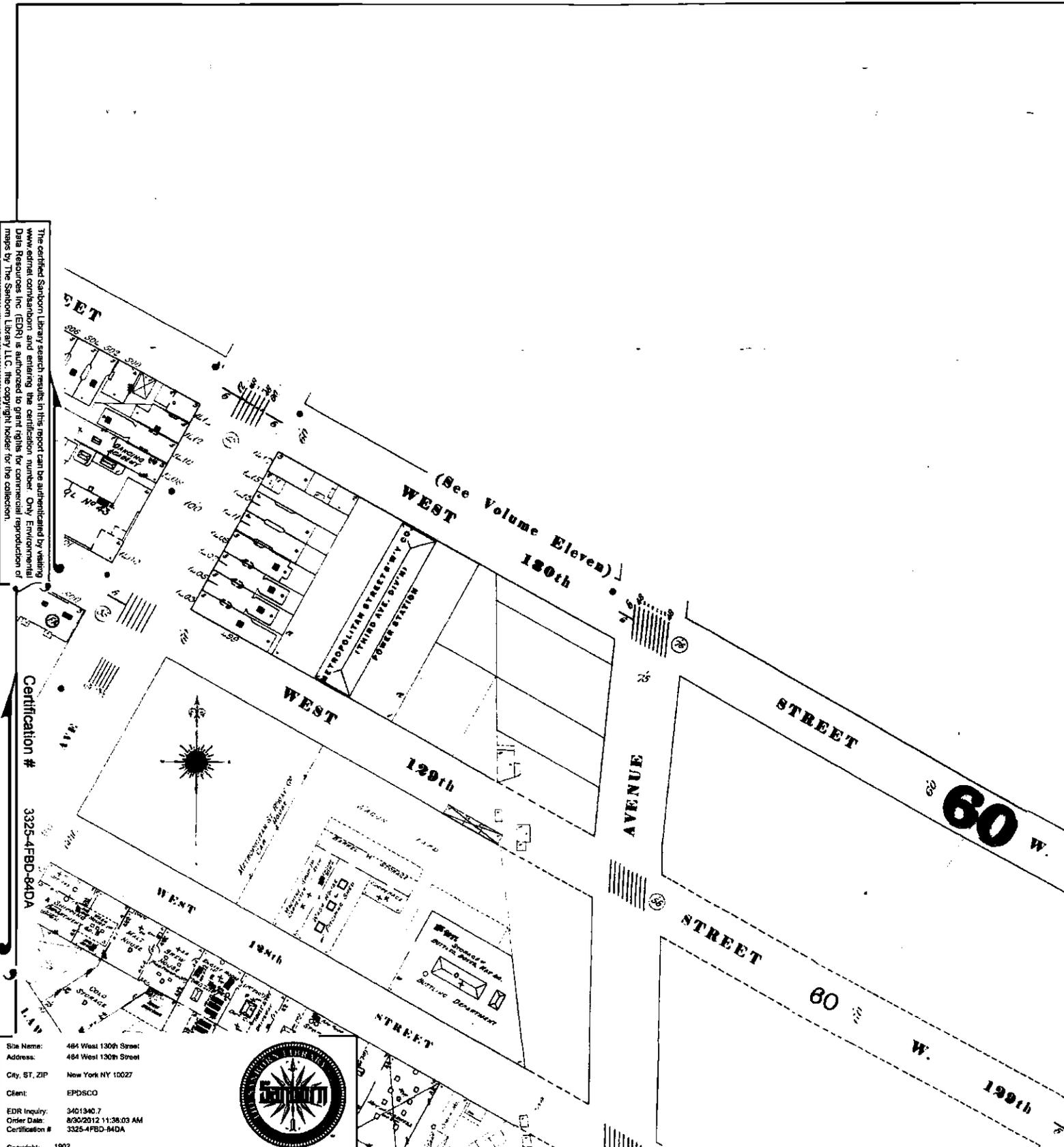


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 Volume 11N, Sheet 243



1902 Certified Sanborn Map

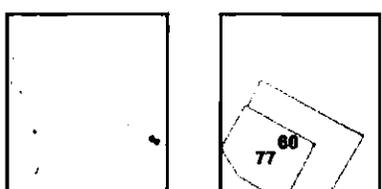
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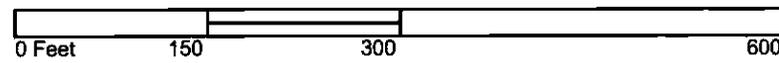
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 Copyright: 1902



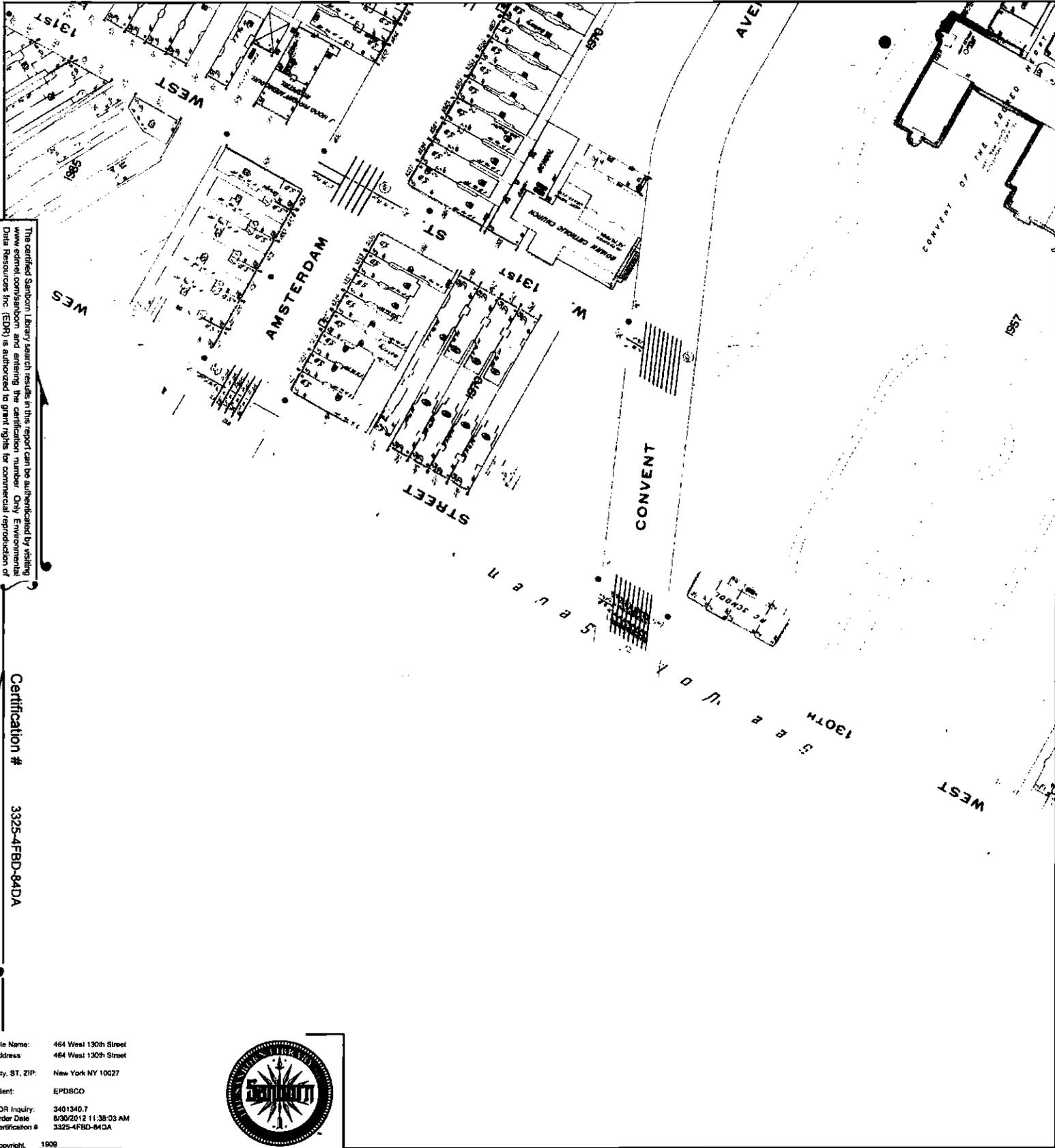
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Volume 7N, Sheet 60
 Volume 7N, Sheet 77



1909 Certified Sanborn Map



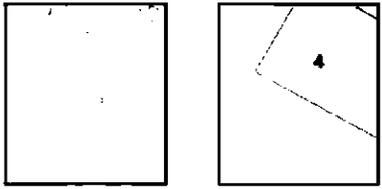
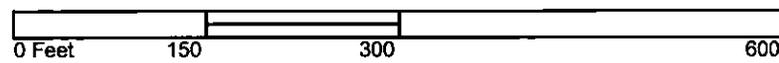
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Volume 11S, Sheet 4



1912 Certified Sanborn Map

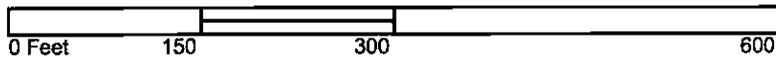
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 Copyright: 1912



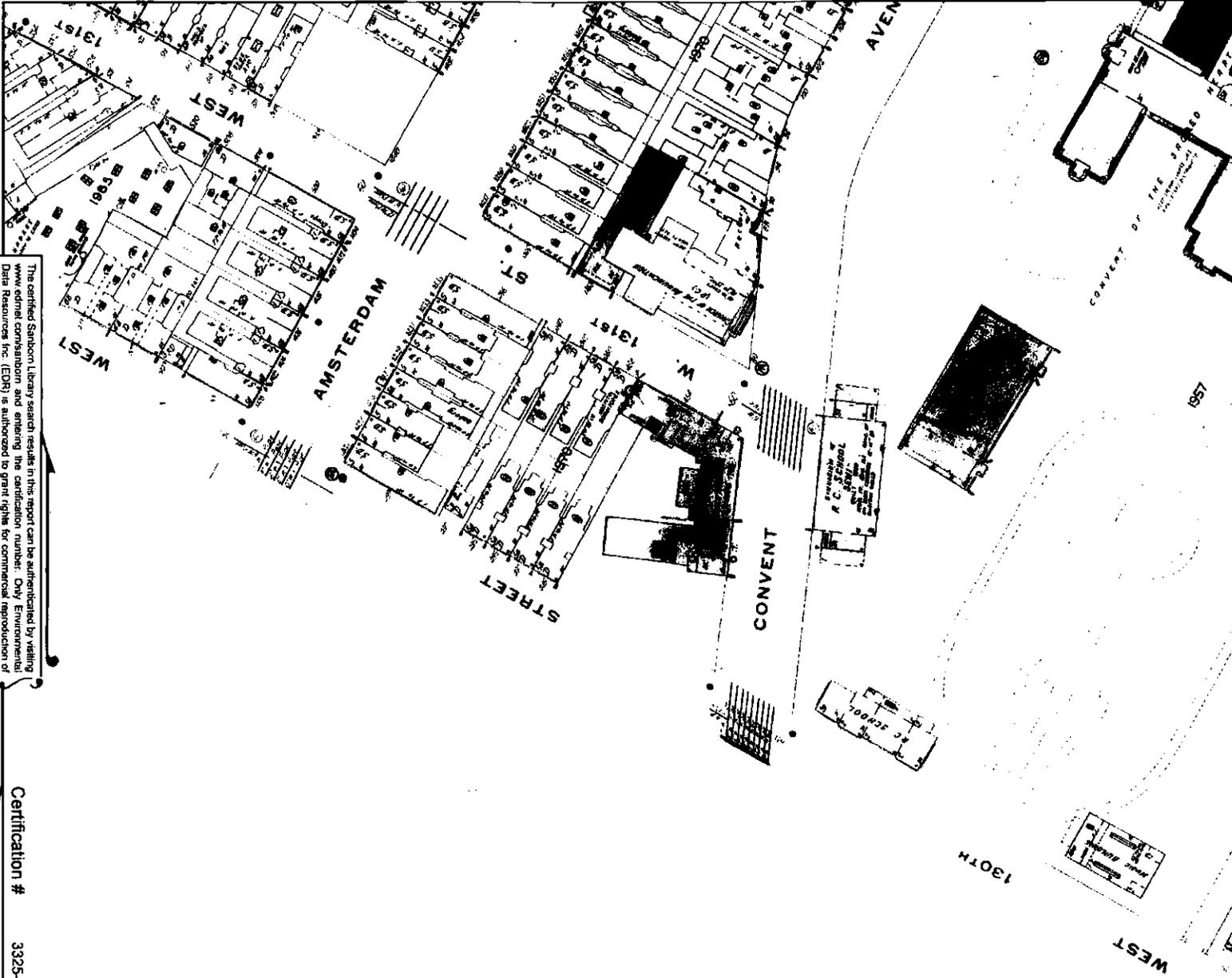
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Volume 7N, Sheet 96



1939 Certified Sanborn Map



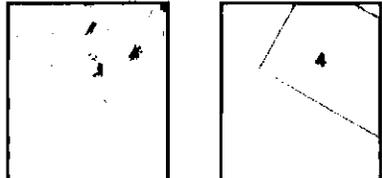
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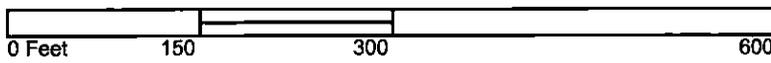
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 Copyright: 1939



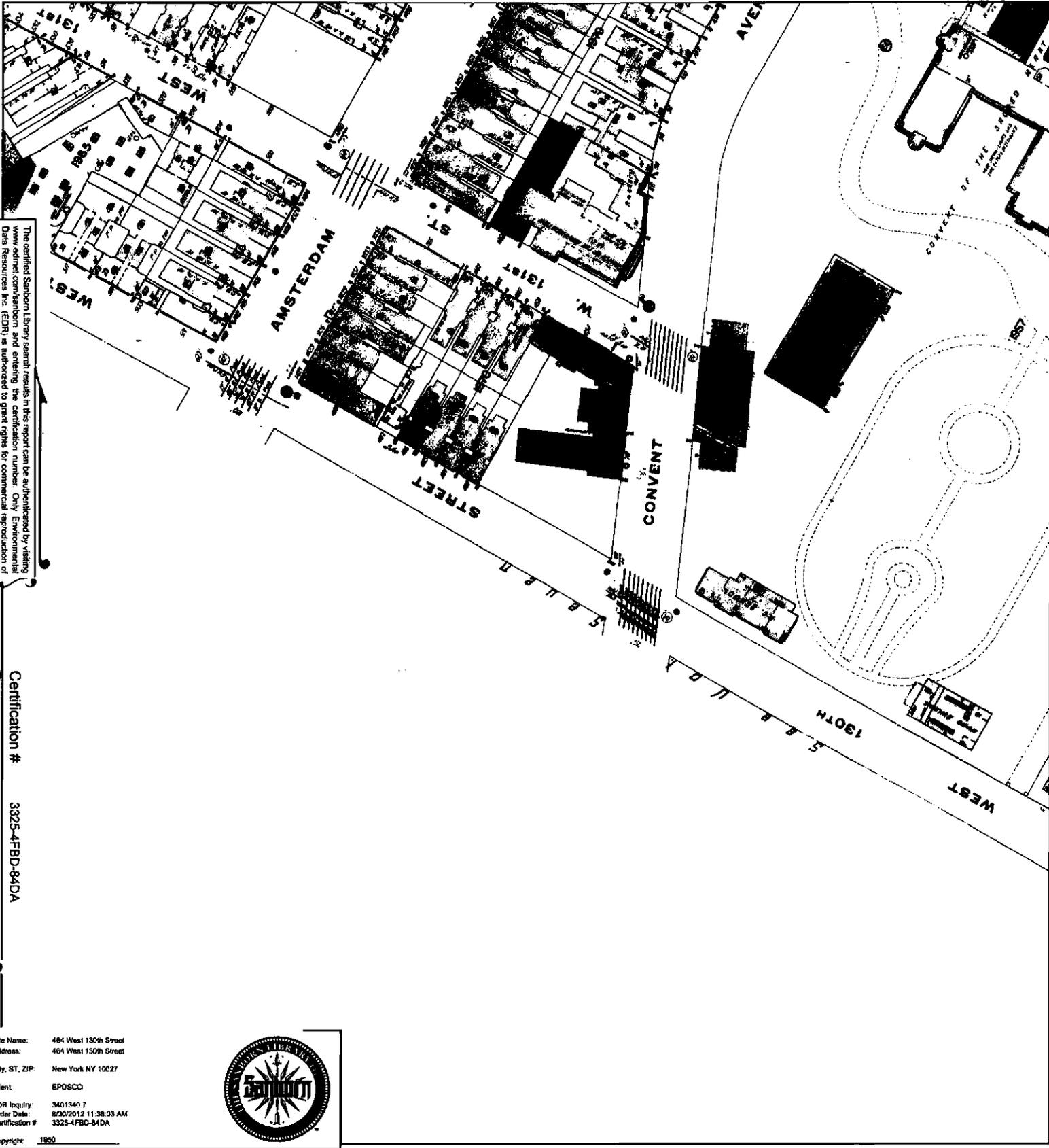
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Volume 11S, Sheet 4



1950 Certified Sanborn Map



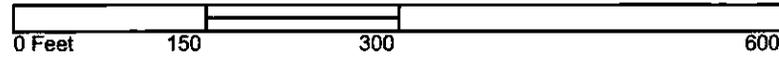
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Volume 11S, Sheet 4



1951 Certified Sanborn Map

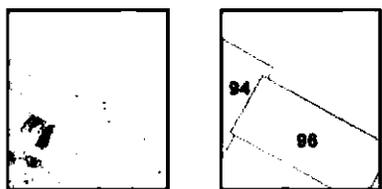
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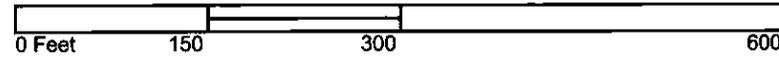
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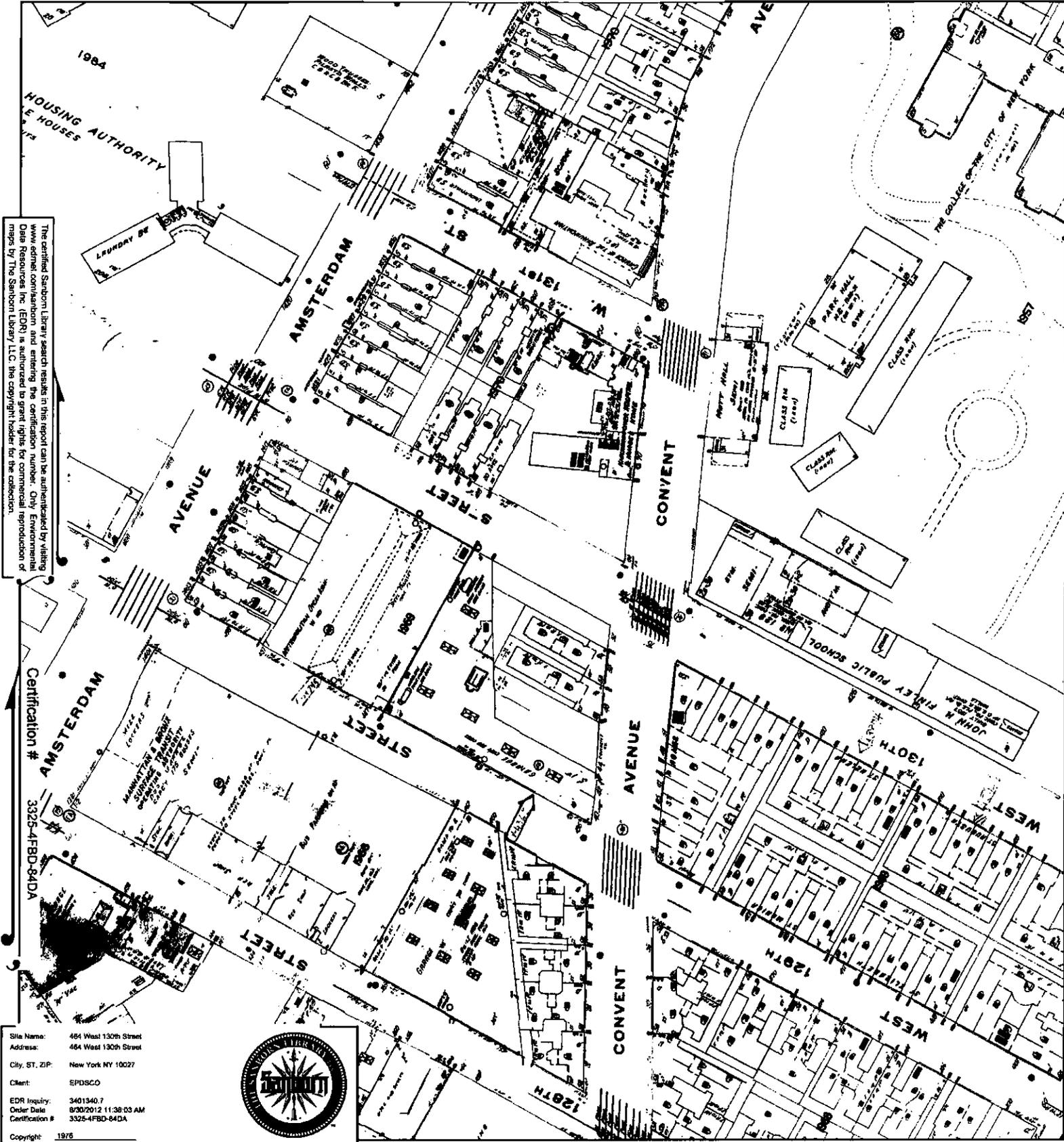
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 Volume 7N, Sheet 94



1976 Certified Sanborn Map



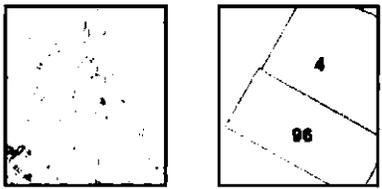
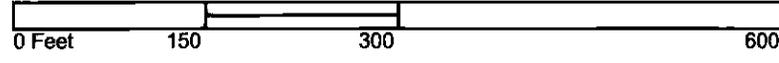
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1978 Certified Sanborn Map

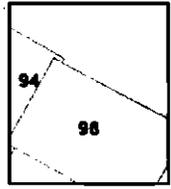
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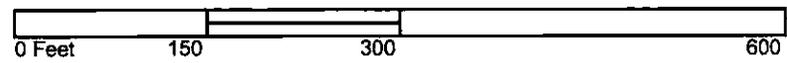
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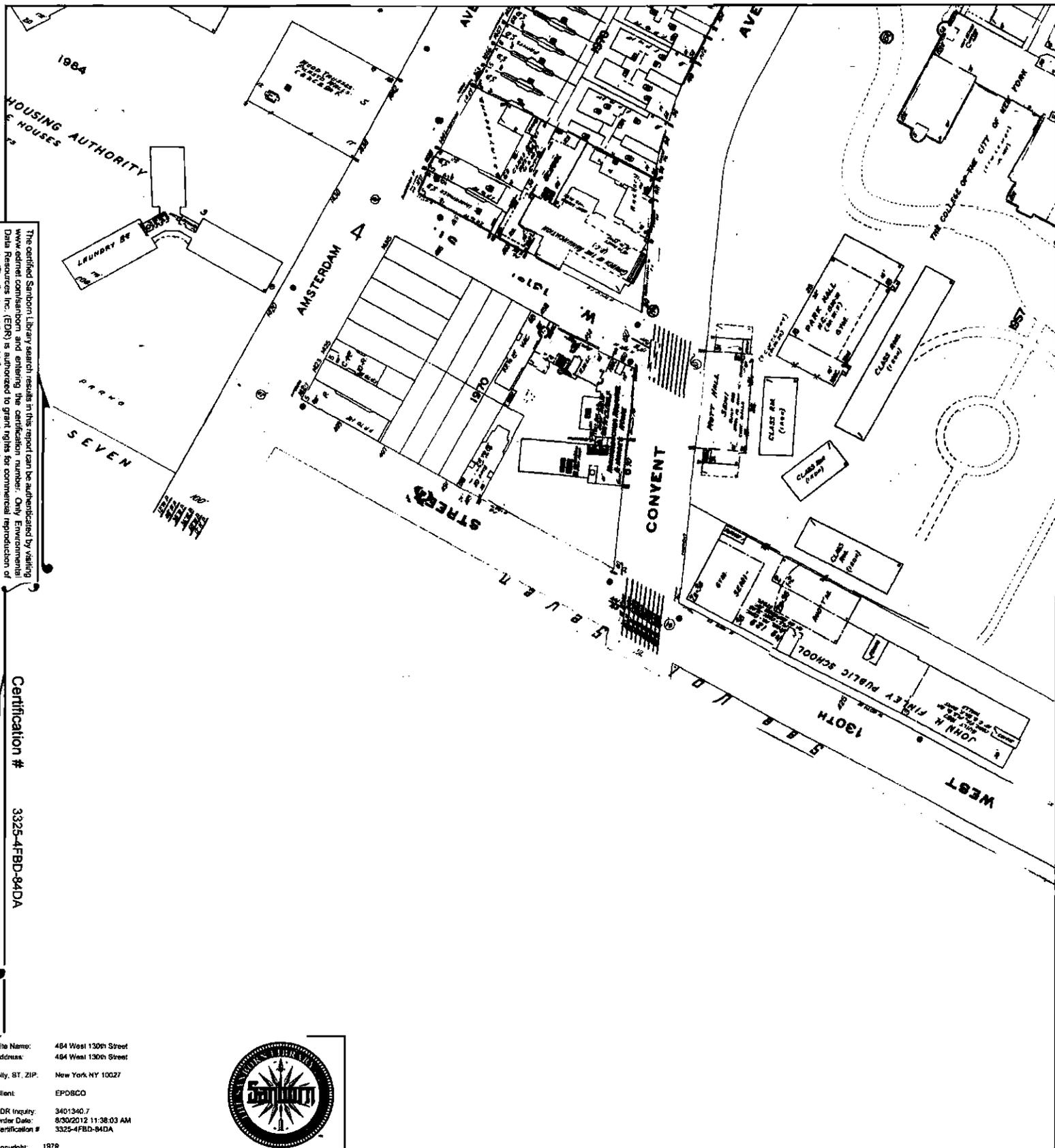
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1979 Certified Sanborn Map



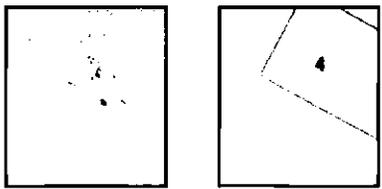
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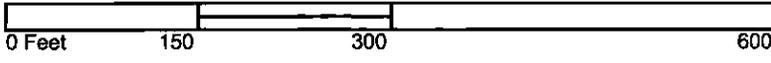
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1980 Certified Sanborn Map

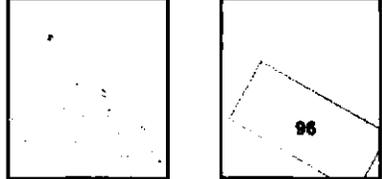
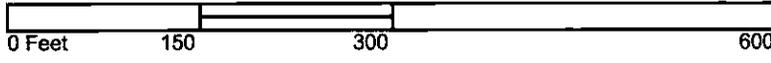
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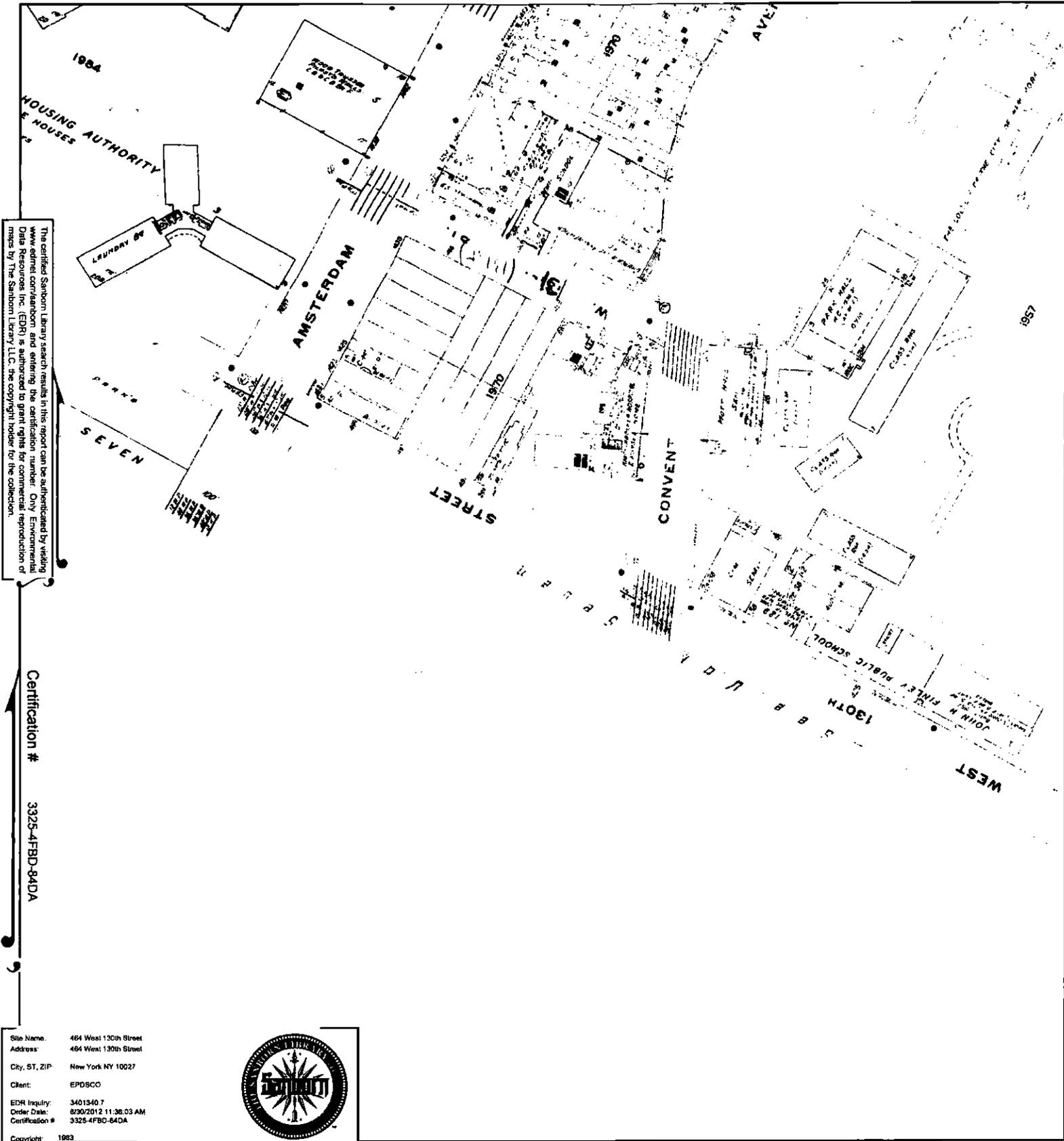
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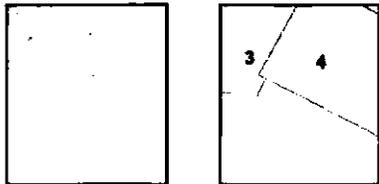
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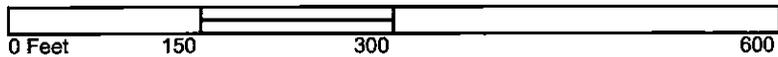
1983 Certified Sanborn Map



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Volume 11S, Sheet 3
 Volume 11S, Sheet 4



1985 Certified Sanborn Map

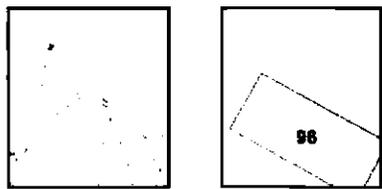
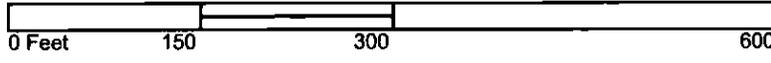
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 Copyright: 1985



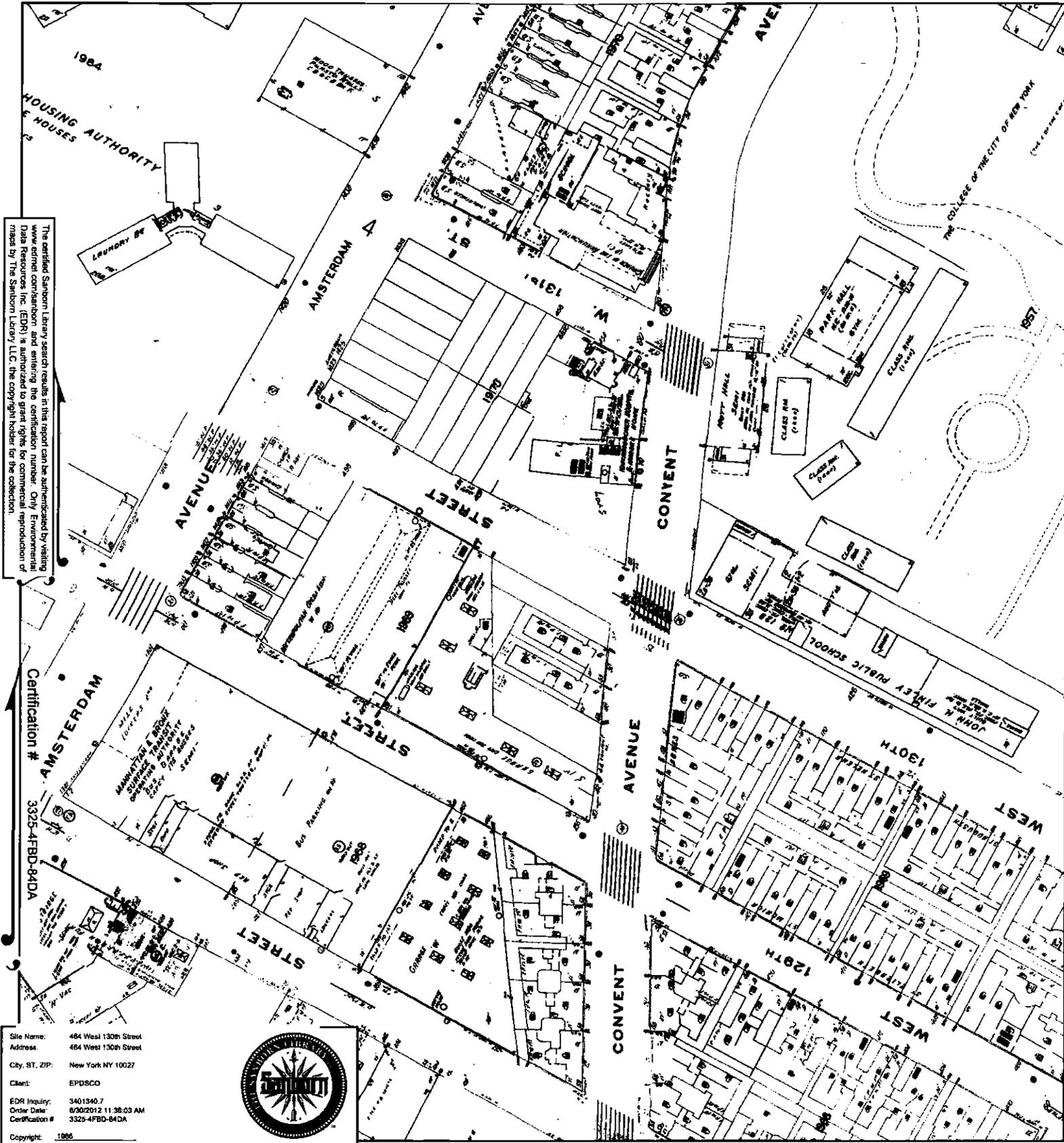
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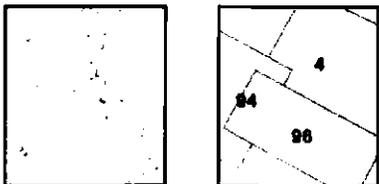
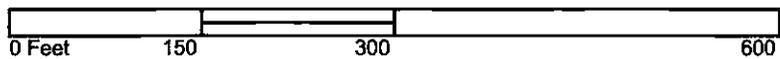
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1986 Certified Sanborn Map



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1988 Certified Sanborn Map

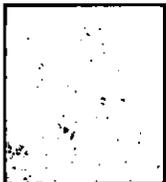
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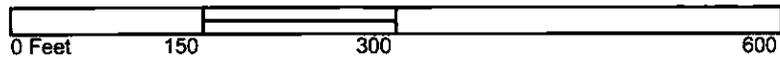
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 Copyright: 1988



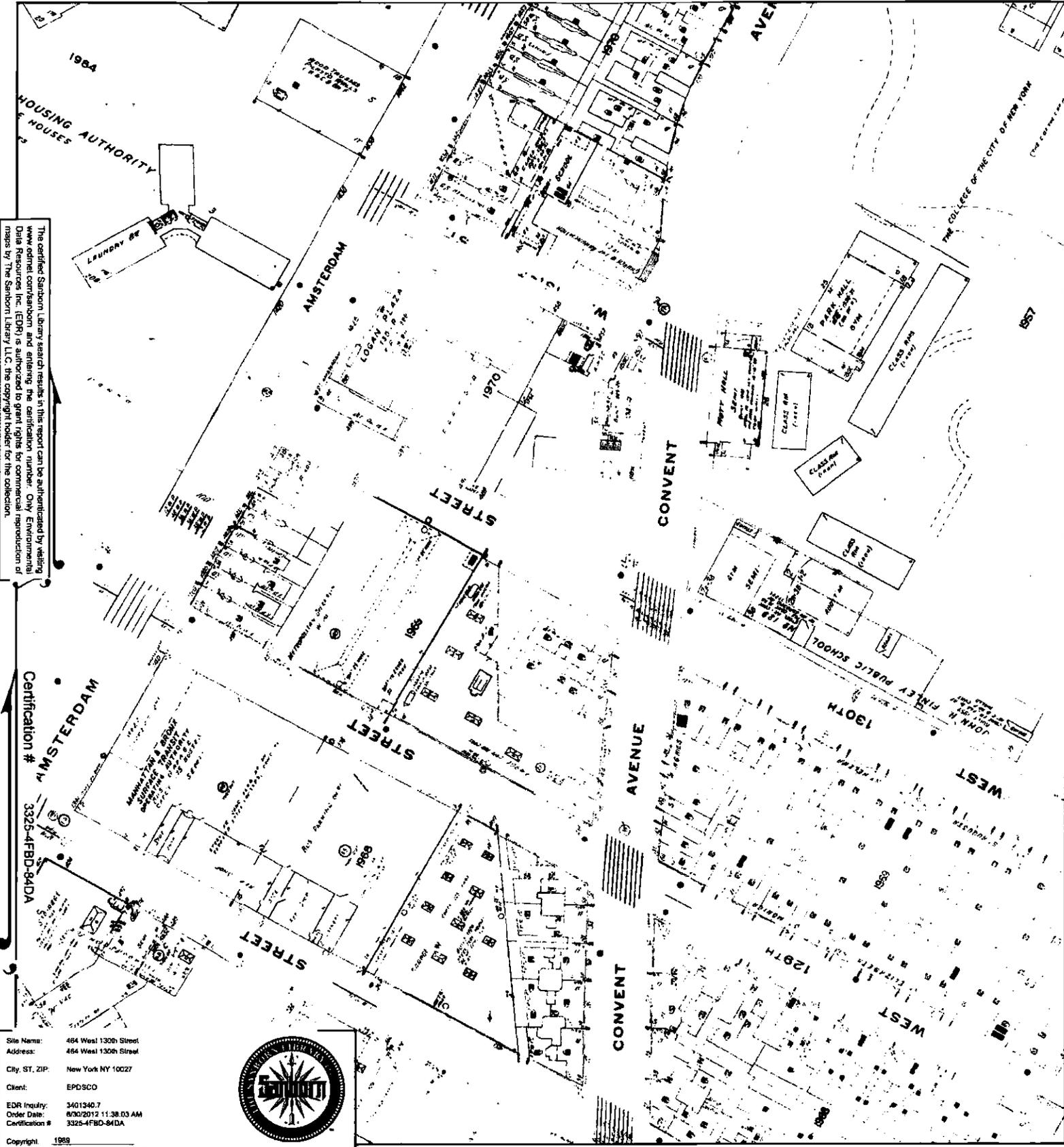
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1989 Certified Sanborn Map



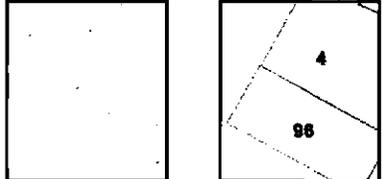
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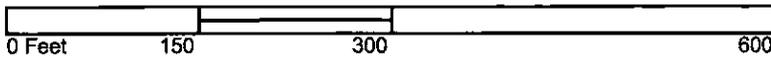
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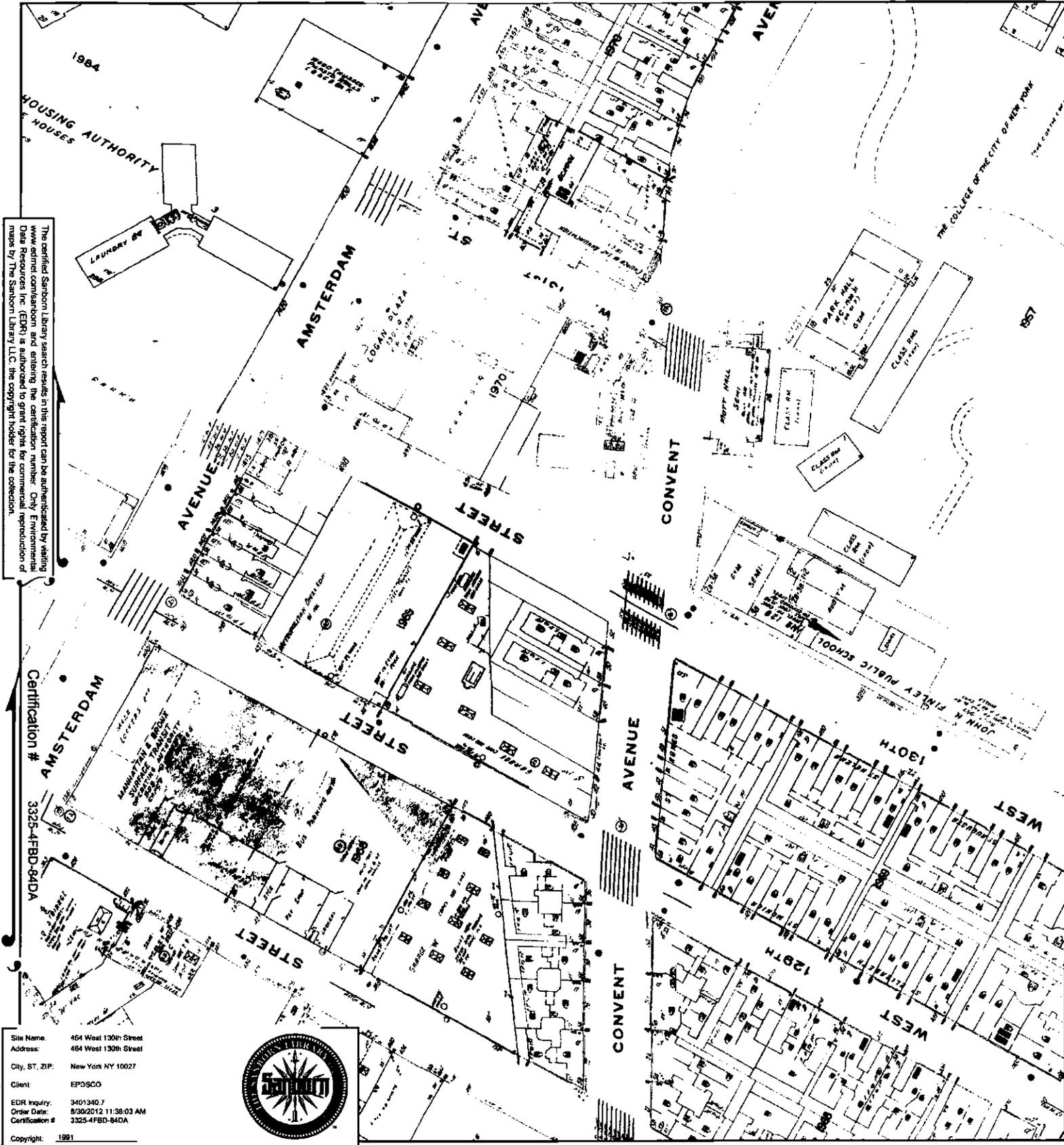
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 Volume 11S, Sheet 4



1991 Certified Sanborn Map



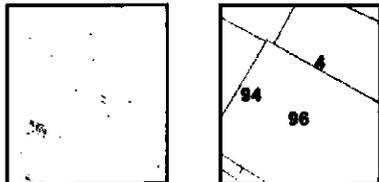
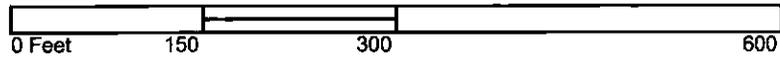
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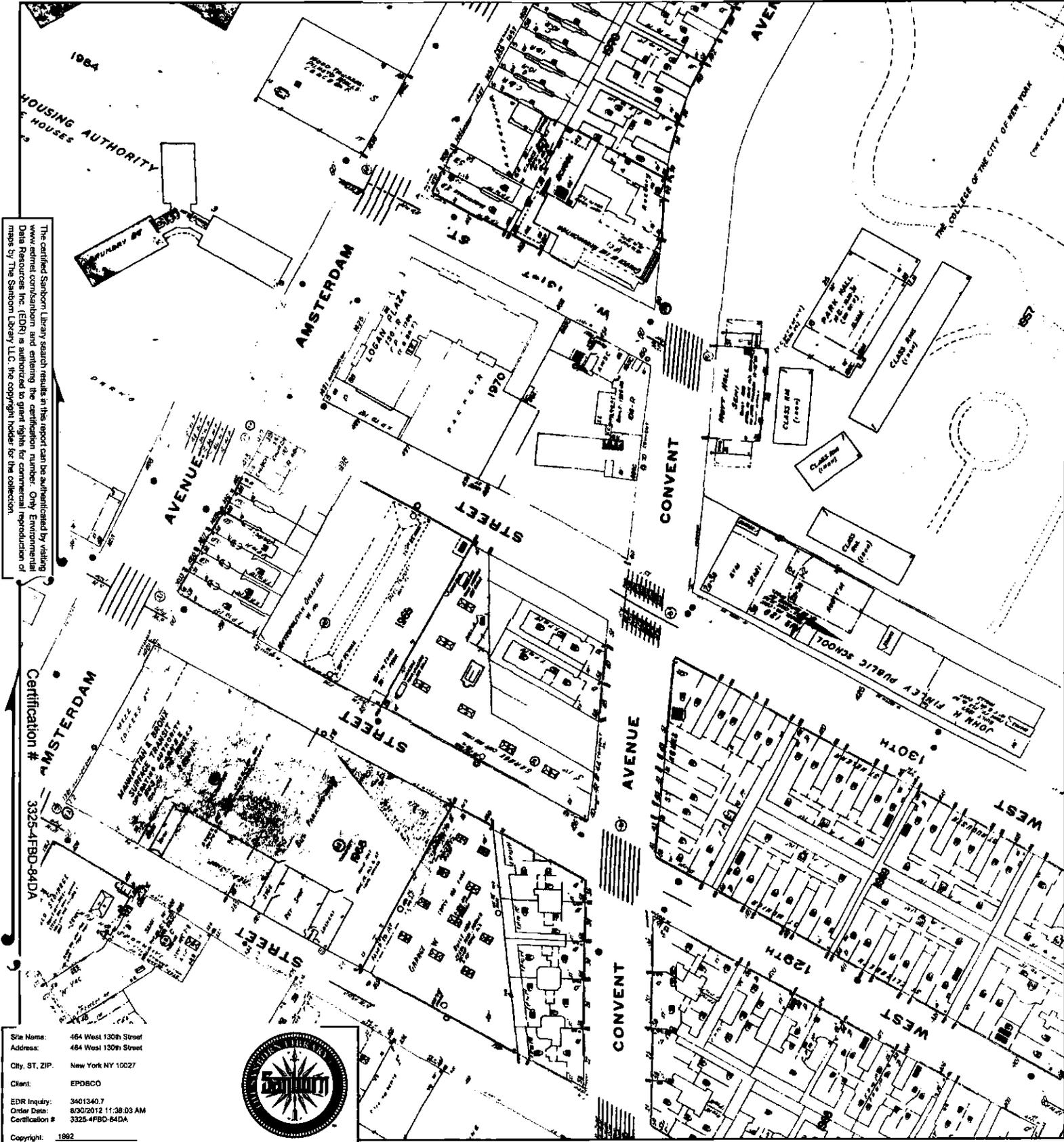
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 Volume 7N, Sheet 94
 Volume 7N, Sheet 96



1992 Certified Sanborn Map



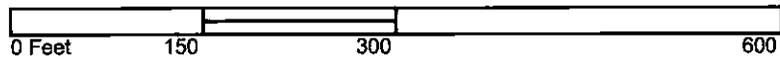
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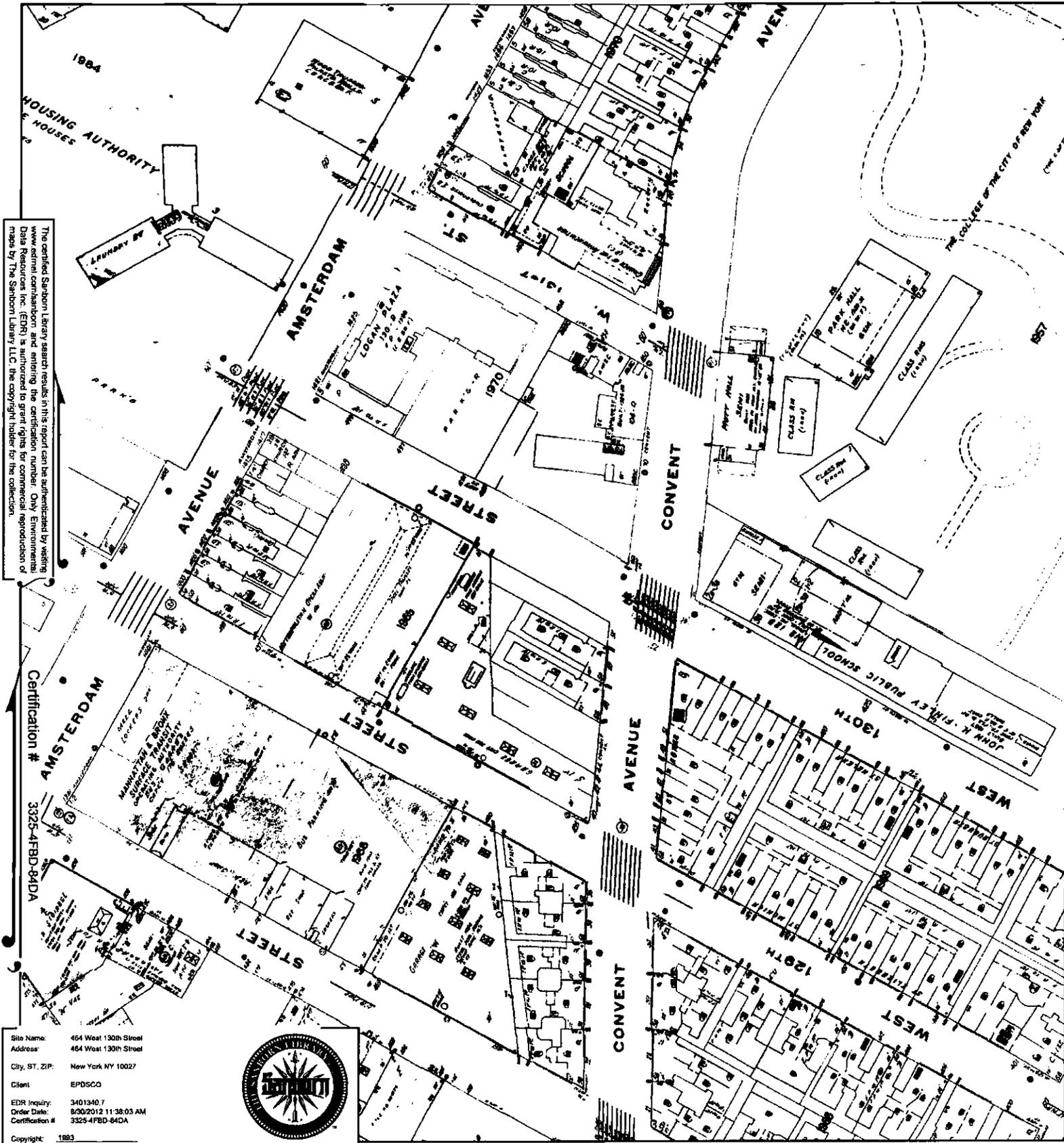
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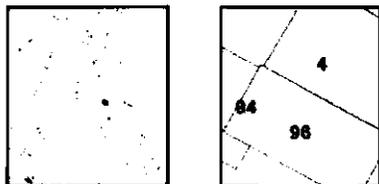
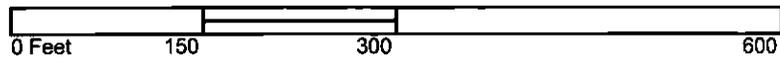
Volume 11S, Sheet 4
 Volume 7N, Sheet 94
 Volume 7N, Sheet 96



1993 Certified Sanborn Map



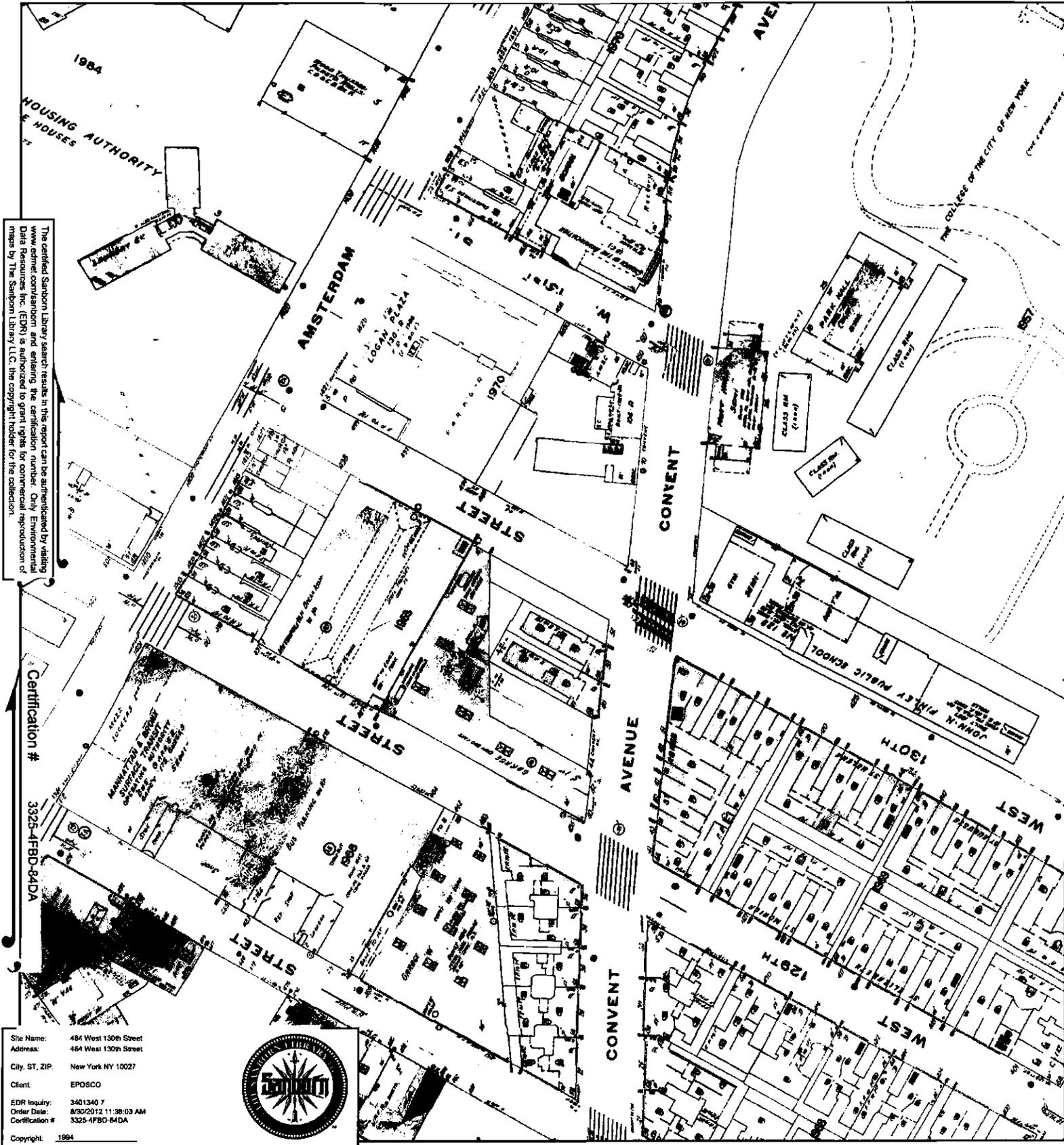
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 Volume 7N, Sheet 94
 Volume 7N, Sheet 96



1994 Certified Sanborn Map



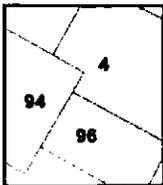
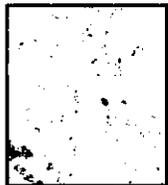
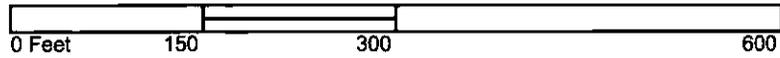
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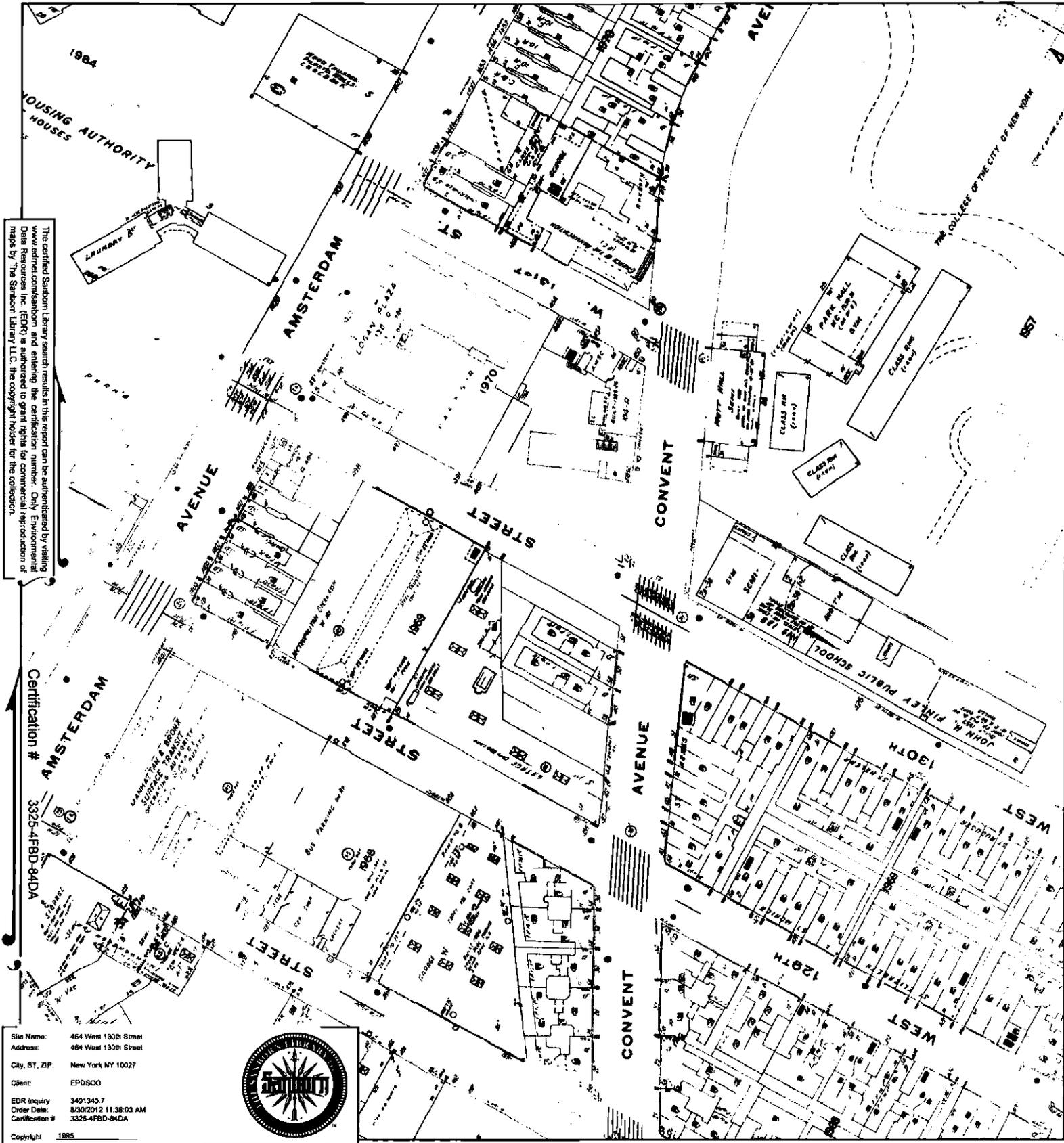
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Volume 7N, Sheet 94
 Volume 7N, Sheet 96
 Volume 11S, Sheet 4



1995 Certified Sanborn Map



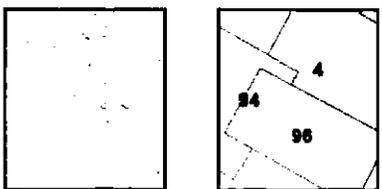
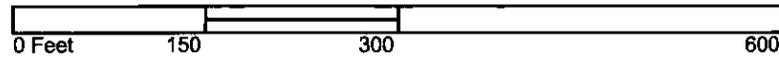
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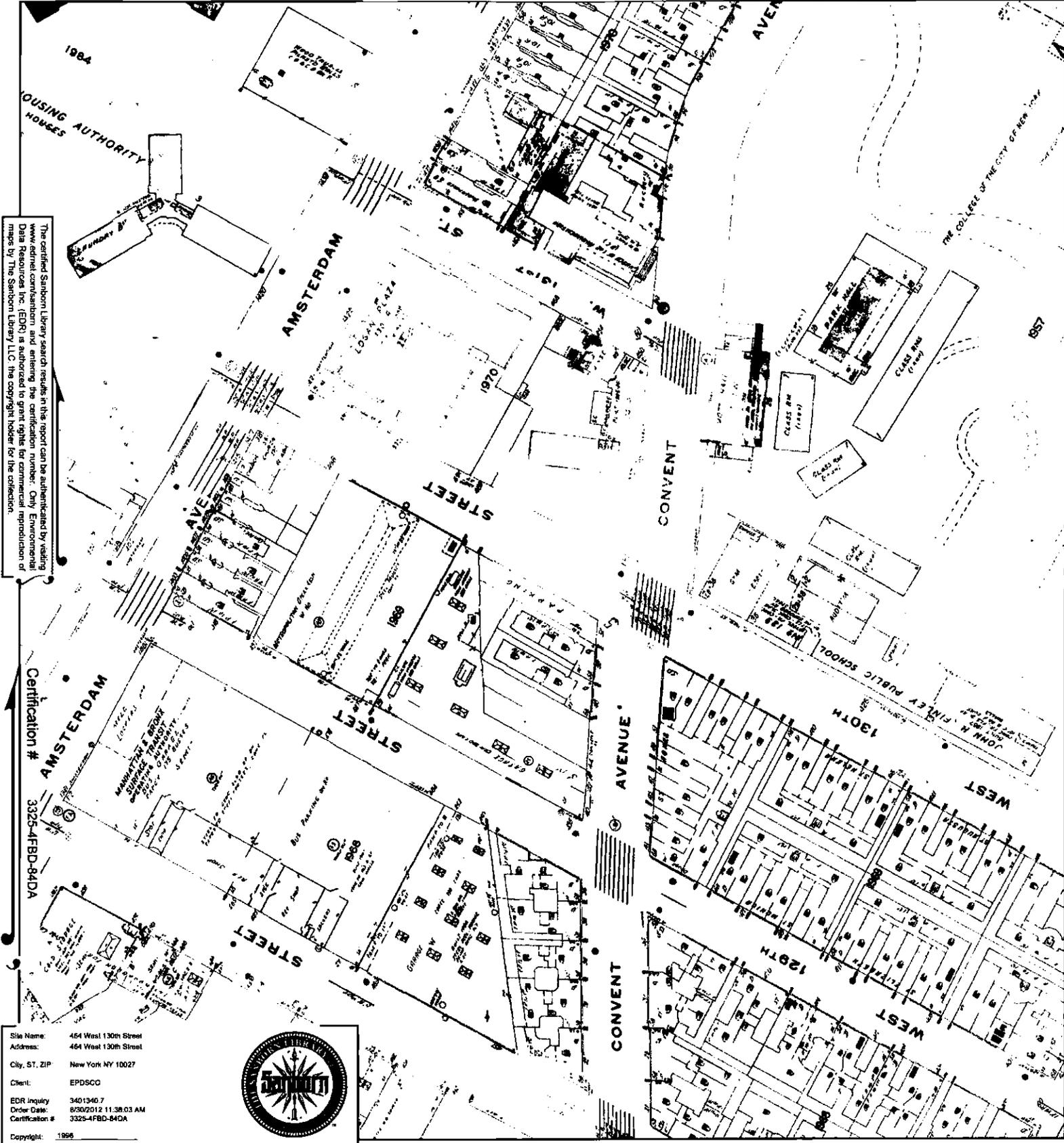
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 Outlined areas indicate map sheets within the collection.



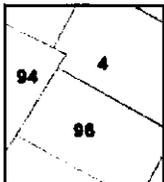
Volume 11S, Sheet 4
 Volume 7N, Sheet 94
 Volume 7N, Sheet 96



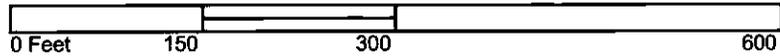
1996 Certified Sanborn Map



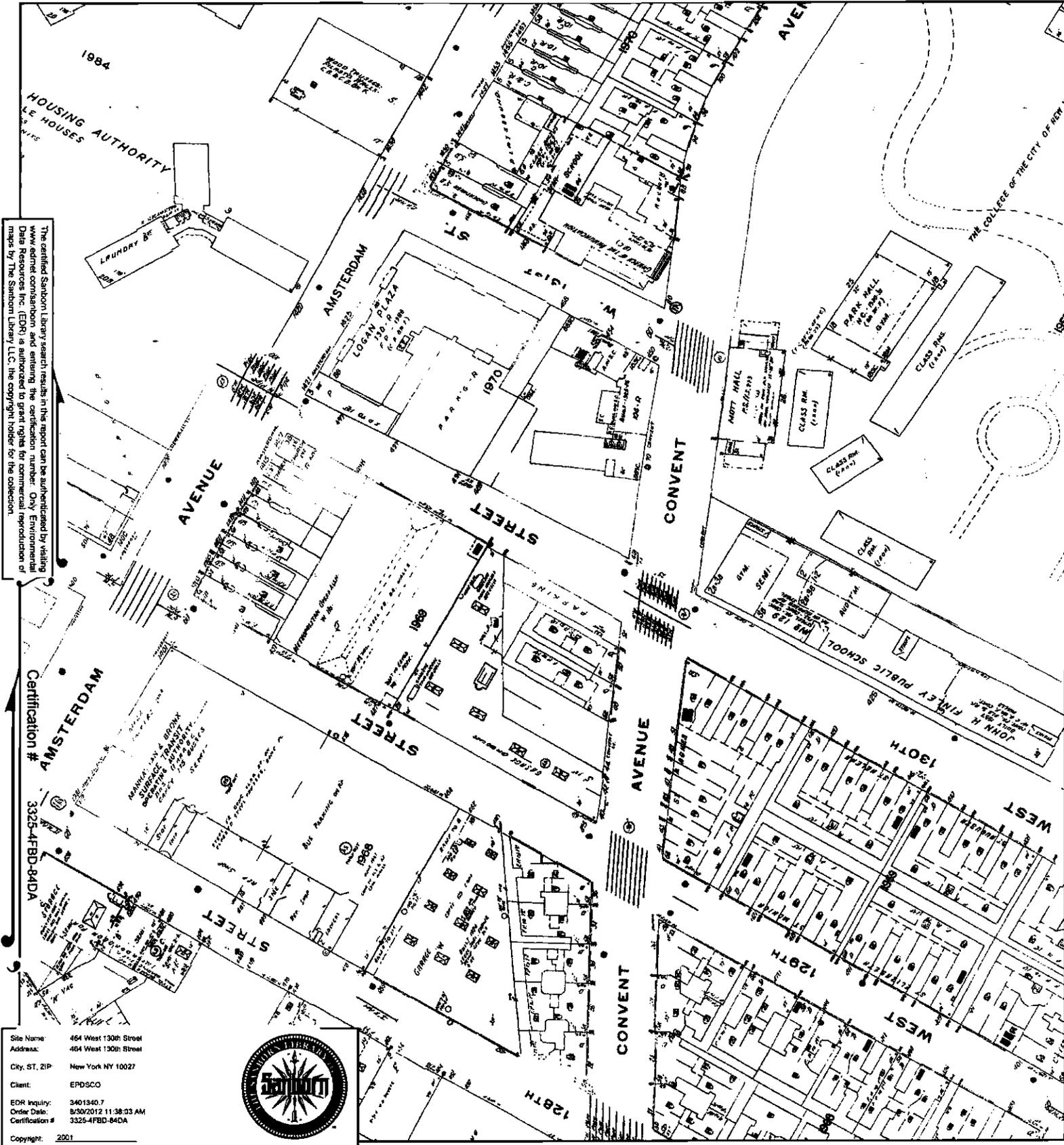
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 Volume 7N, Sheet 94



2001 Certified Sanborn Map



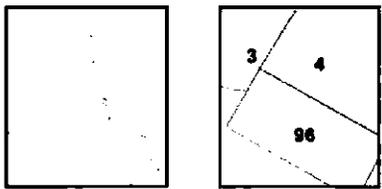
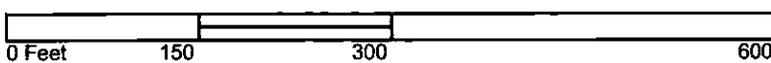
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Certification #
3325-4FBD-84DA

Site Name:	464 West 130th Street
Address:	464 West 130th Street
City, ST, ZIP:	New York NY 10027
Client:	EPDSCO
EOR Inqury:	3401340.7
Order Date:	8/30/2012 11:38:03 AM
Certification #:	3325-4FBD-84DA
Copyright:	2921



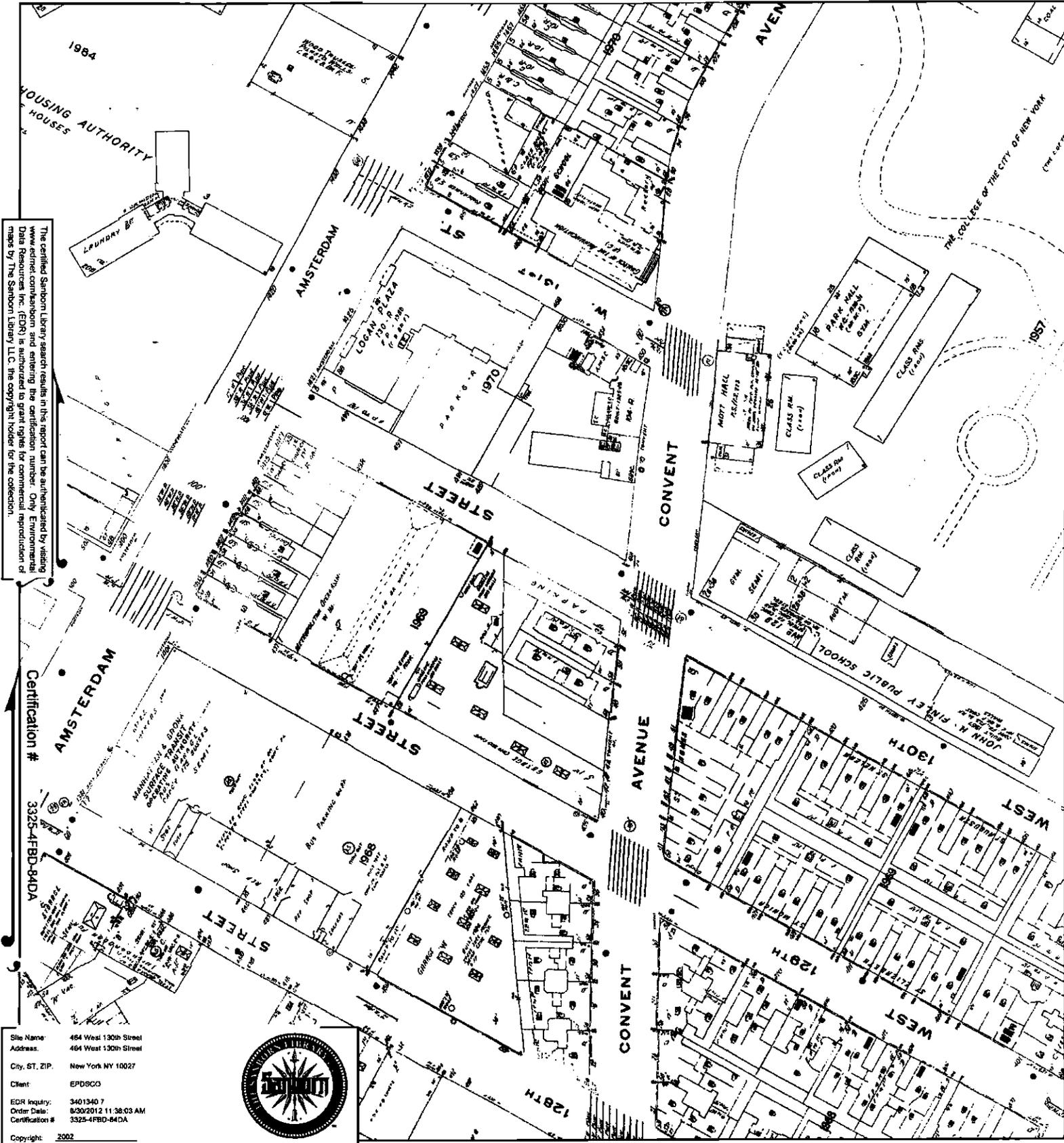
This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



- Volume 7N, Sheet 96
- Volume 11S, Sheet 3
- Volume 11S, Sheet 4



2002 Certified Sanborn Map



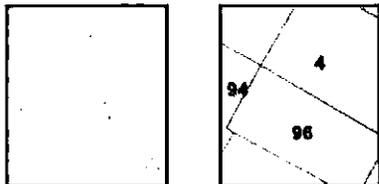
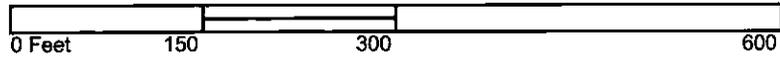
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Certification #
3325-4FBD-84DA

Site Name: 464 West 130th Street
 Address: 464 West 130th Street
 City, ST, ZIP: New York NY 10027
 Client: EPDSCO
 EDR Inquiry: 3401340 7
 Order Date: 8/30/2012 11:38:03 AM
 Certification #: 3325-4FBD-84DA
 Copyright: 2002



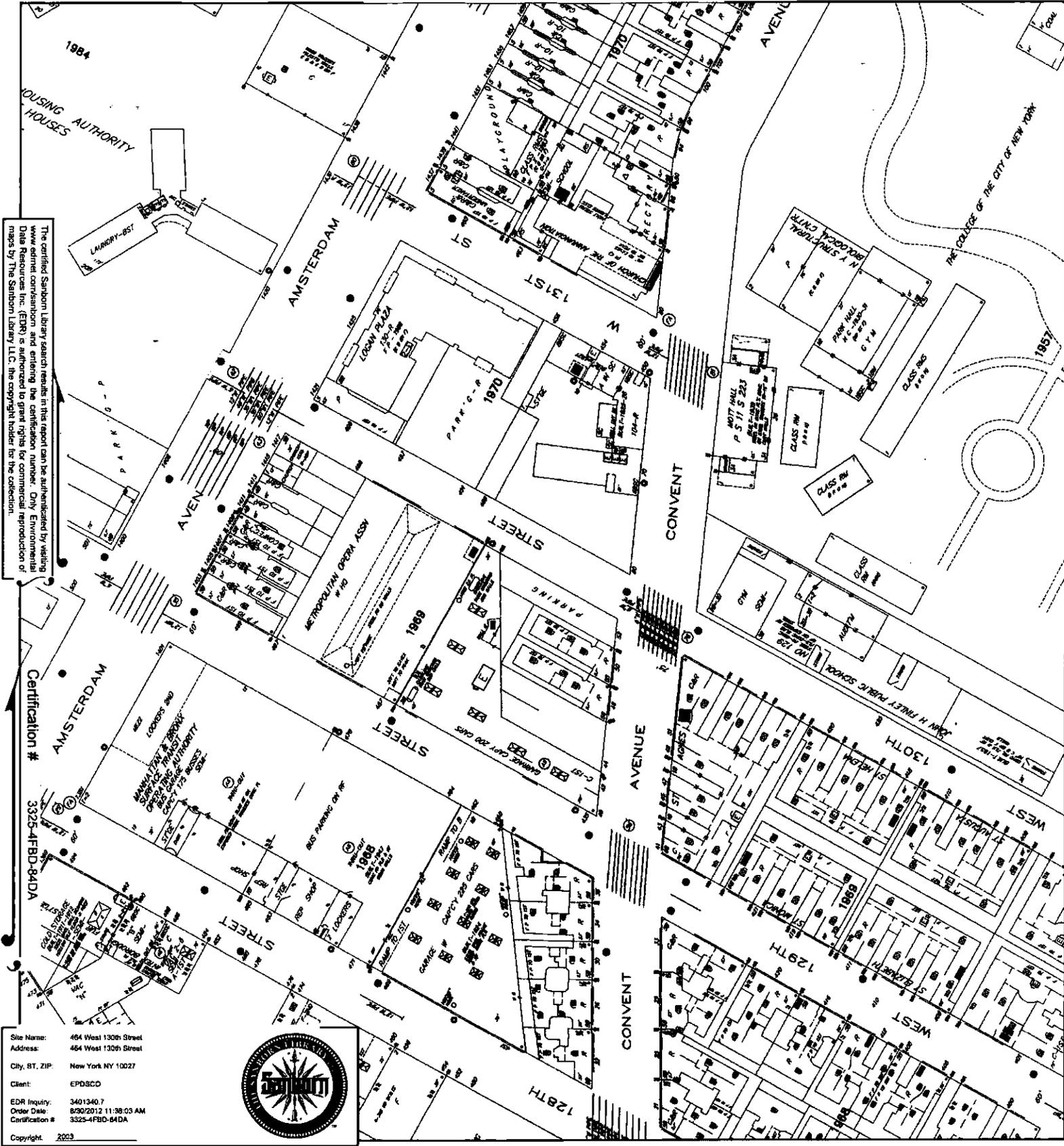
This Certified Sanborn Map combines the following sheets.
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Volume 11S, Sheet 4
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 Volume 7N, Sheet 96



2003 Certified Sanborn Map



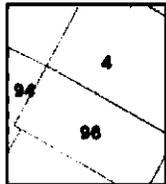
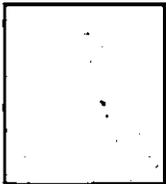
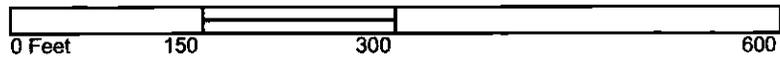
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Certification #
3325-4FBD-84DA

Site Name: 464 West 130th Street
 Address: 464 West 130th Street
 City, ST, ZIP: New York NY 10027
 Client: EPDSCO
 EDR Inquiry: 3401340.7
 Order Date: 8/30/2012 11:38:03 AM
 Certification #: 3325-4FBD-84DA



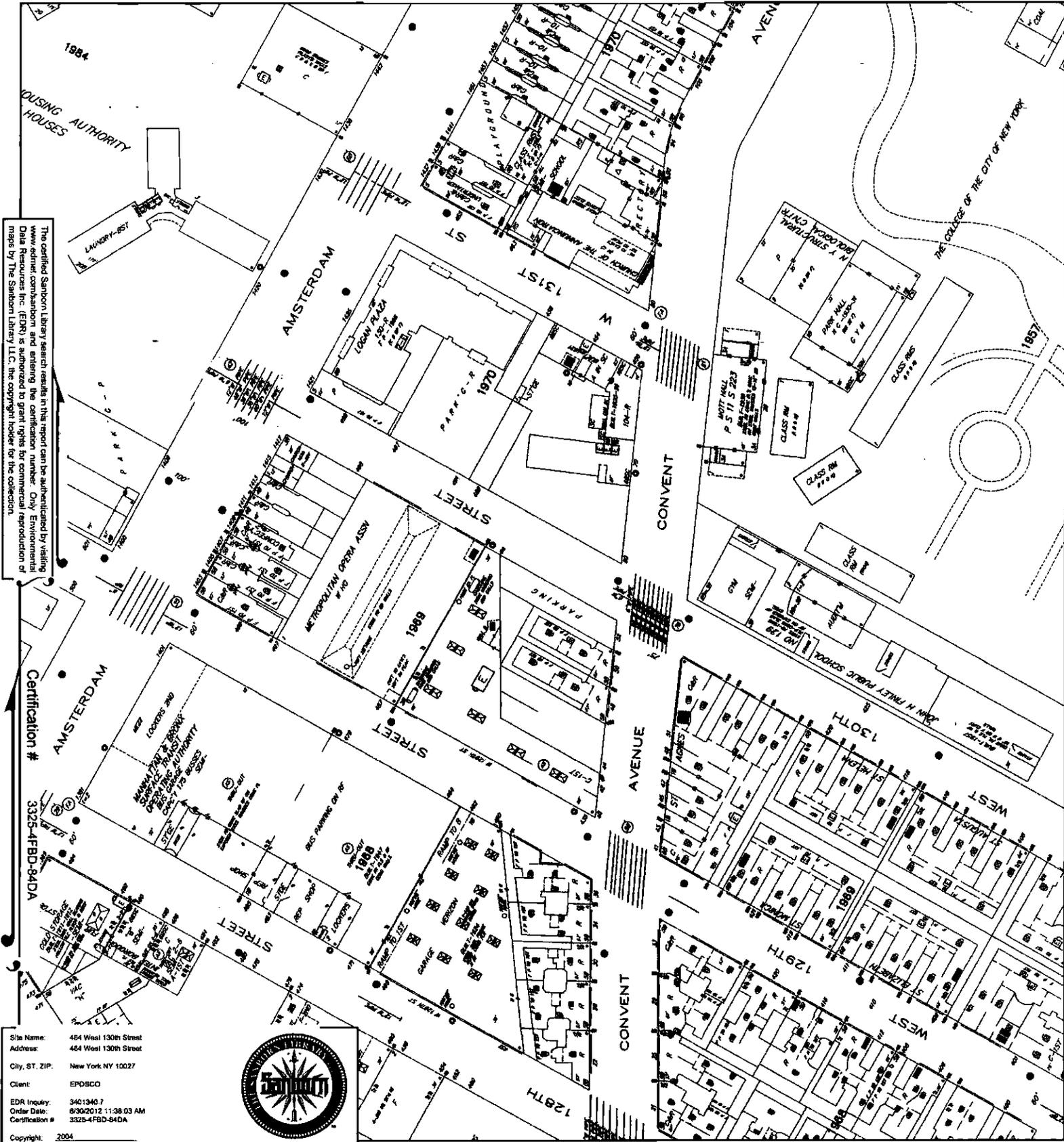
This Certified Sanborn Map combines the following sheets.
 Outlined areas indicate map sheets within the collection.



Volume 7N, Sheet 94
 Volume 7N, Sheet 96
 Volume 11S, Sheet 4



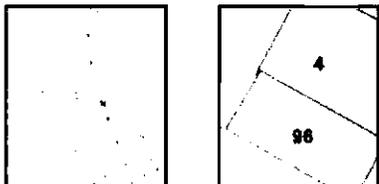
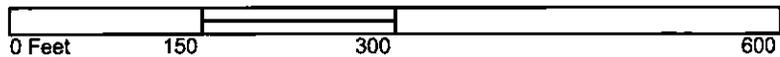
2004 Certified Sanborn Map



Site Name: 464 West 130th Street
 Address: 464 West 130th Street
 City, ST, ZIP: New York NY 10027
 Client: EPOBCO
 EDR Inquiry: 3401340.7
 Order Date: 8/30/2012 11:38:03 AM
 Certification #: 3325-4FBD-84DA
 Copyright: 2004



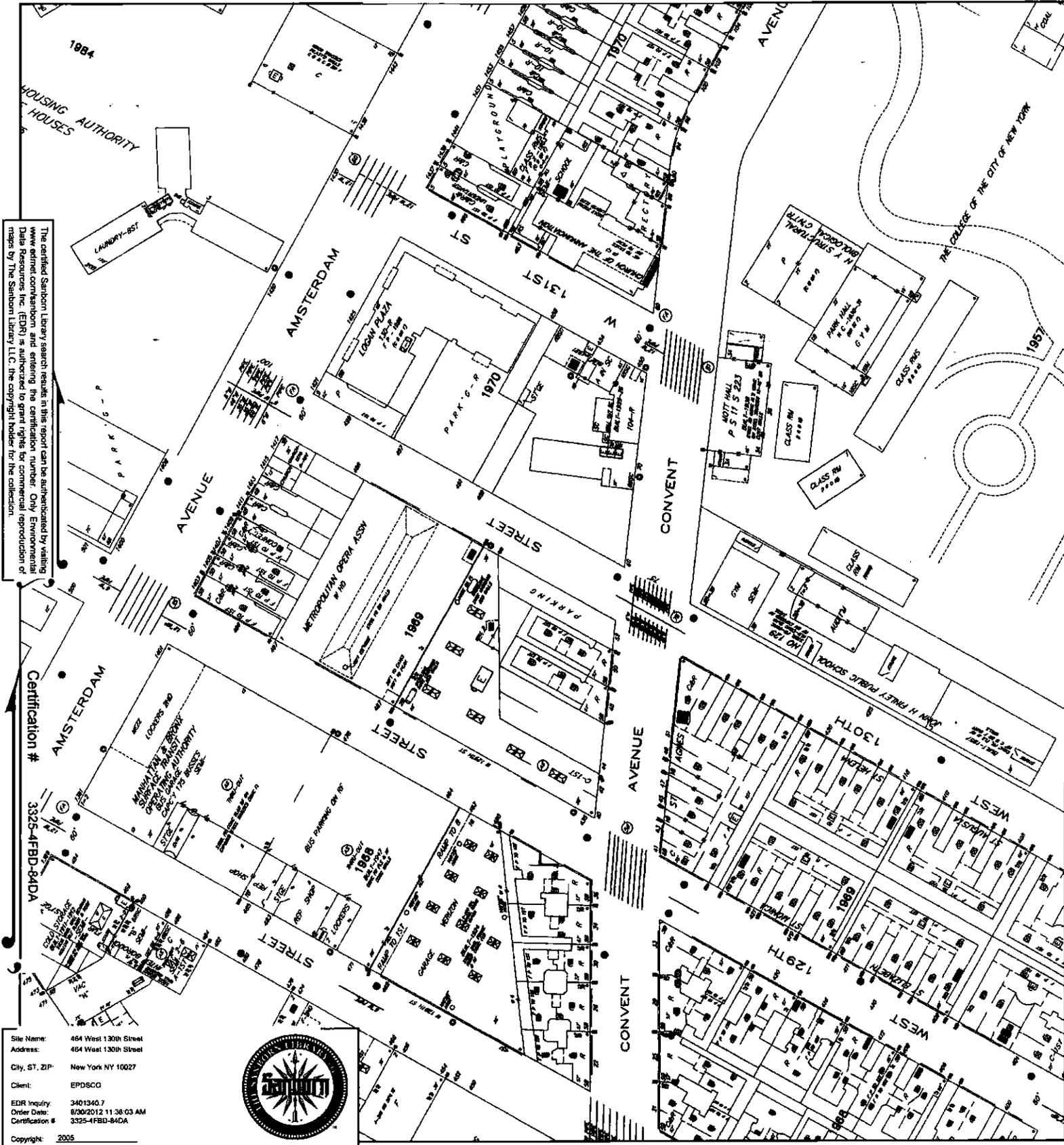
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 Outlined areas indicate map sheets within the collection.



Volume 11S, Sheet 4
 Volume 7N, Sheet 96



2005 Certified Sanborn Map



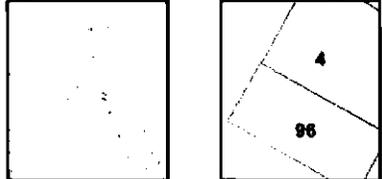
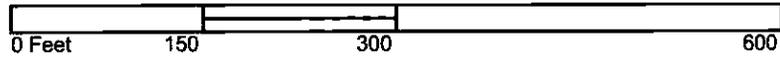
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Site Name: 464 West 130th Street
 Address: 464 West 130th Street
 City, ST, ZIP: New York NY 10027
 Client: EPDSCG
 EDR Inquiry: 3401340.7
 Order Date: 8/30/2012 11:38:03 AM
 Certification #: 3325-4FBD-84DA



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 Outlined areas indicate map sheets within the collection.



Volume 11S, Sheet 4
 Volume 7N, Sheet 96



ATTACHMENT B

PHOTOGRAPHS

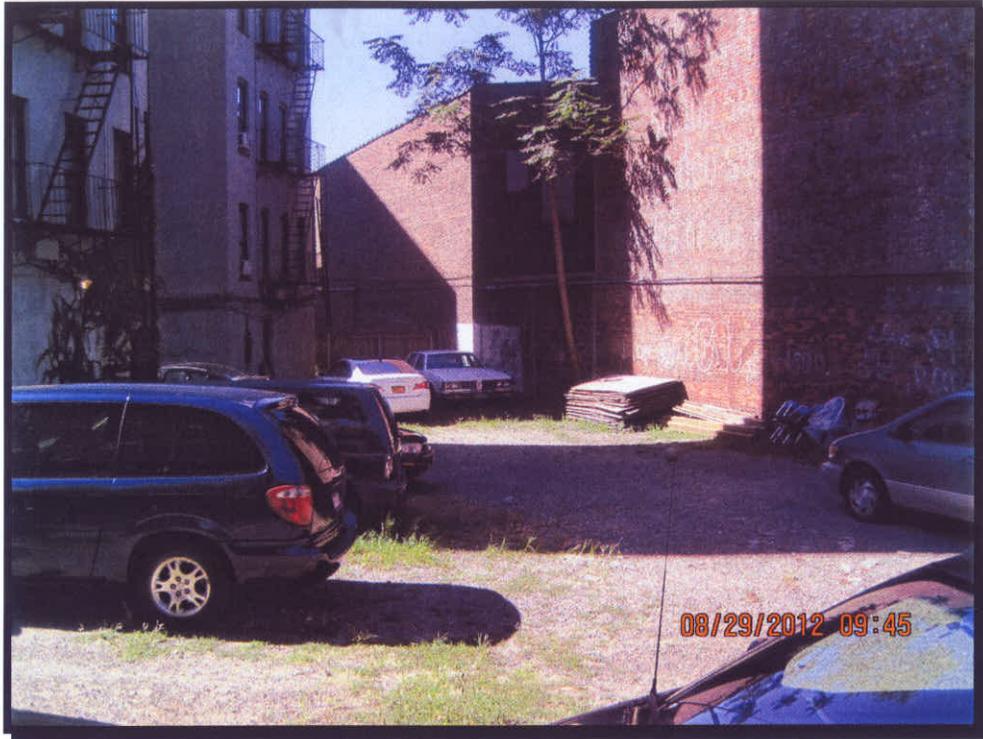


Photo 1
View of the western portion of the subject property at 464 West 130th Street,
New York, New York, facing south from West 130th Street.

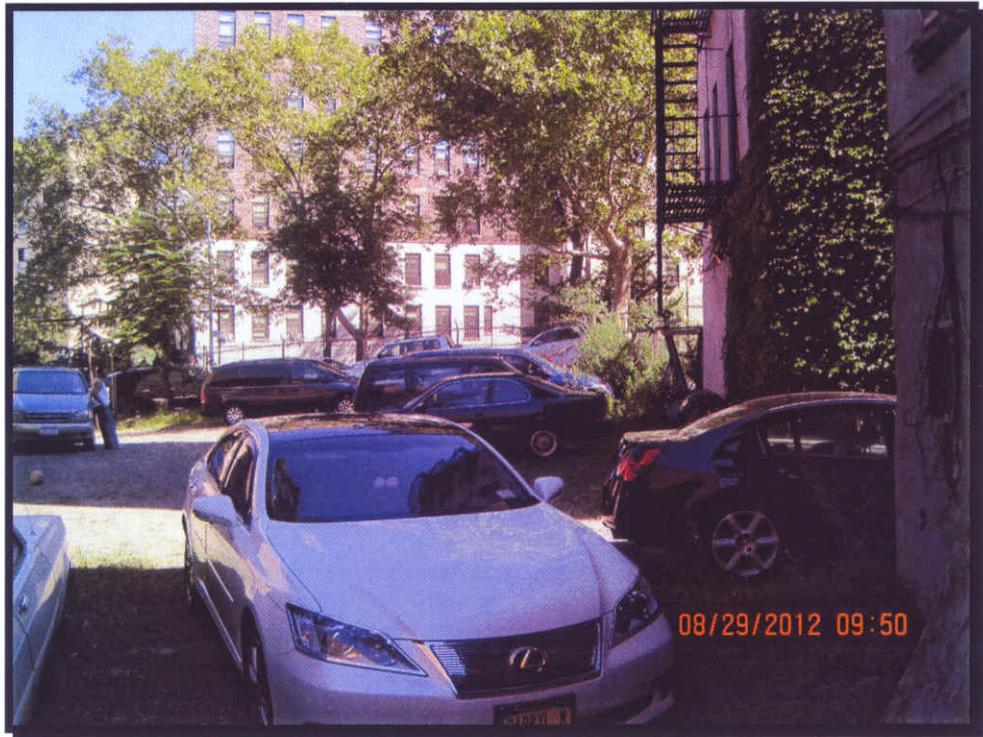


Photo 2
View of the western portion of the site, facing north towards West 130th Street.



Photo 3

View of the eastern portion of the site, facing east from the western portion of the property.



Photo 4

View of the eastern portion of the site, facing west from Convent Avenue.

ATTACHMENT C

**EXECUTIVE SUMMARY SECTION OF THE
ENVIRONMENTAL DATA RESOURCES, INC.
RADIUS MAP REPORT**

464 West 130th Street
464 West 130th Street
New York, NY 10027

Inquiry Number: 3401340.6s
August 30, 2012

The EDR Radius Map™ Report with GeoCheck®



440 Wheelers Farms Road
Milford, CT 06461
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 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

464 WEST 130TH STREET
NEW YORK, NY 10027

COORDINATES

Latitude (North): 40.8152000 - 40° 48' 54.72"
Longitude (West): 73.9534000 - 73° 57' 12.24"
Universal Transverse Mercator: Zone 18
UTM X (Meters): 588269.1
UTM Y (Meters): 4518558.0
Elevation: 66 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 40073-G8 CENTRAL PARK, NY NJ
Most Recent Revision: 1995

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 2009, 2010
Source: USDA

TARGET PROPERTY SEARCH RESULTS

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

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

Proposed NPL..... Proposed National Priority List Sites

EXECUTIVE SUMMARY

NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent CERCLIS

NJ SHWS..... Known Contaminated Sites in New Jersey

State and tribal landfill and/or solid waste disposal site lists

NY SWF/LF..... Facility Register

NJ SWF/LF..... Solid Waste Facility Directory

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

NJ UST..... Underground Storage Tank Data

NY CBS UST..... Chemical Bulk Storage Database

NY MOSF UST..... Major Oil Storage Facilities Database

NY MOSF AST..... Major Oil Storage Facilities Database

NY MOSF..... Major Oil Storage Facility Site Listing

INDIAN UST..... Underground Storage Tanks on Indian Land

FEMA UST..... Underground Storage Tank Listing

State and tribal institutional control / engineering control registries

NY ENG CONTROLS..... Registry of Engineering Controls

NJ ENG CONTROLS..... Declaration Environmental Restriction/Deed Notice Sites

NY INST CONTROL..... Registry of Institutional Controls

NJ INST CONTROL..... Classification Exception Area Sites

NY RES DECL..... Restrictive Declarations Listing

State and tribal voluntary cleanup sites

NY VCP..... Voluntary Cleanup Agreements

EXECUTIVE SUMMARY

INDIAN VCP..... Voluntary Cleanup Priority Listing
NJ VCP..... Voluntary Cleanup Program Sites

State and tribal Brownfields sites

NY ERP..... Environmental Restoration Program Listing
NY BROWNFIELDS..... Brownfields Site List
NJ BROWNFIELDS..... Brownfields Database

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
ODI..... Open Dump Inventory
NY SWTIRE..... Registered Waste Tire Storage & Facility List
NJ SWRCY..... Registered Recycling Facility List
NJ SWRCY..... Approved Class B Recycling Facilities
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL..... Clandestine Drug Labs
NY DEL SHWS..... Delisted Registry Sites
US HIST CDL..... National Clandestine Laboratory Register

Local Land Records

LIENS 2..... CERCLA Lien Information
LUCIS..... Land Use Control Information System
NY LIENS..... Spill Liens Information
NJ LIENS..... Environmental LIENS

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System

Other Ascertainable Records

DOT OPS..... Incident and Accident Data
DOD..... Department of Defense Sites
FUDS..... Formerly Used Defense Sites
UMTRA..... Uranium Mill Tailings Sites
MINES..... Mines Master Index File
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
SSTS..... Section 7 Tracking Systems

EXECUTIVE SUMMARY

ICIS.....	Integrated Compliance Information System
PADS.....	PCB Activity Database System
MLTS.....	Material Licensing Tracking System
RADINFO.....	Radiation Information Database
RAATS.....	RCRA Administrative Action Tracking System
NY HSWDS.....	Hazardous Substance Waste Disposal Site Inventory
NY UIC.....	Underground Injection Control Wells
NJ UIC.....	Underground Injection Wells Database
NJ MANIFEST.....	Hazardous Waste Manifest Data
NJ DRYCLEANERS.....	Drycleaner List
NY NPDES.....	State Pollutant Discharge Elimination System
NJ NPDES.....	New Jersey Pollutant Discharge Elimination System Dischargers
NY AIRS.....	Air Emissions Data
INDIAN RESERV.....	Indian Reservations
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
NY FINANCIAL ASSURANCE.....	Financial Assurance Information Listing
NY COAL ASH.....	Coal Ash Disposal Site Listing
PCB TRANSFORMER.....	PCB Transformer Registration Database
US FIN ASSUR.....	Financial Assurance Information
EPA WATCH LIST.....	EPA WATCH LIST
2020 COR ACTION.....	2020 Corrective Action Program List
NJ COAL ASH.....	Coal Ash Listing
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
COAL ASH DOE.....	Steam-Electric Plant Operation Data
NJ FINANCIAL ASSURANCE.....	Financial Assurance Information Listing

EDR PROPRIETARY RECORDS

EDR Proprietary Records

EDR Historical Auto Stations... EDR Proprietary Historic Gas Stations
EDR Historical Cleaners..... EDR Proprietary Historic Dry Cleaners

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 NPL site list

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and

EXECUTIVE SUMMARY

identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 05/08/2012 has revealed that there is 1 NPL 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>
HUDSON RIVER PCBS	NO STREET APPLICABLE	WNW 1/2 - 1 (0.536 mi.)	0	8

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 08/19/2011 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ASHLAND INC	609 W 131ST ST	NW 1/4 - 1/2 (0.270 mi.)	198	663

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 03/15/2012 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
AMSTERDAM BUS DEPOT	1381 AMSTERDAM AVE.	WSW 0 - 1/8 (0.116 mi.)	N57	221

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/15/2012 has revealed that there are 2 RCRA-SQG 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>
NYCT - HARLEM SUBSTATION	309 W 133RD STREET	NNE 1/8 - 1/4 (0.153 mi.)	S81	285
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LIONEL HAMPTON HOUSES	410 ST NICHOLAS AVE	ESE 1/8 - 1/4 (0.212 mi.)	A1150	466

EXECUTIVE SUMMARY

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/15/2012 has revealed that there are 6 RCRA-CESQG 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	102-104 CONVENT AVE S O	NNE 0 - 1/8 (0.119 mi.)	M62	234
CON EDISON	SAINT NICHOLAS TER & W	ESE 1/8 - 1/4 (0.149 mi.)	78	278
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON	W 130TH ST & AMSTERDAM	WNW 0 - 1/8 (0.071 mi.)	D15	68
CON EDISON	W 128TH ST & CONVENT AV	S 0 - 1/8 (0.119 mi.)	O63	235
CON EDISON	473 W 126TH ST E OF AMS	SW 1/8 - 1/4 (0.143 mi.)	T75	273
NYCHA - MANHATTANVILLE	555 W 126TH ST	W 1/8 - 1/4 (0.194 mi.)	AF125	406

State- and tribal - equivalent CERCLIS

NY SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Conservation's Inactive Hazardous waste Disposal Sites in New York State.

A review of the NY SHWS list, as provided by EDR, and dated 05/21/2012 has revealed that there is 1 NY SHWS site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
2350 FIFTH AVENUE CORP	2350 5TH AVE	E 1/2 - 1 (0.984 mi.)	238	807

Class Code: Significant threat to the public health or environment - action required.

NY VAPOR REOPENED: "Vapor intrusion" refers to the process by which volatile chemicals move from a subsurface source into the indoor air of overlying or adjacent buildings. The subsurface source can either be contaminated groundwater or contaminated soil which releases vapors into the pore spaces in the soil. Improvements in analytical techniques and knowledge gained from site investigations in New York and other states has led to an increased awareness of soil vapor as a medium of concern and of the potential for exposures from the soil vapor intrusion pathway. Based on this additional information, New York is currently re-evaluating previous assumptions and decisions regarding the potential for soil vapor intrusion exposures at sites. As a result, all past, current, and future contaminated sites will be evaluated to determine whether these sites have the potential for exposures related to soil vapor intrusion.

A review of the NY VAPOR REOPENED list, as provided by EDR, and dated 05/01/2012 has revealed that there is 1 NY VAPOR REOPENED site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
2350 FIFTH AVENUE CORP	2350 5TH AVE	E 1/2 - 1 (0.984 mi.)	238	807

EXECUTIVE SUMMARY

State and tribal leaking storage tank lists

NY LTANKS: Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills

A review of the NY LTANKS list, as provided by EDR, and dated 05/22/2012 has revealed that there are 52 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>
MT. WILSON PARTNERS APTS. Date Closed: 7/10/1994	412 W.129TH STREET	SE 1/8 - 1/4 (0.130 mi.)	L67	246
49 SAINT NICHOLAS PLACE Date Closed: 11/1/1995	49 SAINT NICHOLAS PLACE	ESE 1/8 - 1/4 (0.138 mi.)	P72	262
MANHATTANVILLE Date Closed: 5/1/1995	W 133RD ST & AMSTERDAM	N 1/8 - 1/4 (0.166 mi.)	X91	319
501 WEST 134TH ST Date Closed: 1/28/2005	501 WEST 134TH ST	N 1/4 - 1/2 (0.252 mi.)	194	654
NYC HOUSING COMPLEX Date Closed: 6/12/2006	504 WEST 135TH ST	NNE 1/4 - 1/2 (0.264 mi.)	197	660
1532 AMSTERDAM AVENUE Date Closed: 9/13/2005	1532 AMSTERDAM AVENUE	NNE 1/4 - 1/2 (0.298 mi.)	203	690
CCNY BUILDING Date Closed: 9/13/2005	152-236 CONVENT AVE	NNE 1/4 - 1/2 (0.331 mi.)	209	712
ON STREET Date Closed: 8/20/2009	3333 BROADWAY	NNW 1/4 - 1/2 (0.342 mi.)	211	717
THE DERMOT COMPANY Date Closed: 9/1/2011	526 WEST 123RD STREET	SW 1/4 - 1/2 (0.370 mi.)	214	725
THE DERMOT COMPANY Date Closed: 11/19/2008	503 WEST 122ND STREET	SW 1/4 - 1/2 (0.406 mi.)	220	744
Not reported Date Closed: 7/9/2004	725 W 135TH ST	NNW 1/4 - 1/2 (0.418 mi.)	AX221	745
NYCDEP BWT NORTH RIVER WPCP Date Closed: 9/14/2007	725 W 135TH STREET	NNW 1/4 - 1/2 (0.418 mi.)	AX222	749
636 ASSETS INC Date Closed: 5/20/1999	636 W 136TH ST	NNW 1/4 - 1/2 (0.423 mi.)	223	763
NORTH RIVER PLANT Date Closed: 3/9/2006	735 WEST 135TH ST	NNW 1/4 - 1/2 (0.423 mi.)	AX224	766
500 WEST 138TH ST/PS 192 Date Closed: 1/21/2004	500 WEST 138TH STREET	N 1/4 - 1/2 (0.434 mi.)	225	767
COLLEGE BUILDING Date Closed: 11/28/2006	106 MORNING SIDE DRIVE	SSW 1/4 - 1/2 (0.462 mi.)	231	785
Not reported Date Closed: 8/5/2005	3080 BROADWAY	WSW 1/4 - 1/2 (0.462 mi.)	232	791
Lower Elevation	Address	Direction / Distance	Map ID	Page
34 CONVENT AVE Date Closed: 4/20/2006	34 CONVENT AVE	SSE 0 - 1/8 (0.072 mi.)	F17	71

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MANHATTANVILLE Date Closed: 3/25/1999	1430 AMSTERDAM AV	NNW 0 - 1/8 (0.088 mi.)	H30	103
MANHATTANVILLE -NYCHA Date Closed: 1/26/2006 Date Closed: 12/28/2005 <i>*Additional key fields are available in the Map Findings section</i>	1430 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.088 mi.)	H33	118
AMSTERDAM DEPOT Date Closed: 11/30/2000	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J46	161
RESI: SINGER Date Closed: 10/10/2001	25-35 ST NICHOLAS TERR	SSE 1/8 - 1/4 (0.173 mi.)	V106	365
MANHATTANVILLE Date Closed: 7/6/1993	549 WEST 126TH STREET	W 1/8 - 1/4 (0.188 mi.)	Z116	385
APARTMENT Date Closed: 1/11/2008	2-4 ST NICHOLAS PLACE	SSE 1/8 - 1/4 (0.210 mi.)	AC147	460
NYC HPD Date Closed: 11/12/2003	453 WEST 125TH ST	SSW 1/8 - 1/4 (0.212 mi.)	AJ151	467
GRANT HOUSES -NYCHA Date Closed: 10/24/2005 Date Closed: 10/24/2005	1320 AMSTERDAM AVE	SW 1/8 - 1/4 (0.213 mi.)	AG152	470
MOBIL S/S Date Closed: 1/8/1997	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM179	570
AMOCO Date Closed: 12/5/2003	3225 BROADWAY	WNW 1/4 - 1/2 (0.250 mi.)	AQ193	626
MANHATTAN PSYCHIATRIC Date Closed: 12/14/2006	600 EAST 125TH STREET	W 1/4 - 1/2 (0.263 mi.)	AT195	655
WARDS ISLAND Date Closed: 12/16/2010	600 EAST 125TH ST	W 1/4 - 1/2 (0.264 mi.)	AT196	659
302 WEST 128TH STREET Date Closed: 11/20/1992	302 WEST 128TH STREET	SE 1/4 - 1/2 (0.286 mi.)	AU199	681
302 WEST 128TH ST/MANH Date Closed: 8/5/1991	302 WEST 128TH STREET	SE 1/4 - 1/2 (0.286 mi.)	AU200	686
Not reported Date Closed: 2/19/2002	310 W 127TH ST	SSE 1/4 - 1/2 (0.293 mi.)	202	689
W 132ND ST PURS UNIT R3 (M51S) Date Closed: 10/9/1997	630 WEST 132ND STREET	NW 1/4 - 1/2 (0.313 mi.)	AV205	699
80 LASALLE ST Date Closed: 8/29/2003 Date Closed: 2/7/2006	80 LASALLE ST	WSW 1/4 - 1/2 (0.316 mi.)	207	706
WARREN ELECTRICAL SUPPLY Date Closed: 12/15/2009	641 WEST 131 ST ST	NW 1/4 - 1/2 (0.317 mi.)	208	709
273 W. 132ND ST. Date Closed: 12/18/1992	273 W. 132ND ST.	ESE 1/4 - 1/2 (0.332 mi.)	210	714
637 WEST 125TH ST/MANH Date Closed: 2/23/1993	637 WEST 125TH STREET	WNW 1/4 - 1/2 (0.349 mi.)	212	721
APARTMENT BLDG Date Closed: 9/1/2011	1274 AMSTERDAM AVE	SW 1/4 - 1/2 (0.368 mi.)	213	724
MANHATTENVILLE BUS DEPOT Date Closed: 3/9/2005	666 WEST 132ND ST	NW 1/4 - 1/2 (0.370 mi.)	AW215	728

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
YOUNG RESIDENCE Date Closed: 9/29/2006	355 W. 123RD ST.	S 1/4 - 1/2 (0.385 mi.)	216	734
BRONX WEST 01/03/04 DOS -DDC Date Closed: 5/9/2005 Date Closed: 10/31/2003	680 EAST 132ND STREET	NW 1/4 - 1/2 (0.393 mi.)	AW217	735
271 WEST 125TH ST Date Closed: 1/20/2006	271 WEST 125TH ST	SSE 1/4 - 1/2 (0.403 mi.)	219	742
344 WEST 122ND STREET Date Closed: 1/21/1998	344 WEST 122ND STREET	S 1/4 - 1/2 (0.438 mi.)	226	770
Not reported Date Closed: 4/20/2004	666 WEST 133RD ST	NW 1/4 - 1/2 (0.438 mi.)	227	773
323 W 138TH ST Date Closed: 6/7/1995	323 W 138TH ST	NE 1/4 - 1/2 (0.451 mi.)	228	778
Not reported Date Closed: 12/8/1999	260 W 136 TH ST	ENE 1/4 - 1/2 (0.454 mi.)	229	780
231 WEST 125TH ST Date Closed: 3/31/1995	231 WEST 125TH ST	SSE 1/4 - 1/2 (0.455 mi.)	230	783
235 ST NICHOLAS AVE Date Closed: 10/15/2003 Date Closed: 10/15/2003	235 ST NICHOLAS AVENUE	S 1/4 - 1/2 (0.475 mi.)	AY233	794
28TH PRECINCT NYPD -DDC Date Closed: 6/17/2005	2271-89 EIGHTH AVE	S 1/4 - 1/2 (0.477 mi.)	234	799
Not reported Date Closed: 12/10/2003	580 ST NICHOLAS AV	NE 1/4 - 1/2 (0.485 mi.)	236	803
225 WEST 136TH STREET Date Closed: 5/3/1994	225 WEST 136TH STREET	E 1/4 - 1/2 (0.500 mi.)	237	805

NY HIST LTANKS: A listing of leaking underground and aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills. In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY LTANKS database.

A review of the NY HIST LTANKS list, as provided by EDR, and dated 01/01/2002 has revealed that there are 39 NY HIST 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>
MT. WILSON PARTNERS APTS. Date Closed: 07/10/94	412 W.129TH STREET	SE 1/8 - 1/4 (0.130 mi.)	L67	246
49 SAINT NICHOLAS PLACE Date Closed: 11/01/95	49 SAINT NICHOLAS PLACE	ESE 1/8 - 1/4 (0.138 mi.)	P72	262
MANHATTANVILLE Date Closed: 05/01/95	W 133RD ST & AMSTERDAM	N 1/8 - 1/4 (0.166 mi.)	X91	319
NYC HOUSING COMPLEX Date Closed: / /	504 WEST 135TH ST	NNE 1/4 - 1/2 (0.264 mi.)	197	660
1532 AMSTERDAM AVENUE Date Closed: / /	1532 AMSTERDAM AVENUE	NNE 1/4 - 1/2 (0.298 mi.)	203	690

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
636 ASSETS INC Date Closed: 05/20/99	636 W 136TH ST	NNW 1/4 - 1/2 (0.423 mi.)	223	763
500 WEST 138TH ST/PS 192 Date Closed: / /	500 WEST 138TH STREET	N 1/4 - 1/2 (0.434 mi.)	225	767
Not reported Date Closed: / /	3080 BROADWAY	WSW 1/4 - 1/2 (0.462 mi.)	232	791
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MANHATTANVILLE Date Closed: 03/25/99 Date Closed: 03/25/99	1430 AMSTERDAM AV	NNW 0 - 1/8 (0.088 mi.)	H30	103
MANHATTANVILLE Date Closed: / /	1430 AMSTERDAM AVE.	NW 0 - 1/8 (0.088 mi.)	D32	116
MANHATTANVILLE -NYCHA Date Closed: / / Date Closed: / /	1430 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.088 mi.)	H33	118
AMSTERDAM DEPOT Date Closed: 11/30/00	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J46	161
Not reported Date Closed: / /	411 W 128TH ST	SSE 1/8 - 1/4 (0.163 mi.)	V89	313
RESI: SINGER Date Closed: 10/10/01	25-35 ST NICHOLAS TERR	SSE 1/8 - 1/4 (0.173 mi.)	V106	365
MANHATTANVILLE Date Closed: 07/06/93	549 WEST 126TH STREET	W 1/8 - 1/4 (0.188 mi.)	Z116	385
NYC HPD Date Closed: / /	453 WEST 125TH ST	SSW 1/8 - 1/4 (0.212 mi.)	AJ151	467
GRANT HOUSES Date Closed: / / Date Closed: / /	1320 AMSTERDAM AVENUE	SW 1/8 - 1/4 (0.223 mi.)	AG160	492
MOBIL S/S Date Closed: 01/08/97	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM179	570
MOBIL S/S Date Closed: / /	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM182	595
AMOCO Date Closed: / /	3225 BROADWAY	WNW 1/4 - 1/2 (0.250 mi.)	AQ193	626
MANHATTAN PSYCHIATRIC Date Closed: / /	600 EAST 125TH STREET	W 1/4 - 1/2 (0.263 mi.)	AT195	655
302 WEST 128TH STREET Date Closed: 11/20/92	302 WEST 128TH STREET	SE 1/4 - 1/2 (0.286 mi.)	AU199	681
302 WEST 128TH ST/MANH Date Closed: 08/05/91	302 WEST 128TH STREET	SE 1/4 - 1/2 (0.286 mi.)	AU200	686
619 W 125TH ST Date Closed: / /	619 W 125TH ST	WNW 1/4 - 1/2 (0.309 mi.)	204	693
WEST 132ND PURRS PLANT Date Closed: 10/09/97	630 WEST 132ND STREET	NW 1/4 - 1/2 (0.313 mi.)	AV206	705
WARREN ELECTRICAL SUPPLY Date Closed: / /	641 WEST 131 ST ST	NW 1/4 - 1/2 (0.317 mi.)	208	709

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
273 W. 132ND ST. Date Closed: 12/18/92	273 W. 132ND ST.	ESE 1/4 - 1/2 (0.332 mi.)	210	714
637 WEST 125TH ST/MANH Date Closed: 02/23/93	637 WEST 125TH STREET	WNW 1/4 - 1/2 (0.349 mi.)	212	721
MANHATTENVILLE BUS DEPOT Date Closed: / /	666 WEST 132ND ST	NW 1/4 - 1/2 (0.370 mi.)	AW215	728
BRONX WEST 01/03/04 DOS -DDC Date Closed: / /	680 EAST 132ND STREET	NW 1/4 - 1/2 (0.393 mi.)	AW217	735
680 E 132ND ST/BX GARAGE Date Closed: / /	680 EAST 132ND STREET	NW 1/4 - 1/2 (0.393 mi.)	AW218	741
344 WEST 122ND STREET Date Closed: 01/21/98	344 WEST 122ND STREET	S 1/4 - 1/2 (0.438 mi.)	226	770
Not reported Date Closed: / /	666 WEST 133RD ST	NW 1/4 - 1/2 (0.438 mi.)	227	773
323 W 138TH ST Date Closed: 06/07/95	323 W 138TH ST	NE 1/4 - 1/2 (0.451 mi.)	228	778
Not reported Date Closed: 12/08/99	260 W 136 TH ST	ENE 1/4 - 1/2 (0.454 mi.)	229	780
231 WEST 125TH ST Date Closed: 03/31/95	231 WEST 125TH ST	SSE 1/4 - 1/2 (0.455 mi.)	230	783
235 ST NICHOLAS AVE Date Closed: / /	235 ST NICHOLAS AVENUE	S 1/4 - 1/2 (0.475 mi.)	AY233	794
SHELL SERVICE STATION Date Closed: / /	235 ST NICHOLAS AVE	S 1/4 - 1/2 (0.480 mi.)	AY235	801
225 WEST 136TH STREET Date Closed: 05/03/94	225 WEST 136TH STREET	E 1/4 - 1/2 (0.500 mi.)	237	805

State and tribal registered storage tank lists

NY TANKS: This database contains records of facilities that are or have been regulated under Bulk Storage Program. Tank information for these facilities may not be releasable by the state agency.

A review of the NY TANKS list, as provided by EDR, and dated 07/02/2012 has revealed that there is 1 NY TANKS site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
VERIZON NEW YORK INC-NY-15501	460 WEST 129TH STREET	SSW 0 - 1/8 (0.049 mi.)	B5	48

NY UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database

A review of the NY UST list, as provided by EDR, and dated 07/02/2012 has revealed that there are 18 NY UST sites within approximately 0.25 miles of the target property.

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CITY COLLEGE OF NEW YORK	91 CONVENT AVE (PK GYM)	NE 0 - 1/8 (0.064 mi.)	C12	60
AUNNUNCIATION CHURCH	88 CONVENT AVE	NNE 0 - 1/8 (0.079 mi.)	G20	77
CITY UNIVERSITY OF NEW YORK	89 CONVENT AVE	NNE 0 - 1/8 (0.086 mi.)	G28	98
1508 AMSTERDAM AVENUE	1508 AMSTERDAM AVENUE	NNE 1/8 - 1/4 (0.237 mi.)	177	566
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MANHATTANVILLE HOUSES	1430 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.088 mi.)	H34	131
AMSTERDAM BUS DEPOT	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J49	167
464 WEST 126TH STREET	464 WEST 126TH STREET	SW 1/8 - 1/4 (0.151 mi.)	T80	281
26TH PCT.	520 WEST 126TH STREET	W 1/8 - 1/4 (0.154 mi.)	U83	293
1351 AMSTERDAM REALTY CORP	1351 AMSTERDAM AVE	SW 1/8 - 1/4 (0.167 mi.)	Y95	331
HARLEM REAL ESTATE, LLC	434 WEST 126TH STREET	SSW 1/8 - 1/4 (0.170 mi.)	101	356
OLD BROADWAY HOTEL	540 WEST 126TH STREET	W 1/8 - 1/4 (0.179 mi.)	Z112	377
410 ST NICHOLAS AVE	410 ST NICHOLAS AVE	ESE 1/8 - 1/4 (0.209 mi.)	AI144	454
2-4 REALTY ASSOCIATES	2-4 ST. NICHOLAS PLACE	SSE 1/8 - 1/4 (0.210 mi.)	AC148	461
HUDSON MOVING AND STORAGE, INC	573 WEST 131ST STREET	NW 1/8 - 1/4 (0.223 mi.)	AM164	509
GRANT HOUSES	1305 AMSTERDAM AVENUE	SW 1/8 - 1/4 (0.226 mi.)	AN166	515
3260 BROADWAY SHELL SERVICE CE	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM180	576
COLUMBIA UNIVIVERSITY - SITE #	3233 BROADWAY	WNW 1/8 - 1/4 (0.248 mi.)	189	614
U-HAUL OF METRO NY	3270 BROADWAY	NW 1/8 - 1/4 (0.249 mi.)	AS190	620

NY AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database.

A review of the NY AST list, as provided by EDR, and dated 07/02/2012 has revealed that there are 83 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>
1437 AMSTERDAM AVE REALTY INC	405 WEST 131TH STREET	NNE 0 - 1/8 (0.052 mi.)	C7	50
AUNNUNCIATION CHURCH	88 CONVENT AVE	NNE 0 - 1/8 (0.079 mi.)	G21	79
CONVENT PROPERTIES	90 CONVENT AVE	NNE 0 - 1/8 (0.085 mi.)	G27	95
418 WEST 130TH LLC	418 WEST 130TH STREET	ESE 0 - 1/8 (0.097 mi.)	K41	147
P S 129	425 WEST 130TH STREET	ESE 0 - 1/8 (0.100 mi.)	K43	153
129 STREET REALTY CORP.	419 WEST 129TH STREET	SE 0 - 1/8 (0.115 mi.)	L53	209
418 WEST 129 STREET	418-420 WEST 129TH STRE	SE 0 - 1/8 (0.116 mi.)	L54	213
102 CONVENT AVENUE	102 CONVENT AVENUE	NNE 0 - 1/8 (0.116 mi.)	M55	215
NORMAN & MARSHALL REALTY CORP	416 W 129 ST	SE 0 - 1/8 (0.120 mi.)	L65	238
408 WEST 130TH ST JACHAR REALT	408 WEST 130TH ST	ESE 0 - 1/8 (0.124 mi.)	P66	242
106 CONVENT AVENUE	106 CONVENT AVENUE	NNE 1/8 - 1/4 (0.131 mi.)	M68	249
409 W 129 ST	409-411 W 129 ST	SE 1/8 - 1/4 (0.136 mi.)	Q69	252
412 WEST 129TH STREET	412 WEST 129TH STREET	SE 1/8 - 1/4 (0.137 mi.)	Q70	255
49 TERRACE CORPORATION	49 ST NICHOLAS TERRACE	ESE 1/8 - 1/4 (0.138 mi.)	P71	259
1467 AMSTERDAM AVENUE	1467 AMSTERDAM AVENUE	N 1/8 - 1/4 (0.138 mi.)	R73	265
110 CONVENT AVE ASSOC	110 CONVENT AVENUE	NNE 1/8 - 1/4 (0.141 mi.)	S74	269
41-47 ST NICHOLAS LLC	41 ST NICHOLAS TERRACE	SE 1/8 - 1/4 (0.155 mi.)	Q85	303
411 WEST 128 STREET	411 WEST 128 STREET	SSE 1/8 - 1/4 (0.161 mi.)	V87	309
P.S. 161	499 WEST 133RD STREET	N 1/8 - 1/4 (0.166 mi.)	X94	326
501 WEST 133RD STREET	501 WEST 133RD STREET	N 1/8 - 1/4 (0.169 mi.)	X100	352
1484 AMSTERDAM AVENUE	1484 AMSTERDAM AVENUE	N 1/8 - 1/4 (0.193 mi.)	AD121	398
537 WEST 133 STREET	537 WEST 133 ST.	NNW 1/8 - 1/4 (0.218 mi.)	AL157	487
CITY OF N.Y DEPARTMENT OF H.P.	541 WEST 133 ST	NNW 1/8 - 1/4 (0.227 mi.)	AL167	522
PRESTIGE TRANS CORP.DBA LEE MY	547 WEST 133RD STREET	NNW 1/8 - 1/4 (0.236 mi.)	AL175	557
INTREPID AUTO REPAIRS	553 WEST 133RD STREET	NNW 1/8 - 1/4 (0.247 mi.)	187	608

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
48 CONVENT AVE.	48 CONVENT AVE.	SSE 0 - 1/8 (0.047 mi.)	A1	37
CONVENT AVENUE FAMILY LIVING C	456 WEST 129TH STREET	S 0 - 1/8 (0.052 mi.)	A6	48
THE ST. AGNES HOUSING DEVELOPM	41 CONVENT AVENUE	SSE 0 - 1/8 (0.063 mi.)	A10	56
1405 AMSTERDAM AVENUE	1405 AMSTERDAM AVENUE	W 0 - 1/8 (0.078 mi.)	E19	75
MORNINGSIDE REALTY ASSOC.	1437 AMSTERDAM AVE	NNW 0 - 1/8 (0.080 mi.)	H24	89
MANHATTANVILLE -NYCHA	1430 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.088 mi.)	H33	118
1439 AMSTERDAM AVENUE	1439 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.092 mi.)	H36	136
JUNIOR HIGH SCHOOL 43 - MANHAT	509 WEST 129TH STREET	W 0 - 1/8 (0.092 mi.)	I38	140
33 CONVENT AVENUE HDFC	29-33 CONVENT AVENUE	S 0 - 1/8 (0.094 mi.)	F40	145
AMSTERDAM BUS DEPOT	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J50	174
21-25 CONVENT AVENUE REALTY LL	21 CONVENT AVENUE	S 0 - 1/8 (0.117 mi.)	O58	226
26TH PCT.	520 WEST 126TH STREET	W 1/8 - 1/4 (0.154 mi.)	U82	289
415 WEST 128 STREET	415 WEST 128 STREET	SSE 1/8 - 1/4 (0.156 mi.)	V86	307
410 WEST 128 STREET	410 WEST 128TH STREET	SSE 1/8 - 1/4 (0.162 mi.)	V88	311
1350 AMSTERDAM AVE 1346-1358	1350 AMSTERDAM AVE	SW 1/8 - 1/4 (0.168 mi.)	Y96	334
MISSIONARIES OF CHARITY	406 WEST 127TH STREET	S 1/8 - 1/4 (0.168 mi.)	W99	349
ONE CONVENT AVENUE REALTY CORP	1 CONVENT AVENUE	S 1/8 - 1/4 (0.171 mi.)	W102	358
433 WEST 126 STREET	433 WEST 126TH STREET	SSW 1/8 - 1/4 (0.174 mi.)	107	368
35 ST. NICHOLAS TERRACE LLC	25-35 ST. NICHOLAS TERR	SSE 1/8 - 1/4 (0.176 mi.)	108	370
400-408 WEST 128TH ST	400-408 WEST 128TH STRE	SSE 1/8 - 1/4 (0.177 mi.)	V109	372
AMSTER REALTY CORP.	1345-1349 AMSTERDAM AVE	SW 1/8 - 1/4 (0.179 mi.)	Y114	381
171 MORNINGSIDE AVENUE	171 MORNINGSIDE AVENUE	S 1/8 - 1/4 (0.185 mi.)	AA115	383
156 E 105 EQUITIES CONF. C/O M	511 W 125TH ST.	WSW 1/8 - 1/4 (0.190 mi.)	AB117	387
BAHAR REALTY ASSOCIATES	501 W 125TH ST	SW 1/8 - 1/4 (0.190 mi.)	Y118	389
ST. JOSEPH'S SCHOOL	168 MORNINGSIDE AVE.	S 1/8 - 1/4 (0.190 mi.)	AA119	393
TERRACE APARTMENTS, INC.	5 ST. NICHOLAS TERRACE	SSE 1/8 - 1/4 (0.193 mi.)	AC120	395
CENTRAL HARLEM ALCOHOL CRISIS	419 WEST 126TH STREET	SSW 1/8 - 1/4 (0.194 mi.)	AE124	404
TERRACE APARTMENTS, INC.	379 WEST 127TH STREET	SSE 1/8 - 1/4 (0.196 mi.)	126	409
556 WEST 126TH STREET	556-558 WEST 126TH STRE	W 1/8 - 1/4 (0.196 mi.)	AF127	412
ECDO HOUSES	561 WEST 126TH ST	WNW 1/8 - 1/4 (0.199 mi.)	AF128	414
560 WEST 126TH STREET	560-562 WEST 126TH STRE	WNW 1/8 - 1/4 (0.199 mi.)	AF129	416
TERRACE APARTMENTS, INC.	375 WEST 127TH STREET	SSE 1/8 - 1/4 (0.201 mi.)	AC132	422
368 WEST 127TH STREET	368 WEST 127TH STREET	SSE 1/8 - 1/4 (0.201 mi.)	AC133	425
160-166 MORNINGSIDE AVENUE REA	162 MORNINGSIDE AVENUE	S 1/8 - 1/4 (0.203 mi.)	AA135	428
THREE-TWO-TEN AAOCIATES	566 WEST 126 ST	WNW 1/8 - 1/4 (0.205 mi.)	AF136	430
K.M. NICHOLAS CORP	2 SAINT NICHOLAS TERRAC	SSE 1/8 - 1/4 (0.205 mi.)	AC137	433
K.M. NICHOLAS CORPORATION	2-4 ST. NICHOLAS TERR.	SSE 1/8 - 1/4 (0.205 mi.)	AC138	437
12-14 OLD BROADWAY	12-14 OLD BROADWAY	W 1/8 - 1/4 (0.205 mi.)	139	440
TERRACE APARTMENTS, INC.	1 ST. NICHOLAS TERRACE	SSE 1/8 - 1/4 (0.206 mi.)	AC140	442
GENSTART INDUSTRIES	412 WEST 126TH STREET	S 1/8 - 1/4 (0.206 mi.)	AE141	446
545 WEST 125TH STREET	545 WEST 125TH STREET	W 1/8 - 1/4 (0.208 mi.)	142	448
457 WEST 125TH STREET	457 WEST 125TH STREET	SSW 1/8 - 1/4 (0.208 mi.)	AH143	450
453 WEST 125 STREET	453 WEST 125TH STREET	SSW 1/8 - 1/4 (0.211 mi.)	AJ149	463
449 WEST 125 STREET	449 WEST 125 STREET	SSW 1/8 - 1/4 (0.214 mi.)	AJ153	475
445 W 125TH ST	445 W 125TH ST	SSW 1/8 - 1/4 (0.216 mi.)	AJ154	477
420 ST. NICHOLAS AVENUE	420 ST. NICHOLAS AVENUE	ESE 1/8 - 1/4 (0.217 mi.)	155	480
CITY OF N.Y DEPT OF H.P.D	370 ST NICHOLAS AVE	SE 1/8 - 1/4 (0.217 mi.)	AK156	484
UNCLE SAM CHEMICAL CO INC	573-577 WEST 131ST STRE	NW 1/8 - 1/4 (0.223 mi.)	AM163	498
351 ST NICHOLAS AVE	351 ST NICHOLAS AVE	SSE 1/8 - 1/4 (0.228 mi.)	168	525
563 WEST 125 STREET	563-565 WEST 125TH STRE	W 1/8 - 1/4 (0.228 mi.)	AO169	529
567/69 WEST 125TH ST	567 WEST 125TH ST	W 1/8 - 1/4 (0.230 mi.)	AO170	531
438 ST NICHOLAS AVE APT BLDG	438 ST NICHOLAS AVENUE	E 1/8 - 1/4 (0.232 mi.)	AP171	534
440 - 446 ST. NICHOLAS AVENUE	440 - 446 ST. NICHOLAS	E 1/8 - 1/4 (0.236 mi.)	AP176	562
3260 BROADWAY SHELL SERVICE CE	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM183	596
341 ST. NICHOLAS AVE.	341-343 ST. NICHOLAS AV	SSE 1/8 - 1/4 (0.239 mi.)	184	601
373 WEST 126 STREET	373 WEST 126 STREET	S 1/8 - 1/4 (0.242 mi.)	AR185	603

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GRANT HOUSES CITY OF N.Y DEPARTMENT OF H.P.	1305 AMSTERDAM AVENUE 367 W 126 ST	SW 1/8 - 1/4 (0.247 mi.) S 1/8 - 1/4 (0.248 mi.)	AN186 AR188	605 611

NY CBS AST: Chemical Bulk Storage Database. Registration data collected as required by 6 NYCRR Part 596. It includes facilities storing hazardous substances listed in 6 NYCRR Part 597, in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size. Includes facilities registered (and closed) since effective date of CBS regulations (July 15, 1988) through the date request is processed.

A review of the NY CBS AST list, as provided by EDR, and dated 01/01/2002 has revealed that there are 3 NY CBS AST sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
NYCTA	1381 AMSTERDAM AVE	WSW 0 - 1/8 (0.101 mi.)	J51	189
SHELTERING ARMS	126-129 OLD BROADWAY &	WSW 1/8 - 1/4 (0.178 mi.)	Y110	374
UNCLE SAM CHEMICAL CO., INC.	573-577 W. 131 ST ST.	NW 1/8 - 1/4 (0.223 mi.)	AM162	496

NY CBS: These facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size

A review of the NY CBS list, as provided by EDR, and dated 07/02/2012 has revealed that there are 3 NY CBS sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
NYCTA	1381 AMSTERDAM AVE	WSW 0 - 1/8 (0.101 mi.)	J51	189
SHELTERING ARMS	126-129 OLD BROADWAY &	WSW 1/8 - 1/4 (0.178 mi.)	Y110	374
UNCLE SAM CHEMICAL CO., INC.	573-577 W. 131 ST ST.	NW 1/8 - 1/4 (0.223 mi.)	AM162	496

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

NY HIST UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database

A review of the NY HIST UST list, as provided by EDR, and dated 01/01/2002 has revealed that there are 15 NY HIST 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>
CITY COLLEGE OF NEW YORK	91 CONVENT AVE (PK GYM)	NE 0 - 1/8 (0.064 mi.)	C12	60
AUNNUNCIATION CHURCH	88 CONVENT AVE	NNE 0 - 1/8 (0.079 mi.)	G21	79
1508 AMSTERDAM AVENUE	1508 AMSTERDAM AVENUE	NNE 1/8 - 1/4 (0.237 mi.)	177	566
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
BELL ATLANTIC	460 W 129TH STREET	SSW 0 - 1/8 (0.049 mi.)	B4	44
MANHATTANVILLE	1430 AMSTERDAM AV	NNW 0 - 1/8 (0.088 mi.)	H30	103

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
AMSTERDAM BUS DEPOT	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J50	174
464 WEST 126TH STREET	464 WEST 126TH STREET	SW 1/8 - 1/4 (0.151 mi.)	T80	281
26TH PCT.	520 WEST 126TH STREET	W 1/8 - 1/4 (0.154 mi.)	U83	293
OLD BROADWAY HOTEL	540 W 126 ST	W 1/8 - 1/4 (0.179 mi.)	Z111	376
LIONEL HAMPTON HOUSES	410 ST NICHOLAS AVE	ESE 1/8 - 1/4 (0.209 mi.)	A1145	456
2-4 ST NICHOLAS PL APT HOUSE	2 SAINT NICHOLAS PL	SSE 1/8 - 1/4 (0.210 mi.)	AC146	458
UNCLE SAM CHEMICAL CO INC	573-577 WEST 131ST STRE	NW 1/8 - 1/4 (0.223 mi.)	AM163	498
GRANT HOUSES	1305 AMSTERDAM AVENUE	SW 1/8 - 1/4 (0.226 mi.)	AN166	515
3260 BROADWAY SHELL SERVICE CE	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM180	576
U-HAUL OF METRO NY	3270 BROADWAY	NW 1/8 - 1/4 (0.249 mi.)	AS190	620

Records of Emergency Release Reports

NY Spills: Data collected on spills reported to NYSDEC. is required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

A review of the NY Spills list, as provided by EDR, and dated 05/22/2012 has revealed that there are 14 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>
SIDEWALK Date Closed: 1/11/2008	131ST ST/ CONVENT AVE	NNE 0 - 1/8 (0.053 mi.)	C8	53
420-418 WEST 129TH ST.	420 WEST 129TH ST.	SE 0 - 1/8 (0.113 mi.)	L52	206
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
462 WEST 129TH STREET Date Closed: 3/3/2003	462 WEST 129TH STREET	SSW 0 - 1/8 (0.047 mi.)	B2	39
MANHOLE #24661 Date Closed: 8/18/2009	130TH ST & AMSTERDAM AV	WNW 0 - 1/8 (0.070 mi.)	D13	64
AMSTERDAM AVE/W 129TH ST Date Closed: 10/15/1996	AMSTERDAM AVE W 129TH S	WNW 0 - 1/8 (0.071 mi.)	E16	69
APT BLDG Date Closed: 11/25/2009	1437 AMSTERDAM AVE	NNW 0 - 1/8 (0.080 mi.)	H23	87
Not reported Date Closed: 3/30/2004	AMSTERDAM AV/129TH ST	W 0 - 1/8 (0.083 mi.)	I25	91
MANHATTANVILLE Date Closed: 12/31/1992 Date Closed: 10/30/1995	1430 AMSTERDAM AV	NNW 0 - 1/8 (0.088 mi.)	H30	103
MANHATTANVILLE -NYCHA Date Closed: 2/6/2006 Date Closed: 3/27/1991 <i>*Additional key fields are available in the Map Findings section</i>	1430 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.088 mi.)	H33	118
WEST 128TH ST BET AMSTERD Date Closed: 4/11/1994	WEST 128TH ST BET AMSTE	WSW 0 - 1/8 (0.092 mi.)	J39	143
NYCTA Date Closed: 7/23/2002 Date Closed: 8/1/2008 <i>*Additional key fields are available in the Map Findings section</i>	1381 AMSTERDAM AVE	WSW 0 - 1/8 (0.101 mi.)	J51	189

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
AMSTERDAM AVE & 128TH ST Date Closed: 11/12/2003	AMSTERDAM AVE & 128TH S	WSW 0 - 1/8 (0.118 mi.)	N59	228
128TH ST & AMSTERDAM AVE Date Closed: 3/6/1995	128TH ST / AMSTERDAM AV	WSW 0 - 1/8 (0.118 mi.)	N60	230
VACANT LOT Date Closed: 9/29/2003	128TH ST & CONVENT AVE	S 0 - 1/8 (0.119 mi.)	O64	236

NY_Hist Spills: This database contains records of chemical and petroleum spill incidents. Under State law, petroleum and hazardous chemical spills that can impact the waters of the state must be reported by the spiller (and, in some cases, by anyone who has knowledge of the spills). In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY SPILLS database.

A review of the NY Hist Spills list, as provided by EDR, and dated 01/01/2002 has revealed that there are 14 NY Hist 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>
420-418 WEST 129TH ST.	420 WEST 129TH ST.	SE 0 - 1/8 (0.113 mi.)	L52	206

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
462 WEST 129TH STREET	462 WEST 129TH STREET	SSW 0 - 1/8 (0.047 mi.)	B2	39
MANHOLE #24661	130TH ST & AMSTERDAM AV	WNW 0 - 1/8 (0.070 mi.)	D13	64
AMSTERDAM AVE/W 129TH ST	AMSTERDAM AVE W 129TH S	WNW 0 - 1/8 (0.071 mi.)	E16	69
1430 AMSTERDAM AVE/MANH	1430 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.088 mi.)	H29	100
MANHATTANVILLE	1430 AMSTERDAM AV	NNW 0 - 1/8 (0.088 mi.)	H30	103
MANHATTANVILLE HOUSING	1430 AMSTERDAM AVE	NNW 0 - 1/8 (0.088 mi.)	H31	115
WEST 128TH ST BET AMSTERD	WEST 128TH ST BET AMSTE	WSW 0 - 1/8 (0.092 mi.)	J39	143
AMSTERDAM DEPOT	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J47	164
AMSTERDAM BUS DEPOT	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J50	174
NYCTA	1381 AMSTERDAM AVE	WSW 0 - 1/8 (0.101 mi.)	J51	189
AMSTERDAM AVE & 128TH ST	AMSTERDAM AVE & 128TH S	WSW 0 - 1/8 (0.118 mi.)	N59	228
128TH ST & AMSTERDAM AVE	128TH ST / AMSTERDAM AV	WSW 0 - 1/8 (0.118 mi.)	N60	230
VACANT LOT	128TH ST & CONVENT AVE	S 0 - 1/8 (0.119 mi.)	O64	236

Other Ascertainable Records

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 03/15/2012 has revealed that there are 19 RCRA-NonGen 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>
NYC BD OF ED - PUBLIC SCHOOL 1	425 W 130TH ST	ESE 0 - 1/8 (0.100 mi.)	K44	156
CCNY - DAY CARE CENTER	111 CONVENT AVE	NNE 1/8 - 1/4 (0.145 mi.)	S77	277

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
NYC BD OF ED - PUBLIC SCHOOL 1	499 W 133RD ST	N 1/8 - 1/4 (0.166 mi.)	X93	323
J & J CLEANERS	1480 AMSTERDAM AVE	N 1/8 - 1/4 (0.168 mi.)	X98	338
CON EDISON	1484-86 AMSTERDAM AVE &	N 1/8 - 1/4 (0.193 mi.)	AD122	402
LEE MYLES TRANSMISSION	547 W 133RD ST	NNW 1/8 - 1/4 (0.236 mi.)	AL172	538
BODY PRO INC	547 W 133RD ST	NNW 1/8 - 1/4 (0.236 mi.)	AL173	548
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON MANHOLE 30825	W 129TH ST & CONVENT AV	SSE 0 - 1/8 (0.064 mi.)	A11	60
NYC DEPT PARKS & REC - MORNING	123RD ST & MORNINGSIDE	W 0 - 1/8 (0.084 mi.)	I26	93
NYC BD OF ED - JHS 43 M	509 W 129TH ST	W 0 - 1/8 (0.092 mi.)	I37	138
BETANCOURT JOSE - PRIVATE PROP	458 W 128TH ST	SSW 0 - 1/8 (0.098 mi.)	42	149
CON EDISON TRF 1886	S/S W 127ST 30' E/O MOR	S 1/8 - 1/4 (0.173 mi.)	W105	364
NELSONS CLEANERS	1345 AMSTERDAM AVE	SW 1/8 - 1/4 (0.179 mi.)	Y113	379
NYCHA - GRANT	1320 AMSTERDAM AVE	SW 1/8 - 1/4 (0.223 mi.)	AG161	494
UNCLE SAM CHEMICAL CO INC	573-577 W 131ST ST	NW 1/8 - 1/4 (0.224 mi.)	AM165	513
CON EDISON SERVICE BOX 27824	W 126TH & BROADWAY E	WNW 1/8 - 1/4 (0.238 mi.)	AQ178	569
MOBIL BIG APPLE SVC CTR	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM181	593
U-HAUL CENTER #803-69	3270 BROADWAY	NW 1/8 - 1/4 (0.249 mi.)	AS191	623
CON EDISON MANHOLE 68966	3227 BROADWAY	WNW 1/8 - 1/4 (0.250 mi.)	AQ192	625

CONSENT: Major Legal settlements that establish responsibility and standards for cleanup at NPL (superfund) sites. Released periodically by U.S. District Courts after settlement by parties to litigation matters.

A review of the CONSENT list, as provided by EDR, and dated 12/01/2011 has revealed that there is 1 CONSENT 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>
HUDSON RIVER PCBS	NO STREET APPLICABLE	WNW 1/2 - 1 (0.536 mi.)	0	8

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, and dated 02/27/2012 has revealed that there is 1 ROD 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>
HUDSON RIVER PCBS	NO STREET APPLICABLE	WNW 1/2 - 1 (0.536 mi.)	0	8

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, and dated 05/01/2012 has revealed that there are 32 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>
CONSOLIDATED EDISON	88 CONVENT AVE	NNE 0 - 1/8 (0.079 mi.)	G22	84
NYC BD OF ED - PUBLIC SCHOOL 1	425 W 130TH ST	ESE 0 - 1/8 (0.100 mi.)	K44	156
CONSOLIDATED EDISON	96 CONVENT AVE	NNE 0 - 1/8 (0.100 mi.)	G45	158

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CONSOLIDATED EDISON	102 CONVENT AVE	NNE 0 - 1/8 (0.116 mi.)	M56	218
CONSOLIDATED EDISON	1470 AMSTERDAM AVE	N 1/8 - 1/4 (0.150 mi.)	R79	279
NYCT - HARLEM SUBSTATION	309 W 133RD STREET	NNE 1/8 - 1/4 (0.153 mi.)	S81	285
NYC BD OF ED - PUBLIC SCHOOL 1	499 W 133RD ST	N 1/8 - 1/4 (0.166 mi.)	X93	323
J & J CLEANERS	1480 AMSTERDAM AVE	N 1/8 - 1/4 (0.168 mi.)	X98	338
CONSOLIDATED EDISON	1484-86 W 133 & AMSTERD	N 1/8 - 1/4 (0.193 mi.)	AD123	403
CONED	425 W 134TH ST	N 1/8 - 1/4 (0.221 mi.)	159	490
LEE MYLES TRANSMISSION	547 W 133RD ST	NNW 1/8 - 1/4 (0.236 mi.)	AL172	538
BODY PRO INC	547 W 133RD ST	NNW 1/8 - 1/4 (0.236 mi.)	AL174	550
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CONSOLIDATED EDISON	48 CONVENT AVE	SSE 0 - 1/8 (0.048 mi.)	A3	42
CONSOLIDATED EDISON	1413 AMSTERDAM AVE & 13	WNW 0 - 1/8 (0.072 mi.)	D18	72
NYC DEPT PARKS & REC - MORNING	123RD ST & MORNINGSIDE	W 0 - 1/8 (0.084 mi.)	I26	93
NYC BD OF ED - JHS 43 M	509 W 129TH ST	W 0 - 1/8 (0.092 mi.)	I37	138
BETANCOURT JOSE - PRIVATE PROP	458 W 128TH ST	SSW 0 - 1/8 (0.098 mi.)	42	149
NYCTA	1381 AMSTERDAM AVE	WSW 0 - 1/8 (0.101 mi.)	J51	189
NYNEX	AMSTERDAM AVE & 128TH S	WSW 0 - 1/8 (0.118 mi.)	N61	233
CONSOLIDATED EDISON	473 W 126TH ST	SW 1/8 - 1/4 (0.143 mi.)	T76	274
NYCDEP	520 W 126TH ST	W 1/8 - 1/4 (0.154 mi.)	U84	303
CONSOLIDATED EDISON	OPP 414 WEST 127 STREET	S 1/8 - 1/4 (0.164 mi.)	W90	317
COOKS FURNITURE REFINISHING	410 WEST 127TH STREET	S 1/8 - 1/4 (0.166 mi.)	W92	322
CONSOLIDATED EDISON	MORNINGSIDE AVE & 127 S	S 1/8 - 1/4 (0.173 mi.)	W103	361
NYNEX	127TH ST & CONVENT AVE	S 1/8 - 1/4 (0.173 mi.)	W104	363
CON EDISION - TRF 1886	S/S W 127ST 30' E/O MOR	S 1/8 - 1/4 (0.173 mi.)	W105	364
NYCHA - MANHATTANVILLE	555 W 126TH ST	W 1/8 - 1/4 (0.194 mi.)	AF125	406
CONSOLIDATED EDISON	518 W 125 ST	WSW 1/8 - 1/4 (0.199 mi.)	AB130	418
LIONEL HAMPTON HOUSES	410 ST NICHOLAS AVE	ESE 1/8 - 1/4 (0.209 mi.)	AI145	456
CONSOLIDATED EDISON	362 ST. NICHOLAS AVE	SE 1/8 - 1/4 (0.221 mi.)	AK158	489
UNCLE SAM CHEMICAL CO INC	573-577 W 131ST ST	NW 1/8 - 1/4 (0.224 mi.)	AM165	513
MOBIL S/S	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM179	570

NY DRYCLEANERS: A listing of all registered drycleaning facilities.

A review of the NY DRYCLEANERS list, as provided by EDR, and dated 12/20/2011 has revealed that there are 2 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 & J/LA ESTRELLA CLEANERS	1480 AMSTERDAM AVENUE	N 1/8 - 1/4 (0.168 mi.)	X97	338
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SWAN MAGIC/FRIENDLY CLEANERS	471 W 125 STREET	SW 1/8 - 1/4 (0.202 mi.)	AH134	427

NY E DESIGNATION: Lots designation with an 'E?' on the Zoning Maps of the City of New York for potential hazardous material contamination, air and/or noise quality impacts.

A review of the NY E DESIGNATION list, as provided by EDR, and dated 03/28/2012 has revealed that there is 1 NY E DESIGNATION site within approximately 0.125 miles of the target property.

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LOT 12,TAXBLOCK 1969	38 CONVENT AVENUE	SSE 0 - 1/8 (0.063 mi.)	A9	55

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

A review of the Manufactured Gas Plants list, as provided by EDR, has revealed that there is 1 Manufactured Gas Plants site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON - WEST 132ND ST. ST	12TH AVE. BETWEEN W. 13	NW 1/4 - 1/2 (0.292 mi.)	201	689

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 476 records.

Site Name	Database(s)
8 WEST 13TH STREET TENANTS CORP. C	NY LIENS
1461 AMSTERDAM AVE LLC	NY TANKS
CONSOLIDATED EDISON	NY MANIFEST
NYCP&R - WEST 101ST STREET PAVILIO	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
NYC PKS & REC - 125TH STREET SHOPS	RCRA-CESQG, NY MANIFEST
CONSOLIDATED EDISON - SERV BOX 246	NY MANIFEST
CONED	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	RCRA-NonGen, NY MANIFEST
CONED	NY MANIFEST
BELL ATLANTIC - NY	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
MTA NYCT - PUMP ROOM 3706 - 2 3 LI	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
MTA NYCT - 155TH STREET SUBSTATION	CT MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
BELL ATLANTIC NY	NY MANIFEST
BELL ATLANTIC NY	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
NYC PARKS AND REC 86TH STREET	RCRA-NonGen, FINDS, NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	RCRA-NonGen, NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	RCRA-NonGen, NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONED	NY MANIFEST
NYC CITY COLLEGE	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON SB21181	NY MANIFEST
CONSOLIDATED EDISON	RCRA-NonGen, NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST

EXECUTIVE SUMMARY

CON EDISON COMPRESS GAS STATION /	ERNS
CON-ED PIER BETWEEN 38TH & 39TH ST	ERNS
SW CORNER OF EAST 89TH STREET AND	ERNS
NORTHEAST CORNER OF WEST 120TH ST	ERNS
56 CROSBY STREET AND 512 BOARDWAY	ERNS
GENERATION STATION AT 74TH STREET	ERNS
GERARD AVE AND EAST 150TH STREET	ERNS
GOETHALS BRIDGE AND WEST AVENUE	ERNS
GRAND STREET BRIDGE	ERNS
GRAND STREET BRIDGE	ERNS
HALF MILE WEST OF	ERNS
HOYT STREET	ERNS
HUDSON RIVER AT 77TH STREET	ERNS
HUDSON AVENUE TUNNEL HUDSON AVENUE	ERNS
INTERSTATE I 295 WEST BOUND	ERNS
INTERSECIION WEST 230 8TH ST. & KIN	ERNS
INTERSECTION OF EAST 15TH STREET	ERNS
INTERSECTION OF STATION ROAD AND 1	ERNS
KNAPP STREET AND AVE Z	ERNS
LANCEY STREET AND FDR DRIVE	ERNS
MANHOLE NUMBER447 BROADWAY AND WES	ERNS
NAPP STREET AND ALLEN AVE	ERNS
NEAR SOUTH STREET SEAPORT	ERNS
NEW YORK SHIPYARD / RED HOOK TERMI	ERNS
OCEAN AVE & EAST 21ST STREET. AND	ERNS
SOUTH OF 50TH STREET	ERNS
SOUTH OF DEPOT PLACE WEST OF MAJOR	ERNS
WEST OF THE THROGGS NECK BRIDGE	ERNS
WEST OF HUNTERS POINT AVE STATION	ERNS
OFF 155 STREET	ERNS
18 ONE STREET	ERNS
PETROPORT TERMINAL STREET ADDRESS	ERNS
PIER ON SOUTH STREET BY VESSEL(SPI	ERNS
PIERS 35-40 WEST SIDE HWY AND	ERNS
PRESIDENT STREET AND THIRD AVE	ERNS
QUEENS IN CLOSE PROXIMITY TO 59TH	ERNS
QUEENSBRIDGE PARK 59TH STREET BRID	ERNS
NORTH RIVER WATER POLLUTION CONTRO	ERNS
EAST RIVER NEAR WARDS ISLAND SLUDG	ERNS
EAST RIVER PIER 9 OLD SLIP & SOUTH	ERNS
EAST RIVER BELOW 14TH STREET	ERNS
WEST SIDE HWY	ERNS
WEST SIDE STORAGE YARD	ERNS
SMITH STREET & 14TH STREET	ERNS
SMITH AND 9TH STREET	ERNS
STATION ROCKWAY WEST BRAKE WATER L	ERNS
133RS STREET AND 7TH AVE	ERNS
T STREET AND THIRMANHOLE NUMBER:25	ERNS
63 RD STREET / 15TH AVE	ERNS
163-1495 STREET	ERNS
59 TH STREET BRIDGE ON NORTH SIDE	ERNS
132 STREET	ERNS
TRANSFORMER VAULT/453 AMSTERDAM AV	ERNS
6200 WATER STREET	ERNS
138 WOSSTER STREET	ERNS
YORK AVENUE BETWEEN E63 ST AND E68	ERNS
NYC EDC- WEST HARLEM WATERFRONT	FINDS
NYCP&R - WEST 101ST STREET PAVILIO	FINDS
NYC PKS & REC - 125TH STREET SHOPS	FINDS
WEST 135TH STREET-GARBAGE MTS	FINDS
MTA NYCT - 145TH STREET STATION -	FINDS
EAST 34TH STREET	FINDS

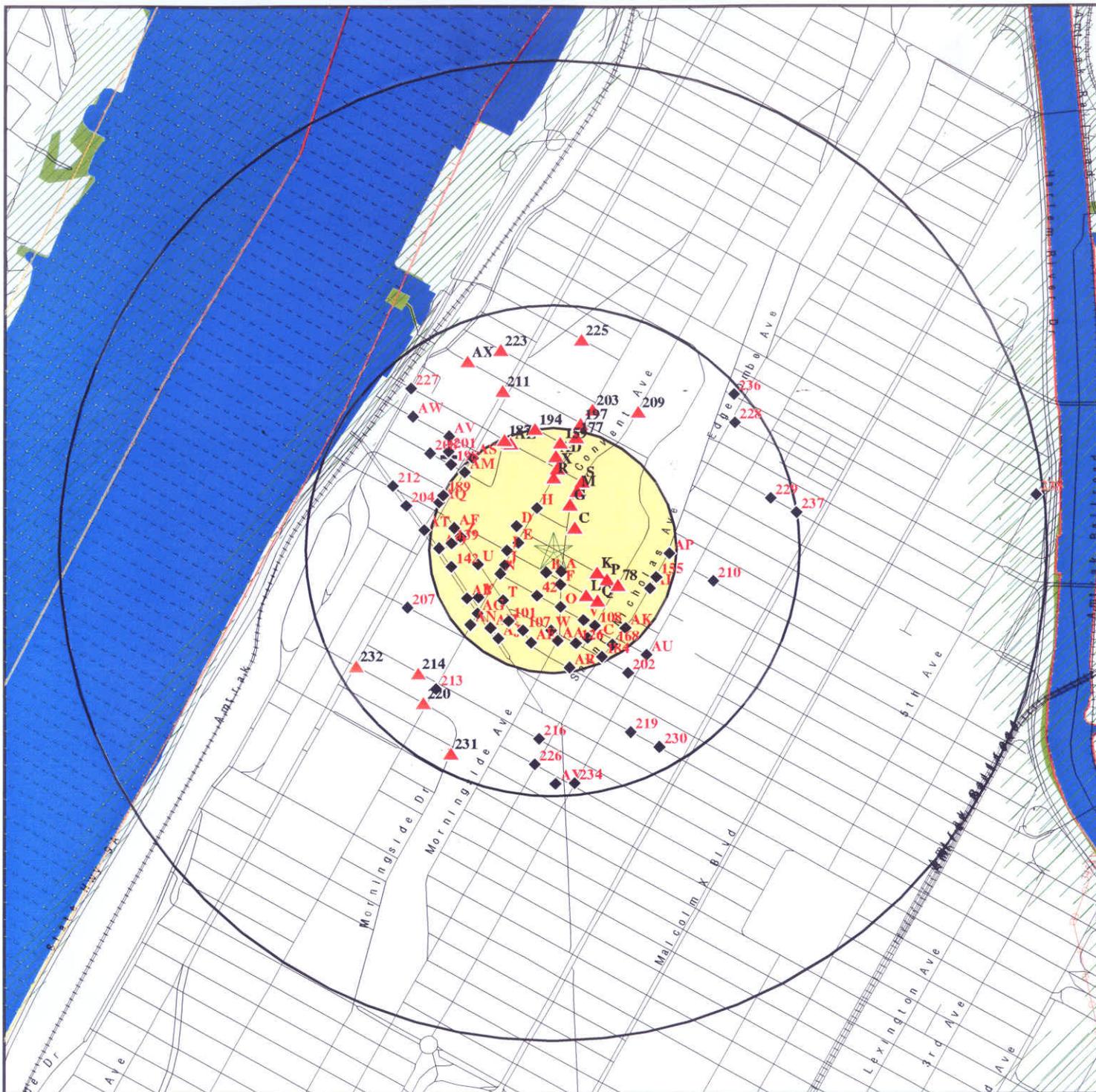
EXECUTIVE SUMMARY

215181; E 3RD STREET AND GREENWOOD	NY Spills
214253; 45 AVENUE AND 157TH STREET	NY Spills
WEST 49TH ST SUBSTATION	NY Spills
WEST 49TH ST SUBSTATION	NY Spills
215541; E 4TH STREET AND FORT HAMI	NY Spills
52ND STREET	NY Spills
215582; W 59TH STREET AND 6TH AVEN	NY Spills
59TH GENERATION STATION	NY Spills
215922; 69 STREET AND 58 AVENUE	NY Spills
215892; E 6 STREET AND FDR DRIVE S	NY Spills
ALLEY BETWEEN 40 WEST 27T	NY Spills
79TH STREET BOUT BASIN	NY Spills, NY Hist Spills
BUS STREET SPILL	NY Spills
ON STREET	NY Spills
STREET SPILL	NY Spills
215003; 92 STREET AND 32ND AVENUE	NY Spills
92 GREEN STREET	NY Spills
215882; 94 STREET AND CORONA AVENU	NY Spills
215275; 99 STREET AND 55 AVENUE	NY Spills
99TH STREET / QUEENS / HA	NY Spills, NY Hist Spills
ACADEMY STREET SUBSTATION	NY Spills
MANHOLE 58594	NY Spills
213886; BAILEY AVENUE & W231 STREE	NY Spills
215286; BATCHELDER STREET AND AVEN	NY Spills
216707; EAST BAY AVENUE AND BARETT	NY Spills
215412; BAY 47 STREET AND BATH AVE	NY Spills
214787; BAY 47TH STREET AND BATH A	NY Spills
214648; EAST BAY AVE AND HALLECK S	NY Spills
STREET	NY Spills
215348; BEDFORD AVENUE AND E 120TH	NY Spills
215555; BENNET AVENUE AND 187TH ST	NY Spills
43RD STREET	NY Spills
GRID # 39 WEST 61ST STREE	NY Spills
215514; BORDEN AVENUE AND 5TH STRE	NY Spills
213674; BOWNE STREET AND SANFORD S	NY Spills
213206; BROADWAY AND 254 STREET	NY Spills
215087; BROADWAY AND EXTERIOR STRE	NY Spills
215387; BROOKE AVENUE AND E148 STR	NY Spills
CANAL STREET	NY Spills, NY Hist Spills
213911; 327 CASANOVA STREET	NY Spills
216143; CEDAR AVENUE AND W 182 STR	NY Spills
215827; CEDAR AVENUE AND 180TH STR	NY Spills
215259; CEDAR AVENUE AND W 180TH S	NY Spills
WEST 109TH STREET AT	NY Spills, NY Hist Spills
CONNER STREET / PUMP STAT	NY Spills, NY Hist Spills
CONNORS STREET STATION /	NY Spills, NY Hist Spills
W 130 ST BETWEEN	NY Spills
MANHOLE # 44896	NY Spills
214050; CYPRESS PLACE AND EAST 133	NY Spills
220 WEST 49TH ST APT 709	NY Spills, NY Hist Spills
210815; FLUSHING AVENUE AND ADELPH	NY Spills
212353; GERARD AVENUE AND EAST 151	NY Spills
212325; GERARD AVENUE AND E151 STR	NY Spills
215632; GOLD STREET AND MYRTLE AVE	NY Spills
215554; GRAND CONCOURSE AND E 203R	NY Spills
215325; GRAND CONCOURSE BLVD AND E	NY Spills
215311; GRAND CONCOURSE BLVD AND E	NY Spills
216626; GREYSTONE AVENUE & W238 ST	NY Spills
214087; HARDING STREET AND AVENUE	NY Spills
HUDSON STREET APPROACH	NY Spills, NY Hist Spills
VARICK STREET APPROACH OF	NY Spills
ON STREET	NY Spills

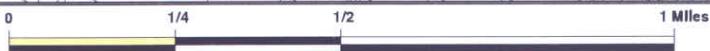
EXECUTIVE SUMMARY

213157; JEROME AVENUE & EAST 198 S KNAPP STREET,PUMP STATION	NY Spills
215120; LAWRENCE STREET AND MYRTLE LEXINGTON AND 56TH STREET	NY Spills, NY Hist Spills
49 WEST 32ND STREET / NEW STREET SPILL	NY Spills
216014; MORRIS AVENUE AND EAST 165 WEST 45TH ST	NY Spills, NY Hist Spills
WEST STREET	NY Spills
215759; NORTHERN BLVD AND 216 STR	NY Spills, NY Hist Spills
215129; EAST OXFORD AVE AND E235 S	NY Spills
213335; PARK AVENUE AND NAVY STREE 15TH STREET AT PROSPECT	NY Spills
215690; RIVERDALE AVENUE AND WEST 146TH STREET/ROCKAWAY BLV	NY Spills, NY_Hist Spills
RUST STREET & 56TH STREET	NY Spills
215787; SOUTHERN BLVD AND E 172ND	NY Spills, NY Hist Spills
215566; SOUTHERN BLVD AND 172 STRE	NY Spills, NY Hist Spills
215526; SOUTHERN BLVD AND E 172ND	NY Spills
215046; E138 STREET AND LOCUST AVE	NY Spills
214998; E187 STREET AND WASHINGTON SOUTHFERRY TERM. CONSTUCT	NY Spills
212463; WEST TREMONT AVENUE & PHEL STREET SPILL	NY Spills
215767; VETERANS ROAD WEST AND ROS	NY Spills
216819; VYSE AVENUE & E178 STREET	NY Spills
215115; WALNUT AVENUE AND EAST 138	NY Spills
216108; WATER STREET AND NEW DOCK	NY Spills
215931; WATER STREET AND NEW DOCK	NY Spills
215499; WEBSTER AVENUE AND E 182ND	NY Spills
214800; WEBSTER AVENUE AND 181ST S	NY Spills
215293; WILLOW AVENUE AND E 132ND	NY Spills
215292; WILLOW AVENUE AND E 132ND	NY Spills
208058; A AMSTERDAM AVE; AMSTERDAM	NY Spills
206267; SWC W 149 ST & AMSTERDAM A WEST 65 & WEST 49TH ST	NY Spills
74TH STREET	NY Hist Spills
206 E. 16TH STREET	NY Hist Spills
1385 WEST POINT AVENUE	NY Hist Spills
353 WEST 117TH STREET, HDFC INC.	NJ VCP
532-536 WEST 143RD STREET REALTY C	NY HIST AST
516-18 WEST 151TH STREET	NY HIST AST
611 WEST 152ND ST LLC	NY HIST AST
401 WEST 150 STREET	NY HIST AST
CITY COLLEGE OF NEW YORK - CUNY	NY HIST UST

OVERVIEW MAP - 3401340.6s



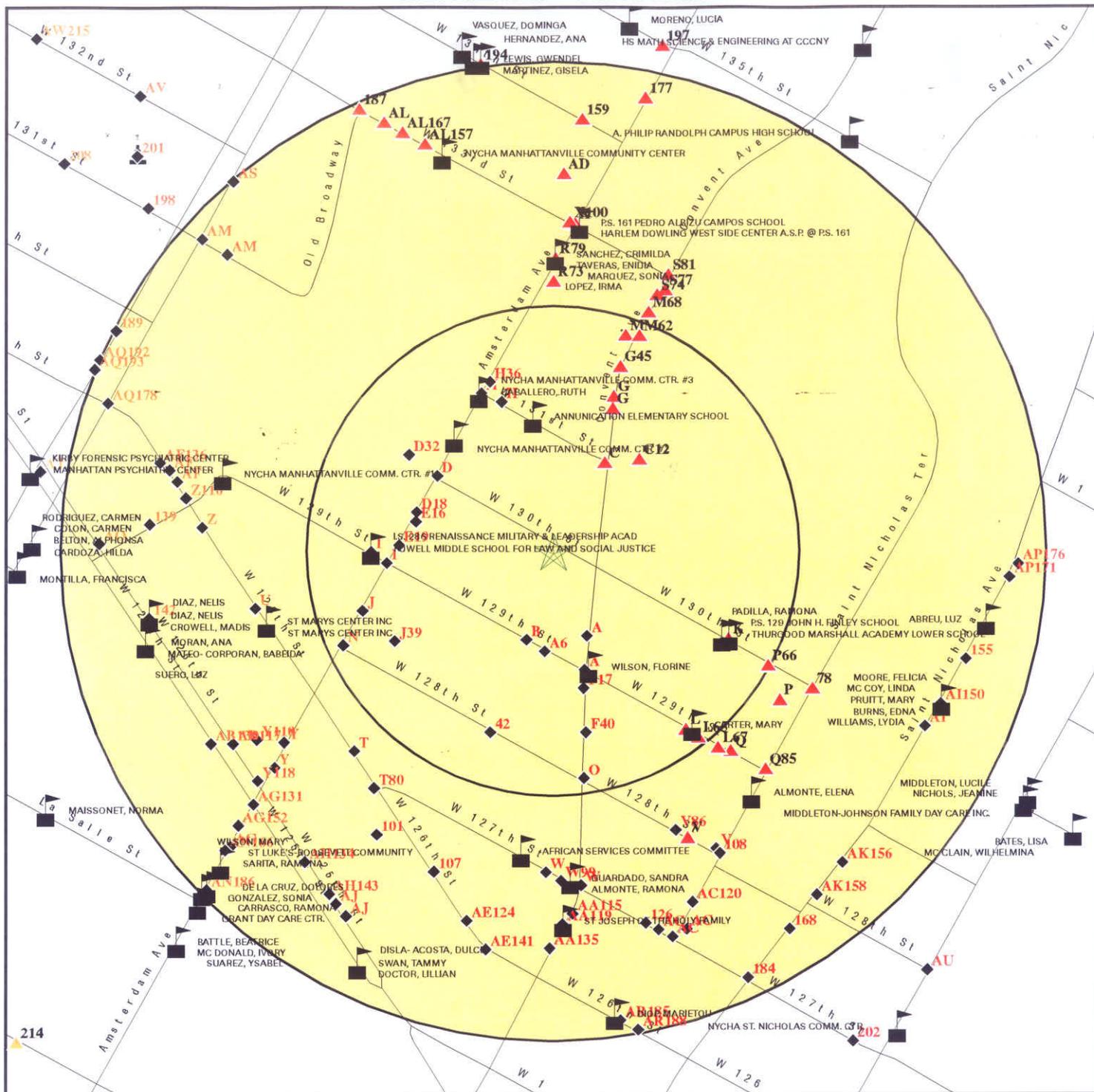
- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- ▨ Indian Reservations BIA
- ▬ County Boundary
- ▬ Power transmission lines
- ▬ Oil & Gas pipelines from USGS
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- ▨ 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: 464 West 130th Street ADDRESS: 464 West 130th Street New York NY 10027 LAT/LONG: 40.8152 / 73.9534	CLIENT: EPDSCO CONTACT: Hiram Rothkrug INQUIRY #: 3401340.6s DATE: August 30, 2012 10:44 am
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DETAIL MAP - 3401340.6s



- ★ 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
- ~ Oil & Gas pipelines from USGS
- ▨ 100-year flood zone
- ▧ 500-year flood zone

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: 464 West 130th Street ADDRESS: 464 West 130th Street New York NY 10027 LAT/LONG: 40.8152 / 73.9534	CLIENT: EPDSCO CONTACT: Hiram Rothkrug INQUIRY #: 3401340.6s DATE: August 30, 2012 10:46 am
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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
<u>STANDARD ENVIRONMENTAL RECORDS</u>								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	1	NR	1
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS NFRAP site List</i>								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	1	0	NR	1
<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		1	0	NR	NR	NR	1
RCRA-SQG	0.250		0	2	NR	NR	NR	2
RCRA-CESQG	0.250		3	3	NR	NR	NR	6
<i>Federal institutional controls / engineering controls registries</i>								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	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	0	1	NR	1
NJ SHWS	1.000		0	0	0	0	NR	0
NY VAPOR REOPENED	1.000		0	0	0	1	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
NJ SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
NY LTANKS	0.500		4	9	39	NR	NR	52
NY HIST LTANKS	0.500		4	10	25	NR	NR	39

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
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
NY TANKS	0.250		1	0	NR	NR	NR	1
NY UST	0.250		5	13	NR	NR	NR	18
NJ UST	0.250		0	0	NR	NR	NR	0
NY CBS UST	0.250		0	0	NR	NR	NR	0
NY MOSF UST	0.500		0	0	0	NR	NR	0
NY AST	0.250		21	62	NR	NR	NR	83
NY CBS AST	0.250		1	2	NR	NR	NR	3
NY MOSF AST	0.500		0	0	0	NR	NR	0
NY MOSF	0.500		0	0	0	NR	NR	0
NY CBS	0.250		1	2	NR	NR	NR	3
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
NY ENG CONTROLS	0.500		0	0	0	NR	NR	0
NJ ENG CONTROLS	0.500		0	0	0	NR	NR	0
NY INST CONTROL	0.500		0	0	0	NR	NR	0
NJ INST CONTROL	0.500		0	0	0	NR	NR	0
NY RES DECL	0.125		0	NR	NR	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
NJ VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
NY ERP	0.500		0	0	0	NR	NR	0
NY BROWNFIELDS	0.500		0	0	0	NR	NR	0
NJ BROWNFIELDS	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								
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
NY SWTIRE	0.500		0	0	0	NR	NR	0
NY SWRCY	0.500		0	0	0	NR	NR	0
NJ SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	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
NY DEL SHWS	1.000		0	0	0	0	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
NY HIST UST	0.250		5	10	NR	NR	NR	15
NY HIST AST	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
NY LIENS	TP		NR	NR	NR	NR	NR	0
NJ LIENS	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
NY Spills	0.125		14	NR	NR	NR	NR	14
NY Hist Spills	0.125		14	NR	NR	NR	NR	14
Other Ascertainable Records								
RCRA-NonGen	0.250		5	14	NR	NR	NR	19
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	1	NR	1
ROD	1.000		0	0	0	1	NR	1
UMTRA	0.500		0	0	0	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
NY HSWDS	0.500		0	0	0	NR	NR	0
NY UIC	TP		NR	NR	NR	NR	NR	0
NJ UIC	TP		NR	NR	NR	NR	NR	0
NY MANIFEST	0.250		11	21	NR	NR	NR	32
NJ MANIFEST	0.250		0	0	NR	NR	NR	0
NY DRYCLEANERS	0.250		0	2	NR	NR	NR	2
NJ DRYCLEANERS	0.250		0	0	NR	NR	NR	0
NY NPDES	TP		NR	NR	NR	NR	NR	0
NJ NPDES	TP		NR	NR	NR	NR	NR	0
NY AIRS	TP		NR	NR	NR	NR	NR	0
NY E DESIGNATION	0.125		1	NR	NR	NR	NR	1
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Search Distance (Miles)</u>	<u>Target Property</u>	<u>< 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>> 1</u>	<u>Total Plotted</u>
NY FINANCIAL ASSURANCE TP			NR	NR	NR	NR	NR	0
NY COAL ASH	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
NJ COAL ASH	0.500		0	0	0	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
NJ FINANCIAL ASSURANCE TP			NR	NR	NR	NR	NR	0

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants	1.000		0	0	1	0	NR	1
EDR Historical Auto Stations	0.250		0	0	NR	NR	NR	0
EDR Historical Cleaners	0.250		0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

ATTACHMENT D

**CITY DIRECTORY ABSTRACT FROM
ENVIRONMENTAL DATA RESOURCES, INC.**

464 West 130th Street
464 West 130th Street
New York, NY 10027

Inquiry Number: 3401340.8
August 30, 2012

The EDR-City Directory Abstract



440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

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 1920 through 2006. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 100 feet of the target property.

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

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>IP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
2006	Hill-Donnelly Information Services	-	X	X	-
2000	Cole Information Services	-	-	-	-
1998	NYNEX Telephone	-	-	-	-
1996	NYNEX	-	-	-	-
1993	NYNEX Telephone	-	-	-	-
1988	NYNEX Telephone	-	-	-	-
1983	New York Telephone	-	-	-	-
1978	New York Telephone	-	-	-	-
1973	New York Telephone	-	-	-	-
1968	New York Telephone	-	-	-	-
1963	New York Telephone	-	-	-	-
1958	New York Telephone	-	-	-	-
1956	New York Telephone	-	-	-	-
1950	New York Telephone	-	X	X	-
1947	New York Telephone	-	-	-	-
1942	New York Telephone	-	X	X	-
1938	New York Telephone	-	X	X	-
1934	R. L. Polk & Co.	-	-	-	-
1931	Manhattan and Bronx Directory Publishing Company Residential Directory	-	-	-	-
1927	New York Telephone	-	X	X	-
1923	R. L. Polk & Co.	-	-	-	-
1920	R. L. Polk & Co.	-	-	-	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

464 West 130th Street
New York, NY 10027

FINDINGS DETAIL

Target Property research detail.

FINDINGS

ADJOINING PROPERTY DETAIL

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

W 130 ST

461 W 130 ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	DONAWA VIOLA MRS BEAUTCN	New York Telephone

474 W 130 ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1942	SONOROL LABS	New York Telephone
1938	CONVENT AV GARAGE	New York Telephone
	CONVENT AV GARAGE INC	New York Telephone
1927	BRUNSWICK GARAGE	New York Telephone
	METZGER GEO A GARAGE	New York Telephone
	BRUNSWIRK GARAGE	New York Telephone

W 130TH

474 W 130TH

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1927	Brunswick Garage	New York Telephone
	Brunswirk Garage	New York Telephone
	Metzger Geo A garage	New York Telephone

W 130TH ST

450 W 130TH ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	490 No Current Listing	Hill-Donnelly Information Services

FINDINGS

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

464 West 130th Street

Address Not Identified in Research Source

2006, 2000, 1998, 1996, 1993, 1988, 1983, 1978, 1973, 1968, 1963, 1958, 1956, 1950, 1947, 1942, 1938, 1934, 1931, 1927, 1923, 1920

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.

Address Researched

450 W 130TH ST

Address Not Identified in Research Source

2000, 1998, 1996, 1993, 1988, 1983, 1978, 1973, 1968, 1963, 1958, 1956, 1950, 1947, 1942, 1938, 1934, 1931, 1927, 1923, 1920

461 W 130 ST

2006, 2000, 1998, 1996, 1993, 1988, 1983, 1978, 1973, 1968, 1963, 1958, 1956, 1947, 1942, 1938, 1934, 1931, 1927, 1923, 1920

474 W 130 ST

2006, 2000, 1998, 1996, 1993, 1988, 1983, 1978, 1973, 1968, 1963, 1958, 1956, 1950, 1947, 1934, 1931, 1923, 1920

474 W 130TH

2006, 2000, 1998, 1996, 1993, 1988, 1983, 1978, 1973, 1968, 1963, 1958, 1956, 1950, 1947, 1942, 1938, 1934, 1931, 1923, 1920

464 West 130th Street

464 West 130th Street

New York, NY 10027

Inquiry Number: 3401340.9

September 10, 2012

EDR Environmental Lien and AUL Search



440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

ATTACHMENT E

**ENVIRONMENTAL LIENSEARCH REPORT
FROM ENVIRONMENTAL DATA RESOURCES,
INC.**

EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

464 West 130th Street
464 West 130th Street
New York, NY 10027

RESEARCH SOURCE

Source 1:

New Yorkk NYC Register
New York, NY

PROPERTY INFORMATION

Deed 1:

Type of Deed:	Deed
Title is vested in:	David Manesh
Title received from:	City of New York
Deed Dated	3/7/2000
Deed Recorded:	4/6/2000
Book:	3080
Page:	2210
Volume:	NA
Instrument:	NA
Docket:	NA
Land Record Comments:	See Exhibit
Miscellaneous Comments:	NA
Legal Description:	See Exhibit
Legal Current Owner:	David Manesh
Parcel # / Property Identifier:	Blk. 1969 / Lot 68
Comments:	See Exhibit

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found Not Found

Deed Exhibit 1

DXL/05/12/99/19

228-

8833-435091 NY

THIS INDENTURE, made the 7th day of March, 2000. nineteen hundred and ninety-nine between THE CITY OF NEW YORK, a municipal corporation, having its principal office at City Hall, Borough of Manhattan, City and State of New York the first party and DAVID MANKESH, residing at 23 Dunhill Road, New Hyde Park, NY 11040 hereinafter designated as the second party.

WHEREAS, after the appraisal under the direction of the Mayor of the City of New York and after a public hearing held on the 13th day of January, 1999, the Mayor by authorization dated the 14th day of April, 1999 (Calendar No.124), duly ordered and directed the sale at public auction of the premises therein and hereinafter described for the minimum or upset price of TWENTY SIX THOUSAND FIVE HUNDRED(\$26,500.00) DOLLARS and

WHEREAS, after advertisement in the manner provided by law, said Premises were duly sold by and under the direction of the Department of Citywide Administrative Services, Division of Real Property (now known as Division of Real Estate Services) at public auction at the time and place set forth in such advertisement for the sum of FIFTY SEVEN THOUSAND(\$57,000.00) DOLLARS that being the highest bid therefor at the said sale,

NOW, THEREFORE, WITNESSETH: That the first party, in consideration of the sum of FIFTY SEVEN THOUSAND(\$57,000.00) DOLLARS

lawful money of the United States, paid by the second party, does hereby grant and release unto the second party, the heirs or successors and assigns of the second party forever,

All that/those certain piece/s or parcel/s of land, together with any improvements thereon, situate, lying and being in the Borough of MANHATTAN City and State of New York, designated on the Tax Map of the City of New York, for the Borough of MANHATTAN, as said Tax Map was on June 9, 1982,

Block 1969 Lot/s 68

TO HAVE AND TO HOLD the premises herein granted unto the second party, the heirs or successors and assigns of the second party forever.

Subject to: (1) Any state of facts an accurate survey would show; (2) The rights, if any, of tenants and persons in possession, if any; (3) All violations of any local, State or Federal Government having jurisdiction thereof existing at the time of closing; (4) Building restrictions and zoning regulations in force at the time of the delivery of the deed and covenants, restrictions of record, and easements affecting the subject property; (5) The trust fund provisions of section thirteen of the Lien Law; and (6) All provisions of the Standard Terms and Conditions of Sale in force and effect at the time of the Sale that are applicable.

In the event of the acquisition by the City of New York, by condemnation or otherwise, of any part or portion of the premises herein granted (except for the portion of the premises herein granted containing a building as of the date of this deed), lying within the bed of any street, avenue, parkway, expressway, park, public place or catch-basin, as said street, avenue, parkway, expressway, park, public place or catch-basin is shown on the present City Map, the second party, the heirs or successors and assigns of the second party, shall only be entitled as compensation for such acquisition by the City to the amount of One Dollar, and shall not be entitled to compensation for any buildings or structures erected thereon after May 12, 1999, within the lines of the street, avenue, parkway, expressway, park, public place or catch-basin so laid out and acquired. This covenant shall be binding upon and run with the land and shall endure until the second party, the heirs or successors and assigns of the second party, obtains a written release of this covenant executed by the Deputy Commissioner of Department of Citywide Administrative Services, Division of Real Estate Services or a person designated by the City's Mayor who may in his sole discretion execute such release if the City Map has already been changed so as to eliminate the lines of said street, avenue, parkway, expressway, park, public place or catch-basin from any part or portion of the premises. If the City Map has not been so changed, the said officer may execute such a release after authorization by the City's Mayor. The second party, the heirs or successors and assigns of the second party shall pay such consideration for the release as said officer shall deem appropriate.

Premises 52 Court Avenue NY NY

FILED 30 APR 2000

IN WITNESS WHEREOF, the party of the first part has caused these presents to be subscribed to by the Deputy Commissioner of the Department of Citywide Administrative Services, Division of Real Estate Services and by the City Clerk and its corporate seal to be hereunto affixed the day and year first above written.

THE CITY OF NEW YORK

Approved As To Form:

By: Lori Fierstein
Deputy Commissioner
Department of Citywide Administrative
Services, Division of Real Estate Services

Theodore K. Okun
Theodore K. Okun
Acting Corporation Counsel

By: [Signature]
City Clerk

STATE OF NEW YORK,)
COUNTY OF NEW YORK) ss.:

On the 15th day of October, in the year 19 99 before me, the undersigned, a Notary Public in and for said State, personally appeared LORI FIERSTEIN, personally known to me or proved to me the basis of satisfactory evidence to be the individual (s) whose name (s) is (are) subscribed to the within instrument and acknowledged to me that he/she /this executed the same in his/her /their capacity (ies), and that by his/her/their signature (s) on the instrument, the individual (s), or the person upon behalf of which the individual (s) acted, executed the instrument.

[Signature]
Notary Public

JOAN GONZALEZ
COMMISSIONER OF DEEDS
CITY OF NEW YORK NO. 5-2000
COMMISSION EXPIRES 7/1/02

STATE OF NEW YORK,)
COUNTY OF NEW YORK) ss.:

On the 19th day of Oct, in the year 19 99 before me, the undersigned, a Notary Public in and for said State, personally appeared CARLOS CUEVAS, personally known to me or proved to me on the basis of satisfactory evidence to be the individual (s) whose name (s) is (are) subscribed to the within instrument and acknowledged to me that he/she/this executed the same in his/her/their capacity (ies), and that by his/her/their signature (s) on the instrument, the individual (s), or the person upon behalf of which the individual (s) acted, executed the instrument.

[Signature]
Notary Public

ANN MARIE HEARY
Commissioner of Deeds
City of New York No. 1-6053
Certificate Filed in New York County
Commission Expires May 1, 2001

STATE OF NEW YORK,)
COUNTY OF NEW YORK) ss.:

On the _____ day of _____ in the year 19 _____ before me, the undersigned, a Notary Public in and for said State, personally appeared RAYMOND TEATUM, personally known to me or proved to me the basis of satisfactory evidence to be the individual (s) whose name (s) is (are) subscribed to the within instrument and acknowledged to me that he/she/this executed the same in his/her/their capacity (ies), and that by his/her/their signature (s) on the instrument, the individual (s), or the person upon behalf of which the individual (s) acted, executed the instrument.

Notary Public

DEED

BLOCK(S) 1969
LOT(S): 68
COUNTY: MANHATTAN

THE CITY OF NEW YORK

TO
DAVID MANESH

Record and return to:
David Manesh
223-17 Hempstead Ave
Queens Village NY 11429

REEL 308062212

CITY REGISTER RECORDING AND ENDORSEMENT PAGE
- NEW YORK COUNTY -
(This page forms part of the instrument)

THIS IS ONE OF THE LOTS DESCRIBED IN THE INSTRUMENT WHICH IS ONLY PART OF A LOT WHICH HAS BEEN PARTIALLY DIVIDED

Block/Lot(s): 1969
68

Address: 52 Convent Ave

City: Queens
State: NY
Zip: 11414

Phone: (718) 888-0805

TOTAL NUMBER OF PAGES IN DOCUMENT INCLUDING THIS PAGE: 3

NAME: DAVID MANESH

ADDRESS: 223-17 Hempstead Ave

CITY: QUEENS VILLAGE STATE: NY ZIP: 11414

THE FOREGOING INSTRUMENT WAS ENDORSED FOR THE RECORD AS FOLLOWS:

Examined by (s): EP

Miso Tax Serial No. _____

Miso Amount \$ _____

Taxable Amount \$ _____

Exempt in (1) YES NO

Type: (MORT) (RE) (OTHER) _____

Dwelling Type: (1 to 4) (5) (6 to 8) (over 8)

TAX RECEIVED ON ABOVE MORTGAGE

County (back) \$ _____

City (back) \$ _____

Spec Advt \$ _____

TAMF \$ _____

NTA \$ _____

NYOTA \$ _____

TOTAL TAX \$ _____

Apartment Mortgage (1) YES NO

Jay A. Schone, City Register

City Register Serial Number 017786

Indexed by (s): EP Verified by (s): NM

Block(s) and Lot(s) verified by (s): EP

Address Tax Map

Enter Block(s) _____ Lot(s) _____

Recording Fee A 35 DEED 015: \$2.00

Affidavit Fee (C) \$ _____

TP-584588 Fee (T) \$ _____ LO/1

RPTT Fee (FV) \$ 35 1-1

MPD-A MPD-C

New York State Real Estate Transfer Tax \$ 225

Serial Number 009344

New York City Real Property Transfer Tax Serial Number R 3619

New York State Gift Tax Serial Number _____

CHUR. RECPT. DATE TIME
8 97209 Apr 6-00 11:46

RECORDED IN NEW YORK COUNTY
OFFICE OF THE CITY REGISTER

APR - 6 2000

Witness My Hand and Official Seal A 11:31



Jay A. Schone
City Register

464 WEST 130TH STREET

MANHATTAN, NEW YORK

Remedial Investigation Report

E-Designation 239

CEQR Number 07DCP076M

West 129th Street Rezoning Action

Prepared for:

Joseph Rastegar

Big Apple Developers

770 Middle Neck Road, Suite 4P

Great Neck, New York 11024-1905

josephr@bigappledevelopers.com

Prepared by:

GEI Consultants, Inc.

110 Walt Whitman Road, Suite 204

Huntington Station, New York 11746

(631) 760-9300

March 2013

REMEDIAL INVESTIGATION REPORT

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LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
CAMP	Community Air Monitoring Plan
COC	Contaminant of Concern
CPP	Citizen Participation Plan
CSM	Conceptual Site Model
DER-10	New York State Department of Environmental Conservation Technical Guide 10
FID	Flame Ionization Detector
GPS	Global Positioning System
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
IRM	Interim Remedial Measure
NAPL	Non-aqueous Phase Liquid
NYC VCP	New York City Voluntary Cleanup Program
NYC DOHMH	New York City Department of Health and Mental Hygiene
NYC OER	New York City Office of Environmental Remediation
NYS DOH ELAP	New York State Department of Health Environmental Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
PID	Photoionization Detector
QEP	Qualified Environmental Professional
RI	Remedial Investigation
RIR	Remedial Investigation Report
SCO	Soil Cleanup Objective
SPEED	Searchable Property Environmental Electronic Database

CERTIFICATION

I, Nicholas J. Recchia, am a Qualified Environmental Professional, as defined in RCNY § 43-1402(ar). I have primary direct responsibility for implementation of the Remedial Investigation for the [E-Designation 239 CEQR Number 07DCP076M](#). I am responsible for the content of this Remedial Investigation Report (RIR), have reviewed its contents and certify that this RIR is accurate to the best of my knowledge and contains all available environmental information and data regarding the property.

Nicholas J. Recchia

Date 2/15/2013

Signature



EXECUTIVE SUMMARY

The Remedial Investigation Report (RIR) provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy pursuant to RCNY§ 43-1407(f). The remedial investigation (RI) described in this document is consistent with applicable guidance.

Site Location and Current Usage

The Site is located in the Manhattanville section of Manhattan, New York and is identified as Block 1969 and Lot 68 on the New York City Tax Map. **Figure 1** is a Site location map. The Site is 3,900-square feet and is located on the south side of West 130th Street on the southwest corner Convent Avenue, and is adjoined by residential apartment buildings (some of which contain retail stores) to the south and east, and a two-story garage/warehouse building to the west. Currently, the Site is vacant, with the western portion of the property being used for parking and the eastern portion appearing to be used as a private garden.

Summary of Proposed Redevelopment Plan

The proposed use of the Site will consist of the construction of a residential apartment complex. Layout of the proposed site development is presented in **Figure 2**. The current zoning designation is residential, within district R7A.

The proposed project will include the construction of a six-story, 30-unit residential building including a basement, which will contain residential units, and a partial cellar for utilities only. The building footprint is approximately 3,500 square feet, and the total square footage of the building is approximately 24,000 square feet. A planting area is planned along Convent Avenue and additional open space will be present on the western edge of the property. The proposed building construction would not cover the entire property footprint; however, excluding the planting area, all other areas not planned for construction will be capped with either asphalt or concrete. Excavation at the site is necessary to complete the portions of the basement and cellar of the structure. The excavation depths vary slightly across the site with a maximum depth of approximately 11feet for the cellar on the western portion of the property. The proposed excavation volume is 1,399 cubic yards. An excavation plan drawing is provided as **Appendix A**. A vapor barrier will be installed at the base of the building's foundation.

Groundwater was not encountered within the planned depth of the excavation. No demolition is required to complete the construction of the proposed building.

Summary of Past Uses of Site and Areas of Concern

According to information provided in the Phase I ESA (**Appendix B**) dating back to 1902, the site has historically been vacant and has been used as a parking lot and private garden. Ownership of the site was reportedly transferred from the Commissioner of Finance to the City of New York on July 31, 1985. Ownership was subsequently transferred from the City of New York to David Manesh and finally to Parkside, Inc, on April 6, 2000.

Summary of the Work Performed under the Remedial Investigation

1. Conducted an electromagnetic (EM) survey to investigate for the existence of potential underground storage tanks (USTs) or other anomalies;
2. Installed seven soil borings across the entire project Site, and collected 14 soil samples for chemical analysis from the soil borings to evaluate soil quality;
3. Installed three soil vapor probes around Site perimeter and collected three samples for chemical analysis;

Monitoring wells were installed to the top of the underlying bedrock formation and monitored for the presence of groundwater. Groundwater was not encountered above the bedrock at the site.

Summary of Environmental Findings

1. Elevation of the property ranges from approximately 63 to 74 feet.
2. Groundwater was not encountered at the Site. As a result, the depth to groundwater and groundwater flow direction were not determined.
3. Depth to bedrock ranges from approximately 9 feet to approximately 22 feet at the Site. It is believed that the bedrock surface closely follows the original land surface of the area prior to the placement of fill materials during the initial development. No perched groundwater was found on this bedrock surface.
4. The stratigraphy of the site, from the surface down, consists of urban-fill materials intermixed with re-worked and re-placed glacial deposits. The intermixed fill and glacial

deposits overlie bedrock. The fill in the area consists predominantly of brick, glass, ash, and rock fragments as well as other urban-fill materials. The re-worked glacial deposits are also apparently fill deposits since evidence indicates that they have been re-worked and mixed. The glacial deposits were generally characterized by fine-to-medium sand, with varying percentages fines, broken cobbles and gravel.

5. Soil/fill samples collected during the RI were below the Restricted Use Soil Cleanup Objectives (SCO) excluding several Polycyclic Aromatic Hydrocarbons (PAH) in sample SB-2 (2 to 4 feet) and barium in sample SB-4 (0 to 2 feet) (see **Figure 3**). The PAH exceedances are commonly found in urban-fill type material, which typically contain ash. The barium exceedance is possibly attributable to natural background conditions.
6. Soil vapor samples collected during the RI showed relatively low detections with all of the results being below the New York State Department of Health (NYSDOH) Soil Vapor/Indoor Air Matrix action levels. A vapor barrier is planned as part of the building's construction.

REMEDIAL INVESTIGATION REPORT

1.0 SITE BACKGROUND

The subject property is located at 464 West 130th Street in the Manhattanville section of Manhattan, New York (the Site). This project has been assigned project number 13EHAZ218M by OER. An E-Designation for Hazardous Materials (E-239) was placed on the Site by the New York City Department of City Planning (DCP) as part of the October 5, 2009, West 129th Street Rezoning action (CEQR 07DCP076M). The property was given an e-designation due to the presence of underground storage tanks (USTs) on an adjacent property. The remedial investigation was conducted on January 22, 2013.

This Remedial Investigation Report (RIR) summarizes the nature and extent of contamination and provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy that is protective of human health and the environment consistent with the use of the property pursuant to RCNY§ 43-1407(f).

1.1 Site Location and Current Usage

The Site is located in the Manhattanville section of Manhattan, New York and is identified as Block 1969 and Lot 68 on the New York City Tax Map. **Figure 1** is a Site location map. The Site is 3,900-square feet and is located on the south side of West 130th Street on the southwest corner of Convent Avenue, and is adjoined by residential apartment buildings (some of which contain retail stores) to the south and east, and a two-story garage/warehouse building to the west. Currently, the Site is vacant, with the western portion of the property being used for parking and the eastern portion appearing to be used as a private garden.

1.2 Proposed Redevelopment Plan

The proposed use of the Site will consist of the construction of a residential apartment complex. Layout of the proposed site development is presented in **Figure 2**. The current zoning designation is residential, within district R7A.

The proposed project will include the construction of a six-story, 30-unit residential building including a basement, which will contain residential units, and a partial cellar for utilities only. The building footprint is approximately 3,500 square feet, and the total square footage of the

building is approximately 24,000 square feet. A planting area is planned along Convent Avenue and additional open space will be present on the western edge of the property. The proposed construction would not cover the entire property footprint. Excavation at the site is necessary to complete the portions of the basement and cellar of the structure. The excavation depths vary slightly across the site with a maximum depth of approximately 11 feet for the cellar on the western portion of the property. The proposed excavation volume is 1,399 cubic yards. An excavation plan drawing is provided as **Appendix A**. A vapor barrier will be installed at the base of the building's foundation. Groundwater was not encountered within the planned depth of the excavation. No demolition is required to complete the construction of the proposed building.

1.3 Description of Surrounding Property

The Site is adjoined by residential apartment buildings (some of which contain retail stores) to the south and east, and a two-story garage/warehouse building to the west. The Site is zoned for residential use and is included in Residential District R7A. This type of zoning typically produces high lot coverage, with seven- and eight-story apartment buildings, which often blend with existing buildings in established neighborhoods.

The area is characterized by numerous storage facilities, commercial shops and residential properties. The expansion of Columbia University is planned for the area with the construction of a new campus in the 17-acre tract from 125th and 133rd Streets between Broadway and Amsterdam Avenue.

2.0 SITE HISTORY

2.1 Past Uses and Ownership

According to information provided in the Phase I ESA dating back to 1902, the site has historically been vacant and has been used as a parking lot and private garden. Ownership of the site was reportedly transferred from the Commissioner of Finance to the City of New York on July 31, 1985. Ownership was subsequently transferred from the City of New York to David Manesh and finally to Parkside, Inc, on April 6, 2000.

2.2 Previous Investigations

Previous investigations at the site were limited to a Phase I Environmental Site Assessment (ESA). The document was titled “*Phase I Environmental Site Assessment, 464 West 130th Street, Block 1969, Lot 68, New York, New York*”, dated September 2012, prepared by Environmental Project Data Statements Company (EPDSCO). The Phase I ESA is presented in **Appendix B**.

No recognized environmental conditions were identified in the Phase I ESA. However, the property was given an e-designation due to the presence of USTs on an adjacent property.

2.3 Site Inspection

The inspection and remedial investigation was conducted on January 22, 2013.

2.4 Areas of Concern

No areas of concern were identified during the remedial investigation. Several sampling points were located near the western edge of the property, nearest the area of the USTs reportedly located on the adjacent property.

3.0 PROJECT MANAGEMENT

3.1 Project Organization

The Qualified Environmental Profession (QEP) responsible for preparation of this RIR is Nicholas J. Recchia.

3.2 Health and Safety

All work described in this RIR was performed in full compliance with applicable laws and regulations, including Site and Occupational Safety and Health Administration (OSHA) worker safety requirements and Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements. A site specific Health and Safety Plan (HASP) (**Appendix C**) was submitted and approved by the New York City (NYC) Office of Environmental Remediation (OER) prior to the start of the investigation. All work was completed in compliance with the HASP under direct observation of a qualified health and safety officer.

3.3 Materials Management

All material encountered during the RI was managed in accordance with applicable laws and regulations.

4.0 PHASE II INVESTIGATION ACTIVITIES

The following scope of work was performed:

1. Conducted a electromagnetic (EM) survey to investigate for the existence of potential USTs;
2. Installed seven soil borings across the entire project Site, and collected 14 soil samples for chemical analysis from the soil borings to evaluate soil quality;
3. Installed three soil vapor probes around the Site perimeter and collected three samples for chemical analysis;

Monitoring wells were installed and monitored for the presence of groundwater.

Groundwater was not encountered above the bedrock at the site.

4.1 EM Survey

An EM Magnetometer survey was conducted in an attempt to identify any possible unknown magnetic anomalies such as USTs on the site. GEI used a Fisher TW-6 magnetometer in the inductive phase mode over the site in an overlapping grid pattern. The results of the survey indicated no underground magnetic anomalies warranting further investigation.

4.2 Borings

Drilling and Soil Logging

Seven soil borings were conducted across the site using a Geoprobe direct-push drilling rig (**Figure 3**). Soil was collected continuously to the boring termination depth with a Geoprobe macrocore sampler. For each sample, a clear 4-foot expendable acetate liner was installed into the core barrel and advanced 4 feet into the soil. The core barrel was removed, the liner extracted and replaced with a new liner and then advanced an additional 4 feet. This procedure was followed for each of the borings. The core barrel tip was decontaminated between borings as specified in the work plan.

The soil was characterized and logged for potential impacts (e.g., odor, staining, anthropogenic materials) and screened for volatile organic vapors in 6-inch intervals with a photoionization detector (PID). Boring logs are provided in **Appendix D**. Soil descriptions were recorded in a field log.

4.3 Sample Collection and Chemical Analysis

Sampling performed as part of the field investigation was conducted based on historical information provided in the Phase I ESA, development plans and professional judgment. All media including soil, groundwater and soil vapor have been evaluated and sampled, where possible, in the RIR. Discrete (grab) samples have been used for final delineation of the nature and extent of contamination and to determine the impact of contaminants on public health and the environment. The sampling performed and presented in this RIR provides sufficient basis for evaluation of remedial action alternatives, establishment of a qualitative human health exposure assessment, and selection of a final remedy.

Soil Sampling

Seven soil borings were completed during this investigation as outlined in the approved work plan. Two soil samples from each boring were collected (for a total of 14 samples), consisting of a surface sample and a deeper sample. The deeper samples were collected from approximately 2 feet below the development cuts or just above bedrock (whichever was shallower) in the area of the excavation (borings B-3 through B-7). In the area not planned for excavation on the southwestern portion of the site (borings B-1 and B-2), two borings were advanced to approximately four feet below ground surface and samples were collected from 0 to 2 feet and 2 to 4 feet below ground surface.

All soil samples were collected in laboratory supplied jars, properly labeled with the boring number and the depth of the sample interval, the date and time of sampling, the analytical requirements, and then placed on ice for the duration of the sampling and transport to the laboratory. A chain of custody form was completed at the time of sampling and maintained until disposition of the samples at the laboratory.

Fourteen soil samples were collected for chemical analysis during this RI. Data on soil sample collection for chemical analyses, including dates of collection and sample depths, is reported in **Table 1**. **Figure 3** shows the location of samples collected in this investigation. Laboratories and analytical methods are shown below.

Groundwater Sampling

Three groundwater monitoring wells (MW-3, MW-4, and MW-6) constructed of one-inch slotted polyvinyl chloride (PVC), were installed to the top of bedrock across the site. The wells

were installed to monitor for the presence of groundwater, or perched water at the site, and to evaluate the water quality underlying the site, if present (see **Figure 3**). No indications of groundwater were evident in any of the soil borings or during the well installations. Following installation, the wells were allowed to sit for several hours to allow for the migration of any water into the wells; however, no groundwater was observed in any of the three wells. The wells were monitored again approximately one month after installation at which time no groundwater was again observed. As a result, no groundwater samples were collected.

Soil Vapor Sampling

Three soil vapor probes (SG-1, SG-2, and SG-3) were installed to depths of 10, 5 and 10–feet, respectively below the surface grade elevation across the site. Soil vapor samples were collected via dedicated polyethylene tubing and Summa Canisters tested for volatile organic compounds (VOCs) using United States Environmental Protection Agency (USEPA) TO-15 method parameters. A chain of custody form was completed at the time of sampling and maintained until disposition of the samples at the laboratory.

Locations of soil vapor samples are indicated on **Figure 3**. Soil vapor sample collection data is reported in **Table 2**.

The soil vapor points were installed using 1-inch diameter steel drill rods advanced using direct-push drilling methods. The soil vapor probe consisted of a prefabricated 2-3 inch perforated steel vapor probe tip attached to 3/8-inch diameter low-density polyethylene (LDPE) plastic riser tubing. Once driven to depth, the rods were removed leaving only the tip and the tubing. The vapor probe boreholes were backfilled with #2 morie well grade gravel. A surface seal was placed using an impermeable clay seal installed within the last six inches of the probe-hole annulus from surface grade level. The vapor wells were measured and purged using a PID prior to sampling.

As part of the vapor intrusion evaluation, a tracer gas was used in accordance with the protocols established in the *NYS DOH Final Guidance on Soil Vapor Intrusion, October 2006* (NYSDOH Guidance). The tracer gas evaluation serves as a quality assurance/quality control (QA/QC) device to verify the integrity of the soil vapor probe seal. Helium was used as the tracer gas and a box will serve to keep it in contact with the probe during testing. A portable monitoring device was used to analyze a sample of soil vapor for the tracer prior to sampling. Upon verifying that a good seal was established, the soil vapor probes were connected for

sampling to 6-liter Summa Canisters set to collect for a 2-hour time period. At the conclusion of the sampling round, tracer monitoring was performed a second time to confirm the integrity of the probe seals.

Chemical Analysis

Chemical analytical work presented in this RIR has been performed in the following manner:

Factor	Description
Quality Assurance Officer	The chemical analytical quality assurance is directed by York Analytical laboratories, Inc. NYS ELAP #10854
Chemical Analytical Laboratory	The chemical analytical laboratory used in the RI was York Analytical Laboratories, Inc. NYS ELAP #10854
Chemical Analytical Methods	Soil analytical methods: <ul style="list-style-type: none"> • TAL Metals by EPA Method 6010C (rev. 2007); • VOCs by EPA Method 8260C (rev. 2006); • SVOCs by EPA Method 8270D (rev. 2007); • Pesticides by EPA Method 8081B (rev. 2000); • PCBs by EPA Method 8082A (rev. 2000); Soil vapor analytical methods: <ul style="list-style-type: none"> • VOCs by TO-15 VOC parameters.

Results of Chemical Analyses

Laboratory data for soil and soil vapor are summarized in **Tables 1 and 2**, respectively. Laboratory data deliverables for all the soil and soil vapor samples evaluated in this RIR are provided in digital form in **Appendices E and F**, respectively.

5.0 ENVIRONMENTAL EVALUATION

5.1 Geological and Hydrogeological Conditions

Stratigraphy

In general, urban-fill material is intermixed with glacial deposits at the site. The fill and glacial deposits overlie bedrock, which was encountered in three of the seven borings at depths varying from as shallow as approximately 9-feet in boring B-4 to as deep as 22 feet in boring B-3. The remaining borings were terminated before reaching bedrock.

The Site is moderately sloped. The Site elevation is approximately 73 feet on the East end along Morningside Avenue and approximately 61 feet on the West end. The total relief change is 12 feet from East to West.

The fill at the Site consists predominantly of brick, glass, ash and rock fragments as well as other urban-fill materials. The glacial deposits were generally characterized by fine-to-medium sand, with varying percentages fines, broken cobbles and gravel. There was evidence that these glacial deposits were re-worked and re-placed onsite as the soils were intermixed with non-native fill in areas. The non-native fill and native fill deposits were found to lie on top of the bedrock surface in all areas of the Site. A geotechnical exploration boring program was completed in May 2008 by A-1 Testing Laboratories, Inc. (see **Appendix G**) the results of that investigation support the environmental investigation findings identified in this report.

Hydrogeology

Groundwater was not encountered at the site during this investigation. Three (3) monitoring wells were installed and two rounds of measurement checks were made in order to determine if groundwater was developing into the monitoring wells. Measurements were made on the day of monitor well installation (1-22-2013) and (2-27-2013). It was noted that several precipitation events had occurred during that time period. No perched groundwater was found lying on top of the bedrock surface during either of these measurement checks. The underlying bedrock surface closely follows the historical pre-development and original land surface of the site prior to the importing of fill soils which was completed in order to grade the neighborhood during the original development of the neighborhood. Groundwater may be found within the underlying bedrock fractures. Investigation into the bedrock hydrology was not completed as part of the work scope of this investigation.

Table for Groundwater and Water Level Data

Monitoring Well ID No.	Water Elevation (ft) Depth to well bottom 1/22/2013	Water Elevation(ft) Depth to well bottom <u>2/27/2013</u>
MW-3	dry	dry
MW-4	dry	dry
MW-6	dry	dry

5.2 Soil Chemistry

Seven continuous soil borings were completed across the Site and a total of 14 samples were collected for laboratory analysis. All samples were analyzed for volatile organic compounds (VOC's), SVOC's, Pesticides/Polychlorinated Biphenyls (PCB's) and Target Analyte List (TAL) Metals. The samples were compared to New York State Environmental Conservation (NYSDEC) Soil Cleanup Objectives (SCOs) 6 NYCRR Subpart 375-6.8; (b): Residential Use SCOs. Detections identified above the SCOs are shown on **Figure 3**. The following observations were noted:

Based on observations noted in the field (visual, olfactory and PID readings) no impacts were identified (see **Appendix D** - boring logs).

No VOC's were detected in any of the soil samples above the instrumentation detection limits.

No pesticides or PCBs were detected in any of the soil samples above the Residential Use SCOs.

SVOC exceedances of the Residential Use SCOs were identified in one of the 14 analytical samples collected (SB-2, 2 to 4-feet). All of the SVOCs identified above the Residential Use SCOs were PAHs. Concentrations ranged from 0.92 mg/kg of dibenzo(a,h)anthracene to 4.74 mg/kg of chrysene. The exceedances of the SCOs were relatively low, all being within at least one order of magnitude of the respective Residential Use SCO.

PAHs are generally produced as byproducts of fuel burning and are commonly found in urban fill-type material, including ash, which was identified in this sampling interval.

All soil samples contained metals as part of the soil structure. Metals exceedances of the Residential Use SCOs were limited to barium in one sample, SB-4 (0 to 2-feet) with a concentration of 691 mg/kg. The barium detection above the Residential Use SCO (350 mg/kg) is possibly attributable to typical background conditions which can vary greatly in the region.

Data collected during the RI is sufficient to delineate the vertical and horizontal distribution of contaminants in soil/fill at the Site. A summary table of data for chemical analyses performed on soil samples is included in **Table 1**. Due to the intended site use and construction plans, a Track 4 remedy is being considered for the Site. The elements of this remedy include either excavation for the building construction, or capping with concrete or asphalt of the remaining portions of the Site (excluding the planting area).

5.3 Groundwater Chemistry

Since no groundwater was found in the unconsolidated soil and fill materials underlying the site. No groundwater samples were collected therefore no groundwater chemistry data is available.

5.4 Soil Vapor Chemistry

Laboratory analytical results for the soil vapor and ambient air samples are shown in **Table 2**. All samples were analyzed for VOCs using EPA Method TO-15. Helium levels were measured prior to and following sample collection to verify the integrity of the soil vapor probe seal. Helium was only detected in the pre-sample measurement of SG-1, at a concentration of 270 parts-per-million (0.27%). This concentration is well below the 10% limit requiring re-establishment of the seal listed in the NYSDOH Guidance.

The only established regulatory criteria for soil vapor are provided in the NYSDOH Guidance. The criteria as listed in the Volatile Chemical Matrix Tables, compare sub-slab vapor concentrations to indoor air concentrations for carbon tetrachloride, tetrachloroethene, 1,1,1-trichloroethane, and trichloroethene. As these media were not sampled as part of this investigation, the criteria do not strictly apply; however, a comparison between the minimum sub-slab concentrations in the matrices to the soil vapor samples collected during this

investigation can be performed and the results used as a tool to determine if mitigation measures are needed.

According to the criteria set in the Volatile Chemical Matrix Tables, no further action would be warranted for all four compounds listed in the tables. Of the four compounds listed in the matrices, only tetrachloroethene was detected in one of the samples collected during this investigation. The detected concentration of tetrachloroethene in sample SG-1 (2.2 ug/m³), was significantly below the minimum actionable value (100 ug/m³) for this compound in soil vapor/indoor air matrix 2.

Other compounds detected in the samples include acetone and toluene (in all three samples), benzene (in SG-1 & SG-2), carbon disulfide (SG-2 & SG-3), methylene chloride and m&p-xylenes (SG-3), n-hexane and trichlorofluoromethane (Freon 11) (SG-2). All of the detections of these compounds were low, with the maximum detection being 22 ug/m³ of toluene in SG-1. The highest detections were generally found in sample SG-1, located nearest the adjacent lot to the west, which reportedly contains USTs. Detections in this sample included benzene and toluene, typically associated petroleum-based products that could be found in USTs.

Data collected during the RI is sufficient to delineate the distribution of contaminants in soil vapor at the Site. A summary table of data for chemical analyses performed on soil vapor samples is included in **Table 2**. As stated above, a Track 4 remedy is being considered for the Site. The remedy would include either excavation for the building construction, or capping with concrete or asphalt of the remaining portions of the Site (excluding the planting area). A vapor barrier is also planned as part of the building's construction.

5.5 Prior Activity

Based on an evaluation of the data and information from the RIR, disposal of significant amounts of hazardous waste is not suspected at this site.

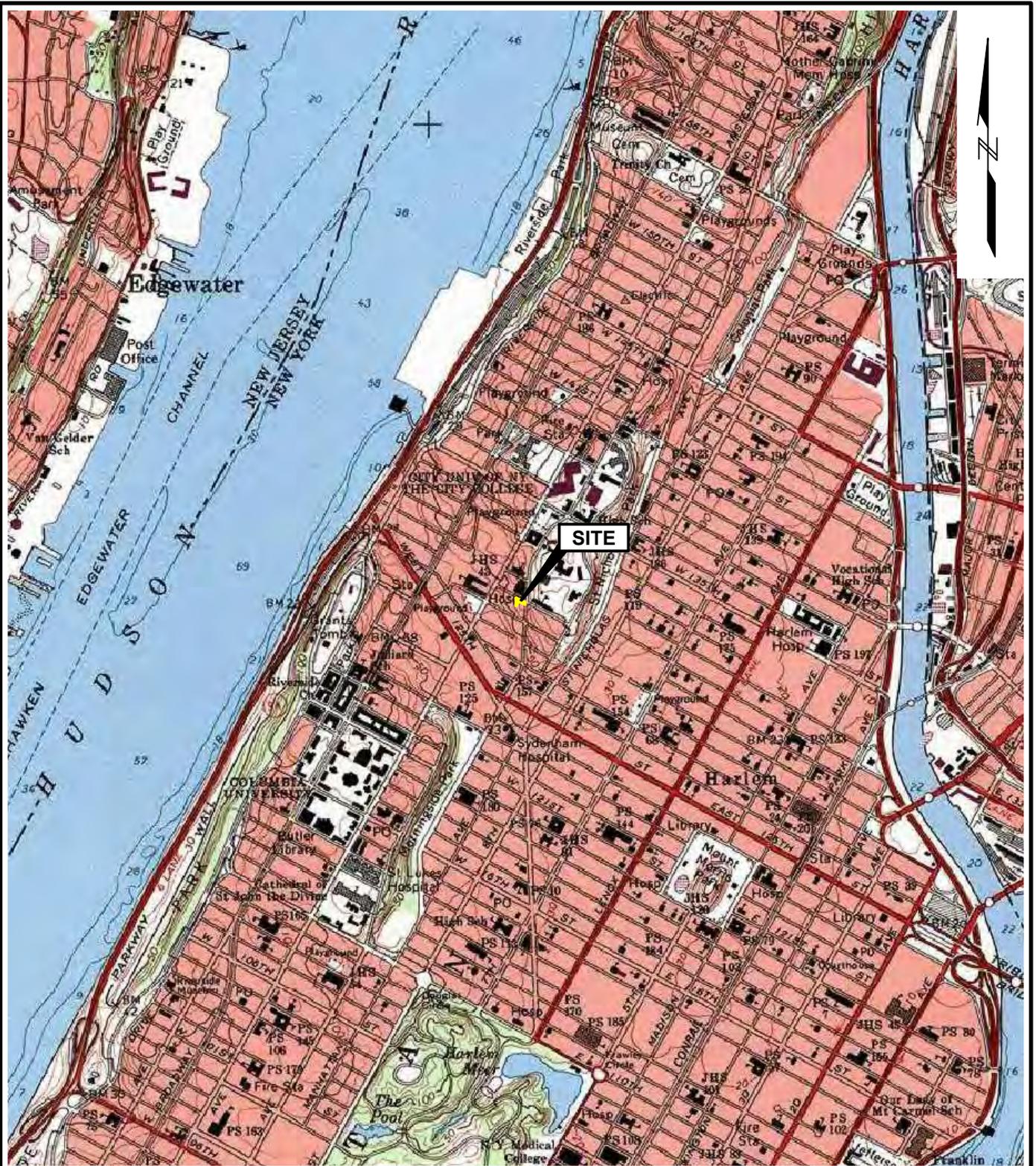
5.6 Impediments to Remedial Action

There are no known impediments to remedial action at this property.

Site-Specific Standards, Criteria and Guidance

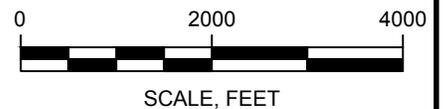
- 6 NYCRR Part 375 - Inactive Hazardous Waste Disposal Sites
- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (final October 2006)

Figures



SOURCE:

Map created with TOPO! © 2001 National Geographic
 (www.nationalgeographic.com/topo)



SUBSURFACE INVESTIGATION
 WEST 130TH STREET
 NEW YORK, NEW YORK

BIG APPLE DEVELOPERS
 GREAT NECK, NEW YORK

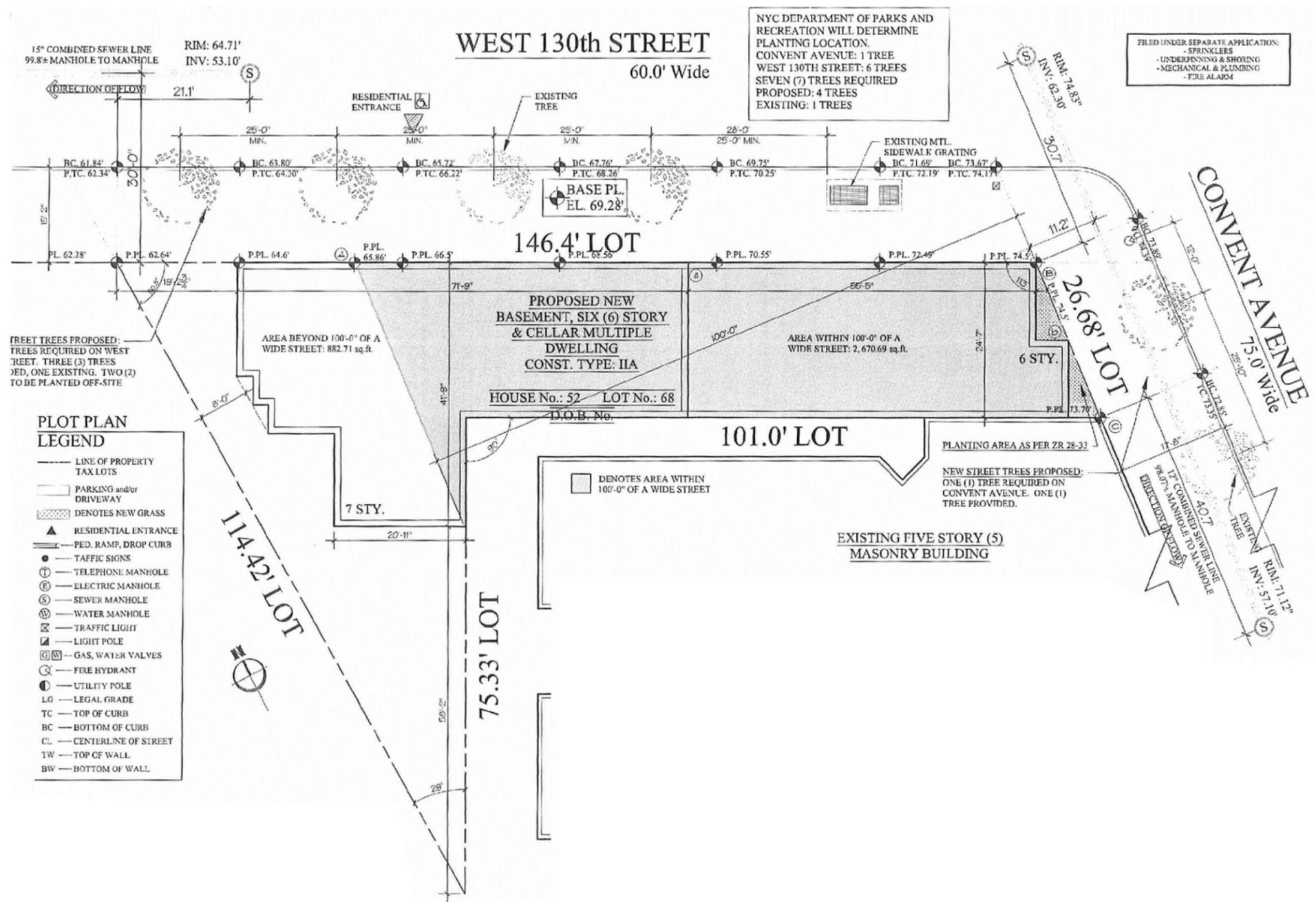


SITE LOCATION MAP

Project 130030-1000

February 2013

Figure 1



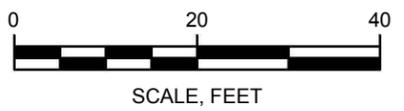
NYC DEPARTMENT OF PARKS AND RECREATION WILL DETERMINE PLANTING LOCATION.
 CONVENT AVENUE: 1 TREE
 WEST 130TH STREET: 6 TREES
 SEVEN (7) TREES REQUIRED
 PROPOSED: 4 TREES
 EXISTING: 1 TREES

FILED UNDER SEPARATE APPLICATION:
 - SPRINKLERS
 - UNDERPINNING & SHORING
 - MECHANICAL & PLUMBING
 - FIRE ALARM

TREES PROPOSED:
 TREES REQUIRED ON WEST 130TH STREET: THREE (3) TREES
 EXISTING: ONE (1) TREE
 TO BE PLANTED OFF-SITE

- PLOT PLAN LEGEND**
- LINE OF PROPERTY TAX LOTS
 - PARKING and/or DRIVEWAY
 - ▨ DENOTES NEW GRASS
 - ▲ RESIDENTIAL ENTRANCE
 - PED. RAMP, DROP CURB
 - TAFFIC SIGNS
 - Ⓣ TELEPHONE MANHOLE
 - ⓔ ELECTRIC MANHOLE
 - Ⓢ SEWER MANHOLE
 - Ⓦ WATER MANHOLE
 - ⓧ TRAFFIC LIGHT
 - Ⓛ LIGHT POLE
 - Ⓜ GAS, WATER VALVES
 - Ⓢ FIRE HYDRANT
 - Ⓛ UTILITY POLE
 - LG LEGAL GRADE
 - TC TOP OF CURB
 - BC BOTTOM OF CURB
 - CL CENTERLINE OF STREET
 - TW TOP OF WALL
 - BW BOTTOM OF WALL

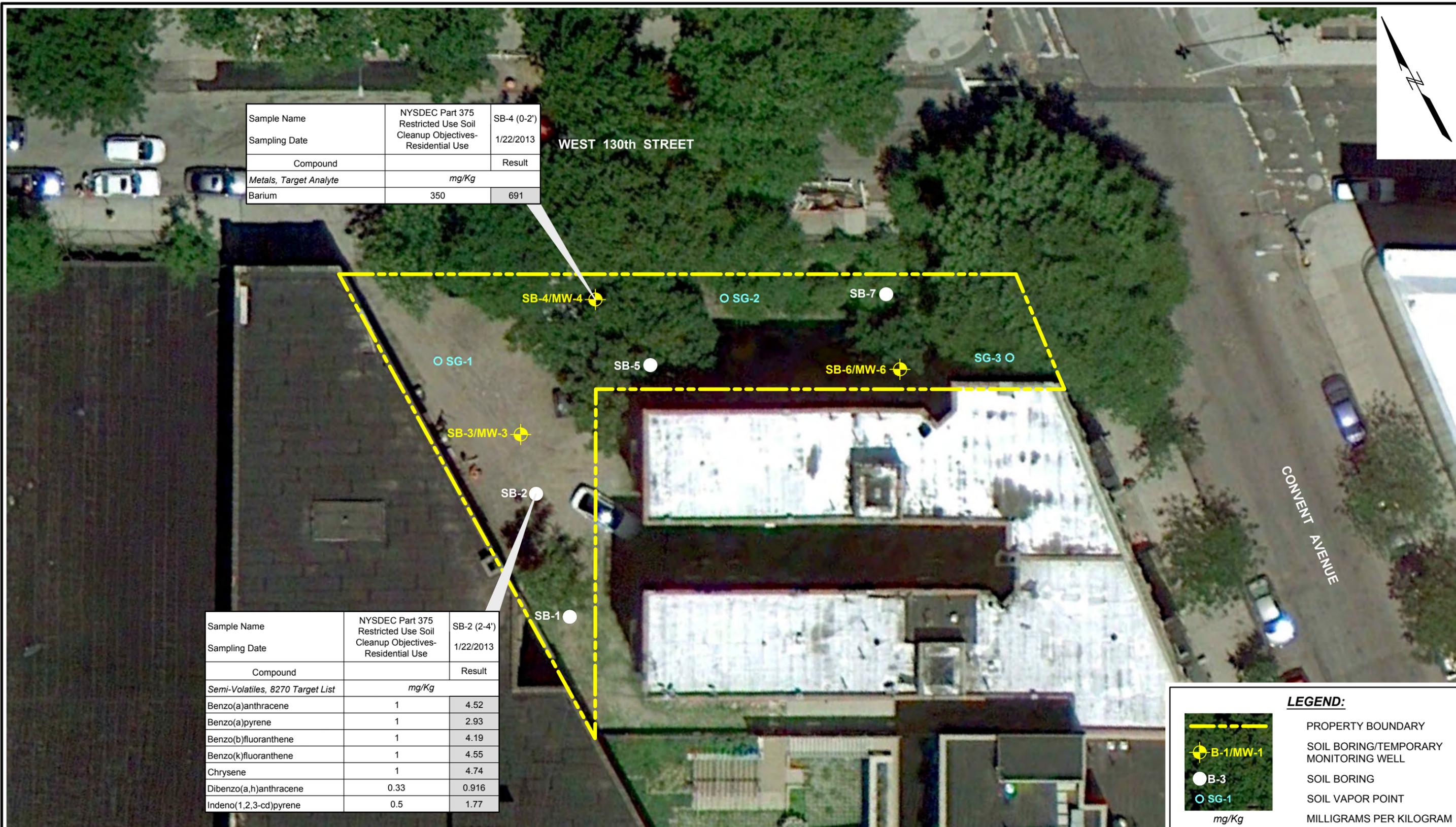
SOURCE:
 SUBSURFACE INVESTIGATION, WEST 130TH STREET, NEW YORK, NEW YORK, PREPARED BY BRICOLAGE ARCHITECTURE & DESIGN, PPLC, SCALE: 3/32" = 1'-0", DATE: 04-05-12.



SUBSURFACE INVESTIGATION
 WEST 130TH STREET
 NEW YORK, NEW YORK
 BIG APPLE DEVELOPERS
 GREAT NECK, NEW YORK



PROPOSED SITE PLAN
 February 2013
 Figure 2



Sample Name	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Residential Use	SB-4 (0-2')
Sampling Date		1/22/2013
Compound		Result
Metals, Target Analyte	mg/Kg	
Barium	350	691

Sample Name	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Residential Use	SB-2 (2-4')
Sampling Date		1/22/2013
Compound		Result
Semi-Volatiles, 8270 Target List	mg/Kg	
Benzo(a)anthracene	1	4.52
Benzo(a)pyrene	1	2.93
Benzo(b)fluoranthene	1	4.19
Benzo(k)fluoranthene	1	4.55
Chrysene	1	4.74
Dibenzo(a,h)anthracene	0.33	0.916
Indeno(1,2,3-cd)pyrene	0.5	1.77

LEGEND:

- PROPERTY BOUNDARY
- B-1/MW-1 SOIL BORING/TEMPORARY MONITORING WELL
- B-3 SOIL BORING
- SG-1 SOIL VAPOR POINT
- MILLIGRAMS PER KILOGRAM

SOURCES:

1. PHOTOGRAPH OBTAINED FROM GOOGLE™ EARTH PRO, ©2011 GOOGLE, IMAGERY DATE 06/02/2011, ACCESSED ON 12/14/2012.
2. SURVEY OF TAX BLOCK 1969, TAX LOT 68, CITY OF NEW YORK, COUNTY OF NEW YORK, BY MONTROSE SURVEYING CO., LLP., SCALE: 1" = 10', REV. DATE: 2/13/12.



SUBSURFACE INVESTIGATION
WEST 130TH STREET
NEW YORK, NEW YORK

BIG APPLE DEVELOPERS
GREAT NECK, NEW YORK



**SAMPLE LOCATION MAP
AND ANALYTICAL SUMMARY**

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February 2013

Figure 3

Tables

**464 West 130th Street
Phase II Investigation
Soil Analytical Results**

SampleID	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives- Residential Use	SB-1 (0-2')		SB-1 (2-4')		SB-2 (0-2')		SB-2 (2-4')		SB-3 (0-2')		SB-3 (8-10')		SB-4 (0-2')		SB-4 (7-9')		SB-5 (0-2')		SB-5 (4-6')		SB-6 (0-2')		SB-6 (6-8')		SB-7 (0-2')		SB-7 (6-8')			
		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013			
		S		S		S		S		S		S		S		S		S		S		S		S		S		S		S	
DilutionFactor		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry	
RptUnits		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Compound		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q										
Volatile Organics, R260 List																															
1,1,1,2-Tetrachloroethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,1,1-Trichloroethane	100	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,1,2,2-Tetrachloroethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,1,2-Trichloroethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,1-Dichloroethane	19	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,1-Dichloroethylene	100	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,1-Dichloropropylene	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,2,3-Trichlorobenzene	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,2,3-Trichloropropane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,2,4-Trichlorobenzene	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,2,4-Trimethylbenzene	47	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,2-Dibromo-3-chloropropane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,2-Dibromoethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,2-Dichlorobenzene	100	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,2-Dichloroethane	2.3	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,2-Dichloropropane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,3,5-Trimethylbenzene	47	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,3-Dichlorobenzene	17	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,3-Dichloropropane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,4-Dichlorobenzene	9.8	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
1,4-Dioxane	9.8	0.0093	U	0.016	U	0.011	U	0.013	U	0.015	U	0.011	U	0.012	U	0.0097	U	0.0080	U	0.018	U	0.0070	U	0.013	U	0.0073	U	0.0090	U	U	
2,2-Dichloropropane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
2-Butanone	100	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
2-Chlorotoluene	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
4-Chlorotoluene	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
Acetone	100	0.0019	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
Benzene	2.9	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
Bromobenzene	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
Bromochloromethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
Bromodichloromethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
Bromoform	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
Bromomethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
Carbon tetrachloride	1.4	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
Chlorobenzene	100	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
Chloroethane	--	0.0018	U	0.0030	U	0.0020	U	0.0024	U	0.0028	U	0.0021	U	0.0022	U	0.0018	U	0.0015	U	0.0034	U	0.0013	U	0.0025	U	0.0014	U	0.0017	U	U	
Chloroform	10	0.0018	U	0.0030	U	0.0020	U	0.0																							

**464 West 130th Street
Phase II Investigation
Soil Analytical Results**

SampleID	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives- Residential Use	SB-1 (0-2')		SB-1 (2-4')		SB-2 (0-2')		SB-2 (2-4')		SB-3 (0-2')		SB-3 (8-10')		SB-4 (0-2')		SB-4 (7-9')		SB-5 (0-2')		SB-5 (4-6')		SB-6 (0-2')		SB-6 (6-8')		SB-7 (0-2')		SB-7 (6-8')			
		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013			
		S		S		S		S		S		S		S		S		S		S		S		S		S		S			
DilutionFactor		5		5		5		5		5		5		5		5		5		5		5		5		5		5			
RptUnits		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry		mg/kg dry			
Compound		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q										
Semi-Volatiles, 8270 Target List																															
1,2,4-Trichlorobenzene	--	0.517	U	0.544	U	0.107	U	0.515	U	0.109	U	0.0987	U	0.507	U	0.0952	U	0.0981	U	0.103	U	0.0990	U	0.535	U	0.0974	U	0.0955	U		
1,2-Dichlorobenzene	100	0.934	U	0.982	U	0.194	U	0.930	U	0.196	U	0.378	U	0.916	U	0.172	U	0.177	U	0.185	U	0.179	U	0.967	U	0.176	U	0.173	U		
1,3-Dichlorobenzene	17	0.451	U	0.475	U	0.0935	U	0.450	U	0.0948	U	0.0862	U	0.443	U	0.0831	U	0.0856	U	0.0896	U	0.0865	U	0.467	U	0.0850	U	0.0834	U		
1,4-Dichlorobenzene	9.8	0.880	U	0.925	U	0.182	U	0.876	U	0.185	U	0.168	U	0.863	U	0.162	U	0.167	U	0.175	U	0.169	U	0.911	U	0.166	U	0.163	U		
2,4,5-Trichlorophenol	--	1.11	U	1.17	U	0.230	U	1.10	U	0.233	U	0.212	U	1.09	U	0.204	U	0.210	U	0.220	U	0.212	U	1.15	U	0.209	U	0.205	U		
2,4,6-Trichlorophenol	--	0.726	U	0.763	U	0.150	U	0.723	U	0.152	U	0.138	U	0.712	U	0.134	U	0.138	U	0.144	U	0.139	U	0.751	U	0.137	U	0.134	U		
2,4-Dichlorophenol	--	1.17	U	1.23	U	0.241	U	1.16	U	0.245	U	0.222	U	1.14	U	0.215	U	0.221	U	0.231	U	0.223	U	1.21	U	0.220	U	0.215	U		
2,4-Dimethylphenol	--	1.00	U	1.05	U	0.207	U	0.996	U	0.210	U	0.191	U	0.981	U	0.184	U	0.190	U	0.199	U	0.192	U	1.03	U	0.188	U	0.185	U		
2,4-Dinitrophenol	--	1.20	U	1.26	U	0.249	U	1.20	U	0.252	U	0.229	U	1.18	U	0.221	U	0.228	U	0.238	U	0.230	U	1.24	U	0.226	U	0.222	U		
2,5-Dinitrotoluene	--	0.631	U	0.664	U	0.131	U	0.629	U	0.133	U	0.121	U	0.619	U	0.116	U	0.120	U	0.125	U	0.121	U	0.653	U	0.119	U	0.117	U		
2,6-Dinitrotoluene	--	0.734	U	0.772	U	0.850	U	0.731	U	0.154	U	0.140	U	0.720	U	0.135	U	0.139	U	0.146	U	0.141	U	0.760	U	0.138	U	0.136	U		
2-Chloronaphthalene	--	0.771	U	0.811	U	0.160	U	0.768	U	0.162	U	0.147	U	0.756	U	0.142	U	0.146	U	0.153	U	0.148	U	0.798	U	0.145	U	0.142	U		
2-Chlorophenol	--	0.471	U	0.496	U	0.0976	U	0.469	U	0.0990	U	0.200	U	0.462	U	0.0868	U	0.0894	U	0.0936	U	0.0903	U	0.488	U	0.0888	U	0.0871	U		
2-Methylnaphthalene	--	1.10	U	1.15	U	0.227	U	1.09	U	0.230	U	0.200	U	1.08	U	0.202	U	0.208	U	0.218	U	0.210	U	1.14	U	0.207	U	0.203	U		
2-Methylphenol	100	0.543	U	0.571	U	0.112	U	0.541	U	0.114	U	0.104	U	0.532	U	0.0999	U	0.103	U	0.108	U	0.104	U	0.562	U	0.102	U	0.100	U		
2-Nitroaniline	--	1.25	U	1.31	U	0.258	U	1.24	U	0.262	U	0.238	U	1.22	U	0.229	U	0.236	U	0.247	U	0.239	U	1.29	U	0.235	U	0.230	U		
2-Nitrophenol	--	0.389	U	0.409	U	0.0805	U	0.387	U	0.0816	U	0.0742	U	0.381	U	0.0715	U	0.0737	U	0.0771	U	0.0744	U	0.402	U	0.0732	U	0.0718	U		
3,3'-Dichlorobenzidine	--	0.749	U	0.787	U	0.155	U	0.745	U	0.157	U	0.143	U	0.734	U	0.138	U	0.142	U	0.149	U	0.143	U	0.775	U	0.141	U	0.138	U		
3- & 4-Methylphenols	--	0.620	U	0.652	U	0.128	U	0.617	U	0.130	U	0.118	U	0.608	U	0.114	U	0.118	U	0.123	U	0.119	U	0.642	U	0.117	U	0.114	U		
3-Nitroaniline	--	1.42	U	1.49	U	0.294	U	1.41	U	0.298	U	0.271	U	1.39	U	0.261	U	0.269	U	0.282	U	0.272	U	1.47	U	0.267	U	0.262	U		
4,6-Dinitro-2-methylphenol	--	1.80	U	1.89	U	0.373	U	1.79	U	0.378	U	0.344	U	1.77	U	0.331	U	0.341	U	0.357	U	0.345	U	1.86	U	0.339	U	0.332	U		
4-Bromophenyl phenyl ether	--	0.689	U	0.724	U	0.143	U	0.686	U	0.145	U	0.131	U	0.675	U	0.127	U	0.131	U	0.137	U	0.132	U	0.713	U	0.130	U	0.127	U		
4-Chloro-3-methylphenol	--	0.963	U	1.01	U	0.199	U	0.959	U	0.202	U	0.184	U	0.944	U	0.177	U	0.183	U	0.191	U	0.184	U	0.996	U	0.181	U	0.178	U		
4-Chloroaniline	--	0.371	U	0.391	U	0.0769	U	0.370	U	0.0780	U	0.0709	U	0.364	U	0.0684	U	0.0705	U	0.0737	U	0.0711	U	0.384	U	0.0700	U	0.0686	U		
4-Chlorophenyl phenyl ether	--	0.837	U	0.880	U	0.173	U	0.834	U	0.176	U	0.160	U	0.821	U	0.154	U	0.159	U	0.166	U	0.160	U	0.866	U	0.158	U	0.155	U		
4-Nitroaniline	--	0.591	U	0.622	U	0.122	U	0.589	U	0.124	U	0.113	U	0.580	U	0.109	U	0.112	U	0.117	U	0.113	U	0.612	U	0.111	U	0.109	U		
4-Nitrophenol	--	0.537	U	0.565	U	0.111	U	0.535	U	0.113	U	0.103	U	0.527	U	0.0989	U	0.102	U	0.107	U	0.103	U	0.556	U	0.101	U	0.0992	U		
Acephenanthrene	100	0.517	U	0.544	U	0.107	U	0.517	U	0.109	U	0.0987	U	0.507	U	0.0952	U	0.0981	U	0.103	U	0.0990	U	0.535	U	0.0974	U	0.0955	U		
Acephenanthylene	100	0.686	U	0.721	U	0.142	U	0.683	U	0.144	U	0.131	U	0.672	U	0.126	U	0.130	U	0.136	U	0.131	U	0.710	U	0.129	U	0.127	U		
Aniline	--	0.817	U	0.859	U	0.169	U	0.814	U	0.172	U	0.156	U	0.801	U	0.150	U	0.155	U	0.162	U	0.156	U	0.846	U	0.154	U	0.151	U		
Anthracene	100	0.780	U	0.820	U	0.162	U	1.23	J	0.164	U	0.149	U	0.765	U	0.144	U	0.148	U	0.155	U	0.149	U	0.807	U	0.147	U	0.144	U		
Benzo(a)anthracene	1	0.534	U	0.562	U	0.111	U	4.52	D	0.194	J	0.128	J	0.524	U	0.0983	U	0.101	U	0.106	U	0.102	U	0.553	U	0.101	U	0.0987	U		
Benzo(a)pyrene	1	0.566	U	0.595	U	0.117	U	2.93	D	0.186	J	0.153	J	0.555	U	0.104	U	0.107	U	0.166	J	0.108	U	0.585	U	0.107	U	0.104	U		
Benzo(b)fluoranthene	1	1.20	U	1.26	U	0.248	U	4.19	D	0.251	U	0.228	U	1.17	U	0.220	U	0.227	U	0.238	U	0.229	U	1.24	U	0.225	U	0.221	U		
Benzo(g,h,i)perylene	100	0.474	U	0.499	U	0.0982	U	1.97	D	0.115	J	0.122	J	0.465	U	0.0873	U	0.0900	U	0.0942	U	0.0908	U	0.491	U	0.0893	U	0.0876	U		
Benzo(k)fluoranthene	1	1.43	U	1.50	U	0.296	U	4.55	D	0.300	U	0.273	U	1.40	U	0.263	U	0.271	U	0.284	U	0.274	U	1.48	U	0.269	U	0.264	U		
Benzyl alcohol	--	1.43	U	1.50	U	0.296	U	1.42	U	0.300	U	0.273	U	1.40	U	0.263	U	0.271	U	0.284	U	0.274	U	1.48	U	0.269	U	0.264	U		
Benzyl butyl phthalate	--	0.789	U	0.829	U	0.163	U	0.785	U	0.166	U	0.150	U	0.773	U	0.145	U	0.150	U	0.157	U	0.151	U	0.816	U	0.149	U	0.146	U		
Bis(2-chloroethoxy)methane	--	0.491	U	0.512	U	0.102	U	0.489	U	0.103	U	0.0938	U	0.482	U	0.0904	U	0.0932	U	0.0976	U	0.0941	U	0.509	U	0.0926	U	0.0907	U		
Bis(2-chloroethyl)ether	--	0.729	U	0.766	U	0.151	U	0.726	U	0.153	U	0.139	U	0.714	U	0.134	U	0.138	U	0.145	U	0.140	U	0.754	U	0.137	U	0.135	U		
Bis(2-chloroisopropyl)ether	--	0.503	U	0.529	U	0.104	U	0.501	U	0.106	U	0.0960	U	0.493	U	0.0925	U	0.0954	U	0.0998	U	0.0963	U	0.520	U	0.0947	U	0.0929	U		
Bis(2-ethylhexyl)phthalate	--	0.986	U	1.04	U	0.204	U	0.982	U	0.207	U	0.188	U	0.967	U	0.181	U	0.187	U	0.196	U	0.189	U	1.02	U	0.186	U	0.182	U		
Chrysene	1	0.657	U	0.691	U	0.136	U	4.78	D	0.206	J	0.132	J	0.644	U	0.121	U	0.125	U	0.130	U	0.126	U	0.680	U	0.124	U	0.121	U		
Di-n-butyl phthalate	--	0.580	U	0.610	U	0.120	U	0.578	U	0.122	U	0.111	U	0.569	U	0.107	U	0.110	U	0.115	U	0.111	U	0.600	U	0.109	U	0.107	U		
Di-n-octyl phthalate																															

**464 West 130th Street
Phase II Investigation
Soil Analytical Results**

SampleID Sampling Date DilutionFactor RptUnits Compound	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives- Residential Use mg/Kg	SB-1 (0-2')		SB-1 (2-4')		SB-2 (0-2')		SB-2 (2-4')		SB-3 (0-2')		SB-3 (8-10')		SB-4 (0-2')		SB-4 (7-9')		SB-5 (0-2')		SB-5 (4-6')		SB-6 (0-2')		SB-6 (6-8')		SB-7 (0-2')		SB-7 (6-8')	
		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013		1/22/2013	
		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q								
Pesticides/PCBs, EPA 8081/8082 List																													
4,4'-DDD	2.6	0.00206	D	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
4,4'-DDE	1.8	0.00678	D	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
4,4'-DDT	1.7	0.0403	D	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00399	D	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Aldrin	0.019	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
alpha-BHC	0.097	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Aroclor 1016	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U
Aroclor 1221	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U
Aroclor 1232	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U
Aroclor 1242	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U
Aroclor 1248	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U
Aroclor 1254	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U
Aroclor 1260	--	0.0194	U	0.0204	U	0.0201	U	0.0193	U	0.0204	U	0.0185	U	0.0191	U	0.0179	U	0.0184	U	0.0193	U	0.0186	U	0.0201	U	0.0183	U	0.0179	U
beta-BHC	0.072	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Chlordane, total	--	0.0267	D	0.00793	U	0.00781	U	0.00751	U	0.00792	U	0.00720	U	0.00740	U	0.00694	U	0.00715	U	0.00749	U	0.00722	U	0.00781	U	0.00710	U	0.00696	U
delta-BHC	100	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Dieldrin	0.039	0.00242	D	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Endosulfan I	4.8	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Endosulfan II	4.8	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Endosulfan sulfate	4.8	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Endrin	2.2	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Endrin aldehyde	--	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Endrin ketone	--	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
gamma-BHC (Lindane)	0.28	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Heptachlor	0.42	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Heptachlor epoxide	--	0.00189	U	0.00198	U	0.00195	U	0.00188	U	0.00198	U	0.00180	U	0.00185	U	0.00174	U	0.00179	U	0.00187	U	0.00181	U	0.00195	U	0.00178	U	0.00174	U
Methoxychlor	--	0.00943	U	0.00991	U	0.00976	U	0.00939	U	0.00990	U	0.00900	U	0.00925	U	0.00868	U	0.00894	U	0.00936	U	0.00903	U	0.00976	U	0.00888	U	0.00871	U
Total PCBs	1	0.00777	U	0.00817	U	0.00805	U	0.00774	U	0.00816	U	0.00742	U	0.00762	U	0.00715	U	0.00737	U	0.00771	U	0.00744	U	0.00804	U	0.00732	U	0.00718	U
Toxaphene	--	0.0954	U	0.100	U	0.0988	U	0.0950	U	0.100	U	0.0911	U	0.0936	U	0.0878	U	0.0905	U	0.0947	U	0.0914	U	0.0988	U	0.0899	U	0.0881	U
Metals, Target Analyte																													
Aluminum	--	4710		2830		3790		6210		3480		10100		6040		16900		6580		2890		5740		3890		6090		13900	
Antimony	--	0.750		4.79		0.260	U	1.20		0.264	U	0.240	U	0.247	U	0.231	U	0.238	U	0.250	U	0.241	U	0.260	U	0.237	U	0.232	U
Arsenic	16	7.01		8.14		10.5		11.0		4.86		4.23		4.23		4.32		2.52		3.57		2.02		4.24		1.93		1.76	
Barium	350	287		191		56.5		339		86.7		108		691		223		50.5		87.0		51.2		121		42.1		123	
Beryllium	14	0.114	U	0.120	U	0.118	U	0.114	U	0.120	U	0.109	U	0.112	U	0.105	U	0.108	U	0.113	U	0.109	U	0.118	U	0.108	U	0.106	U
Cadmium	2.5	0.587		0.118	U	0.118	U	0.114	U	0.120	U	0.109	U	0.112	U	0.105	U	0.108	U	0.113	U	0.109	U	0.118	U	0.108	U	0.106	U
Calcium	--	5900		5030		24600		3350		2310		2260		7540		1470		2710		2840		2960		2150		1430		10600	
Chromium	--	11.4		19.1		9.52		20.6		6.10		18.1		13.3		26.5		12.6		6.62		11.7		8.55		10.6		20.1	
Cobalt	--	5.27		4.75		5.64		5.86		6.39		9.29		7.53		30.5		5.42		5.26		5.33		6.55		5.65		18.0	
Copper	270	40.1		35.3		62.1		54.4		20.4		25.8		33.2		17.7		13.0		30.8		13.3		35.2		11.8		13.8	
Iron	--	6830		11800		8330		12600		5430		17000		11700		33600	E	12100		7050		11500		11400		13000		21400	E
Lead	400	249		89.5		36.7		246		6.50		107		170		138		15.8		71.1		21.3		141		11.9		18.0	
Magnesium	--	1350		393		1920		605		294		2810		3710		10700		3130		824		3050		1760		2800		10600	
Manganese	2000	110		67.5		132		235		62.2		290		221		358		241		89.9		369		114		302		396	
Nickel	140	38.9		15.6		17.0		20.1		12.6		20.0		21.9		60.8		15.2		12.6		13.5		14.9		14.4		36.0	
Potassium	--	581		415		1120		746		541		2010		1630		11100		1130		506		981		1250		934		8770	
Selenium	36	1.73		2.99		4.14		1.24		1.24		3.07		2.45		5.43		2.49		1.23		2.23		2.57		2.26		4.08	
Silver	36	0.114	U	0.120	U	0.118	U	0.114	U	0.120	U	0.109	U	0.112	U	0.105	U	0.108	U	0.113	U	0.109	U	0.118	U	0.108	U	0.106	U
Sodium	--</																												

Table 2
464 West 130th Street
Phase II Investigation
Soil Vapor Analytical Results

SampleID	SG-1		SG-2		SG-3	
Sampling Date	1/22/2013		1/22/2013		1/22/2013	
DilutionFactor	1.909		1.625		1.826	
Matrix	Soil Vapor		Soil Vapor		Soil Vapor	
RptUnits	ug/m ³		ug/m ³		ug/m ³	
Compound	Result	Q	Result	Q	Result	Q
Volatile Organics, EPA TO15 Full List						
1,1,1-Trichloroethane	1.1	U	0.90	U	1.0	U
1,1,2-Tetrachloroethane	1.3	U	1.1	U	1.3	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1.5	U	1.3	U	1.4	U
1,1,2-Trichloroethane	1.1	U	0.90	U	1.0	U
1,1-Dichloroethane	0.79	U	0.67	U	0.75	U
1,1-Dichloroethylene	0.77	U	0.66	U	0.74	U
1,2,4-Trichlorobenzene	1.4	U	1.2	U	1.4	U
1,2,4-Trimethylbenzene	0.95	U	0.81	U	0.91	U
1,2-Dibromoethane	1.5	U	1.3	U	1.4	U
1,2-Dichlorobenzene	1.2	U	0.99	U	1.1	U
1,2-Dichloroethane	0.79	U	0.67	U	0.75	U
1,2-Dichloropropane	0.90	U	0.76	U	0.86	U
1,2-Dichlorotetrafluoroethane	1.4	U	1.2	U	1.3	U
1,3,5-Trimethylbenzene	0.95	U	0.81	U	0.91	U
1,3-Butadiene	0.84	U	0.72	U	0.81	U
1,3-Dichlorobenzene	1.2	U	0.99	U	1.1	U
1,4-Dichlorobenzene	1.2	U	0.99	U	1.1	U
1,4-Dioxane	0.70	U	0.60	U	0.67	U
2-Butanone	0.57	U	0.49	U	0.55	U
2-Hexanone	0.80	U	0.68	U	0.76	U
4-Methyl-2-pentanone	0.80	U	0.68	U	0.76	U
Acetone	20	D	3.6	D	4.0	D
Benzene	6.7	D	1.3	D	0.59	U
Benzyl chloride	1.0	U	0.86	U	0.96	U
Bromodichloromethane	1.2	U	1.0	U	1.2	U
Bromoform	2.0	U	1.7	U	1.9	U
Bromomethane	0.75	U	0.64	U	0.72	U
Carbon disulfide	0.60	U	3.0	D	9.5	D
Carbon tetrachloride	0.61	U	0.52	U	0.58	U
Chlorobenzene	0.89	U	0.76	U	0.85	U
Chloroethane	0.51	U	0.44	U	0.49	U
Chloroform	0.95	U	0.81	U	0.91	U
Chloromethane	0.40	U	0.34	U	0.38	U
cis-1,2-Dichloroethylene	0.77	U	0.66	U	0.74	U
cis-1,3-Dichloropropylene	0.88	U	0.75	U	0.84	U
Cyclohexane	0.67	U	0.57	U	0.64	U
Dibromochloromethane	1.6	U	1.3	U	1.5	U
Dichlorodifluoromethane	0.96	U	0.82	U	0.92	U
Ethyl acetate	0.70	U	0.60	U	0.67	U
Ethyl Benzene	0.84	U	0.72	U	0.81	U
Hexachlorobutadiene	2.1	U	1.8	U	2.0	U
Isopropanol	0.48	U	0.41	U	0.46	U
Methyl Methacrylate	0.79	U	0.68	U	0.76	U
Methyl tert-butyl ether (MTBE)	0.70	U	0.59	U	0.67	U
Methylene chloride	0.67	U	0.57	U	0.97	D
n-Heptane	0.80	U	0.68	U	0.76	U
n-Hexane	0.68	U	1.2	D	0.65	U
o-Xylene	0.84	U	0.72	U	0.81	U
p- & m- Xylenes	0.84	U	0.72	U	1.2	D
p-Ethyltoluene	4.8	U	4.1	U	4.6	U
Propylene	0.33	U	0.28	U	0.32	U
Styrene	0.83	U	0.70	U	0.79	U
Tetrachloroethylene	2.2	D	1.1	U	1.3	U
Tetrahydrofuran	0.57	U	0.49	U	0.55	U
Toluene	22	D	3.7	D	7.4	D
trans-1,2-Dichloroethylene	0.77	U	0.66	U	0.74	U
trans-1,3-Dichloropropylene	0.88	U	0.75	U	0.84	U
Trichloroethylene	0.52	U	0.44	U	0.50	U
Trichlorofluoromethane (Freon 11)	1.1	U	1.4	D	1.0	U
Vinyl acetate	0.68	U	0.58	U	0.65	U
Vinyl Chloride	0.50	U	0.42	U	0.47	U

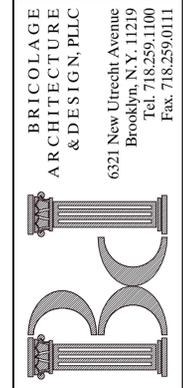
NOTES:

Q is the Qualifier Column with definitions as follows:
 U=analyte not detected at or above the level indicated
 D=result is from an analysis that required a dilution

Appendix A

Excavation Plan

CONVENT AVENUE



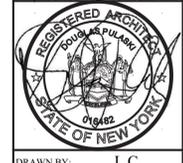
BRICOLAGE ARCHITECTURE & DESIGN, PLLC
 6321 New Utrecht Avenue
 Brooklyn, N.Y. 11219
 Tel: 718.259.1100
 Fax: 718.259.0111

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR THE CONSTRUCTION OF THE WORK UNLESS HE OR SHE PROVIDES TECHNICAL SOLUTIONS OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. FOR THE ACTS OR OMISSIONS OF THE ARCHITECT OR FOR THE ACTS OR OMISSIONS OF THE PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, ACCORDING TO THE INTENT AND PURPOSES OF THE CONTRACT, THE ARCHITECT SHALL BE RESPONSIBLE AND SHALL NOT BE SCALED.

Cover Sheet
 Proposed New Building, Seventh (7) Story & Cellar,
 Thirty (30) Family Dwelling, Located @ Convent
 Avenue, Manhattan, N.Y.

Client:
 Dorovan Haslam
 APPROVED Under Directive of 3/75
 Date: Dec 11, 2012 - 10:57 AM
 NYC Development Hub

REVISIONS:



DRAWN BY: L.C.
 PROJECT No.: 12-107
 DATE: 04-05-12
DRAWING No.:
A000.00
 OF

ABBREVIATIONS

& L @ # # # #	AND ANGLE AT CENTERLINE FOUND OR NUMBER PROPERTY LINE	A/C ACC. ACT. ADJ. A.F.F. ALUM. ALLOW. APPL. APPRX. ARCH. ASPH.	AIR CONDITIONING ACCESSORY ACOUSTICAL CEILING TILE ADJUSTABLE ABOVE FINISHED FLOOR ALUMINUM ALLOWABLE APPLICATION APPROVED APPROXIMATE ARCHITECTURAL ASPHALT	B. B.C. BD. BITUM. BLDG. BLK. BLKG. BM. BOT. B.O. BRG. BTWN. B.U.R.	BOILER BOTTOM OF CURB BOARD BITUMINOUS BUILDING BLOCK BLOCKING BEAM BOTTOM BOTTOM OF BEARING BETWEEN BUILT-UP ROOFING	CT CAB. CANT. C.B. CEIL/G. CEM. CER. C.F. C.G. C.I. C.J. CL. CLK'G. CLR. CMU CNTR. C.O. COL. CONC. CONN. CONST. CONT. CORR. CTR. CTS.K. C.W.	CERAMIC TILE CABINET CANTILEVER CATCH BASIN CEILING CEMENT CEMATIC COLD FORMED CORNER GUARD CAST IRON CONTROL JOINT CLOSE Caulking CLEAR CONCRETE MASONRY UNIT COUNTER CASED OPENING COLUMN CONCRETE CONNECTION CONSTRUCTION CONTINUOUS CORRIDOR CENTER COUNTERSUNK COLD WATER	D. DBL. DEPT. D.F. DET. DIA. DIM. DISP. DN. D.O. DR. DS. DWG. DWR. DURO.	DEPTH DOUBLE DEPARTMENT DRINKING FOUNTAIN DETAIL DIAMETER DIMENSION DISPENSER DOWN DOOR OPENING DOOR DOWNSPOUT DRAWING DRAWER DURANODIC	E. EA. E.I.F.S. E.J. EL. ELEV. ELEC. EMER. ENCL. EQ. EQPT. EU. E.W. E.W.C. EXH. EXP. EXPO. EXT.	EAST EACH EXT. INSUL. & FINISH SYSTEM EXPANSION JOINT ELEVATION ELEVATION ELECTRIC EMERGENCY ENCLOSURE EQUAL EQUIPMENT EXIT UNIT(S) EACH WAY ELECTRIC WATER COOLER EXHAUST EXPANSION EXPOSED EXISTING EXTERIOR	F. FABR. F.C. F.D. FDN. F.E. F/E F.E.C. FIN. FL. FLASH. FLUOR. F.O.(XX) F.O.C. F.O.F. F.O.M. F.O.S. F.P.S.C. FR.TR. F.S. FT. FTG. FURR.	FLUSH FABRICATOR / FABRICATED FURRING CHANNEL FLOOR DRAIN FOUNDATION FIRE ESCAPE FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FINISH FITURE FLOOR FLASHING FLUORESCENT FACE OF (XX) FACE OF CONCRETE FACE OF FINISH FACE OF MASONRY FACE OF STUDS FIRE PROOF SELF CLOSING FIRE-RETARDANT TREATED FIBER STRENGTH FOOT OF FEET FOOTING FURRING	GA. GALV. G.C. G.L. GR. G.W.B. GYP.BD.	GAUGE GALVANIZED GENERAL CONTRACTOR GLASS GRADE GYPSUM WALL BOARD GYPSUM BOARD	H.R. H.C. HD. H.D. HDR. HDWD. HDWE. H.M. HORIZ. H.P. HR. H.S.S. HT. HVAC. H.W. H.W.H.	HOSE BIBB HOLLOW CORE HOOD HEAVY DUTY HEADER HARDWOOD HARDWARE HOLLOW METAL HORIZONTAL HIGH POINT HOOR HOLLOW STEEL SECTION HEIGHT HEATG. VENTILATG & AIR COND. HOT WATER HOT WATER HEATER	I.D. I.G. INFO. INSUL. INT. INV.	INSIDE DIMENSION INSULATING GLASS INFORMATION INSULATION INTERIOR INVERT	JAN. JT.	JANITOR JOINT	KIT. KIT'TE	KITCHEN KITCHENETTE	L. LAM. LAV. LNDRY. L.P. LTG.	LENGTH LAMINATE LAVATORY LAUNDRY LOW POINT LIGHTING	M. MAS. MAT. MAX. MECH. MED. MEMB. MET. MFG. MIN. MISC. M.O. M.R. M.S. MTD. MTG. MTL. MTL.S.	MEN MASONRY MATERIAL MAXIMUM MECHANICAL MEDIUM MEMBRANE METAL MANUFACTURER MINIMUM MISCELLANEOUS MASONRY OPENING MARBLE SADDLE MOUNTED MOUNTING METAL METAL SADDLE	N. N. & FS. N.I.C. NO. or # NOM. N.T.S.	NORTH NEAR AND FAR SIDE NOT IN CONTRACT NUMBER NOMINAL NOT TO SCALE	O.A. OBS. O.C. OCC. O.D. O.H. OPEN'G OPP.	OVER ALL OBSOLETE ON CENTER OCCUPANT(S) OUTSIDE DIMENSION OVER HANG OPENING OPPOSITE	PLT. PARTN. P.L. PL.LAM. PLAS. PLMB. PLYVD. P.O.C. P PP PR. PRCST. PR.TB. P.S.F. P.S.I. P/T PT. PTD. P.V.C.	PLATE PARTITION PROPERTY LINE PLASTIC LAMINATE PLASTER PLUMBING PLYWOOD POINT OF CONNECTION 4"x4" POST 4"x6" POST PAIR PRE-CAST PRESSURE TREATED POUNDS/ SQ. FEET POUNDS/ SQ. INCHES PRESSURE TREATED POINT PAINTED POLYVINYL CHLORIDE	Q.T. QTR.	QUARRY TILE QUARTER	R. RAD. R.D. RECEPT. REF. REFR. REINF. REQ'D. RES. RET. RM. RND. R.O. R.T.U. RWC.	RISER RADIUS ROOF DRAIN RECEPTACLE REFERENCE REFRIGERATOR REINFORCED REQUIRED RESILIENT RETAINING ROOM ROUND ROUGH OPENING ROOF TOP HVAC UNITS RAINWATER CONDUCTOR	S. S/C S.C. SCHED. SECT. SF. SHT. SIM. S.J. SPEC. SPEC'D. SST. STD. STR'G STRUCT. SUSP.	SOUTH SELF CLOSING SOLID CORE SCHEDULE(D) SECTION STOREFRONT SHEET SIMILAR SAWCUT JOINT SPECIFICATION SPECIFIED (SECTION) STAINLESS STEEL STANDARD STEEL STORAGE STRUCTURAL SUSPENDED	T & B T.C. TEL. T & G T.G. THK. THR. T.L.G. T/O T.O.S. T.P. T.S. TV. T.W. TYP.	TOP AND BOTTOM TOP OF CURB TELEPHONE TONGUE AND GROOVE TEMPERED GLASS THICK THRESHOLD TEMPERED INSULATING GLASS TOP OF TOP OF SLAB TOP OF PAVEMENT TUBE STEEL TELEVISION TOP OF WALL TYPICAL	UNF. U.G. U.O.N. UR.	UNFINISHED UNDERGROUND UNLESS OTHERWISE NOTED URINAL	VCT. VERT. VEST. V.F. V.T.R. VVC	VINYL COMPOSITION TILE VERTICAL VESTIBULE VERIFY IN FIELD VENT THRU ROOF VINYL WALL COVERING	W. W/ W.C. WD. W.D.S. WDT. W.I.C. W/O WOM. WP. WSCT. WT. W.W.M.	WEST WITH WATER CLOSET WOOD WOOD SADDLE WIDTH WALK IN CLOSET WITHOUT WOMEN WATERPROOF WAINSCOT WEIGHT WELDED WIRE MESH
--------------------------------------	--	--	---	--	---	---	---	---	---	--	--	--	--	---	--	--	---	---	---	---------------------------	------------------	------------------------------	------------------------	--	--	---	--	--	--	--	---	--	--	----------------------------	------------------------	--	--	--	---	---	--	---	---	---	---	--	--

SYMBOLS

	EQUIPMENT
	PLAN NOTE
	WALL TYPE
	DOOR TYPE
	ROOM No.
	WINDOW TYPE
	REVISIONS
	ELEVATIONS
	SECTION
	DETAIL
	ELEVATION HEIGHT
	APPROVED TYPE EXIT LIGHT AND SIGN
	APPROVED DIRECTIONAL TYPE EXIT LIGHT AND SIGN
	DENOTES U.L. LISTED HARD WIRED SMOKE & CARBON MONOXIDE DETECTOR
	DENOTES MARBLE SADDLE
	DENOTES MIN 50cfm (2cfm /sq.ft. min. for Kitchette) EXHAUST FAN DUCTED TO OUT DOORS PROVIDE FUSIBLE-LINK FIRE DAMPER WHERE EXHAUST DUCTS PASS THRU RATED CONSTRUCTION
	2" DIA. FLOOR DRAIN
	3" DIA. AREA DRAIN
	DENOTES APPROVED TYPE PENDANT TYPE SPRINKLER HEAD MEA NO. 354-01-E, CENTRAL SPRINKLER

DRAWING LIST

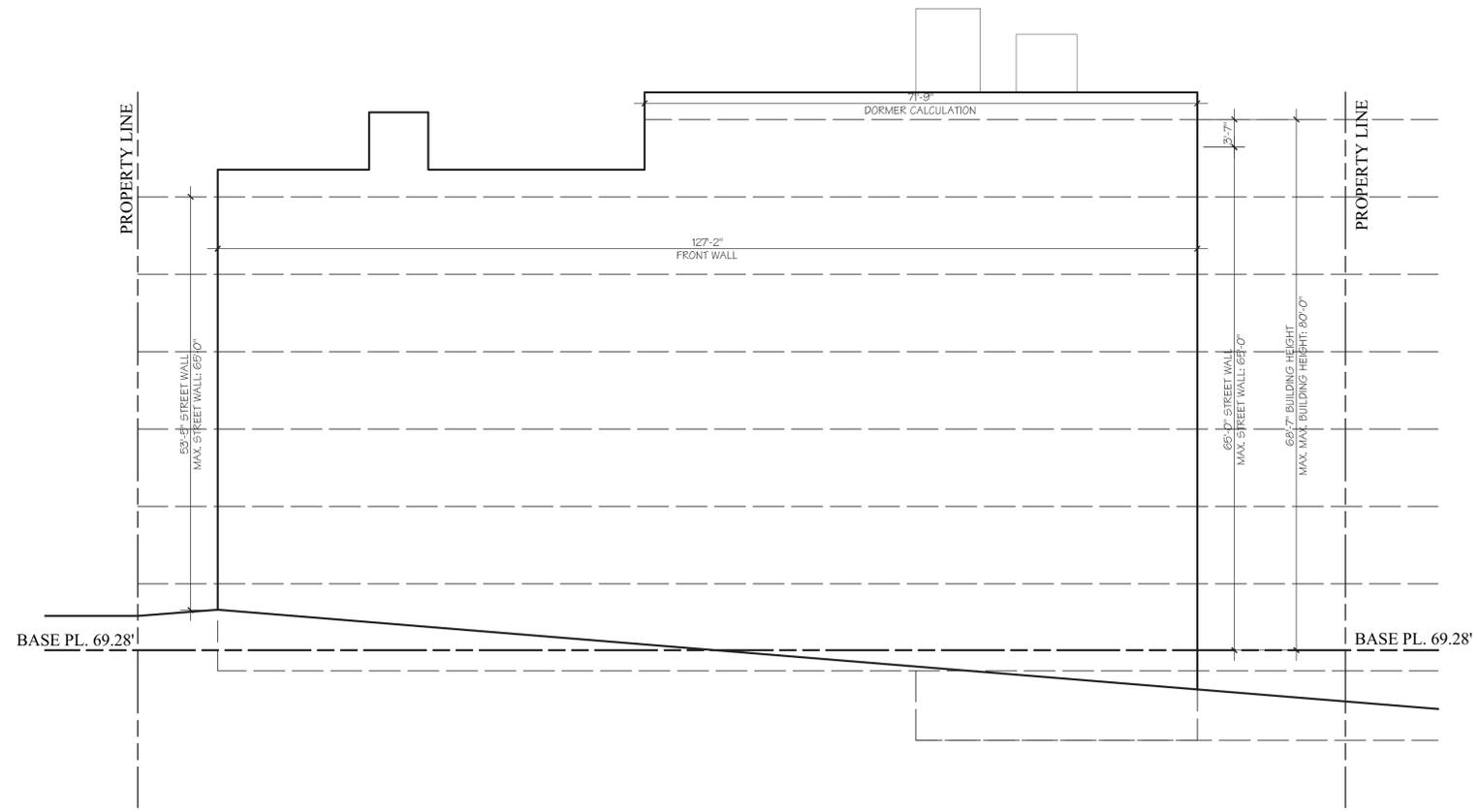
A000	- COVER SHEET
Z001	- VICINITY MAP, ZONING COMPUTATION AND PLOT PLAN
A002	- FLOOR AREA CALCULATIONS
A003	- DEDUCTIONS CALCULATIONS
A004	- GENERAL NOTES
A005	- GENERAL NOTES
A006	- COMCHECK
A007	- HEIGHT & SETBACK DIAGRAM
A100	- CELLAR FLOOR PLAN
A101	- BASEMENT FLOOR PLAN
A102	- FIRST FLOOR PLAN
A103	- SECOND THRU FIFTH FLOOR PLAN
A104	- SIXTH FLOOR PLAN
A105	- ROOF PLAN & BULKHEAD
A200	- BUILDING ELEVATION
A201	- BUILDING ELEVATION
A202	- BUILDING ELEVATION
A300	- BUILDING SECTION
A400	- WALL TYPE DETAILS
A401	- WALL SECTION DETAILS
A402	- H.C. ACCESSIBILITY DETAILS
A403	- H.C. ACCESSIBILITY DETAILS
A404	- D.O.T. DETAILS
A500	- RISER DIAGRAMS & SCHEDULES

LEGEND

	DENOTES 4 HOUR RATED 12" THICK CONCRETE FOUNDATION WALL SEE WALL DETAIL F4 ON PAGE A400.
	DENOTES EXTERIOR WALL CONSTRUCTED OF 6" 16 GA. MTL. STUDS @ 16" O.C. WITH 1 LAYER 5/8" TYPE 'x' G.W.B ON THE INTERIOR SIDE & 1/2" CEMENT BOARD ON EXTERIOR W/ 4 " BRICK VENEER OVER PROVIDE GALV. DRIP TIES @ 16" O.C. BOTH WAYS ATTACHED TO STUDS W/APPROVED TYPE GALV. SCREWS. SEE WALL DETAIL W11 ON PAGE 400.
	DENOTES EXTERIOR WALL CONSTRUCTED OF 6" 16 GA. MTL. STUDS @ 16" O.C. WITH 1 LAYER 5/8" TYPE 'x' G.W.B ON THE INTERIOR SIDE & ONE LAYER 1/2" DUROCK CEMENT BOARD ON EXTERIOR W/ R 21 BATT INSULATION THROUGHOUT STUD CAVITIES & PROVIDE FURRED-OUT FRAMING AS NECESSARY & THREE STEP STUCCO FINISH OVER WIRE MESH TO MEET BRICK VENEER @ FIRST FLOOR. SEE WALL DETAIL W12 PAGE A400.
	DENOTES MASONRY BEARING WALL. SEE WALL DETAIL W9 ON PAGE A400.
	DENOTES UNFINISHED MASONRY BEARING WALL. SEE WALL DETAIL W10 ON PAGE A400.
	DENOTES STUCCO OVER MASONRY BEARING WALL. SEE WALL DETAIL W15 ON PAGE A400.
	DENOTES STUCCO OVER INSULATED MASONRY BEARING WALL. SEE WALL DETAIL W17 ON PAGE A400.
	DENOTES NON-RATED NON BEARING PARTITION CONSTRUCTED OF 2" X 4" METAL STUDS @ 16" O.C. WITH 1 LAYER 5/8" G.W.B EACH SIDE. IN WET AREAS BATH, KITCHEN AND LAUNDRY USE M.R. G.W.B.(GA FILE#: WP 1200). SEE WALL DETAIL P5 ON PAGE A400.
	DENOTES 2 HR. FIRE RATED SOUNDPROOF DRYWALL ASSEMBLY (MASONRY EQUIVALENT). SEE WALL DETAIL P21 ON PAGE A400.

HEIGHT & SETBACK DIAGRAM SCALE: 3/32"=1'-0"

OCCUPANT LOAD



DORMER CALCULATIONS 6th FLOOR:

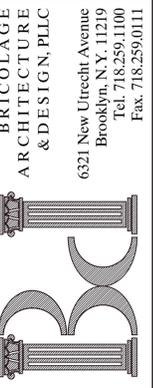
(PERMITTED OBSTRUCTION AS PER Z.R. 23-621(c))
 = 60 % STREET WALL LENGTH BELOW MAX. BASE HT. REDUCE WIDTH BY 1% PER EVERY FT. OF HEIGHT ABOVE MAX. BASE HEIGHT

DORMER :
 HEIGHT ABOVE MAX BASE HT= 3'-7" = 3.58'
 60% - 3.58% = 56.42%

127'-2" (FRONT WALL LENGTH) X 56.42% = 71'-9" (MAXIMUM DORMER LENGTH)
 DORMER = 71'-9" = 71'-9"

TABLE 1004.1.2 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

USE OF SPACES: RESIDENTIAL		
FLOOR:	AREA:	# OF PERSONS
BASEMENT	1809.49 / 200 = 9.04	9
1st FLOOR	981.29 / 200 = 4.90	5
2nd FLOOR	3553.40 / 200 = 17.76	18
3rd FLOOR	3553.40 / 200 = 17.76	18
4th FLOOR	3553.40 / 200 = 17.76	18
5th FLOOR	3553.40 / 200 = 17.76	18
6th FLOOR	3553.40 / 200 = 17.76	18
7th FLOOR	2166.30 / 200 = 10.83	11
TOTAL		115



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Height & Setback Diagram
 Proposed New Building, Seventh (7) Story & Cellar, Thirty (30) Family Dwelling, Located @ Convent Avenue, Manhattan, N.Y.
 Client:

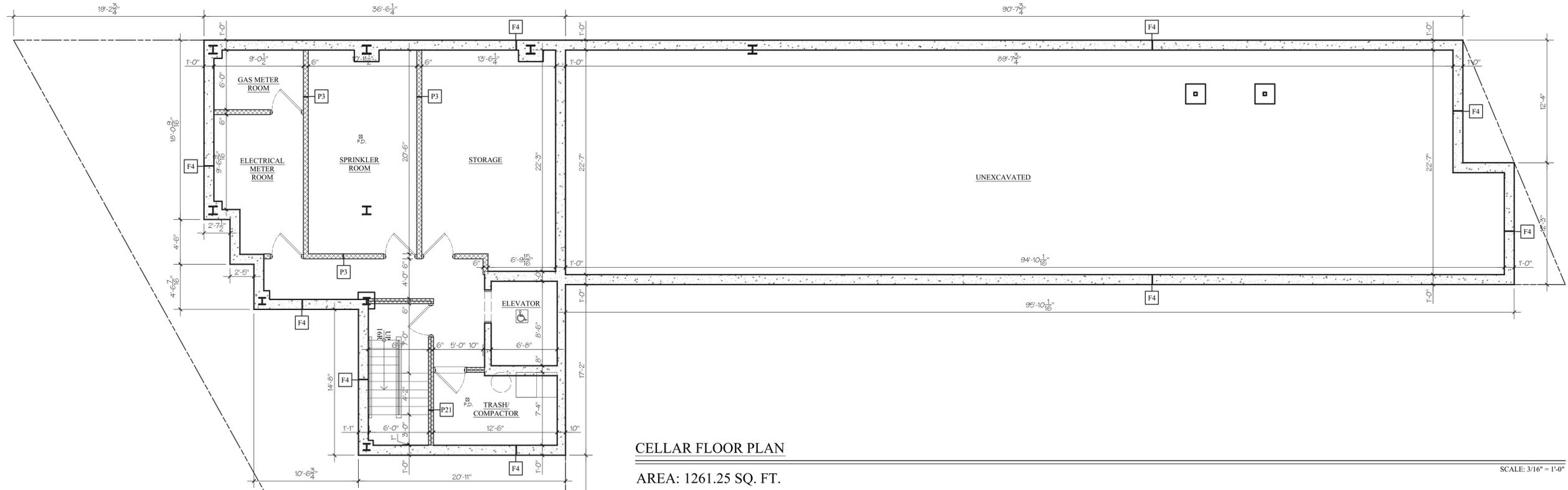
Dorovan Haslam
 APPROVED Under Directive of 1975
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REVISIONS:



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 PROJECT No.: 12-107
 DATE: 04-05-12
 DRAWING No.: A007.00
 OF

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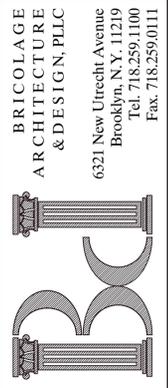
CELLAR FLOOR PLAN

AREA: 1261.25 SQ. FT.

SCALE: 3/16" = 1'-0"

CELLAR PLAN NOTES

1. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS NOT TO BE SCALED.
2. F.D. DENOTES FLOOR DRAIN.
3. H.R. DENOTES HANDRAIL (SHALL COMPLY WITH SECTION C27-275(F)).
4. M.S. DENOTES MARBLE SADDLE.
5. PROVIDE MECHANICAL VENTILATION FOR INTERIOR BATHS/KITCHENETTES. FOR ADDITIONAL INFORMATION, SEE NOTE NUMBER 60, DRAWING NUMBER N-1.
6. AREA OF DUCT SPACE NOT TO EXCEED TWO (2) SQUARE FEET. SEE PARTITION LEGEND, DRAWING NUMBER D-1.
7. STORAGE ROOM AND GARAGE CEILING TO BE PROVIDED WITH TWO (2) LAYERS OF FIRE CODE TYPE "X" SHEETROCK (TWO HOUR FIRE RATED).
8. FOOTINGS TO SIT ON VIRGIN UNDISTURBED SOIL, HAVING A MINIMUM BEARING CAPACITY OF TWO (2) TONS PER SQUARE FOOT.
9. FOOTING AT FRONT OF BUILDING TO BE CARRIED DOWN BELOW THE LEVEL OF HOUSE SEWER, WHERE HOUSE SEWER PASSES THROUGH FOUNDATION WALL.
10. PRIOR TO THE PLACEMENT OF CELLAR CONCRETE FLOOR SLAB, CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO DETERMINE THE BEARING CAPACITY OF THE SOIL UNDER THE SLAB. HIS FINDINGS SHALL BE REPORTED TO THE ARCHITECT IN WRITING. ANY CHANGE IN SLAB DESIGN FROM THAT SHOWN ON THE APPROVED, SHALL BE FILED AS AN AMENDMENT BY A LICENSED PROFESSIONAL ENGINEER.
11. PROVIDE WEB STIFFENERS WHERE ONE PIECE OF STEEL FRAMES INTO ANOTHER.
12. FOR CONSTRUCTION OF BEARING PARTITIONS, WHERE APPLICABLE, SEE PARTITION LEGEND DRAWING NUMBER D-1.
13. FIREPROOF ALL INTERIOR COLUMNS PER DETAIL , WHERE APPLICABLE.



BRICOLAGE ARCHITECTURE & DESIGN, PLLC
 6321 New Utrecht Avenue
 Brooklyn, N.Y. 11219
 Tel: 718.259.1100
 Fax: 718.259.0111

Cellar Floor Plan
 Proposed New Building, Seventh (7) Story & Cellar,
 Thirty (30) Family Dwelling, Located @ Convent
 Avenue, Manhattan, N.Y.

Client:

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 APPROVED
 Under Directive 2 of 2075
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WEST 130TH STREET ELEVATION

SCALE: 3/16" = 1'-0"

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Building Elevation
 Proposed New Building, Seventh (7) Story & Cellar, Thirty (30) Family Dwelling, Located @ Convent Avenue, Manhattan, N.Y.

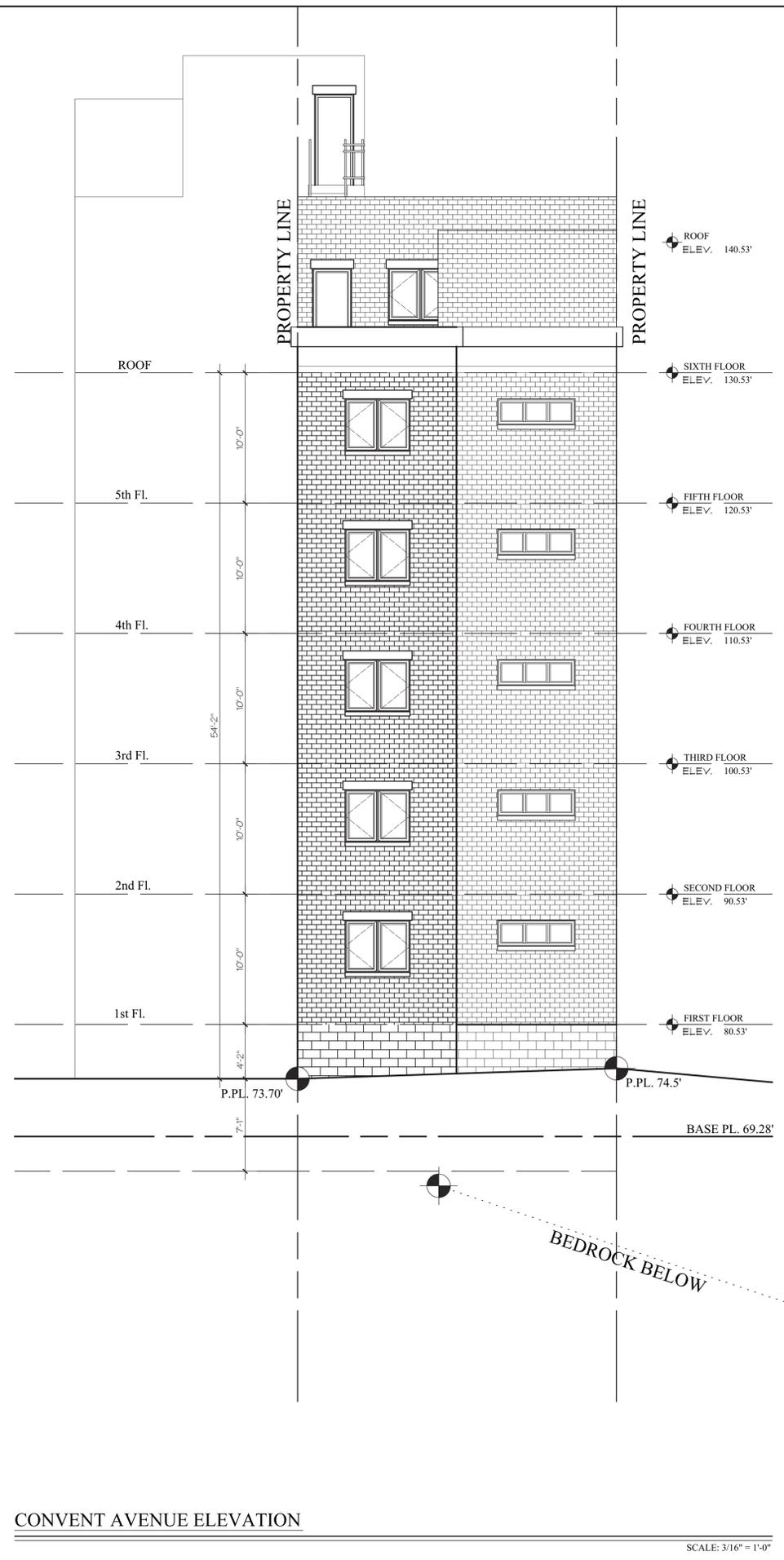
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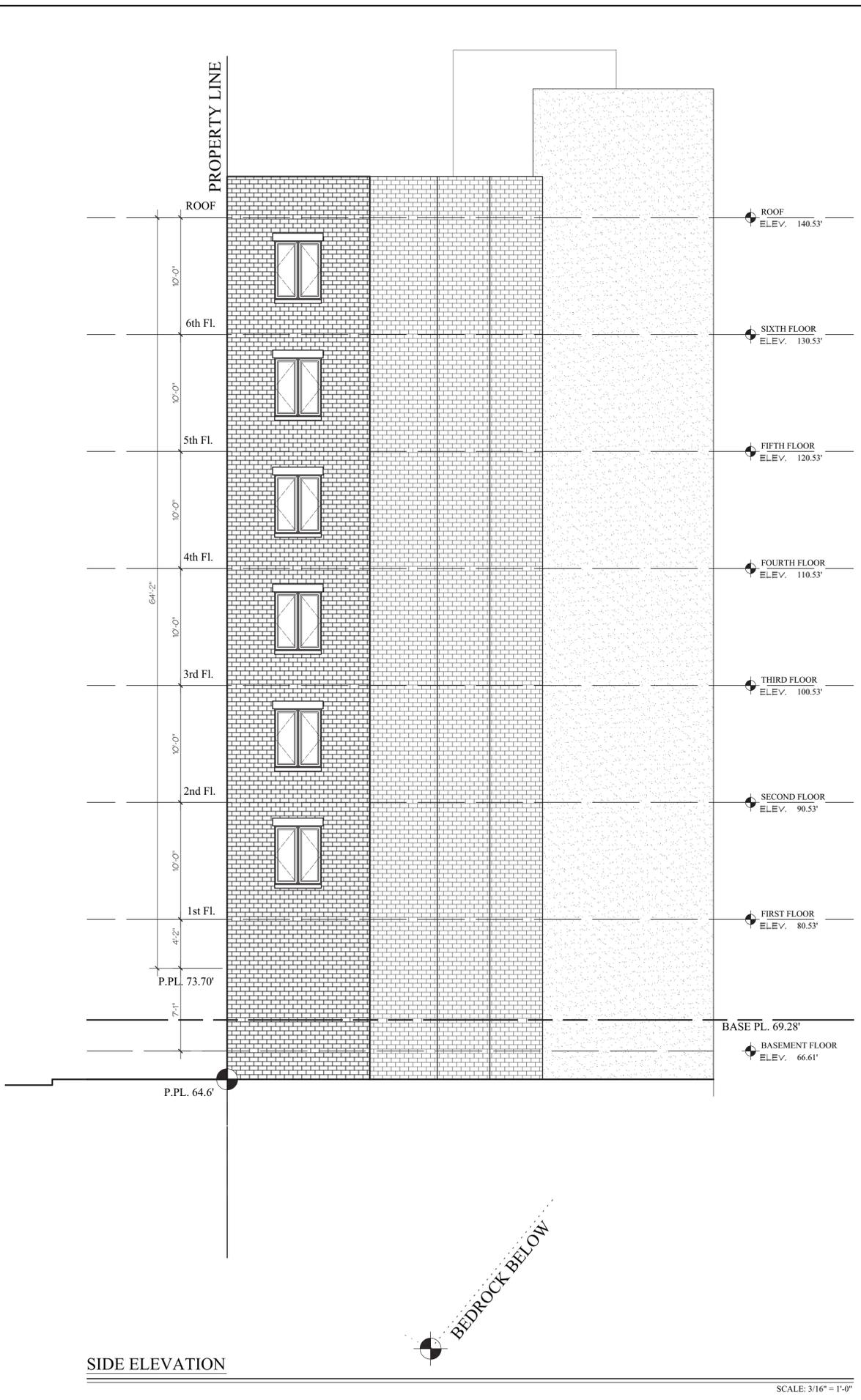
REGISTERED ARCHITECT
 STATE OF NEW YORK
 19162

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 PROJECT No.: 12-107
 DATE: 04-05-12
 DRAWING No.:
A200.00
 OF



CONVENT AVENUE ELEVATION

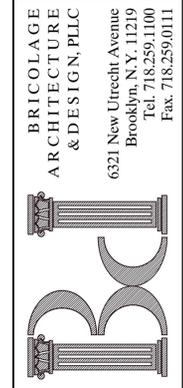
SCALE: 3/16" = 1'-0"



SIDE ELEVATION

SCALE: 3/16" = 1'-0"

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Building Elevation
Proposed New Building, Seventh (7) Story & Cellar, Thirty (30) Family Dwelling, Located @ Convent Avenue, Manhattan, N.Y.

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PROJECT No.: 12-107
DATE: 04-05-12

DRAWING No.: A201.00
OF

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE

ROOF
ELEV. 140.53'

10'-0"

SIXTH FLOOR
ELEV. 130.53'

10'-0"

FIFTH FLOOR
ELEV. 120.53'

10'-0"

FOURTH FLOOR
ELEV. 110.53'

10'-0"

THIRD FLOOR
ELEV. 100.53'

10'-0"

SECOND FLOOR
ELEV. 90.53'

10'-0"

FIRST FLOOR
ELEV. 80.53'

11'-9"

BASEMENT FLOOR
ELEV. 66.61'

5'-11"

66'-7" BUILDING HEIGHT
MAX. MAX. BUILDING HEIGHT: 80'-0"

BASE PL. 69.28'

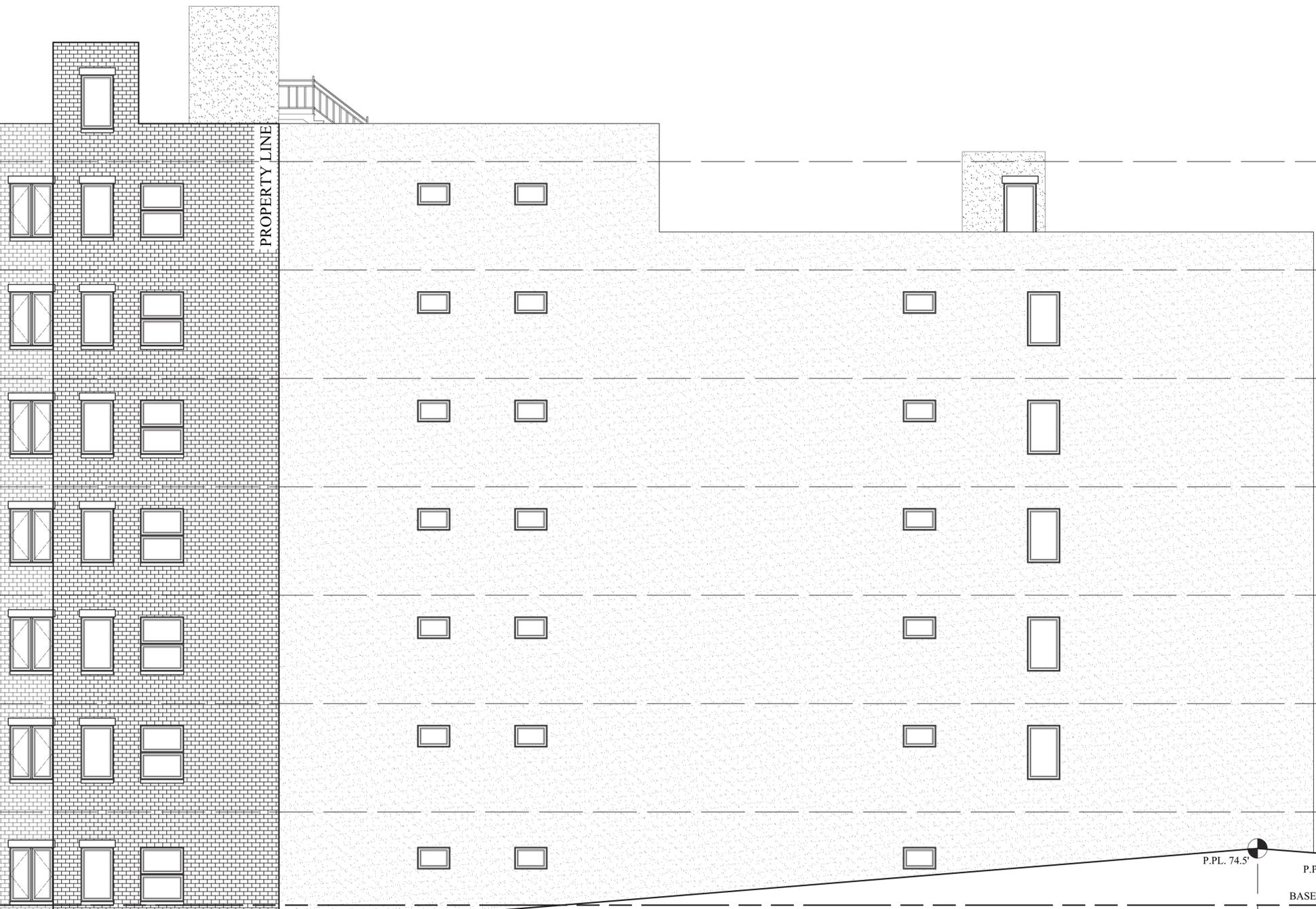
BASE PL. 69.28'

P.P.L. 62.64'

P.P.L. 74.5'

P.P.L. 73.70'

59'-0" STREET WALL
MAX. STREET WALL: 60'-0"



REAR ELEVATION

SCALE: 3/16" = 1'-0"

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Building Elevation
Proposed New Building, Seventh (7) Story & Cellar, Thirty (30) Family Dwelling, Located @ Convent Avenue, Manhattan, N.Y.

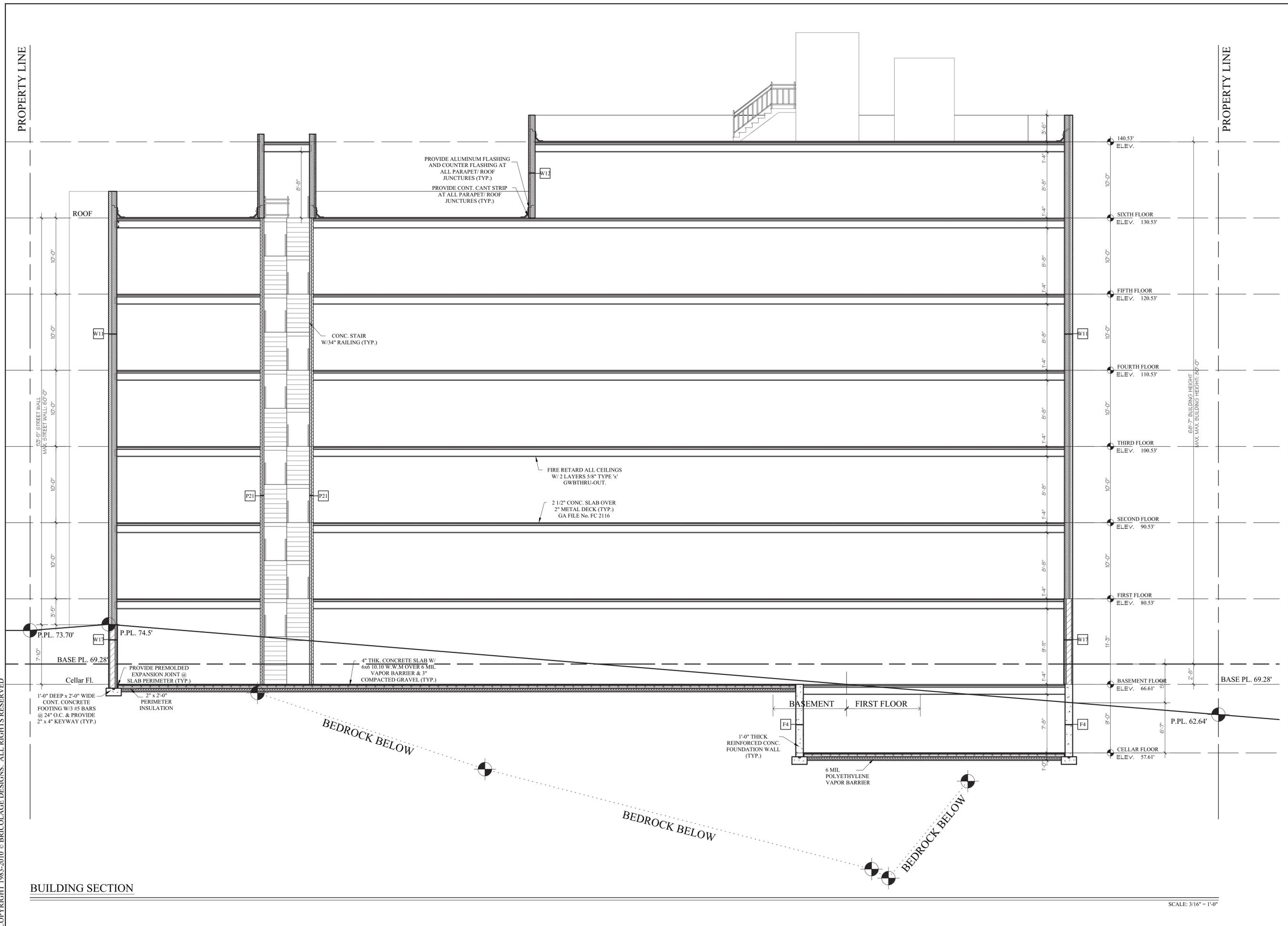
Client:

Dorovan Haslam
[Signature]
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Under Directive of 1975
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REVISIONS:



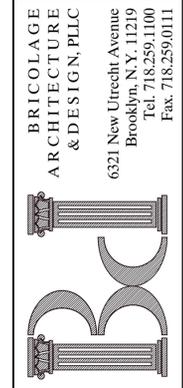
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OF



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BUILDING SECTION

SCALE: 3/16" = 1'-0"



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Building Section
 Proposed New Building, Seventh (7) Story & Cellar, Thirty (30) Family Dwelling, Located @ Convent Avenue, Manhattan, N.Y.

Client:

APPROVED
 Under Directive of 3/7/05
 Date/Time: Dec 1, 2012 - 10:57 AM
 NYC Development Hub

REVISIONS:

REGISTERED ARCHITECT
 DONOVAN HASLAM
 STATE OF NEW YORK

DRAWN BY: L.C.
 PROJECT No.: 12-107
 DATE: 04-05-12
A300.00
 OF

Appendix B

Phase I ESA

PHASE I ENVIRONMENTAL SITE ASSESSMENT

**464 WEST 130TH STREET
BLOCK 1969, LOT #68
NEW YORK, N.Y.**

PREPARED FOR:

BIG APPLE DEVELOPERS

770 MIDDLE NECK ROAD, SUITE 4P

GREAT NECK, N.Y. 11024

PREPARED BY



**55 WATERMILL LANE, SUITE 200
GREAT NECK, NEW YORK 11021**

SEPTEMBER 2012

464 West 130th Street
Block 1969 Lot 68
New York, N.Y.

Phase I Environmental Site Assessment

A. INTRODUCTION	1
B. EXECUTIVE SUMMARY	2
C. REPORT OF FINDINGS	4
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SITE INSPECTION	7
REGULATORY AGENCY INFORMATION	8
D. SCOPE OF WORK	14
E. QUALIFICATIONS	15
F. DISCLAIMER	15

ATTACHMENT A - Figures

ATTACHMENT B - Photographs

**ATTACHMENT C - Executive Summary section of the Environmental
Data Resources, Inc. Radius Map Report.**

ATTACHMENT D - City Directory Abstract From Environmental Data Resources, Inc.

ATTACHMENT E- Environmental LienSearch from Environmental Data Resources, Inc.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

A. INTRODUCTION

EPDSCO, Inc., has performed a Phase I Environmental Site Assessment (ESA) of the property located at 464 West 130th Street, in the Borough of Manhattan, in the City of New York. This ESA was prepared in accordance with the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation E 1527-05).

The purpose of this ESA is to identify, to the extent feasible in accordance with ASTM E 1527-05, recognized environmental conditions in connection with the site with regard to hazardous materials as defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and petroleum products. Additionally, several ASTM "Non-Scope" items including asbestos-containing materials, lead-based paints, and radon are also discussed. Recognized Environmental Conditions are identified through research into the history and uses of the site and surrounding area, an inspection of the subject property and a survey of adjoining and nearby uses, and a review of available regulatory agency records and environmental databases. A detailed scope of work is included in Section IV of this report. Sanborn atlases and other pertinent figures are included in Attachment A. Photographs are located in Attachment B. Regulatory agency database information from Environmental Data Resources, Inc. (EDR) is included in Attachment C. The City Directory Abstract report from EDR is included in Attachment D, and the Environmental Liens report from EDR is included in Attachment E.

E. EXECUTIVE SUMMARY

The subject property consists of an unpaved, irregularly shaped lot, a total of 3,900+/- square feet in area. At the time of the site visit, the western portion of the property was being used for automobile parking, with eight cars parked on this portion of the lot at the time of the site inspection. The eastern portion of the site appeared to be in use as a private garden. No building foundations, concrete slabs or other visible indications of former on-site buildings or structures were observed at the site. At the time of inspection, the site was free of any obvious indications of past on-site storage, use, or disposal of hazardous materials (e.g., discarded drums or chemical containers, chemical/oil stained surfaces, dead or dying vegetation, etc.).

Research into the history of the property indicates that the site has been undeveloped since at least 1902. The site has been used for automobile parking since at least the 1950s and more recently, the eastern portion of the property has contained a private garden. There were not any former operations which typically involve the storage or use of hazardous materials or petroleum products identified at the site in the information reviewed for this report.

No trench drains, floor drains, drywells, pits, ponds or other drainage structures were observed at the subject property during the site visit.

No tank fill ports, vent lines or other visible indications of the presence of underground tanks were observed at the subject property, or in the sidewalk in front of the property during the site visit. No aboveground fuel oil tanks were observed at the site. The property does not appear in the New York State Department of Environmental Conservation (NYSDEC) Petroleum Bulk Storage (PBS) database, which lists all registered facilities with a total combined petroleum storage capacity in excess of 1,100 gallons.

No suspected asbestos-containing materials, lead-based paints or electrical equipment suspected of containing PCBs were observed at the property during the site inspection.

The property does not appear in the Federal or State environmental databases reviewed including the USEPA's Superfund, CERCLIS or ERNS databases, the RCRA Hazardous Waste Handlers list or hazardous waste Treatment/Storage/Disposal Facilities list, or the NYSDEC's Solid Waste Facilities database, PBS database, Spill Logs database or the Registry of Inactive Hazardous Waste Disposal Sites.

The New York City Department of Buildings records show that the site has been given an E-Designation for hazardous materials, which is a NYC Zoning Map designation that indicates the presence of an environmental requirement pertaining to the potential for hazardous materials at the site. An E-Designation requires special activities coordinated through the New York City Office of Environmental Remediation to be performed, including subsurface investigations, preparation of remedial action work plans, health and safety plans, etc.

The site is adjoined by residential apartment buildings (some of which contain first floor retail stores) to the north and east, and is adjoined by a 2-story garage/warehouse type building to the west. A buried gasoline tank vent line was observed protruding from the roof of this adjacent building during the site visit. Sanborn historical maps show three, 550-gallon buried gasoline

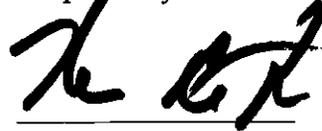
tanks at this site and indicate that the building was at one time used for auto repair operations. There are not any Active NYSDEC-reported spill incidents at this adjacent location. Land uses in the area immediately surrounding the site include residential and commercial/retail uses and public schools to the north and east, and garages, warehouses and public transportation repair facilities to the south and west. A review of Sanborn maps indicates that such surrounding land uses have existed in the general area since at least the 1950s.

Conclusions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-05 of 464 West 130th Street, New York, N.Y., the property. Any exceptions to or deletions from this standard are described in section A of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property, with the following exception:

- The subject property has been given an E-designation for hazardous materials, which may requires special activities coordinated through the New York City Office of Environmental Remediation to be performed at the site, including subsurface investigations, preparation of remedial action work plans, health and safety plans, etc.

Respectfully Submitted,



Hiram A. Rothkrug, Director

EPDSCO, Inc.

REPORT OF FINDINGS

The subject property was inspected on August 29th, 2012. Mr. Freddie Acevedo, a representative of the owner of the property was present to provide access to the building and property grounds, and to answer questions regarding past and present uses of the site.

Property Description

Property Address and Location

Subject Property:

*464 West 130th Street
New York, New York 10027
Block 1969, Lot 68*

The property is located on the south side of West 130th Street, between Convent Avenue and Amsterdam Avenue, in the Borough of Manhattan in the City of New York. The property appears on the USGS 7.5 Minute Series Topographic Map Central Park, New York Quadrangle (see Attachment A).

Site Description

The property, which is surrounded by chain link fencing with locking gates, consists of an unpaved, irregularly shaped lot, a total of 3,900+/- square feet in area. At the time of the site visit, the western portion of the property was being used for automobile parking, with eight cars parked on this portion of the lot, and the eastern portion of the site appeared to be in use as a private garden. No building foundations, concrete slabs or other visible indications of former on-site buildings or structures were observed at the site. At the time of inspection, the building and property grounds appeared to be free of any obvious indications of past on-site storage, use, or disposal of hazardous materials (e.g., discarded drums or chemical containers, chemical/oil stained surfaces, dead or dying vegetation, etc.).

Site History

Information regarding site history was obtained from a variety of standard historical sources including historical land use/fire insurance atlases such as those produced by Sanborn, Bromley and/or Belcher Hyde, New York City Buildings Department information including Certificates of Occupancy (CO), Building Permits, Alteration Permits, etc., and interviews with site owners, occupants or local residents. Additionally, historical aerial photographs of the site, a city directories abstract search and a search for environmental liens and activity use limitations (AULs) were obtained from EDR, Inc.

Historical Maps

The 1902, 1912, 1951, 1976, 1978, 1980, 1985, 1986, 1988, 1989, 1991, 1992, 1993, 1994, 1995, 1996, 2001, 2002, 2003, 2004 and 2005 Sanborn fire insurance/real estate maps were reviewed (see Attachment A). These maps provide information on the history of structures at the site, and may show property use including operations involving the storage or use of hazardous materials, and the presence of buried gasoline tanks.

The project site appears as vacant land with no identified site uses on the 1902 through 1995 Sanborn maps. The site is shown as a parking lot on the 1996 through 2005 Sanborn maps. There are not any buried gasoline tanks or indications of the on-site storage or use of hazardous materials/petroleum products shown at the subject site on any of the maps reviewed.

Historical Aerial Photographs

Historical aerial photographs for the years 1953, 1954, 1966, 1974, 1980, 1987, 1995, 2004, 2006 and 2008 were reviewed on-line at HistoricAerials.com. Aerial photographs provide an additional source of information regarding past on-site structures and may show areas of concern including excavations, filling activities, on-site dumping or debris piles, etc.

The property appears to be vacant with no buildings or other objects visible at the site on the 1953 and 1966 photographs. Several objects which appear to be automobiles are visible at the site on the 1954, 1974, 1980, 1987, 2004 and 2008 aerial photos. The poor resolution and quality of the 1995 and 2006 aerial photographs do not allow for the identification of any structures or objects at the site. There are not any visible indications of debris piles, excavations, pits, ponds, lagoons or indications of on-site waste disposal at the property on any of the historical aerial photographs reviewed.

N.Y.C. Department of Buildings and Department of Finance

New York City Department of Buildings (NYCDOB) records were reviewed for Certificates of Occupancy (CO), New Building permits, Demolition permits and other pertinent information regarding the subject property. No COs or Demolition permits were found on file for the site. A New Building permit was issued to the site in 1923 for an unspecified building. In addition, there were five unspecified Alteration permits issued to the site, in 1953, 1954, 1961, 1966 and 1975. The Department of Finance Building Classification for the building is V1 - Vacant Land. No additional pertinent information regarding the subject site was found in Building Department records reviewed.

The NYCDOB records show that the site contains an E-Designation for hazardous materials, which is a NYC Zoning Map designation that indicates the presence of an environmental requirement pertaining to the potential for hazardous materials at the site. An E-Designation requires special activities coordinated through the New York City Office of Environmental Remediation to be performed, including subsurface investigations, preparation of remedial action work plans, health and safety plans, etc.

According to information from the New York City Department of Finance, the site was transferred from the Commissioner of Finance to the City of New York on 7/31/85. The site was transferred from the City of New York to David Manesh on 4/6/2000. The site was transferred from David Manesh to Parkside, Inc. on 4/6/2000.

Interviews

Mr. Freddie Acevedo, the property owner's representative, was interviewed regarding past uses of the site. According to him and to the best of his knowledge, the property has always been vacant and used as a parking lot and private garden. Mr. Acevedo had no knowledge of any past operations at the site which involved the storage or use of hazardous materials.

City Directories Abstract

A city directories abstract review was performed for the address of the subject property; 464 West 130th Street, New York, New York. A city directories abstract is a review of city directories, cross reference and telephone directories which list occupants at a corresponding address. These directories are reviewed at approximately five-year intervals from the 1920s to 2000. No listings for the address of the subject property were found in the city directories reviewed.

Environmental Liens/Activity and Use Limitations

An Environmental Liens and Activity and Use Limitations (AULs) search for the subject property was ordered from EDR, Inc. An Environmental Lien is a charge, security or encumbrance upon title to a property to secure the payment of a cost, damage, debt or obligation arising out of response actions, cleanup or other remediation of hazardous substances or petroleum products upon a property. AULs are legal or physical restrictions or limitations on the use of, or access to, a site. AULs include both *institutional* controls, which are typically administrative measures including groundwater use restrictions, construction restrictions and property use restrictions, and *engineering* controls such as various forms of caps, building foundations, liners and/or treatment methods to prevent contaminants from entering environmental media or affecting human health.

There were not any Environmental Liens or AULs found on file for the subject property (see Attachment E).

Previous Environmental Reports

There were not any previous environmental reports for the subject property provided to EPDSCO for review.

Data Failure

The ASTM Standard Practice E 1527-05 requires a discussion of any identified data failures as defined by the Practice. There were not any identified data failures in the information reviewed for this report.

Site Inspection

The subject property was inspected in order to identify potential recognized environmental conditions which may exist at the site. Such conditions include the on-site storage/use of hazardous materials, petroleum storage tanks, asbestos-containing materials, lead-based paints, as well as any visible indications of the past on-site storage/use/disposal of hazardous materials, etc.

Current Operations/Hazardous Materials

At the time of the site visit, the eastern portion of the site was occupied by a private garden and the western portion was an open lot used for automobile parking. There were not any businesses or operations which involve the storage or use of hazardous materials observed at the property. Additionally, there were not any indications of past on-site storage or use of hazardous materials such as discarded drums or chemical containers, chemical or oil stained surfaces, etc observed.

Drainage Structures

No trench drains, floor drains, drywells, pits, ponds or other drainage structures were observed at the subject property during the site visit.

Monitoring Wells

There were not any groundwater monitoring wells observed on the site.

Petroleum Storage Tanks

No tank fill ports, vent lines or other visible indications of the presence of underground tanks were observed at the property, or in the sidewalk in front of the property, during the site visit. No aboveground fuel oil tanks were observed at the site. The property does not appear in the New York State Department of Environmental Conservation (NYSDEC) Petroleum Bulk Storage (PBS) database, which lists all registered facilities with a total combined petroleum storage capacity in excess of 1,100 gallons.

Polychlorinated Biphenyls (PCBs)

Prior to 1979, PCBs were widely used in electrical equipment such as transformers, capacitors, fluorescent light ballasts, etc., for their cooling and insulating properties. The manufacture, processing and commercial distribution of PCBs was banned in 1979, under the Toxic Substances Control Act (40 CFR Part 761). No electrical transformers or other equipment suspected of containing PCBs were observed on the subject property during our site visit.

Asbestos-Containing Materials

Asbestos is a natural mineral fiber which was widely used in the manufacture of building and insulating materials prior to the late 1970s, primarily due to its good insulation and mechanical resistance properties. Materials made with asbestos include thermal system insulation (TSI), such as aircell pipe wrap, boiler insulation and breaching, hot water/expansion tank insulation, castable elbow packing, magnesia block insulation, etc., surfacing materials, such as spray-on fire proofing and sound proofing, and miscellaneous materials such as floor tiles and roofing materials.

No suspected asbestos-containing materials were observed at the property during the site visit.

Lead-Based Paint

Lead-based paint is hazardous when in a deteriorating condition (i.e., chipped, broken, crumbling, pulverized); and lead-based paint debris removed during construction/renovation work may be required to be disposed of as hazardous waste.

No suspected lead-based paints were observed during the site visit.

Potable Water Supply

Potable water is supplied to the area of the subject site through the New York City Municipal water supply system, which obtains water from upstate reservoirs. This water is tested on a daily basis at various distribution points.

Surrounding Land Uses

The site is adjoined by residential apartment buildings (some of which contain first floor retail stores) to the north and east, and is adjoined by a 2-story garage/warehouse type building to the west. A buried gasoline tank vent line was observed protruding from the roof of this adjacent building during the site visit. Sanborn historical maps show three 550-gallon buried gasoline tanks at this site and indicate that the building was at one time used for auto repair operations. Land uses in the area immediately surrounding the site include residential and commercial/retail uses and public schools to the north and east, and garages, warehouses and public transportation repair facilities to the south and west. A review of Sanborn maps indicates that such surrounding land uses have existed in the general area since at least the 1950s.

Regulatory Agency Information and Databases

Regulatory agency environmental database information regarding known or suspected hazardous waste storage or disposal sites, reported spill incidents, registered petroleum storage tanks, solid waste facilities and landfills, etc. for the subject properties and surrounding area is obtained from Environmental Data Resources, Inc. (EDR) of Milford, Ct. These documented sites and incidents are listed in the following section for descriptive purposes. Their inclusion does not necessarily suggest any potential impacts to the subject property, but provides an indication of the potential for general groundwater and soil contamination in the larger area.

Federal Databases

Superfund Sites

The U.S. Environmental Protection Agency's (USEPA) National Priorities List identifies confirmed hazardous waste sites, (Superfund sites) that are ranked for clean-up under the federal Superfund program. This program was authorized by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

The subject property is not on the U.S. Environmental Protection Agency's (USEPA) National Priorities List. There is one USEPA NPL site identified within an approximate one-mile radius of the subject property (see Appendix C). This site, the Hudson River PCBs site, is located approximately 1/2 mile west of the site. According to the USEPA Hudson River PCBs website, the Hudson River PCBs Site encompasses a nearly 200-mile stretch of

the Hudson River in eastern New York State from Hudson Falls, New York to the Battery in New York City and includes communities in fourteen New York counties and two counties in New Jersey. The site is divided into the Upper Hudson River, which runs from Hudson Falls to the Federal Dam at Troy (a distance of approximately 40 miles), and the Lower Hudson River, which runs from the Federal Dam at Troy to the southern tip of Manhattan at the Battery in New York City. Approximately 40 miles of the upper Hudson River from Hudson Falls to Troy contains the most contaminated areas of river bottom. This portion of the Hudson River is located more than 150 miles north of the site. Given the distance of this site from the property, and that it is a water body, it is considered unlikely that the Hudson River PCBs site would have any impact on the site.

CERCLIS Sites

A check was made of the USEPA's CERCLA Information System (CERCLIS). The CERCLIS is a comprehensive database and management system that inventories and tracks sites addressed or needing to be addressed by the Superfund program. Sites that the USEPA decide do not warrant further evaluation under the Superfund program are delisted.

The site is not on the USEPA's CERCLA Information System (CERCLIS) list. There are not any CERCLIS sites located within ½ mile of the subject site.

RCRA Treatment/Storage/Disposal Facilities

The USEPA's RCRA hazardous waste Treatment/Storage/Disposal (TSD) Facilities database includes facilities that transport, treat, store and/or dispose of hazardous wastes, or have engaged in these activities in the past. TSD operators, as with hazardous waste transporters or generators, are regulated under the Resource Conservation and Recovery Act (RCRA).

The site is not on the USEPA's RCRA hazardous waste TSD Facilities database list. There are not any RCRA TSD facilities listed within one-mile of the property.

RCRA CORRACTS

CORRACTS is a list of hazardous waste handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

The property is not on the list. There is one RCRA CORRACTS facility located within one mile of the subject property (see Attachment C). This site, Ashland, Inc. at 609 West 131st Street, is located approximately 1/4 mile northwest of the property. This site was assigned a low corrective action priority in 1994. Given this information, and the distance of this site from the property, it is considered unlikely that the Ashland, Inc. site would have impacted the project site.

RCRA Hazardous Waste Generators

RCRA Hazardous Waste Generators are regulated by the federal government under the Resource Conservation and Recovery Act (RCRA). An inventory of hazardous waste generators is useful to assess the kinds of hazardous materials/wastes that are handled, stored, and/or transported in the vicinity of the site, as well as on the subject property.

The property does not appear in the RCRA Hazardous Waste Generator database. There is one RCRA Hazardous Waste Generator identified at Convent Avenue and West 130th Street. This site is listed as ConEd, the local electric utility, and is listed as a Conditionally Exempt Small Quantity Generator. It is likely that this is a one time listing for the removal of materials from a utility vault below the street and is not an on-going operations which generates hazardous wastes. Therefore, it is considered unlikely that this adjacent RCRA Hazardous Waste Generator would have impacted the property.

Emergency Response Notification System

USEPA's Emergency Response Notification System (ERNS) database contains information from federal agencies on CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity.

There are no reported ERNS releases or spills listed at the site.

U.S. Institutional/Engineering Controls Lists

The U.S. Institutional Controls List is a database of sites with institutional controls in place, typically administrative controls such as groundwater use restrictions, construction restrictions, property use restrictions and post remediation care requirements intended to prevent exposure to contaminants remaining at a site. The U.S. Engineering Controls List is a database of site with engineering controls in place such as various forms of caps, building foundations, liners and/or treatment methods to prevent contaminants from entering environmental media or affect human health.

The property and adjoining properties are not listed in the U.S. Institutional Controls or the U.S. Engineering Controls databases. There are not any facilities listed in the U.S. Institutional Controls or the U.S. Engineering Controls databases within ½ mile of the site.

State Databases

Inactive Hazardous Waste Disposal Sites

A NYSDEC's Inactive Hazardous Waste Disposal Sites Registry contains information on potentially hazardous waste sites in New York State.

The property is not included in the Registry. There is one Inactive Hazardous Waste Disposal site located within one-mile of the property (see Attachment C). This site, 2350 Fifth Avenue, is located approximately one-mile east/northeast of the site. According to information in the database report, groundwater below this site flows in a northerly and easterly direction, towards the East River. Given the direction of groundwater flow at 2350

Fifth Avenue, and the distance of this site from the property, it is considered unlikely that 2350 Fifth Avenue would have impacted the site.

State Institutional/Engineering Controls Lists

The State Institutional Controls List is a database of sites with institutional controls in place, typically administrative controls such as groundwater use restrictions, construction restrictions, property use restrictions and post remediation care requirements intended to prevent exposure to contaminants remaining at a site. The State Engineering Controls List is a database of site with engineering controls in place such as various forms of caps, building foundations, liners and/or treatment methods to prevent contaminants from entering environmental media or affect human health.

The property and adjoining properties are not listed in the State Institutional Controls or the State Engineering Controls Lists. There are no State Institutional Controls or the State Engineering Controls sites located within ½ mile of the property.

Spill Logs

The NYSDEC spill logs database for Region 2 (New York City) was checked for reported spills of toxic or hazardous materials (including petroleum products) within ½ mile of the subject properties. Spill incidents listed as "Active" indicate that the spill is either still undergoing remediation, or awaiting completion of paperwork for closure. Spill incidents listed as "Closed" indicate that the NYSDEC required no additional remedial measures at the time of spill closure. Spills listed as tank failures or tank test failures indicate the possibility of oil or gasoline seepage to the surrounding soils or groundwater. Other spills (i.e., accidents, sloppy housekeeping, equipment failures, etc.) may only affect surface soils.

There are not any NYSDEC-reported spill incidents identified at the property in the database report. There are 57 leaking tank spill incidents identified within ½ mile of the site, all of which have been closed by the NYSDEC (see Attachment C). In addition to the leaking tank spill incidents, there are 17 spill incidents from other causes listed within 1/8 mile of the site. Of these spill incidents, 16 have been closed by the NYSDEC and one is active. The active spill incident is listed at 420 West 129th Street, approximately 600 feet southeast of the site (Spill Number 9314756). Based on a review of the information in the database report regarding this spill, and the distance from the property, it is considered unlikely that Spill Number 9314756 would have impacted the site.

Petroleum Bulk Storage Facilities

A check was made of the most recent NYSDEC Petroleum Bulk Storage (PBS) database. Petroleum bulk storage facilities have petroleum storage capacities in excess of eleven hundred (1,100) gallons, and less than four hundred thousand (400,000) gallons.

The property does not appear in the NYSDEC PBS database. There is one adjoining property identified in the PBS database; 48 Convent Avenue (see Attachment C). There are not any Active NYSDEC-reported spill incidents at this adjacent location.

Chemical Bulk Storage Facilities

The NYSDEC Chemical Bulk Storage (CBS) database was reviewed. Chemical bulk storage facilities store regulated hazardous substances in aboveground tanks with capacities of one hundred eighty-five (185) gallons or greater, and/or in underground tanks of any size.

The property and adjoining properties do not appear in the CBS database.

Solid Waste Facilities

A check was made of the NYSDEC database of solid waste facilities, including, but not limited to, landfills, incinerators, transfer stations, recycling centers.

The site is not identified in this database. There are not any Solid Waste Facility sites located within ½ mile of the property.

Voluntary Cleanup Program Sites

The New York State database of sites with Voluntary Cleanup Agreements was reviewed. The Voluntary Cleanup Program (VCP) was established to address the environmental, legal and financial barriers that often hinder the re-development and re-use of contaminated properties. The VCP enhances private sector cleanup of contaminated sites by enabling parties to remediate sites using private rather than public funds.

The site is not on the VCP database. There are no VCP sites listed within ½ mile of the property.

Brownfield Site List

The New York State list of Brownfield sites was reviewed. A Brownfield is any real property where re-development or re-use may be complicated by the presence of potential presence of a hazardous waste, petroleum, pollutant or contaminant.

The site is not on the list. There are not any Brownfield sites listed within ½ mile of the subject property.

Radon

Radon, a naturally occurring radioactive gas, is the product of the decay of radium. It is found most frequently in relatively high concentrations in rock formations containing uranium, granite, shale, phosphate, and pitchblende. Radon may also be found in soils contaminated with industrial waste from uranium and phosphate mining. Radon as a gas can move through the soil and water, and into the atmosphere, and is a potential health concern if confined in sufficiently high concentrations in indoor environments. The U.S. Environmental Protection Agency (USEPA) has set an "action level" of 4.0 picocuries per liter for continuous long-term exposure to radon gas. If radon gas is measured above this level, USEPA suggests follow-up testing and remediation measures.

According to Federal EPA Radon Information, New York County (i.e., Manhattan) falls within Radon Zone 3, which has an average indoor radon level below 2 picocuries per liter.

Based on these low average levels for Manhattan, it is unlikely that radon gas levels exceed the USEPA action level of 4.0 picocuries per liter, and therefore radon testing is typically not recommended.

Site Topography and Elevation

The site is mapped on the USGS 7.5 Minute Topographic Map Central Park, N.Y. Quadrangle (1995). The general elevation for the sites is depicted as between 60 and 70 feet above mean sea-level.

D. SCOPE OF WORK

Historical site research is important in the assessment of the likelihood of past releases of hazardous substances (which include petroleum products). Sources of historical information for the subject property include:

- Local library documents (historical, maps, atlases, address directories).
- Interviews with site contacts, current site operators, and site owners.
- USGS topographic maps, land use and zoning maps, flood plain maps.
- New York City Buildings Department for building history including construction, demolition, and alteration permits.

The following regulatory agency lists and databases of documented hazardous waste sites, waste handlers, and spills are checked for the vicinity of the subject property:

- U.S. Environmental Protection Agency for location of Superfund and CERCLIS sites, ERNS database, and RCRA Hazardous Waste Generators and Treatment/Storage/ Disposal Facilities (TSDF).
- New York State Department of Environmental Conservation, Region 2, for hazardous waste spill logs, Inactive Hazardous Waste Disposal Sites, and registered tank lists, Solid Waste Facilities.

The site visit involves a review of current operations, interviews with knowledgeable on-site occupants or building managers, and inspection of accessible areas of the building and inspection of the property for visible indications of any significant contamination by toxic or hazardous materials. The investigation includes the following objectives:

- To identify sources of potential on-site contamination, such as underground storage tanks, dry wells, interior floor drains, transformers (which may contain PCBs), suspected asbestos-containing materials, and suspected lead-based paints, etc.
- To examine the property for signs of potential contamination: stained soils, unusual odors, stressed or dead vegetation, improperly stored drums, oil slicks, on-site waste disposal/dumping, etc.
- To identify the quantity and type of toxic or hazardous substances (if any) used in the on-site operations.
- To determine if any on-site toxic and hazardous materials are stored, handled and disposed of in accordance with good practice, minimizing the potential for contamination.
- To identify potential off-site sources of contamination. Adjacent uses are noted, particularly auto-related and industrial sites.
- To identify on-site or adjacent off-site sensitive receptors, such as wetlands, surface waters, drinking water wells.

Not all of the objectives described above are applied to every site; investigations are tailored to the particular nature of the site. It should be noted that information requested from regulatory agencies may be incomplete or unavailable within a reasonable time period.

QUALIFICATIONS

EPDSCO, Inc. is an environmental consulting firm that has undertaken environmental site assessment studies since 1987. These site evaluation studies have been prepared for major lenders, public corporations, businesses, and governmental agencies.

Individual qualifications of personnel, including specific credentials of persons involved in the preparation of this report, can be provided upon request.

DISCLAIMER

This report is for use by Big Apple Developers, and is only to be used as a guide in determining the potential for contamination by toxic or hazardous materials on the subject property at the time of the site visit. This Phase I Environmental (ESA) is based principally on the review of historic and regulatory records (made available within a reasonable time period), relating to past occupants and usage of the subject property, as well as activities at nearby sites, and upon a visual assessment of the subject property, and makes no determinations with respect to portions of the subject property and its structures which were not inspected.

This Phase I ESA does not involve any sampling, testing, or laboratory analysis of subsurface soils, groundwater or building materials or other substances on-site, but constitutes only the professional opinion of our staff based on established procedures and protocols. This Phase I ESA is not, and should not be construed as, a guaranty, warranty, or certification of the presence or absence of toxic or hazardous substances, which can be made only with testing, and contains no formal plans or recommendations to rectify or remediate the presence of any toxic or hazardous substances, which may be subject to regulatory approval.

Any and all liability shall be limited solely to the cost of this Environmental Site Assessment report. EPDSCO Inc., shall have no liability for any other damages, whether consequential, compensatory, punitive, or special, arising out of incidental to, or as a result of, this assessment. We assume no liability for the use of this report by any person or entity other than the institution and/or entities or persons for whom it has been prepared.

ATTACHMENT A

FIGURES

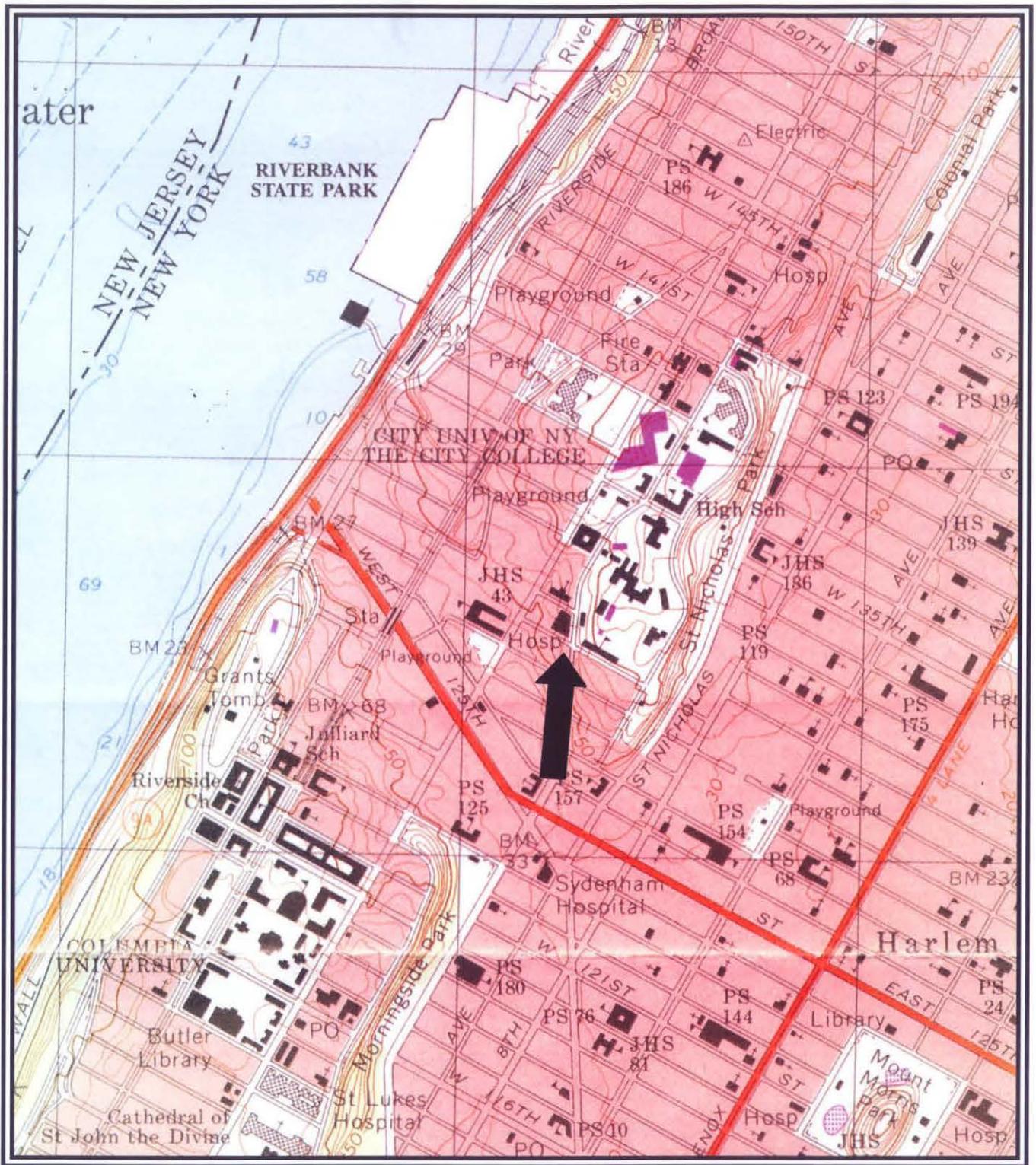
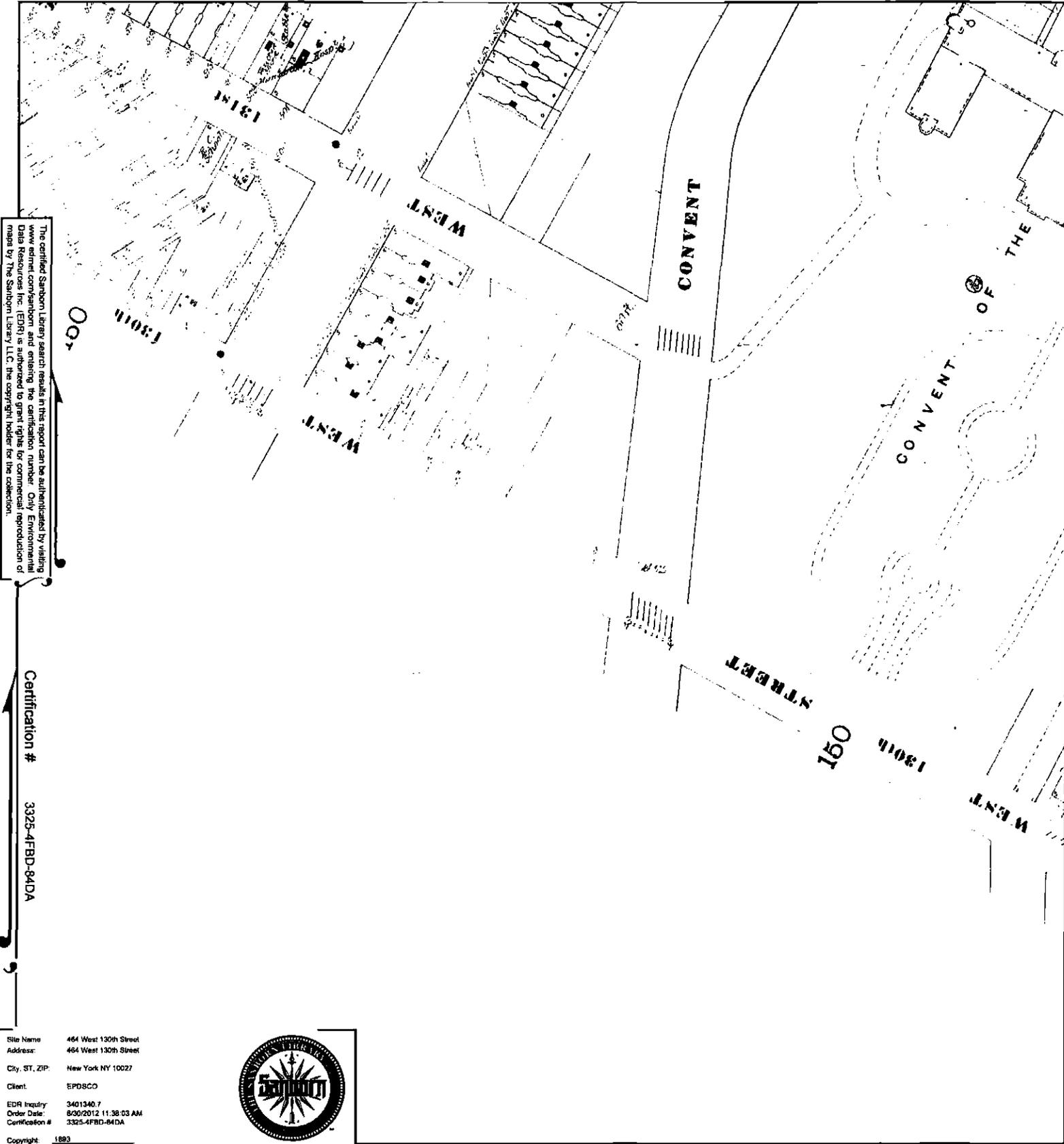


FIGURE 1
Subject Property Location
USGS 7.5 Minute Series Topographic Map
Central Park, N.Y. – N.J. Quadrangle (1995)

1893 Certified Sanborn Map



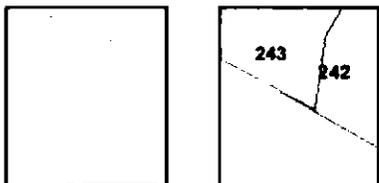
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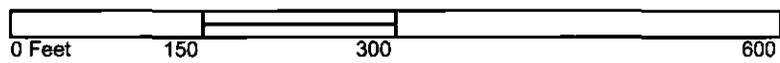
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Volume 11N, Sheet 242
 Volume 11N, Sheet 243



1902 Certified Sanborn Map

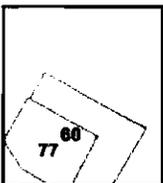
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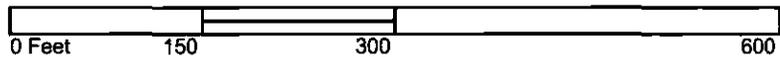
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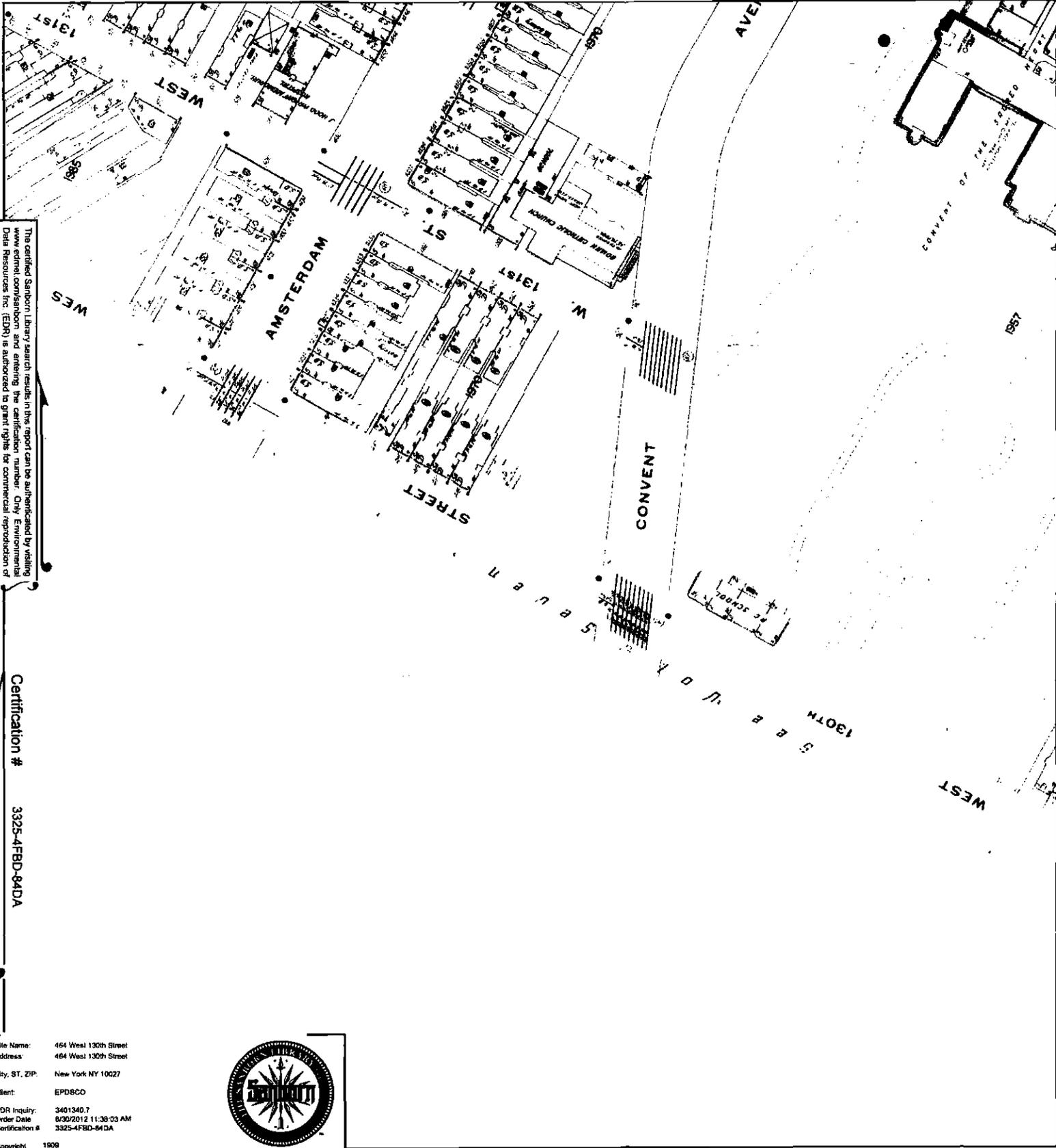
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Volume 7N, Sheet 60
 Volume 7N, Sheet 77



1909 Certified Sanborn Map



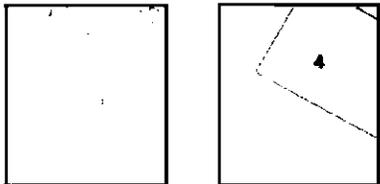
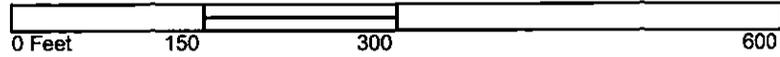
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Volume 11S, Sheet 4



1912 Certified Sanborn Map

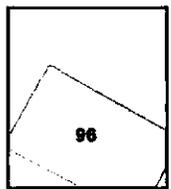
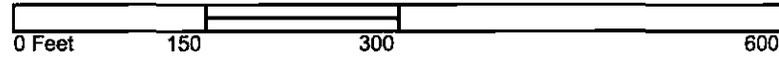
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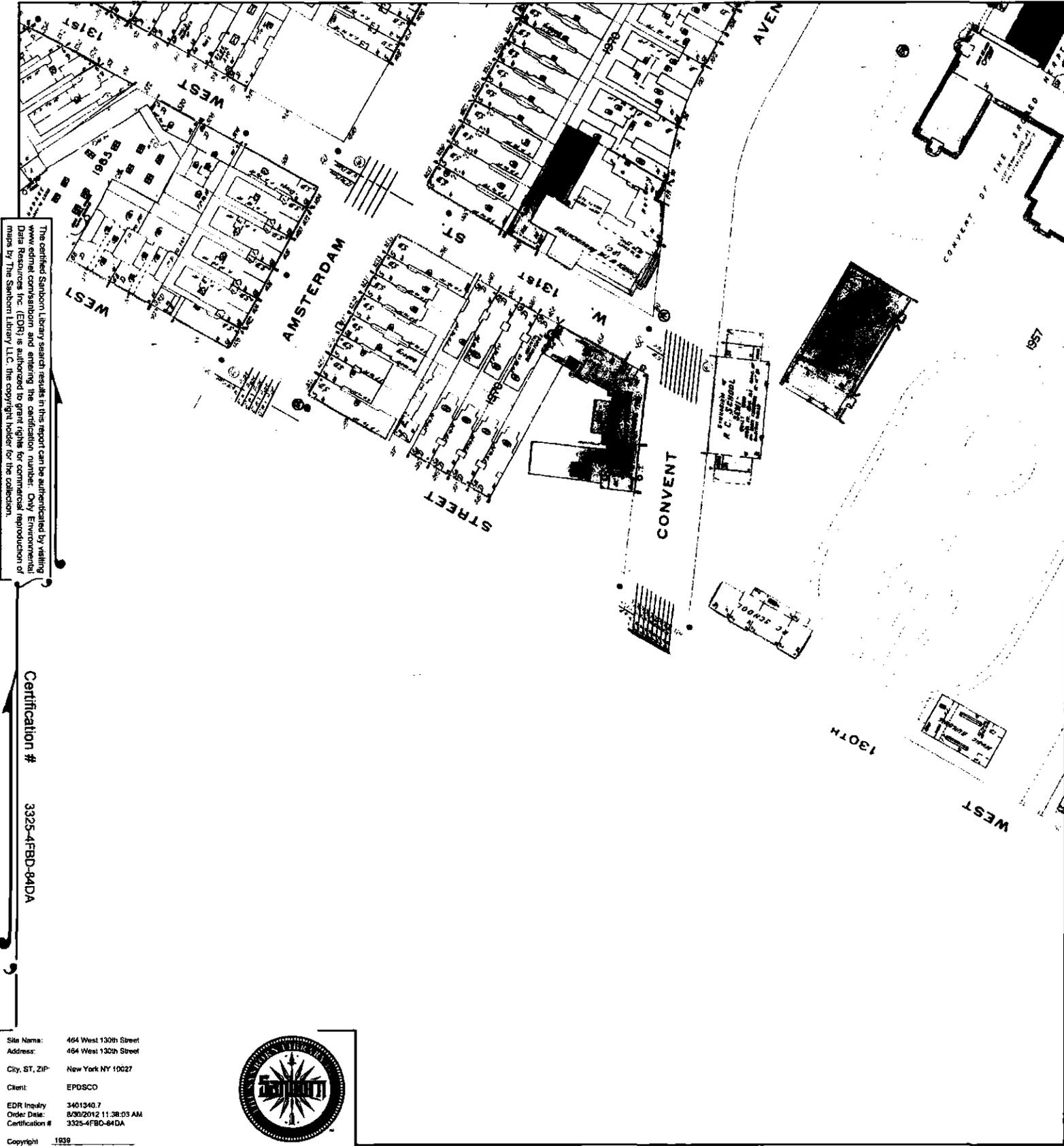
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1939 Certified Sanborn Map



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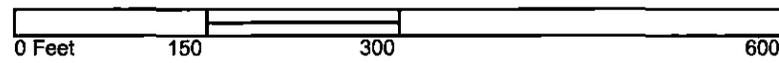
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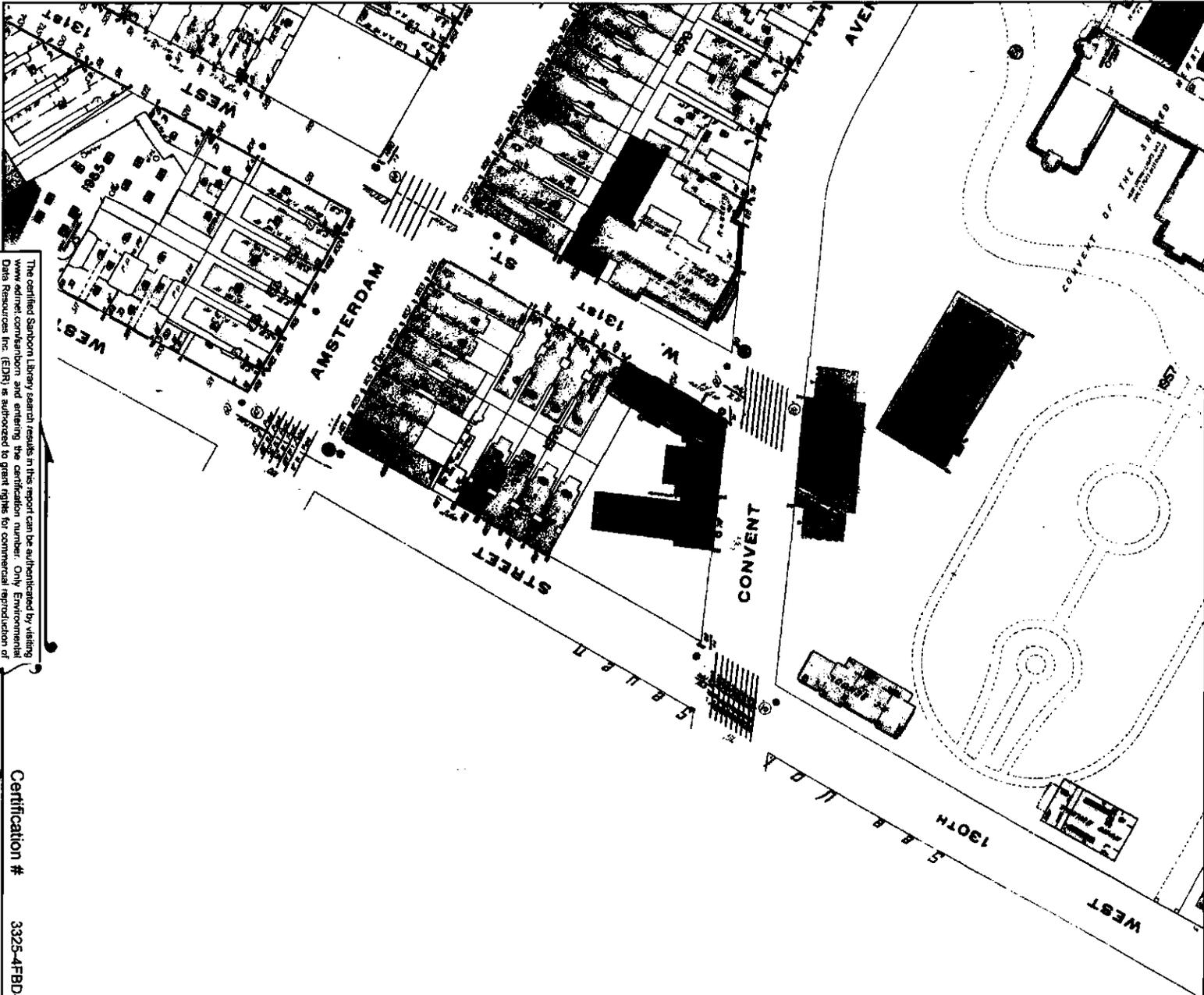
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Volume 11S, Sheet 4



1950 Certified Sanborn Map



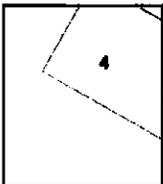
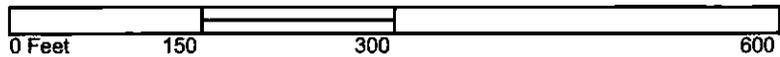
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1951 Certified Sanborn Map

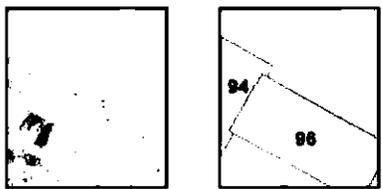
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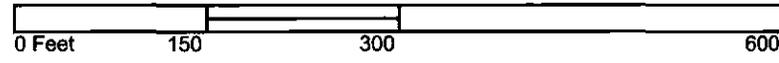
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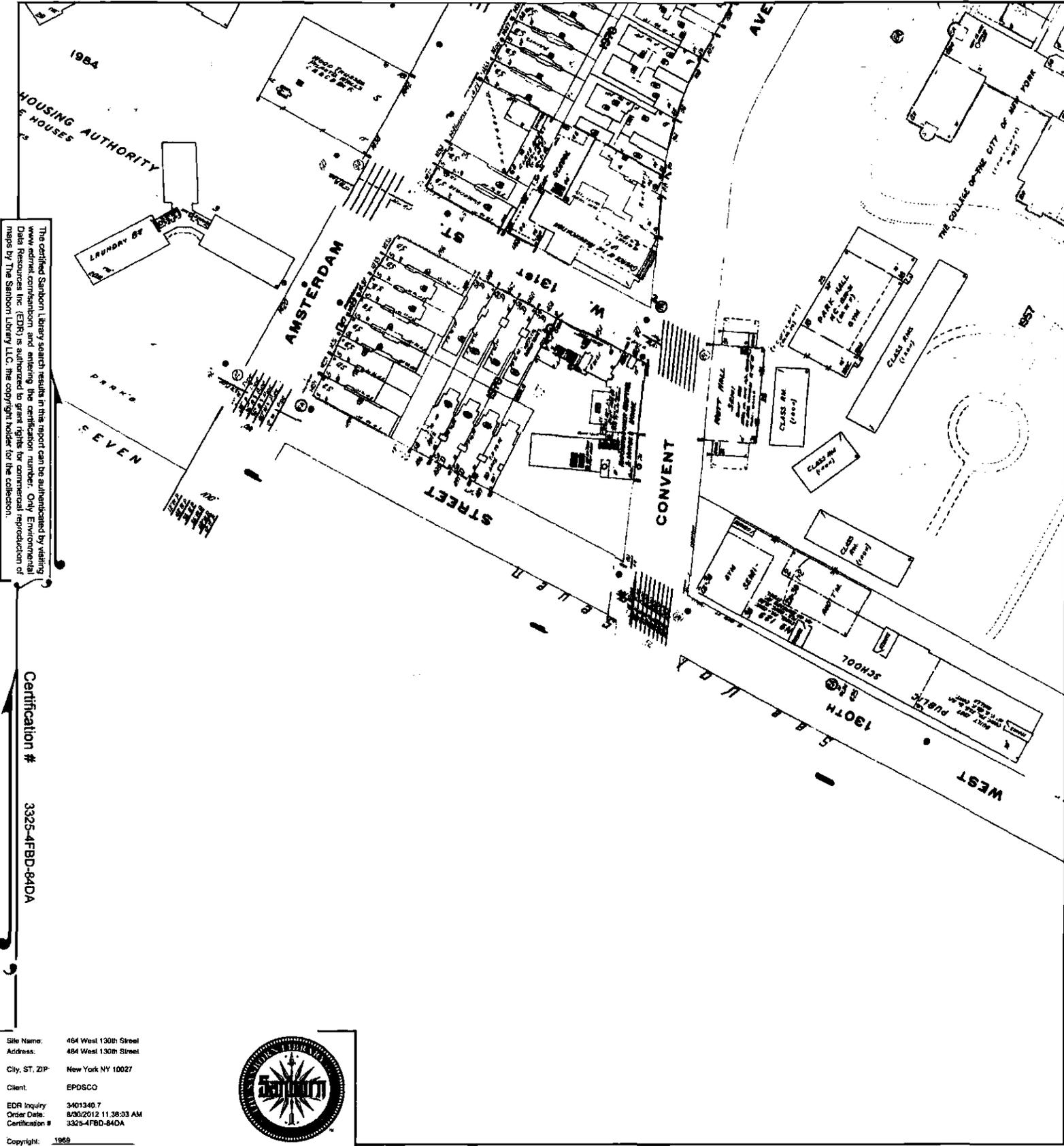
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Volume 7N, Sheet 96
 Volume 7N, Sheet 94



1969 Certified Sanborn Map



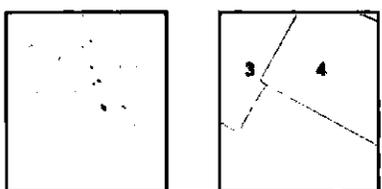
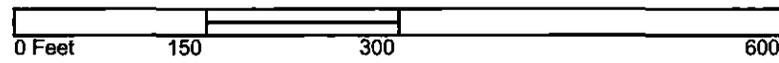
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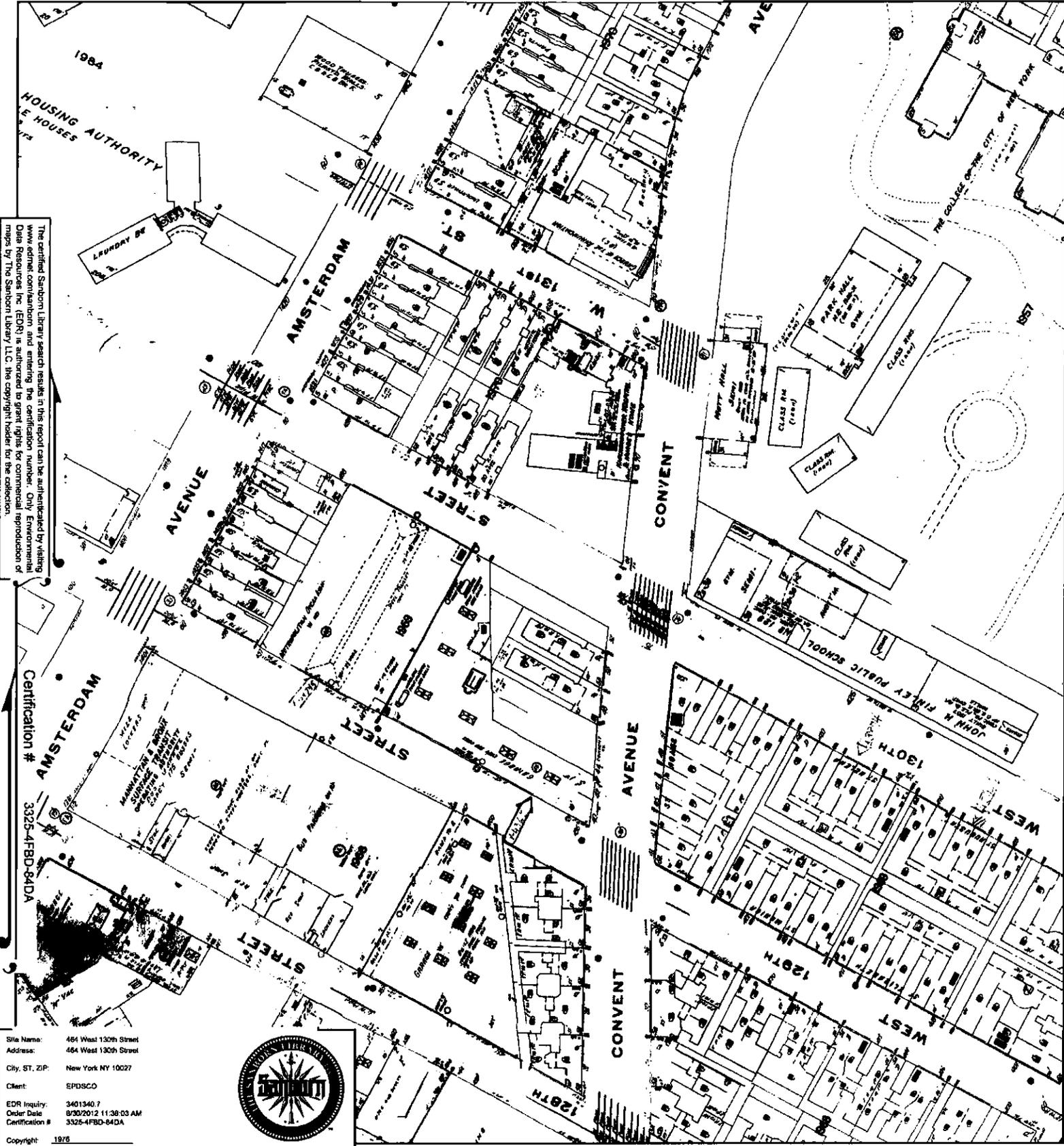
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Volume 11S, Sheet 3
 Volume 11S, Sheet 4



1976 Certified Sanborn Map



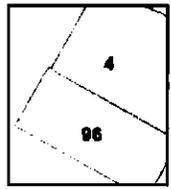
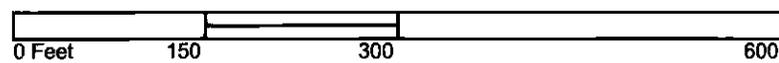
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 Volume 11S, Sheet 4



1978 Certified Sanborn Map

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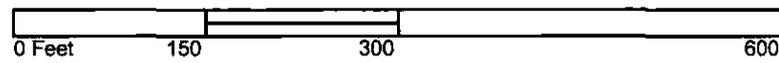
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 Copyright: 1978



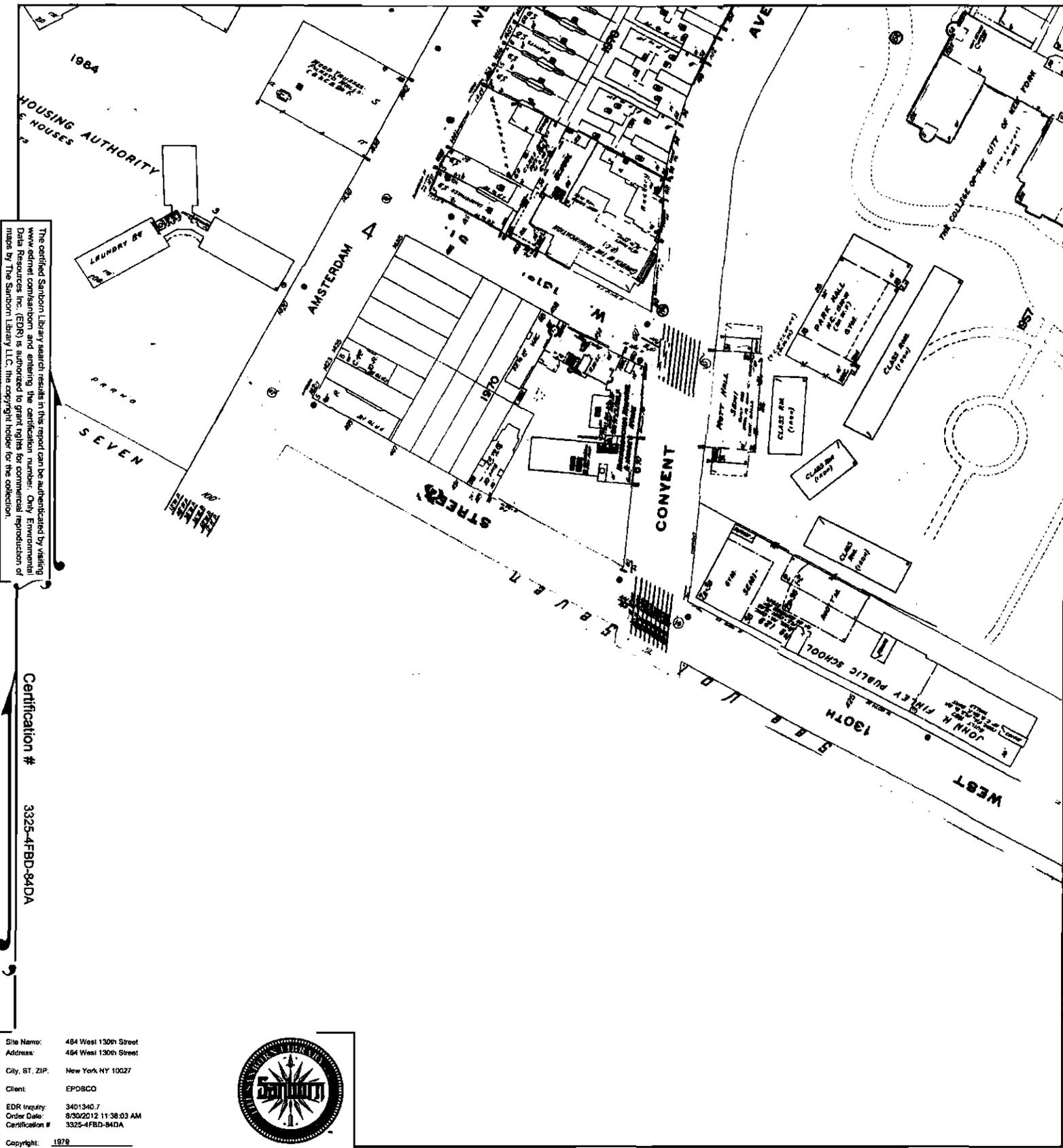
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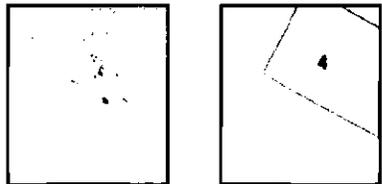
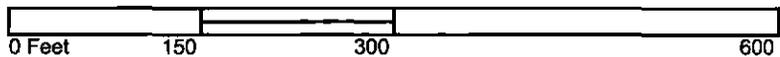
Volume 7N, Sheet 94
 Volume 7N, Sheet 96



1979 Certified Sanborn Map



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Volume 11S, Sheet 4



1980 Certified Sanborn Map

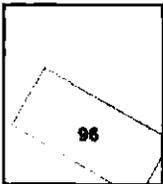
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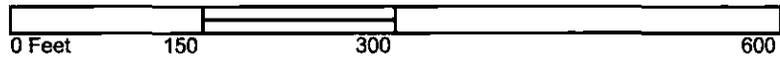
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 Copyright: 1980



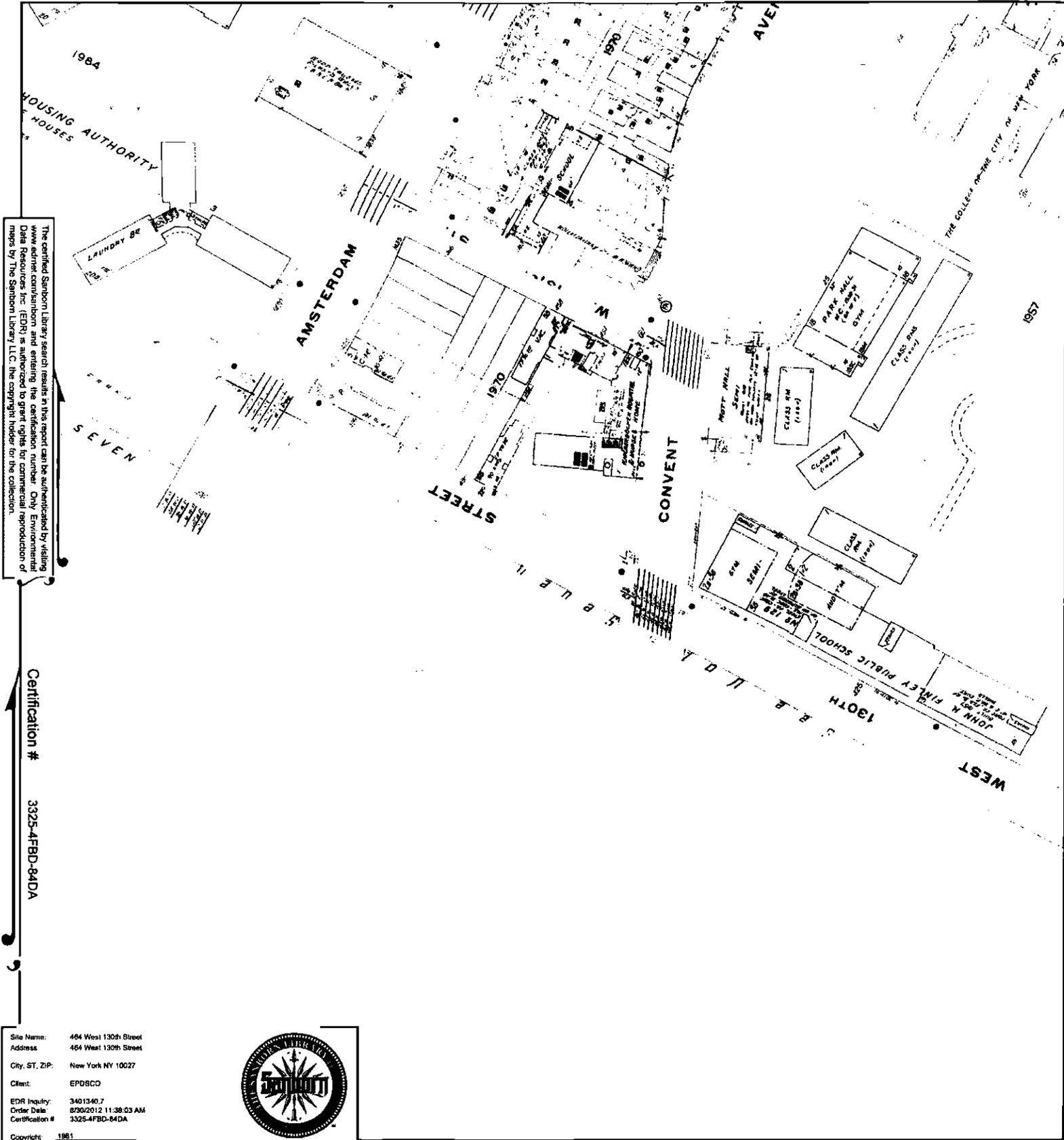
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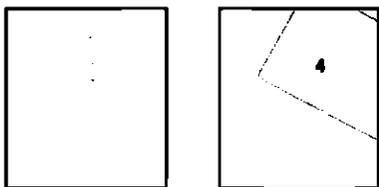
Volume 7N, Sheet 96



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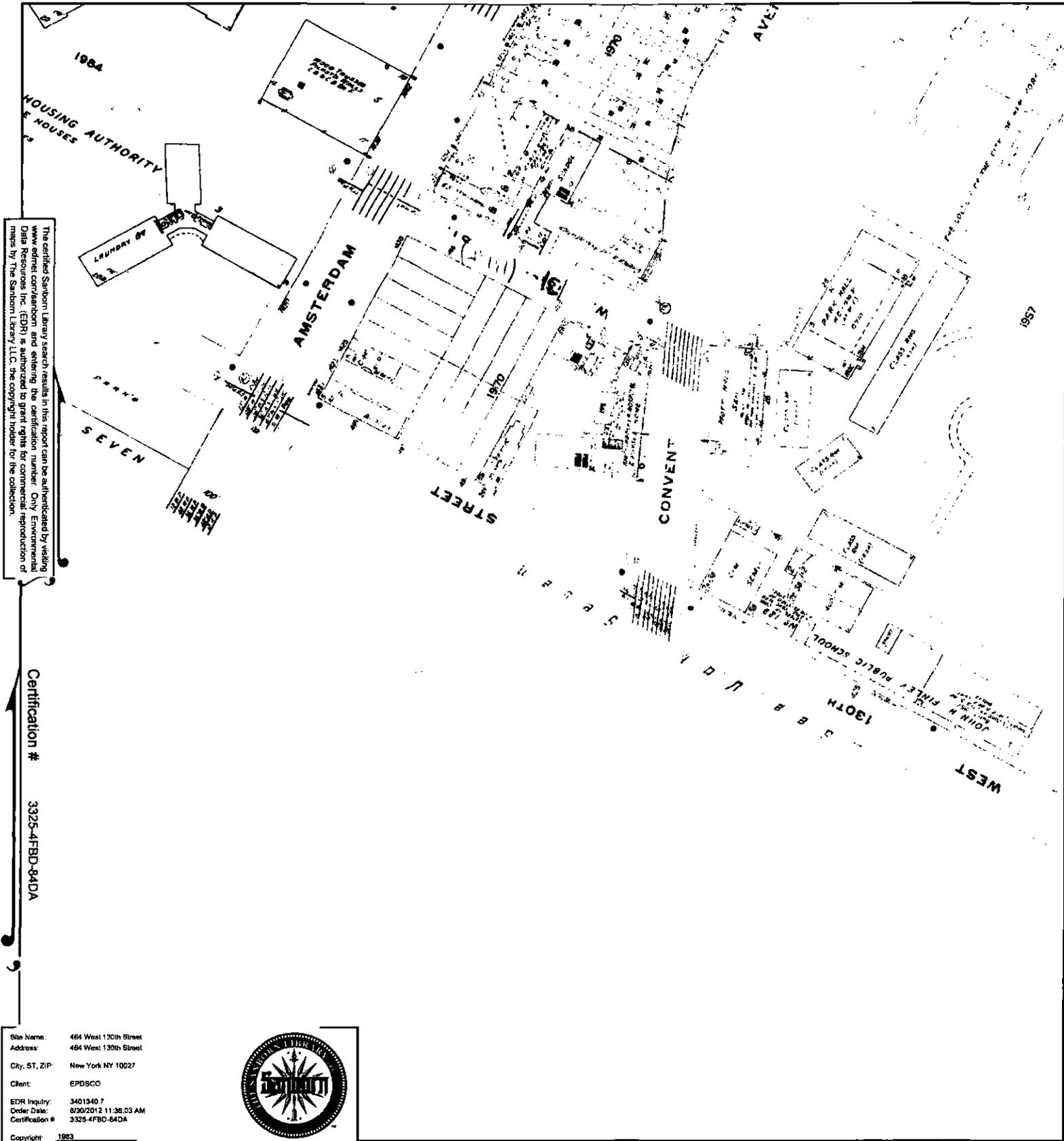
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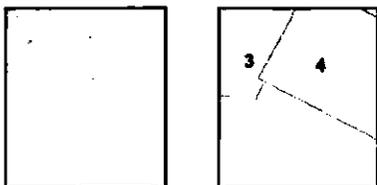
Volume 11S, Sheet 4



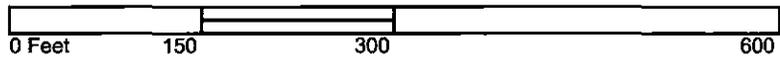
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Volume 11S, Sheet 3
 Volume 11S, Sheet 4



1985 Certified Sanborn Map

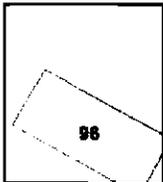
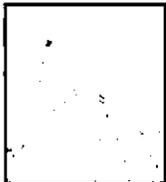
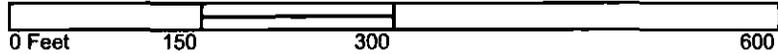
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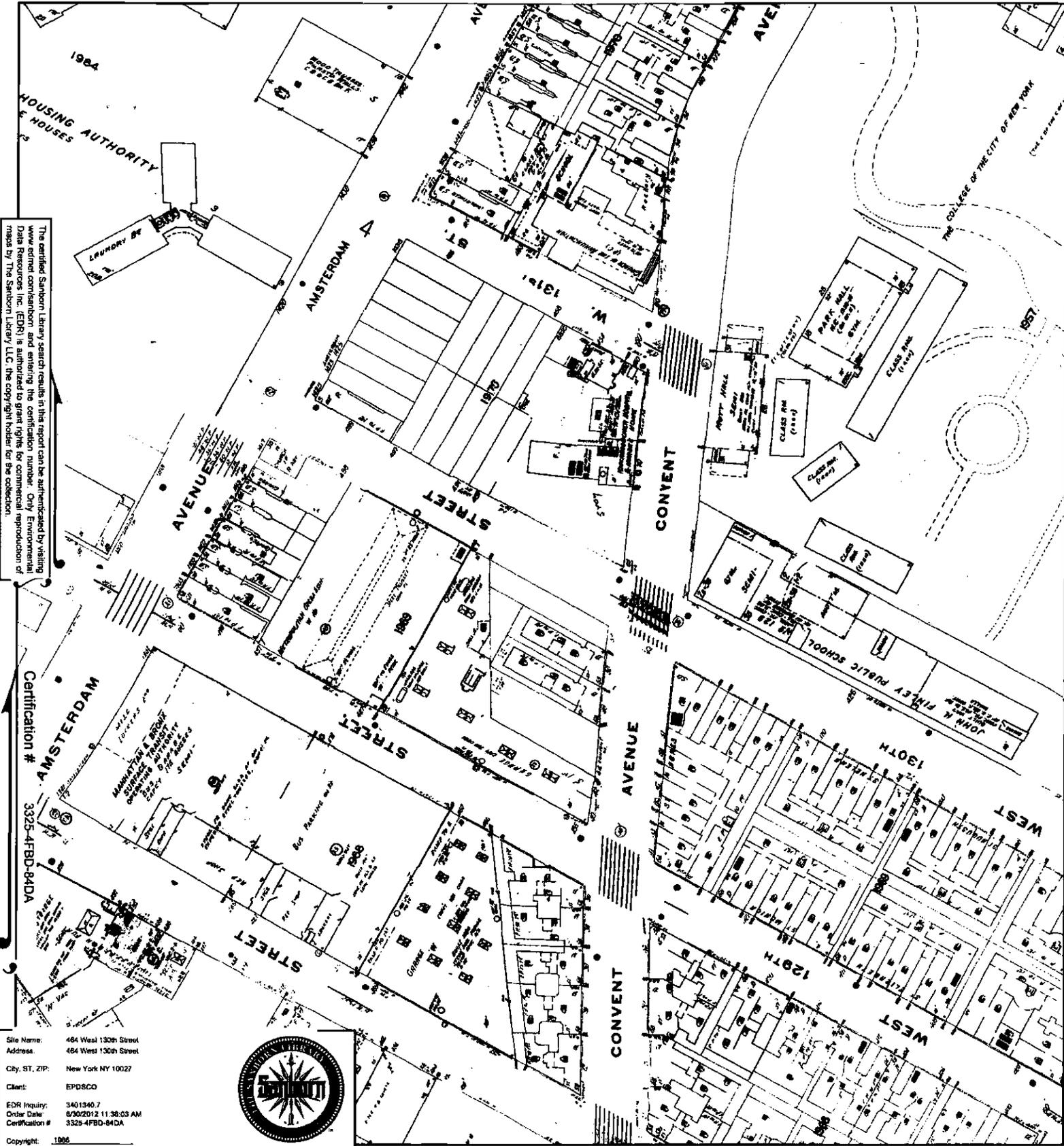
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1986 Certified Sanborn Map



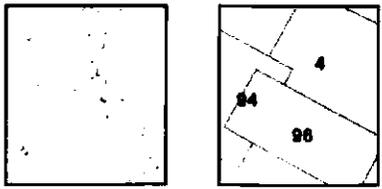
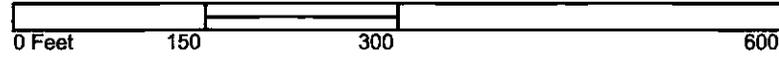
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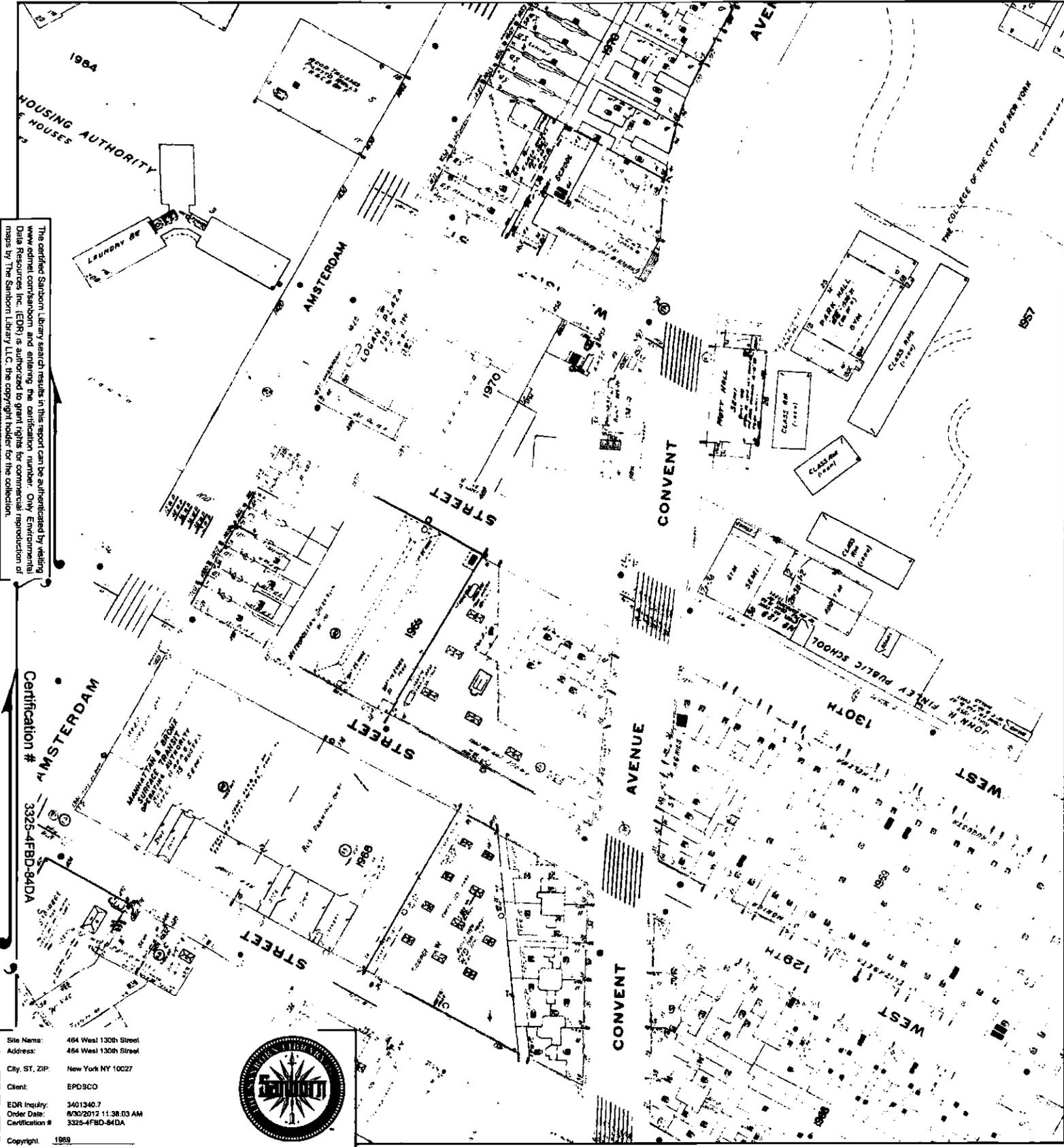
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 Volume 7N, Sheet 94
 Volume 7N, Sheet 96



1989 Certified Sanborn Map



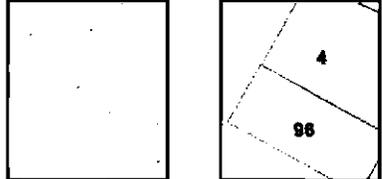
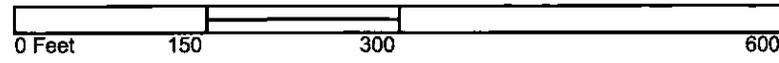
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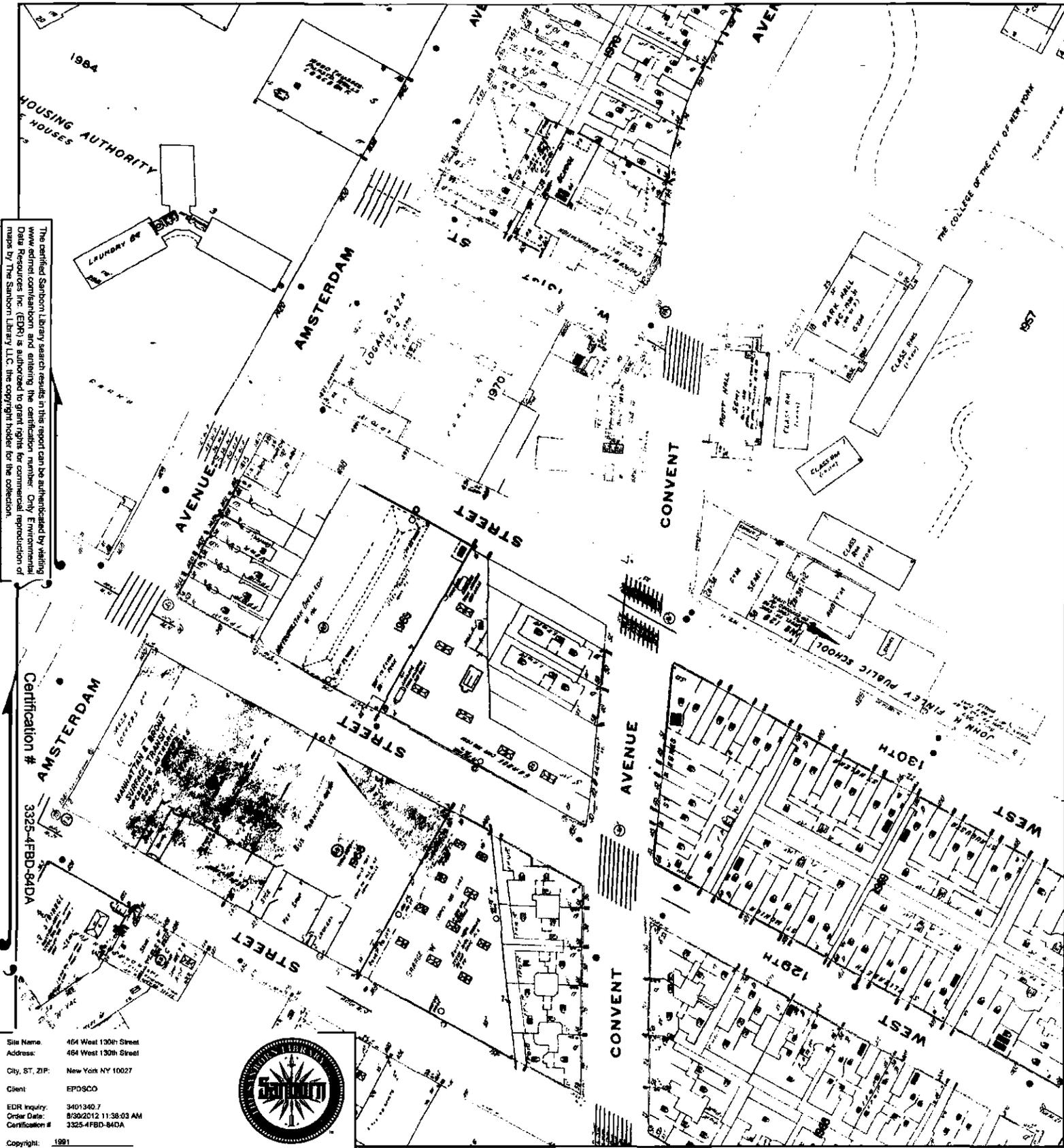
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 Volume 11S, Sheet 4



1991 Certified Sanborn Map



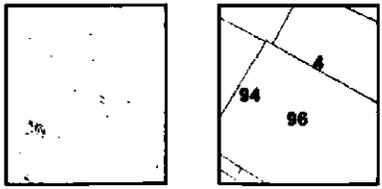
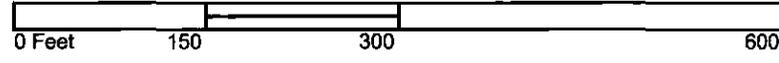
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 Certification #: 3325-4FBD-94DA
 Copyright: 1991



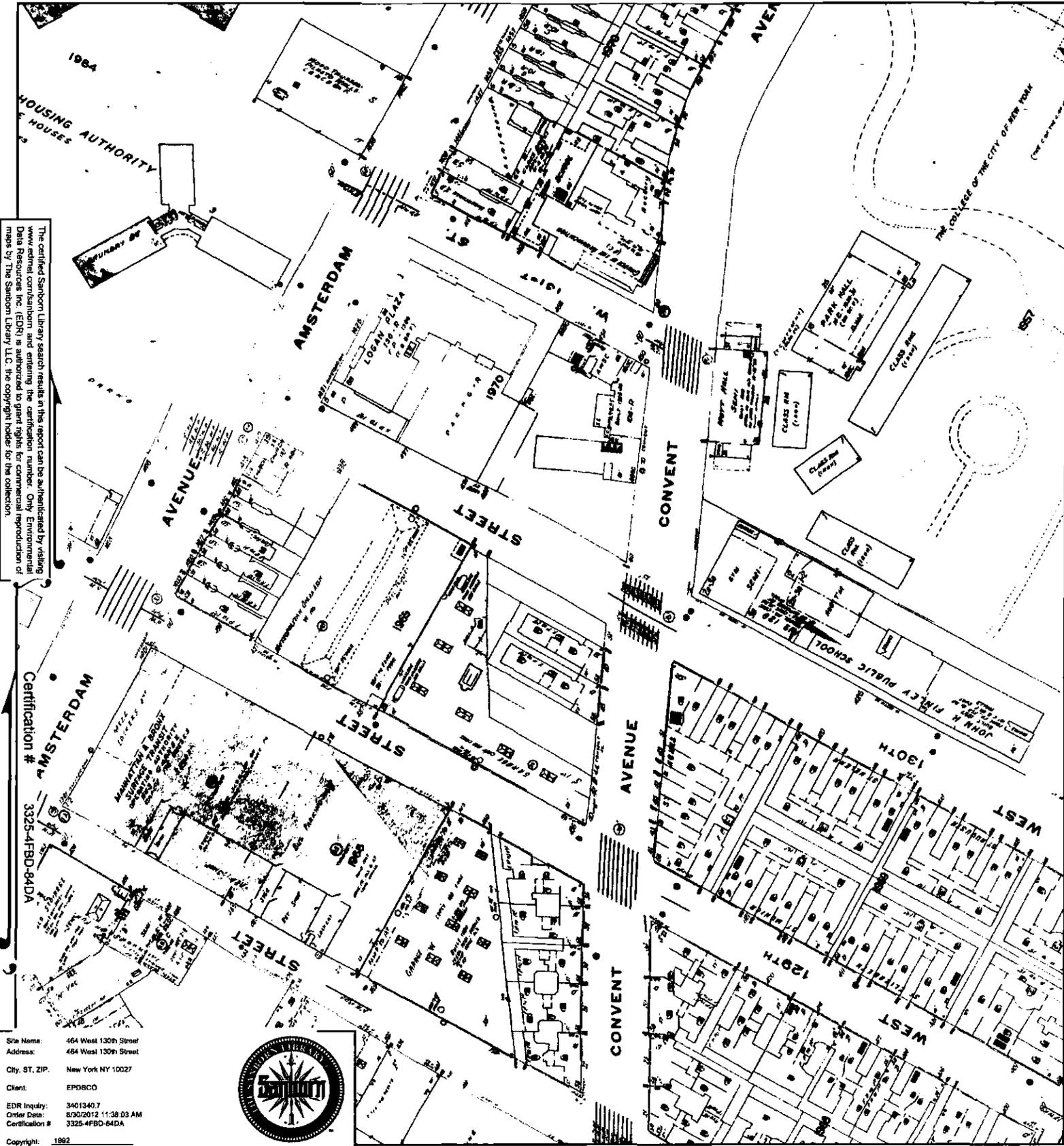
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Volume 11S, Sheet 4
 Volume 7N, Sheet 94
 Volume 7N, Sheet 96



1992 Certified Sanborn Map



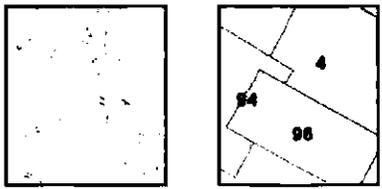
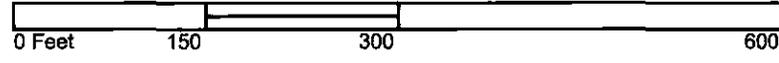
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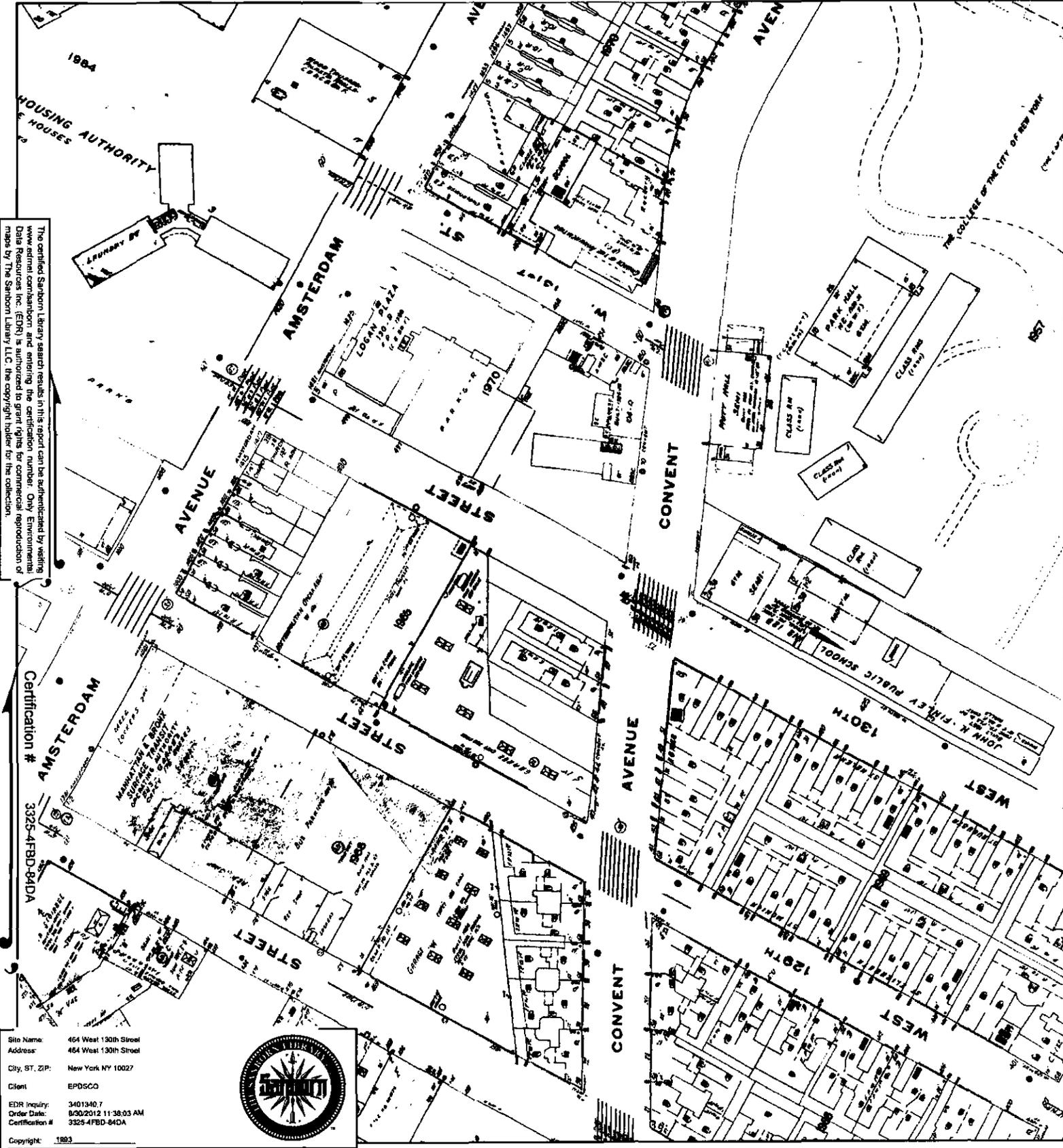
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Volume 11S, Sheet 4
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 Volume 7N, Sheet 96



1993 Certified Sanborn Map



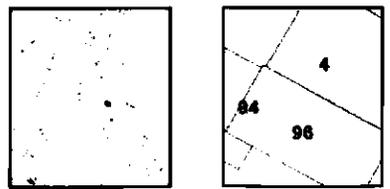
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 Copyright: 1993



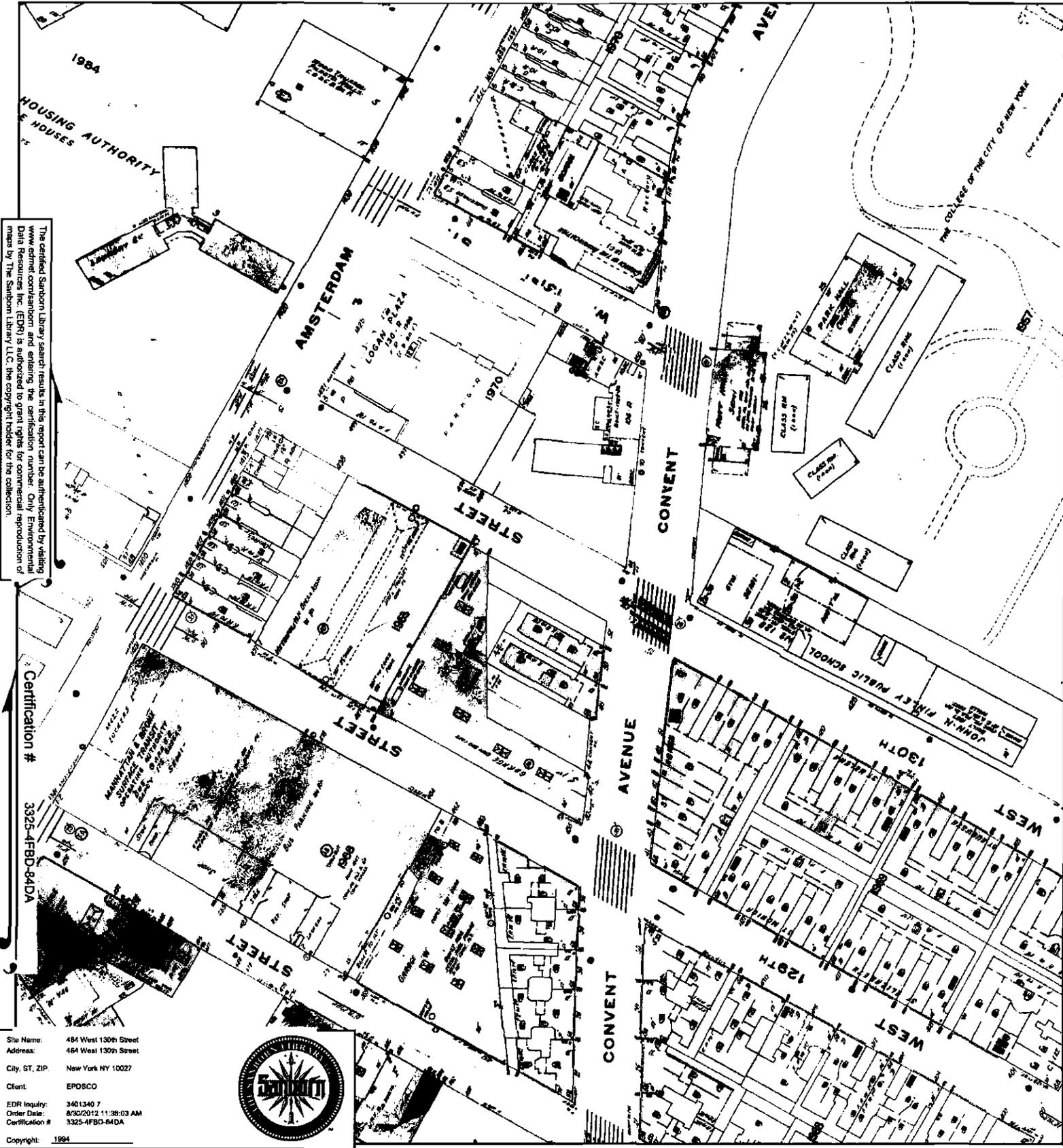
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 Volume 7N, Sheet 94
 Volume 7N, Sheet 96



1994 Certified Sanborn Map



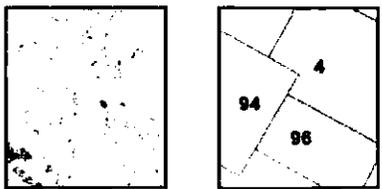
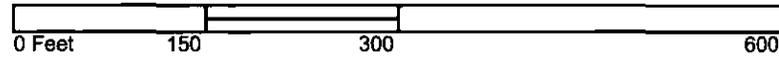
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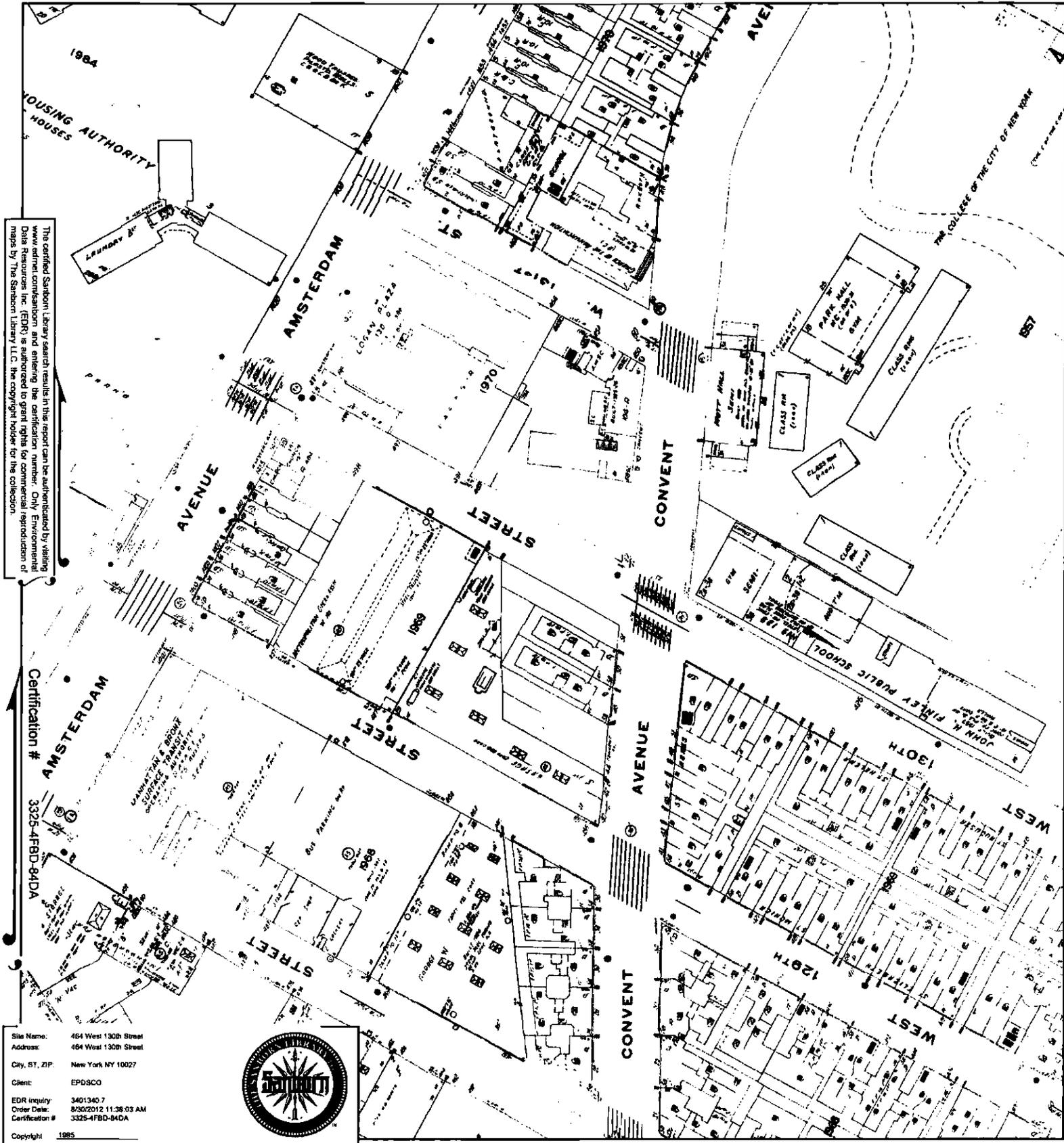
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Volume 7N, Sheet 94
 Volume 7N, Sheet 96
 Volume 11S, Sheet 4



1995 Certified Sanborn Map



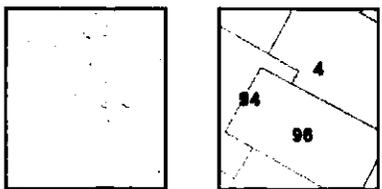
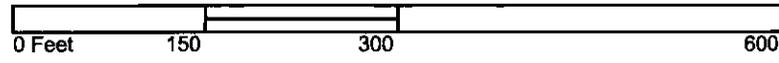
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 Copyright: 1995



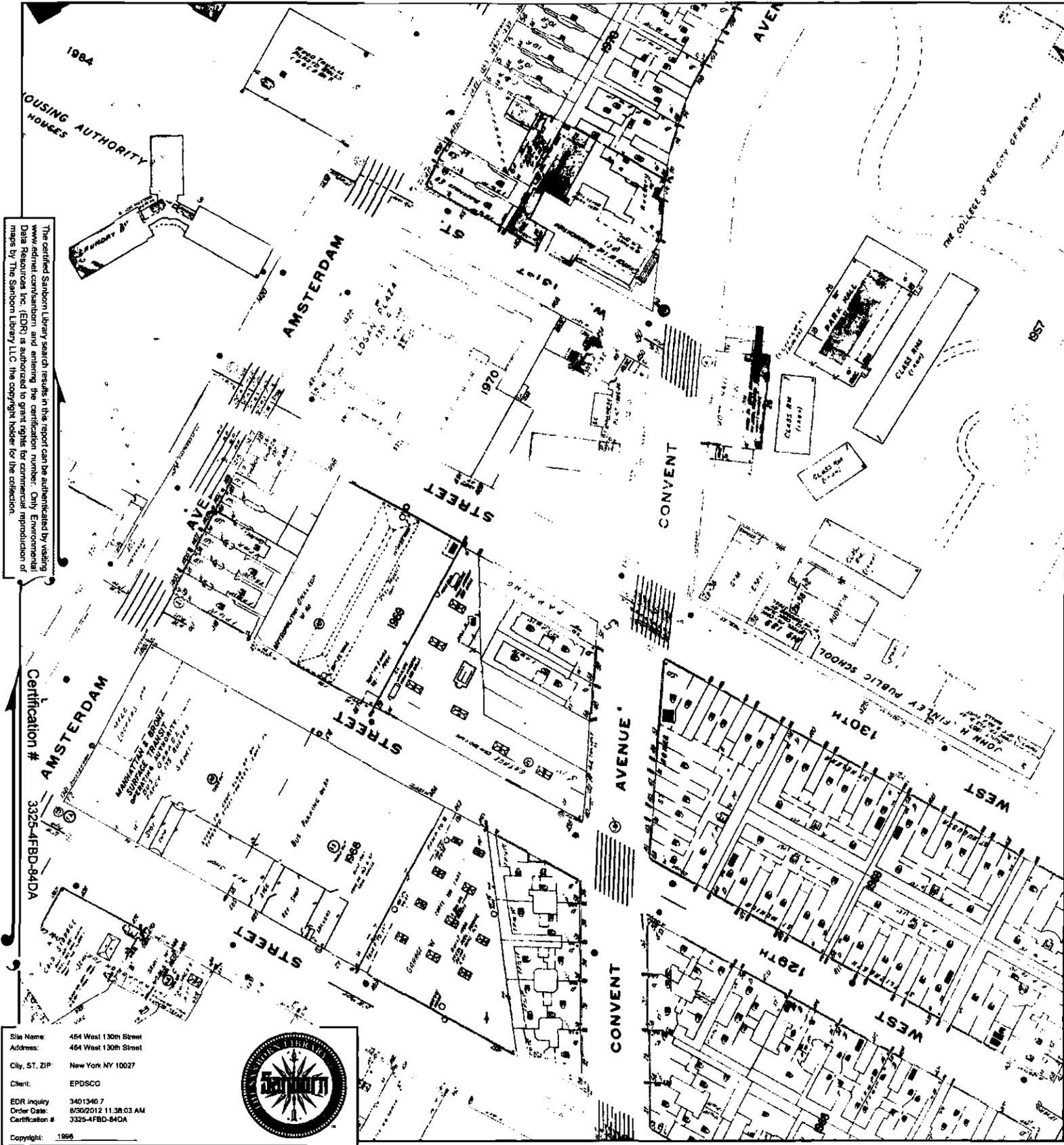
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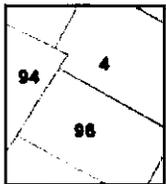
Volume 11S, Sheet 4
 Volume 7N, Sheet 94
 Volume 7N, Sheet 96



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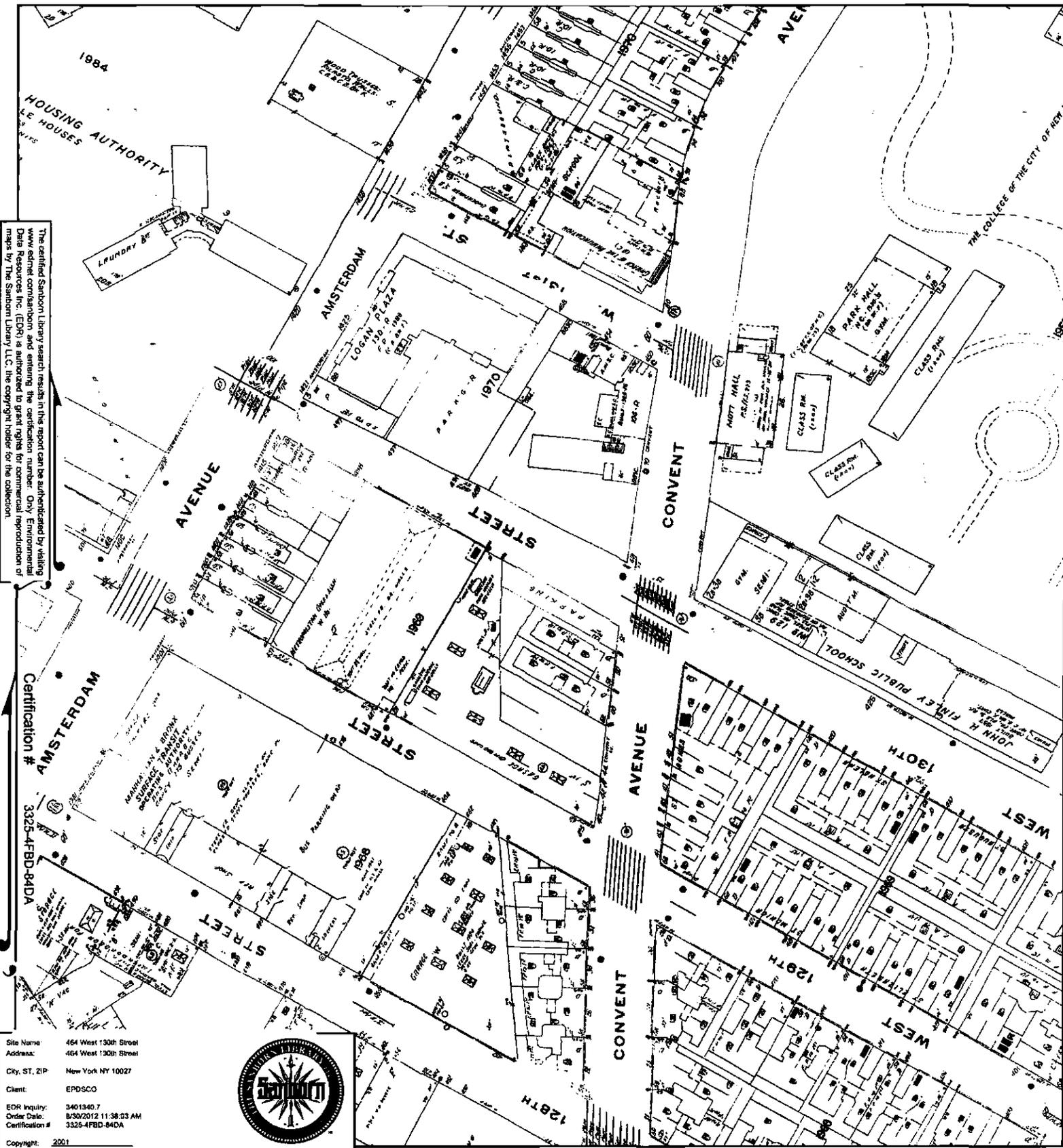
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Volume 115, Sheet 4
 Volume 7N, Sheet 96
 Volume 7N, Sheet 94



2001 Certified Sanborn Map



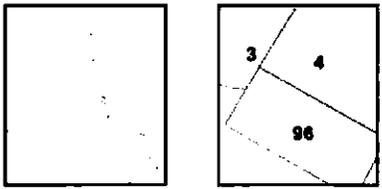
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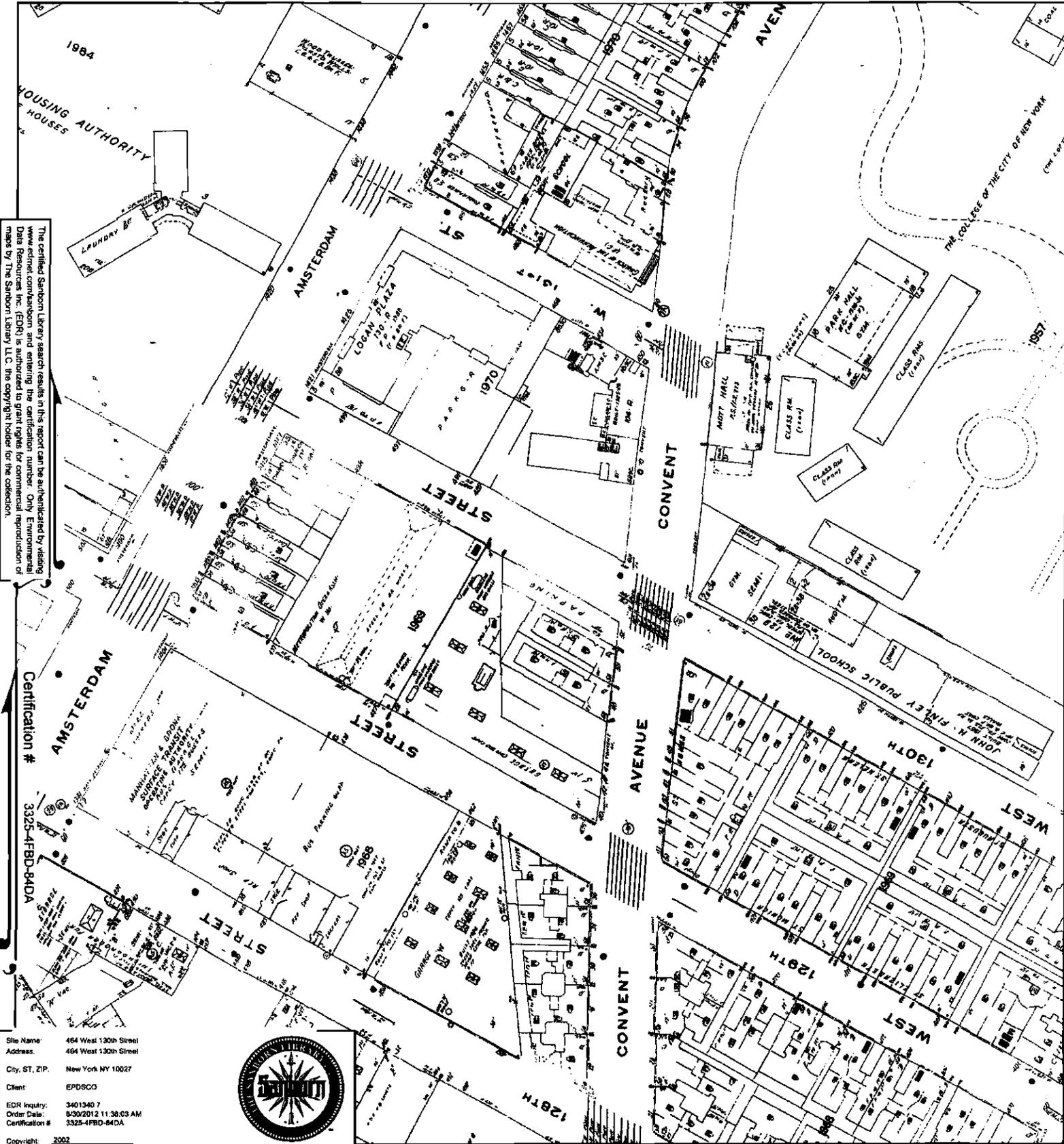
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Volume 7N, Sheet 96
 Volume 11S, Sheet 3
 Volume 11S, Sheet 4



2002 Certified Sanborn Map



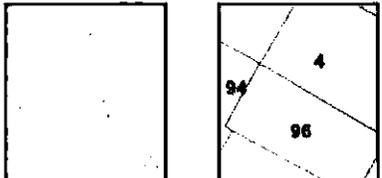
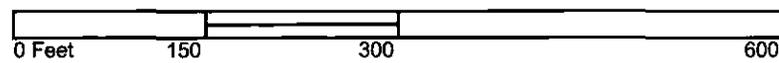
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 Copyright: 2002



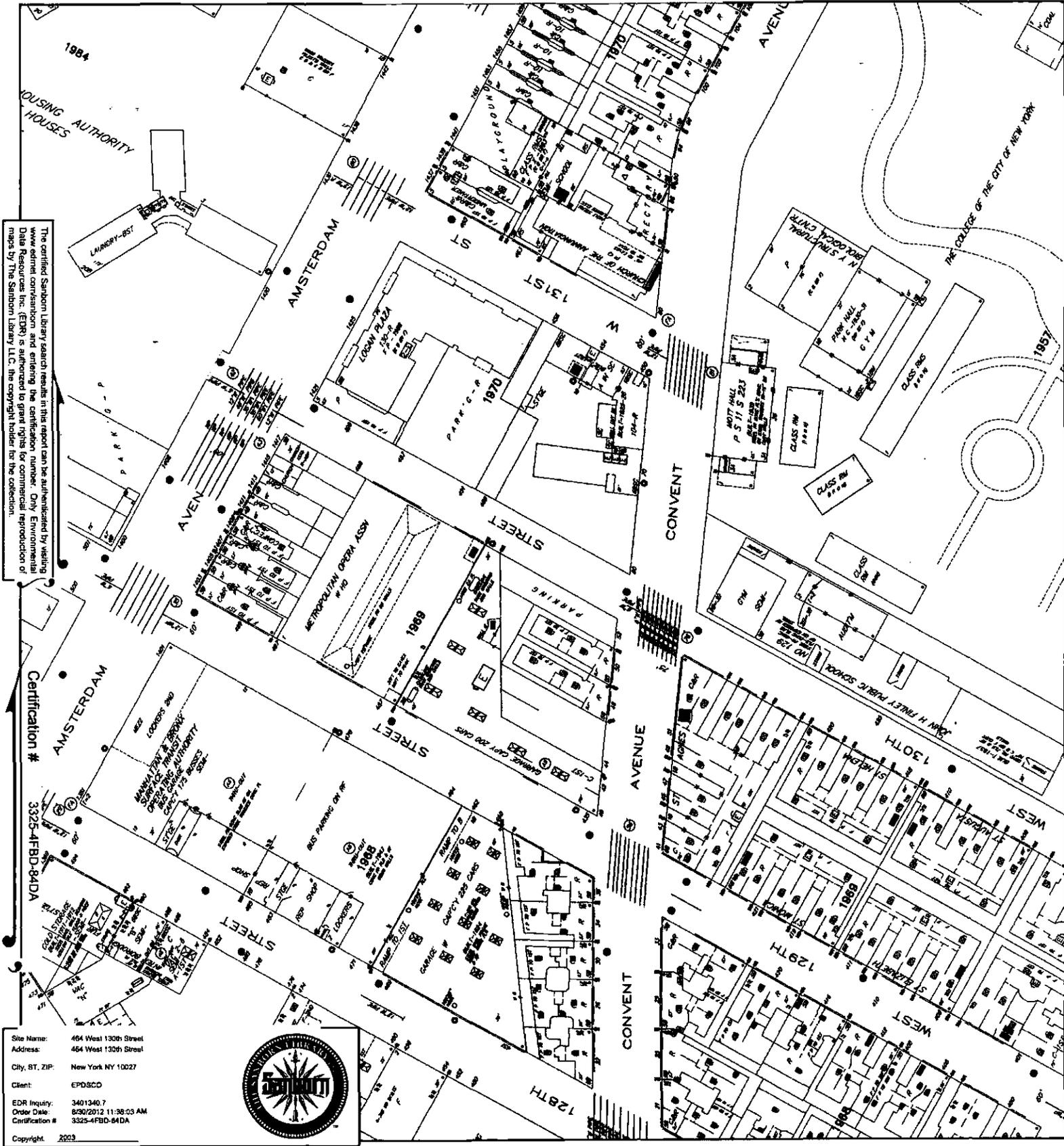
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 Volume 7N, Sheet 94
 Volume 7N, Sheet 96



2003 Certified Sanborn Map



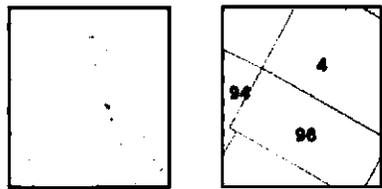
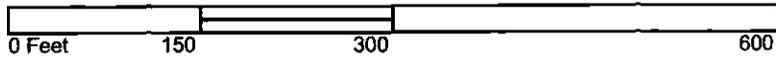
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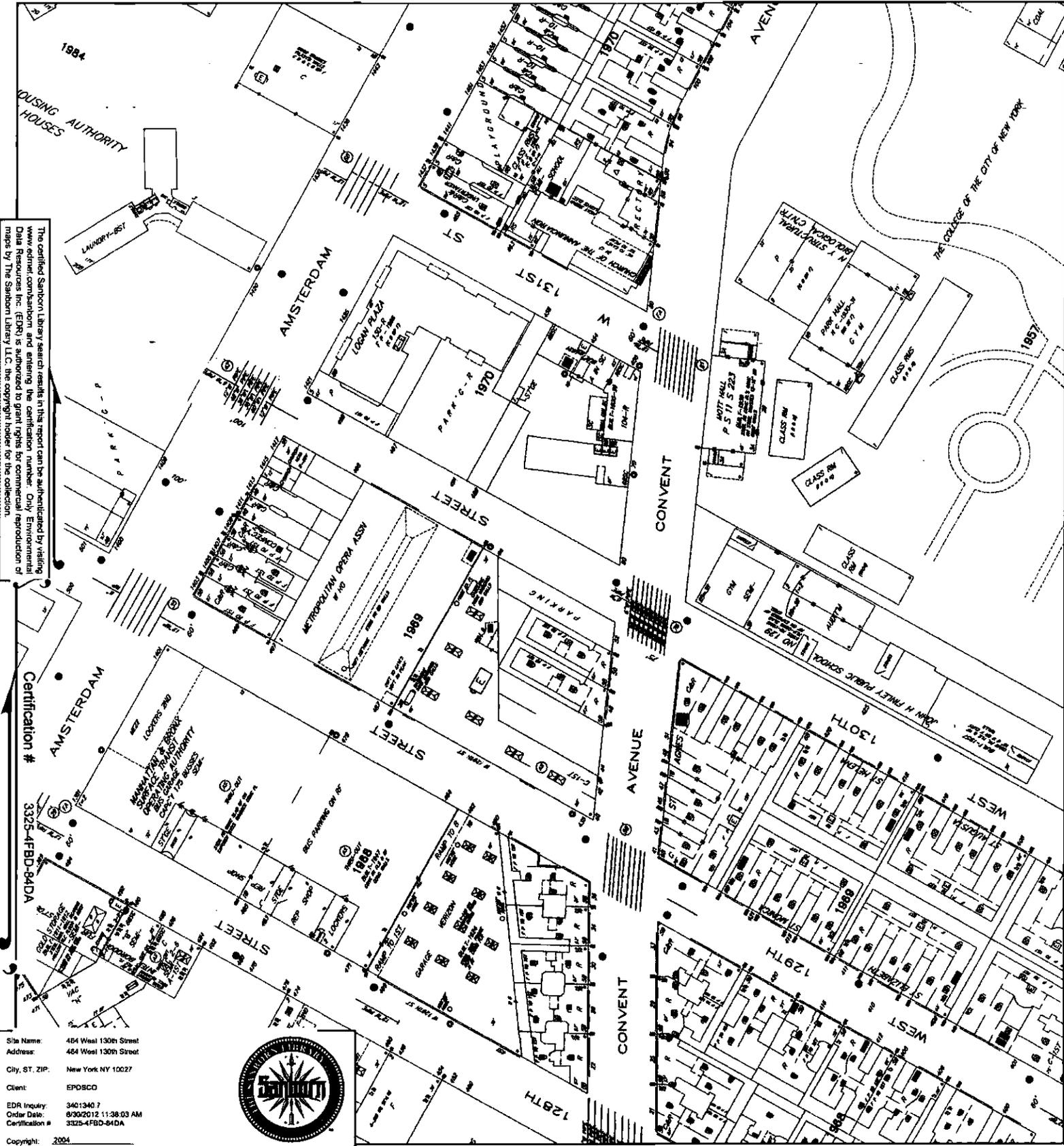
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Volume 7N, Sheet 94
 Volume 7N, Sheet 96
 Volume 11S, Sheet 4



2004 Certified Sanborn Map



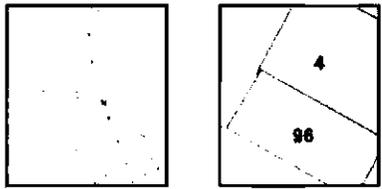
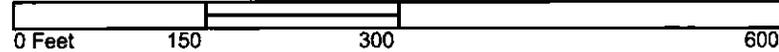
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 Certification #: 3325-4FBD-84DA
 Copyright: 2004



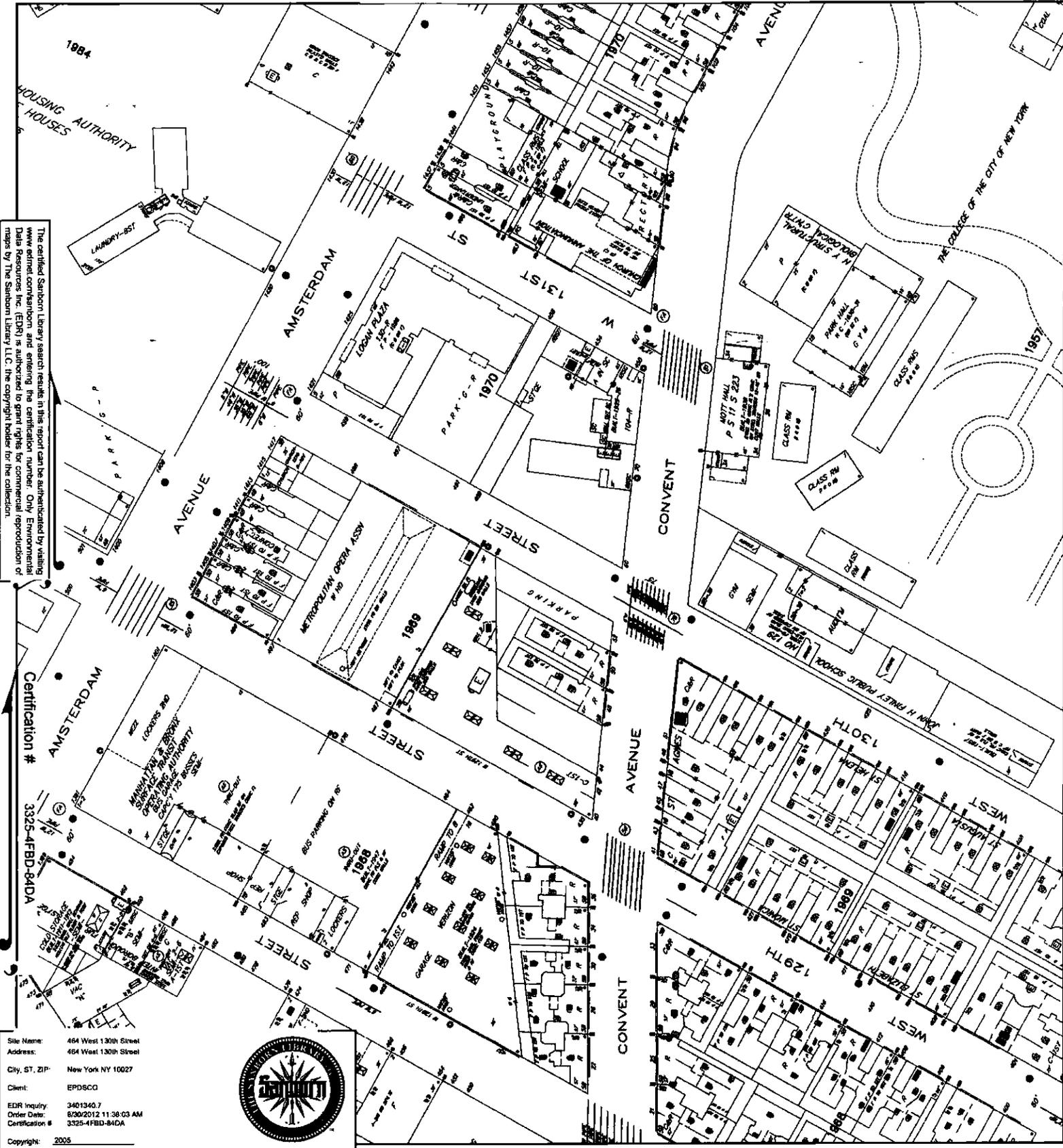
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Volume 11S, Sheet 4
 Volume 7N, Sheet 96



2005 Certified Sanborn Map



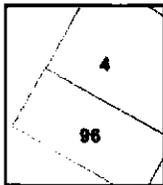
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Volume 11S, Sheet 4
 Volume 7N, Sheet 96



ATTACHMENT B

PHOTOGRAPHS



Photo 1
View of the western portion of the subject property at 464 West 130th Street,
New York, New York, facing south from West 130th Street.

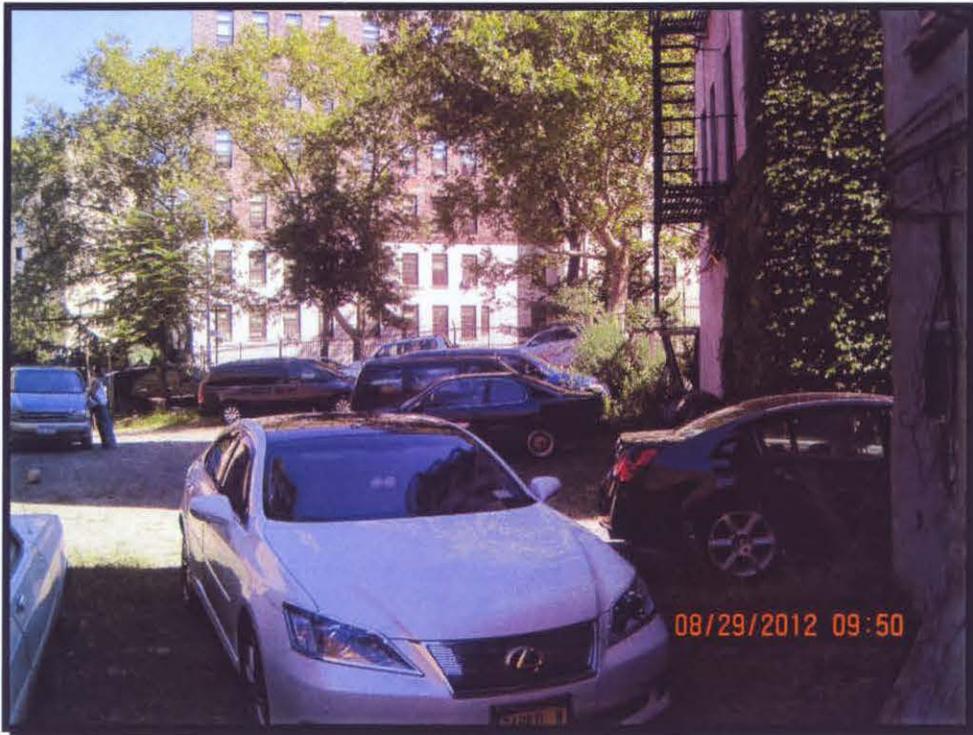


Photo 2
View of the western portion of the site, facing north towards West 130th Street.



Photo 3

View of the eastern portion of the site, facing east from the western portion of the property.



Photo 4

View of the eastern portion of the site, facing west from Convent Avenue.

ATTACHMENT C

**EXECUTIVE SUMMARY SECTION OF THE
ENVIRONMENTAL DATA RESOURCES, INC.
RADIUS MAP REPORT**

464 West 130th Street
464 West 130th Street
New York, NY 10027

Inquiry Number: 3401340.6s
August 30, 2012

The EDR Radius Map™ Report with GeoCheck®



440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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 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 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

464 WEST 130TH STREET
NEW YORK, NY 10027

COORDINATES

Latitude (North): 40.8152000 - 40° 48' 54.72"
Longitude (West): 73.9534000 - 73° 57' 12.24"
Universal Transverse Mercator: Zone 18
UTM X (Meters): 588269.1
UTM Y (Meters): 4518558.0
Elevation: 66 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 40073-G8 CENTRAL PARK, NY NJ
Most Recent Revision: 1995

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 2009, 2010
Source: USDA

TARGET PROPERTY SEARCH RESULTS

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

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

Proposed NPL..... Proposed National Priority List Sites

EXECUTIVE SUMMARY

NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent CERCLIS

NJ SHWS..... Known Contaminated Sites in New Jersey

State and tribal landfill and/or solid waste disposal site lists

NY SWF/LF..... Facility Register

NJ SWF/LF..... Solid Waste Facility Directory

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

NJ UST..... Underground Storage Tank Data

NY CBS UST..... Chemical Bulk Storage Database

NY MOSF UST..... Major Oil Storage Facilities Database

NY MOSF AST..... Major Oil Storage Facilities Database

NY MOSF..... Major Oil Storage Facility Site Listing

INDIAN UST..... Underground Storage Tanks on Indian Land

FEMA UST..... Underground Storage Tank Listing

State and tribal institutional control / engineering control registries

NY ENG CONTROLS..... Registry of Engineering Controls

NJ ENG CONTROLS..... Declaration Environmental Restriction/Deed Notice Sites

NY INST CONTROL..... Registry of Institutional Controls

NJ INST CONTROL..... Classification Exception Area Sites

NY RES DECL..... Restrictive Declarations Listing

State and tribal voluntary cleanup sites

NY VCP..... Voluntary Cleanup Agreements

EXECUTIVE SUMMARY

INDIAN VCP..... Voluntary Cleanup Priority Listing
NJ VCP..... Voluntary Cleanup Program Sites

State and tribal Brownfields sites

NY ERP..... Environmental Restoration Program Listing
NY BROWNFIELDS..... Brownfields Site List
NJ BROWNFIELDS..... Brownfields Database

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
ODI..... Open Dump Inventory
NY SWTIRE..... Registered Waste Tire Storage & Facility List
NY SWRCY..... Registered Recycling Facility List
NJ SWRCY..... Approved Class B Recycling Facilities
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL..... Clandestine Drug Labs
NY DEL SHWS..... Delisted Registry Sites
US HIST CDL..... National Clandestine Laboratory Register

Local Land Records

LIENS 2..... CERCLA Lien Information
LUCIS..... Land Use Control Information System
NY LIENS..... Spill Liens Information
NJ LIENS..... Environmental LIENS

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System

Other Ascertainable Records

DOT OPS..... Incident and Accident Data
DOD..... Department of Defense Sites
FUDS..... Formerly Used Defense Sites
UMTRA..... Uranium Mill Tailings Sites
MINES..... Mines Master Index File
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
SSTS..... Section 7 Tracking Systems

EXECUTIVE SUMMARY

ICIS.....	Integrated Compliance Information System
PADS.....	PCB Activity Database System
MLTS.....	Material Licensing Tracking System
RADINFO.....	Radiation Information Database
RAATS.....	RCRA Administrative Action Tracking System
NY HSWDS.....	Hazardous Substance Waste Disposal Site Inventory
NY UIC.....	Underground Injection Control Wells
NJ UIC.....	Underground Injection Wells Database
NJ MANIFEST.....	Hazardous Waste Manifest Data
NJ DRYCLEANERS.....	Drycleaner List
NY NPDES.....	State Pollutant Discharge Elimination System
NJ NPDES.....	New Jersey Pollutant Discharge Elimination System Dischargers
NY AIRS.....	Air Emissions Data
INDIAN RESERV.....	Indian Reservations
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
NY FINANCIAL ASSURANCE.....	Financial Assurance Information Listing
NY COAL ASH.....	Coal Ash Disposal Site Listing
PCB TRANSFORMER.....	PCB Transformer Registration Database
US FIN ASSUR.....	Financial Assurance Information
EPA WATCH LIST.....	EPA WATCH LIST
2020 COR ACTION.....	2020 Corrective Action Program List
NJ COAL ASH.....	Coal Ash Listing
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
COAL ASH DOE.....	Steam-Electric Plant Operation Data
NJ FINANCIAL ASSURANCE.....	Financial Assurance Information Listing

EDR PROPRIETARY RECORDS

EDR Proprietary Records

EDR Historical Auto Stations... EDR Proprietary Historic Gas Stations
EDR Historical Cleaners..... EDR Proprietary Historic Dry Cleaners

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 NPL site list

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and

EXECUTIVE SUMMARY

identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 05/08/2012 has revealed that there is 1 NPL 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>
HUDSON RIVER PCBS	NO STREET APPLICABLE	WNW 1/2 - 1 (0.536 mi.)	0	8

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 08/19/2011 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ASHLAND INC	609 W 131ST ST	NW 1/4 - 1/2 (0.270 mi.)	198	663

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 03/15/2012 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
AMSTERDAM BUS DEPOT	1381 AMSTERDAM AVE.	WSW 0 - 1/8 (0.116 mi.)	N57	221

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/15/2012 has revealed that there are 2 RCRA-SQG 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>
NYCT - HARLEM SUBSTATION	309 W 133RD STREET	NNE 1/8 - 1/4 (0.153 mi.)	S81	285

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LIONEL HAMPTON HOUSES	410 ST NICHOLAS AVE	ESE 1/8 - 1/4 (0.212 mi.)	A1150	466

EXECUTIVE SUMMARY

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/15/2012 has revealed that there are 6 RCRA-CESQG 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	102-104 CONVENT AVE S O	NNE 0 - 1/8 (0.119 mi.)	M62	234
CON EDISON	SAINT NICHOLAS TER & W	ESE 1/8 - 1/4 (0.149 mi.)	78	278
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON	W 130TH ST & AMSTERDAM	WNW 0 - 1/8 (0.071 mi.)	D15	68
CON EDISON	W 128TH ST & CONVENT AV	S 0 - 1/8 (0.119 mi.)	O63	235
CON EDISON	473 W 126TH ST E OF AMS	SW 1/8 - 1/4 (0.143 mi.)	T75	273
NYCHA - MANHATTANVILLE	555 W 126TH ST	W 1/8 - 1/4 (0.194 mi.)	AF125	406

State- and tribal - equivalent CERCLIS

NY SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Conservation's Inactive Hazardous waste Disposal Sites in New York State.

A review of the NY SHWS list, as provided by EDR, and dated 05/21/2012 has revealed that there is 1 NY SHWS site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
2350 FIFTH AVENUE CORP	2350 5TH AVE	E 1/2 - 1 (0.984 mi.)	238	807

Class Code: Significant threat to the public health or environment - action required.

NY VAPOR REOPENED: "Vapor intrusion" refers to the process by which volatile chemicals move from a subsurface source into the indoor air of overlying or adjacent buildings. The subsurface source can either be contaminated groundwater or contaminated soil which releases vapors into the pore spaces in the soil. Improvements in analytical techniques and knowledge gained from site investigations in New York and other states has led to an increased awareness of soil vapor as a medium of concern and of the potential for exposures from the soil vapor intrusion pathway. Based on this additional information, New York is currently re-evaluating previous assumptions and decisions regarding the potential for soil vapor intrusion exposures at sites. As a result, all past, current, and future contaminated sites will be evaluated to determine whether these sites have the potential for exposures related to soil vapor intrusion.

A review of the NY VAPOR REOPENED list, as provided by EDR, and dated 05/01/2012 has revealed that there is 1 NY VAPOR REOPENED site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
2350 FIFTH AVENUE CORP	2350 5TH AVE	E 1/2 - 1 (0.984 mi.)	238	807

EXECUTIVE SUMMARY

State and tribal leaking storage tank lists

NY LTANKS: Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills

A review of the NY LTANKS list, as provided by EDR, and dated 05/22/2012 has revealed that there are 52 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>
MT. WILSON PARTNERS APTS. Date Closed: 7/10/1994	412 W.129TH STREET	SE 1/8 - 1/4 (0.130 mi.)	L67	246
49 SAINT NICHOLAS PLACE Date Closed: 11/1/1995	49 SAINT NICHOLAS PLACE	ESE 1/8 - 1/4 (0.138 mi.)	P72	262
MANHATTANVILLE Date Closed: 5/1/1995	W 133RD ST & AMSTERDAM	N 1/8 - 1/4 (0.166 mi.)	X91	319
501 WEST 134TH ST Date Closed: 1/28/2005	501 WEST 134TH ST	N 1/4 - 1/2 (0.252 mi.)	194	654
NYC HOUSING COMPLEX Date Closed: 6/12/2006	504 WEST 135TH ST	NNE 1/4 - 1/2 (0.264 mi.)	197	660
1532 AMSTERDAM AVENUE Date Closed: 9/13/2005	1532 AMSTERDAM AVENUE	NNE 1/4 - 1/2 (0.298 mi.)	203	690
CCNY BUILDING Date Closed: 9/13/2005	152-236 CONVENT AVE	NNE 1/4 - 1/2 (0.331 mi.)	209	712
ON STREET Date Closed: 8/20/2009	3333 BROADWAY	NNW 1/4 - 1/2 (0.342 mi.)	211	717
THE DERMOT COMPANY Date Closed: 9/1/2011	526 WEST 123RD STREET	SW 1/4 - 1/2 (0.370 mi.)	214	725
THE DERMOT COMPANY Date Closed: 11/19/2008	503 WEST 122ND STREET	SW 1/4 - 1/2 (0.406 mi.)	220	744
Not reported Date Closed: 7/9/2004	725 W 135TH ST	NNW 1/4 - 1/2 (0.418 mi.)	AX221	745
NYCDEP BWT NORTH RIVER WPCP Date Closed: 9/14/2007	725 W 135TH STREET	NNW 1/4 - 1/2 (0.418 mi.)	AX222	749
636 ASSETS INC Date Closed: 5/20/1999	636 W 136TH ST	NNW 1/4 - 1/2 (0.423 mi.)	223	763
NORTH RIVER PLANT Date Closed: 3/9/2006	735 WEST 135TH ST	NNW 1/4 - 1/2 (0.423 mi.)	AX224	766
500 WEST 138TH ST/PS 192 Date Closed: 1/21/2004	500 WEST 138TH STREET	N 1/4 - 1/2 (0.434 mi.)	225	767
COLLEGE BUILDING Date Closed: 11/28/2006	106 MORNING SIDE DRIVE	SSW 1/4 - 1/2 (0.462 mi.)	231	785
Not reported Date Closed: 8/5/2005	3080 BROADWAY	WSW 1/4 - 1/2 (0.462 mi.)	232	791
Lower Elevation	Address	Direction / Distance	Map ID	Page
34 CONVENT AVE Date Closed: 4/20/2006	34 CONVENT AVE	SSE 0 - 1/8 (0.072 mi.)	F17	71

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MANHATTANVILLE Date Closed: 3/25/1999	1430 AMSTERDAM AV	NNW 0 - 1/8 (0.088 mi.)	H30	103
MANHATTANVILLE -NYCHA Date Closed: 1/26/2006 Date Closed: 12/28/2005 <i>*Additional key fields are available in the Map Findings section</i>	1430 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.088 mi.)	H33	118
AMSTERDAM DEPOT Date Closed: 11/30/2000	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J46	161
RESI: SINGER Date Closed: 10/10/2001	25-35 ST NICHOLAS TERR	SSE 1/8 - 1/4 (0.173 mi.)	V106	365
MANHATTANVILLE Date Closed: 7/6/1993	549 WEST 126TH STREET	W 1/8 - 1/4 (0.188 mi.)	Z116	385
APARTMENT Date Closed: 1/11/2008	2-4 ST NICHOLAS PLACE	SSE 1/8 - 1/4 (0.210 mi.)	AC147	460
NYC HPD Date Closed: 11/12/2003	453 WEST 125TH ST	SSW 1/8 - 1/4 (0.212 mi.)	AJ151	467
GRANT HOUSES -NYCHA Date Closed: 10/24/2005 Date Closed: 10/24/2005	1320 AMSTERDAM AVE	SW 1/8 - 1/4 (0.213 mi.)	AG152	470
MOBIL S/S Date Closed: 1/8/1997	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM179	570
AMOCO Date Closed: 12/5/2003	3225 BROADWAY	WNW 1/4 - 1/2 (0.250 mi.)	AQ193	626
MANHATTAN PSYCHIATRIC Date Closed: 12/14/2006	600 EAST 125TH STREET	W 1/4 - 1/2 (0.263 mi.)	AT195	655
WARDS ISLAND Date Closed: 12/16/2010	600 EAST 125TH ST	W 1/4 - 1/2 (0.264 mi.)	AT196	659
302 WEST 128TH STREET Date Closed: 11/20/1992	302 WEST 128TH STREET	SE 1/4 - 1/2 (0.286 mi.)	AU199	681
302 WEST 128TH ST/MANH Date Closed: 8/5/1991	302 WEST 128TH STREET	SE 1/4 - 1/2 (0.286 mi.)	AU200	686
Not reported Date Closed: 2/19/2002	310 W 127TH ST	SSE 1/4 - 1/2 (0.293 mi.)	202	689
W 132ND ST PURS UNIT R3 (M51S) Date Closed: 10/9/1997	630 WEST 132ND STREET	NW 1/4 - 1/2 (0.313 mi.)	AV205	699
80 LASALLE ST Date Closed: 8/29/2003 Date Closed: 2/7/2006	80 LASALLE ST	WSW 1/4 - 1/2 (0.316 mi.)	207	706
WARREN ELECTRICAL SUPPLY Date Closed: 12/15/2009	641 WEST 131 ST ST	NW 1/4 - 1/2 (0.317 mi.)	208	709
273 W. 132ND ST. Date Closed: 12/18/1992	273 W. 132ND ST.	ESE 1/4 - 1/2 (0.332 mi.)	210	714
637 WEST 125TH ST/MANH Date Closed: 2/23/1993	637 WEST 125TH STREET	WNW 1/4 - 1/2 (0.349 mi.)	212	721
APARTMENT BLDG Date Closed: 9/1/2011	1274 AMSTERDAM AVE	SW 1/4 - 1/2 (0.368 mi.)	213	724
MANHATTENVILLE BUS DEPOT Date Closed: 3/9/2005	666 WEST 132ND ST	NW 1/4 - 1/2 (0.370 mi.)	AW215	728

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
YOUNG RESIDENCE Date Closed: 9/29/2006	355 W. 123RD ST.	S 1/4 - 1/2 (0.385 mi.)	216	734
BRONX WEST 01/03/04 DOS -DDC Date Closed: 5/9/2005 Date Closed: 10/31/2003	680 EAST 132ND STREET	NW 1/4 - 1/2 (0.393 mi.)	AW217	735
271 WEST 125TH ST Date Closed: 1/20/2006	271 WEST 125TH ST	SSE 1/4 - 1/2 (0.403 mi.)	219	742
344 WEST 122ND STREET Date Closed: 1/21/1998	344 WEST 122ND STREET	S 1/4 - 1/2 (0.438 mi.)	226	770
Not reported Date Closed: 4/20/2004	666 WEST 133RD ST	NW 1/4 - 1/2 (0.438 mi.)	227	773
323 W 138TH ST Date Closed: 6/7/1995	323 W 138TH ST	NE 1/4 - 1/2 (0.451 mi.)	228	778
Not reported Date Closed: 12/8/1999	260 W 136 TH ST	ENE 1/4 - 1/2 (0.454 mi.)	229	780
231 WEST 125TH ST Date Closed: 3/31/1995	231 WEST 125TH ST	SSE 1/4 - 1/2 (0.455 mi.)	230	783
235 ST NICHOLAS AVE Date Closed: 10/15/2003 Date Closed: 10/15/2003	235 ST NICHOLAS AVENUE	S 1/4 - 1/2 (0.475 mi.)	AY233	794
28TH PRECINCT NYPD -DDC Date Closed: 6/17/2005	2271-89 EIGHTH AVE	S 1/4 - 1/2 (0.477 mi.)	234	799
Not reported Date Closed: 12/10/2003	580 ST NICHOLAS AV	NE 1/4 - 1/2 (0.485 mi.)	236	803
225 WEST 136TH STREET Date Closed: 5/3/1994	225 WEST 136TH STREET	E 1/4 - 1/2 (0.500 mi.)	237	805

NY HIST LTANKS: A listing of leaking underground and aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills. In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY LTANKS database.

A review of the NY HIST LTANKS list, as provided by EDR, and dated 01/01/2002 has revealed that there are 39 NY HIST 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>
MT. WILSON PARTNERS APTS. Date Closed: 07/10/94	412 W.129TH STREET	SE 1/8 - 1/4 (0.130 mi.)	L67	246
49 SAINT NICHOLAS PLACE Date Closed: 11/01/95	49 SAINT NICHOLAS PLACE	ESE 1/8 - 1/4 (0.138 mi.)	P72	262
MANHATTANVILLE Date Closed: 05/01/95	W 133RD ST & AMSTERDAM	N 1/8 - 1/4 (0.166 mi.)	X91	319
NYC HOUSING COMPLEX Date Closed: / /	504 WEST 135TH ST	NNE 1/4 - 1/2 (0.264 mi.)	197	660
1532 AMSTERDAM AVENUE Date Closed: / /	1532 AMSTERDAM AVENUE	NNE 1/4 - 1/2 (0.298 mi.)	203	690

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
636 ASSETS INC Date Closed: 05/20/99	636 W 136TH ST	NNW 1/4 - 1/2 (0.423 mi.)	223	763
500 WEST 138TH ST/PS 192 Date Closed: / /	500 WEST 138TH STREET	N 1/4 - 1/2 (0.434 mi.)	225	767
Not reported Date Closed: / /	3080 BROADWAY	WSW 1/4 - 1/2 (0.462 mi.)	232	791
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MANHATTANVILLE Date Closed: 03/25/99 Date Closed: 03/25/99	1430 AMSTERDAM AV	NNW 0 - 1/8 (0.088 mi.)	H30	103
MANHATTANVILLE Date Closed: / /	1430 AMSTERDAM AVE.	NW 0 - 1/8 (0.088 mi.)	D32	116
MANHATTANVILLE -NYCHA Date Closed: / / Date Closed: / /	1430 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.088 mi.)	H33	118
AMSTERDAM DEPOT Date Closed: 11/30/00	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J46	161
Not reported Date Closed: / /	411 W 128TH ST	SSE 1/8 - 1/4 (0.163 mi.)	V89	313
RESI: SINGER Date Closed: 10/10/01	25-35 ST NICHOLAS TERR	SSE 1/8 - 1/4 (0.173 mi.)	V106	365
MANHATTANVILLE Date Closed: 07/06/93	549 WEST 126TH STREET	W 1/8 - 1/4 (0.188 mi.)	Z116	385
NYC HPD Date Closed: / /	453 WEST 125TH ST	SSW 1/8 - 1/4 (0.212 mi.)	AJ151	467
GRANT HOUSES Date Closed: / / Date Closed: / /	1320 AMSTERDAM AVENUE	SW 1/8 - 1/4 (0.223 mi.)	AG160	492
MOBIL S/S Date Closed: 01/08/97	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM179	570
MOBIL S/S Date Closed: / /	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM182	595
AMOCO Date Closed: / /	3225 BROADWAY	WNW 1/4 - 1/2 (0.250 mi.)	AQ193	626
MANHATTAN PSYCHIATRIC Date Closed: / /	600 EAST 125TH STREET	W 1/4 - 1/2 (0.263 mi.)	AT195	655
302 WEST 128TH STREET Date Closed: 11/20/92	302 WEST 128TH STREET	SE 1/4 - 1/2 (0.286 mi.)	AU199	681
302 WEST 128TH ST/MANH Date Closed: 08/05/91	302 WEST 128TH STREET	SE 1/4 - 1/2 (0.286 mi.)	AU200	686
619 W 125TH ST Date Closed: / /	619 W 125TH ST	WNW 1/4 - 1/2 (0.309 mi.)	204	693
WEST 132ND PURRS PLANT Date Closed: 10/09/97	630 WEST 132ND STREET	NW 1/4 - 1/2 (0.313 mi.)	AV206	705
WARREN ELECTRICAL SUPPLY Date Closed: / /	641 WEST 131 ST ST	NW 1/4 - 1/2 (0.317 mi.)	208	709

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
273 W. 132ND ST. Date Closed: 12/18/92	273 W. 132ND ST.	ESE 1/4 - 1/2 (0.332 mi.)	210	714
637 WEST 125TH ST/MANH Date Closed: 02/23/93	637 WEST 125TH STREET	WNW 1/4 - 1/2 (0.349 mi.)	212	721
MANHATTENVILLE BUS DEPOT Date Closed: / /	666 WEST 132ND ST	NW 1/4 - 1/2 (0.370 mi.)	AW215	728
BRONX WEST 01/03/04 DOS -DDC Date Closed: / /	680 EAST 132ND STREET	NW 1/4 - 1/2 (0.393 mi.)	AW217	735
680 E 132ND ST/BX GARAGE Date Closed: / /	680 EAST 132ND STREET	NW 1/4 - 1/2 (0.393 mi.)	AW218	741
344 WEST 122ND STREET Date Closed: 01/21/98	344 WEST 122ND STREET	S 1/4 - 1/2 (0.438 mi.)	226	770
Not reported Date Closed: / /	666 WEST 133RD ST	NW 1/4 - 1/2 (0.438 mi.)	227	773
323 W 138TH ST Date Closed: 06/07/95	323 W 138TH ST	NE 1/4 - 1/2 (0.451 mi.)	228	778
Not reported Date Closed: 12/08/99	260 W 136 TH ST	ENE 1/4 - 1/2 (0.454 mi.)	229	780
231 WEST 125TH ST Date Closed: 03/31/95	231 WEST 125TH ST	SSE 1/4 - 1/2 (0.455 mi.)	230	783
235 ST NICHOLAS AVE Date Closed: / /	235 ST NICHOLAS AVENUE	S 1/4 - 1/2 (0.475 mi.)	AY233	794
SHELL SERVICE STATION Date Closed: / /	235 ST NICHOLAS AVE	S 1/4 - 1/2 (0.480 mi.)	AY235	801
225 WEST 136TH STREET Date Closed: 05/03/94	225 WEST 136TH STREET	E 1/4 - 1/2 (0.500 mi.)	237	805

State and tribal registered storage tank lists

NY TANKS: This database contains records of facilities that are or have been regulated under Bulk Storage Program. Tank information for these facilities may not be releasable by the state agency.

A review of the NY TANKS list, as provided by EDR, and dated 07/02/2012 has revealed that there is 1 NY TANKS site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
VERIZON NEW YORK INC-NY-15501	460 WEST 129TH STREET	SSW 0 - 1/8 (0.049 mi.)	B5	48

NY UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database

A review of the NY UST list, as provided by EDR, and dated 07/02/2012 has revealed that there are 18 NY UST sites within approximately 0.25 miles of the target property.

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CITY COLLEGE OF NEW YORK	91 CONVENT AVE (PK GYM)	NE 0 - 1/8 (0.064 mi.)	C12	60
AUNNUNCIATION CHURCH	88 CONVENT AVE	NNE 0 - 1/8 (0.079 mi.)	G20	77
CITY UNIVERSITY OF NEW YORK	89 CONVENT AVE	NNE 0 - 1/8 (0.086 mi.)	G28	98
1508 AMSTERDAM AVENUE	1508 AMSTERDAM AVENUE	NNE 1/8 - 1/4 (0.237 mi.)	177	566
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MANHATTANVILLE HOUSES	1430 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.088 mi.)	H34	131
AMSTERDAM BUS DEPOT	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J49	167
464 WEST 126TH STREET	464 WEST 126TH STREET	SW 1/8 - 1/4 (0.151 mi.)	T80	281
26TH PCT.	520 WEST 126TH STREET	W 1/8 - 1/4 (0.154 mi.)	U83	293
1351 AMSTERDAM REALTY CORP	1351 AMSTERDAM AVE	SW 1/8 - 1/4 (0.167 mi.)	Y95	331
HARLEM REAL ESTATE, LLC	434 WEST 126TH STREET	SSW 1/8 - 1/4 (0.170 mi.)	101	356
OLD BROADWAY HOTEL	540 WEST 126TH STREET	W 1/8 - 1/4 (0.179 mi.)	Z112	377
410 ST NICHOLAS AVE	410 ST NICHOLAS AVE	ESE 1/8 - 1/4 (0.209 mi.)	AI144	454
2-4 REALTY ASSOCIATES	2-4 ST. NICHOLAS PLACE	SSE 1/8 - 1/4 (0.210 mi.)	AC148	461
HUDSON MOVING AND STORAGE, INC	573 WEST 131ST STREET	NW 1/8 - 1/4 (0.223 mi.)	AM164	509
GRANT HOUSES	1305 AMSTERDAM AVENUE	SW 1/8 - 1/4 (0.226 mi.)	AN166	515
3260 BROADWAY SHELL SERVICE CE	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM180	576
COLUMBIA UNIVIVERSITY - SITE #	3233 BROADWAY	WNW 1/8 - 1/4 (0.248 mi.)	189	614
U-HAUL OF METRO NY	3270 BROADWAY	NW 1/8 - 1/4 (0.249 mi.)	AS190	620

NY AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database.

A review of the NY AST list, as provided by EDR, and dated 07/02/2012 has revealed that there are 83 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>
1437 AMSTERDAM AVE REALTY INC	405 WEST 131TH STREET	NNE 0 - 1/8 (0.052 mi.)	C7	50
AUNNUNCIATION CHURCH	88 CONVENT AVE	NNE 0 - 1/8 (0.079 mi.)	G21	79
CONVENT PROPERTIES	90 CONVENT AVE	NNE 0 - 1/8 (0.085 mi.)	G27	95
418 WEST 130TH LLC	418 WEST 130TH STREET	ESE 0 - 1/8 (0.097 mi.)	K41	147
P S 129	425 WEST 130TH STREET	ESE 0 - 1/8 (0.100 mi.)	K43	153
129 STREET REALTY CORP.	419 WEST 129TH STREET	SE 0 - 1/8 (0.115 mi.)	L53	209
418 WEST 129 STREET	418-420 WEST 129TH STRE	SE 0 - 1/8 (0.116 mi.)	L54	213
102 CONVENT AVENUE	102 CONVENT AVENUE	NNE 0 - 1/8 (0.116 mi.)	M55	215
NORMAN & MARSHALL REALTY CORP	416 W 129 ST	SE 0 - 1/8 (0.120 mi.)	L65	238
408 WEST 130TH ST JACHAR REALT	408 WEST 130TH ST	ESE 0 - 1/8 (0.124 mi.)	P66	242
106 CONVENT AVENUE	106 CONVENT AVENUE	NNE 1/8 - 1/4 (0.131 mi.)	M68	249
409 W 129 ST	409-411 W 129 ST	SE 1/8 - 1/4 (0.136 mi.)	Q69	252
412 WEST 129TH STREET	412 WEST 129TH STREET	SE 1/8 - 1/4 (0.137 mi.)	Q70	255
49 TERRACE CORPORATION	49 ST NICHOLAS TERRACE	ESE 1/8 - 1/4 (0.138 mi.)	P71	259
1467 AMSTERDAM AVENUE	1467 AMSTERDAM AVENUE	N 1/8 - 1/4 (0.138 mi.)	R73	265
110 CONVENT AVE ASSOC	110 CONVENT AVENUE	NNE 1/8 - 1/4 (0.141 mi.)	S74	269
41-47 ST NICHOLAS LLC	41 ST NICHOLAS TERRACE	SE 1/8 - 1/4 (0.155 mi.)	Q85	303
411 WEST 128 STREET	411 WEST 128 STREET	SSE 1/8 - 1/4 (0.161 mi.)	V87	309
P.S. 161	499 WEST 133RD STREET	N 1/8 - 1/4 (0.166 mi.)	X94	326
501 WEST 133RD STREET	501 WEST 133RD STREET	N 1/8 - 1/4 (0.169 mi.)	X100	352
1484 AMSTERDAM AVENUE	1484 AMSTERDAM AVENUE	N 1/8 - 1/4 (0.193 mi.)	AD121	398
537 WEST 133 STREET	537 WEST 133 ST.	NNW 1/8 - 1/4 (0.218 mi.)	AL157	487
CITY OF N.Y DEPARTMENT OF H.P.	541 WEST 133 ST	NNW 1/8 - 1/4 (0.227 mi.)	AL167	522
PRESTIGE TRANS CORP.DBA LEE MY	547 WEST 133RD STREET	NNW 1/8 - 1/4 (0.236 mi.)	AL175	557
INTREPID AUTO REPAIRS	553 WEST 133RD STREET	NNW 1/8 - 1/4 (0.247 mi.)	187	608

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
48 CONVENT AVE.	48 CONVENT AVE.	SSE 0 - 1/8 (0.047 mi.)	A1	37
CONVENT AVENUE FAMILY LIVING C	456 WEST 129TH STREET	S 0 - 1/8 (0.052 mi.)	A6	48
THE ST. AGNES HOUSING DEVELOPM	41 CONVENT AVENUE	SSE 0 - 1/8 (0.063 mi.)	A10	56
1405 AMSTERDAM AVENUE	1405 AMSTERDAM AVENUE	W 0 - 1/8 (0.078 mi.)	E19	75
MORNINGSIDE REALTY ASSOC.	1437 AMSTERDAM AVE	NNW 0 - 1/8 (0.080 mi.)	H24	89
MANHATTANVILLE -NYCHA	1430 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.088 mi.)	H33	118
1439 AMSTERDAM AVENUE	1439 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.092 mi.)	H36	136
JUNIOR HIGH SCHOOL 43 - MANHAT	509 WEST 129TH STREET	W 0 - 1/8 (0.092 mi.)	I38	140
33 CONVENT AVENUE HDFC	29-33 CONVENT AVENUE	S 0 - 1/8 (0.094 mi.)	F40	145
AMSTERDAM BUS DEPOT	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J50	174
21-25 CONVENT AVENUE REALTY LL	21 CONVENT AVENUE	S 0 - 1/8 (0.117 mi.)	O58	226
26TH PCT.	520 WEST 126TH STREET	W 1/8 - 1/4 (0.154 mi.)	U82	289
415 WEST 128 STREET	415 WEST 128 STREET	SSE 1/8 - 1/4 (0.156 mi.)	V86	307
410 WEST 128 STREET	410 WEST 128TH STREET	SSE 1/8 - 1/4 (0.162 mi.)	V88	311
1350 AMSTERDAM AVE 1346-1358	1350 AMSTERDAM AVE	SW 1/8 - 1/4 (0.168 mi.)	Y96	334
MISSIONARIES OF CHARITY	406 WEST 127TH STREET	S 1/8 - 1/4 (0.168 mi.)	W99	349
ONE CONVENT AVENUE REALTY CORP	1 CONVENT AVENUE	S 1/8 - 1/4 (0.171 mi.)	W102	358
433 WEST 126 STREET	433 WEST 126TH STREET	SSW 1/8 - 1/4 (0.174 mi.)	107	368
35 ST. NICHOLAS TERRACE LLC	25-35 ST. NICHOLAS TERR	SSE 1/8 - 1/4 (0.176 mi.)	108	370
400-408 WEST 128TH ST	400-408 WEST 128TH STRE	SSE 1/8 - 1/4 (0.177 mi.)	V109	372
AMSTER REALTY CORP.	1345-1349 AMSTERDAM AVE	SW 1/8 - 1/4 (0.179 mi.)	Y114	381
171 MORNINGSIDE AVENUE	171 MORNINGSIDE AVENUE	S 1/8 - 1/4 (0.185 mi.)	AA115	383
156 E 105 EQUITIES CONF. C/O M	511 W 125TH ST.	WSW 1/8 - 1/4 (0.190 mi.)	AB117	387
BAHAR REALTY ASSOCIATES	501 W 125TH ST	SW 1/8 - 1/4 (0.190 mi.)	Y118	389
ST. JOSEPH'S SCHOOL	168 MORNINGSIDE AVE.	S 1/8 - 1/4 (0.190 mi.)	AA119	393
TERRACE APARTMENTS, INC.	5 ST. NICHOLAS TERRACE	SSE 1/8 - 1/4 (0.193 mi.)	AC120	395
CENTRAL HARLEM ALCOHOL CRISIS	419 WEST 126TH STREET	SSW 1/8 - 1/4 (0.194 mi.)	AE124	404
TERRACE APARTMENTS, INC.	379 WEST 127TH STREET	SSE 1/8 - 1/4 (0.196 mi.)	126	409
556 WEST 126TH STREET	556-558 WEST 126TH STRE	W 1/8 - 1/4 (0.196 mi.)	AF127	412
ECDO HOUSES	561 WEST 126TH ST	WNW 1/8 - 1/4 (0.199 mi.)	AF128	414
560 WEST 126TH STREET	560-562 WEST 126TH STRE	WNW 1/8 - 1/4 (0.199 mi.)	AF129	416
TERRACE APARTMENTS, INC.	375 WEST 127TH STREET	SSE 1/8 - 1/4 (0.201 mi.)	AC132	422
368 WEST 127TH STREET	368 WEST 127TH STREET	SSE 1/8 - 1/4 (0.201 mi.)	AC133	425
160-166 MORNINGSIDE AVENUE REA	162 MORNINGSIDE AVENUE	S 1/8 - 1/4 (0.203 mi.)	AA135	428
THREE-TWO-TEN AAOCIATES	566 WEST 126 ST	WNW 1/8 - 1/4 (0.205 mi.)	AF136	430
K.M. NICHOLAS CORP	2 SAINT NICHOLAS TERRAC	SSE 1/8 - 1/4 (0.205 mi.)	AC137	433
K.M. NICHOLAS CORPORATION	2-4 ST. NICHOLAS TERR.	SSE 1/8 - 1/4 (0.205 mi.)	AC138	437
12-14 OLD BROADWAY	12-14 OLD BROADWAY	W 1/8 - 1/4 (0.205 mi.)	139	440
TERRACE APARTMENTS, INC.	1 ST. NICHOLAS TERRACE	SSE 1/8 - 1/4 (0.206 mi.)	AC140	442
GENSTART INDUSTRIES	412 WEST 126TH STREET	S 1/8 - 1/4 (0.206 mi.)	AE141	446
545 WEST 125TH STREET	545 WEST 125TH STREET	W 1/8 - 1/4 (0.208 mi.)	142	448
457 WEST 125TH STREET	457 WEST 125TH STREET	SSW 1/8 - 1/4 (0.208 mi.)	AH143	450
453 WEST 125 STREET	453 WEST 125TH STREET	SSW 1/8 - 1/4 (0.211 mi.)	AJ149	463
449 WEST 125 STREET	449 WEST 125 STREET	SSW 1/8 - 1/4 (0.214 mi.)	AJ153	475
445 W 125TH ST	445 W 125TH ST	SSW 1/8 - 1/4 (0.216 mi.)	AJ154	477
420 ST. NICHOLAS AVENUE	420 ST. NICHOLAS AVENUE	ESE 1/8 - 1/4 (0.217 mi.)	155	480
CITY OF N.Y DEPT OF H.P.D	370 ST NICHOLAS AVE	SE 1/8 - 1/4 (0.217 mi.)	AK156	484
UNCLE SAM CHEMICAL CO INC	573-577 WEST 131ST STRE	NW 1/8 - 1/4 (0.223 mi.)	AM163	498
351 ST NICHOLAS AVE	351 ST NICHOLAS AVE	SSE 1/8 - 1/4 (0.228 mi.)	168	525
563 WEST 125 STREET	563-565 WEST 125TH STRE	W 1/8 - 1/4 (0.228 mi.)	AO169	529
567/69 WEST 125TH ST	567 WEST 125TH ST	W 1/8 - 1/4 (0.230 mi.)	AO170	531
438 ST NICHOLAS AVE APT BLDG	438 ST NICHOLAS AVENUE	E 1/8 - 1/4 (0.232 mi.)	AP171	534
440 - 446 ST. NICHOLAS AVENUE	440 - 446 ST. NICHOLAS	E 1/8 - 1/4 (0.236 mi.)	AP176	562
3260 BROADWAY SHELL SERVICE CE	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM183	596
341 ST. NICHOLAS AVE.	341-343 ST. NICHOLAS AV	SSE 1/8 - 1/4 (0.239 mi.)	184	601
373 WEST 126 STREET	373 WEST 126 STREET	S 1/8 - 1/4 (0.242 mi.)	AR185	603

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GRANT HOUSES CITY OF N.Y DEPARTMENT OF H.P.	1305 AMSTERDAM AVENUE 367 W 126 ST	SW 1/8 - 1/4 (0.247 mi.) S 1/8 - 1/4 (0.248 mi.)	AN186 AR188	605 611

NY CBS AST: Chemical Bulk Storage Database. Registration data collected as required by 6 NYCRR Part 596. It includes facilities storing hazardous substances listed in 6 NYCRR Part 597, in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size. Includes facilities registered (and closed) since effective date of CBS regulations (July 15, 1988) through the date request is processed.

A review of the NY CBS AST list, as provided by EDR, and dated 01/01/2002 has revealed that there are 3 NY CBS AST sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
NYCTA	1381 AMSTERDAM AVE	WSW 0 - 1/8 (0.101 mi.)	J51	189
SHELTERING ARMS	126-129 OLD BROADWAY &	WSW 1/8 - 1/4 (0.178 mi.)	Y110	374
UNCLE SAM CHEMICAL CO., INC.	573-577 W. 131 ST ST.	NW 1/8 - 1/4 (0.223 mi.)	AM162	496

NY CBS: These facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size

A review of the NY CBS list, as provided by EDR, and dated 07/02/2012 has revealed that there are 3 NY CBS sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
NYCTA	1381 AMSTERDAM AVE	WSW 0 - 1/8 (0.101 mi.)	J51	189
SHELTERING ARMS	126-129 OLD BROADWAY &	WSW 1/8 - 1/4 (0.178 mi.)	Y110	374
UNCLE SAM CHEMICAL CO., INC.	573-577 W. 131 ST ST.	NW 1/8 - 1/4 (0.223 mi.)	AM162	496

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

NY HIST UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database

A review of the NY HIST UST list, as provided by EDR, and dated 01/01/2002 has revealed that there are 15 NY HIST 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>
CITY COLLEGE OF NEW YORK	91 CONVENT AVE (PK GYM)	NE 0 - 1/8 (0.064 mi.)	C12	60
AUNNUNCIATION CHURCH	88 CONVENT AVE	NNE 0 - 1/8 (0.079 mi.)	G21	79
1508 AMSTERDAM AVENUE	1508 AMSTERDAM AVENUE	NNE 1/8 - 1/4 (0.237 mi.)	177	566
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
BELL ATLANTIC	460 W 129TH STREET	SSW 0 - 1/8 (0.049 mi.)	B4	44
MANHATTANVILLE	1430 AMSTERDAM AV	NNW 0 - 1/8 (0.088 mi.)	H30	103

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
AMSTERDAM BUS DEPOT	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J50	174
464 WEST 126TH STREET	464 WEST 126TH STREET	SW 1/8 - 1/4 (0.151 mi.)	T80	281
26TH PCT.	520 WEST 126TH STREET	W 1/8 - 1/4 (0.154 mi.)	U83	293
OLD BROADWAY HOTEL	540 W 126 ST	W 1/8 - 1/4 (0.179 mi.)	Z111	376
LIONEL HAMPTON HOUSES	410 ST NICHOLAS AVE	ESE 1/8 - 1/4 (0.209 mi.)	AI145	456
2-4 ST NICHOLAS PL APT HOUSE	2 SAINT NICHOLAS PL	SSE 1/8 - 1/4 (0.210 mi.)	AC146	458
UNCLE SAM CHEMICAL CO INC	573-577 WEST 131ST STRE	NW 1/8 - 1/4 (0.223 mi.)	AM163	498
GRANT HOUSES	1305 AMSTERDAM AVENUE	SW 1/8 - 1/4 (0.226 mi.)	AN166	515
3260 BROADWAY SHELL SERVICE CE	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM180	576
U-HAUL OF METRO NY	3270 BROADWAY	NW 1/8 - 1/4 (0.249 mi.)	AS190	620

Records of Emergency Release Reports

NY Spills: Data collected on spills reported to NYSDEC. is required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

A review of the NY Spills list, as provided by EDR, and dated 05/22/2012 has revealed that there are 14 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>
SIDEWALK Date Closed: 1/11/2008	131ST ST/ CONVENT AVE	NNE 0 - 1/8 (0.053 mi.)	C8	53
420-418 WEST 129TH ST.	420 WEST 129TH ST.	SE 0 - 1/8 (0.113 mi.)	L52	206
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
462 WEST 129TH STREET Date Closed: 3/3/2003	462 WEST 129TH STREET	SSW 0 - 1/8 (0.047 mi.)	B2	39
MANHOLE #24661 Date Closed: 8/18/2009	130TH ST & AMSTERDAM AV	WNW 0 - 1/8 (0.070 mi.)	D13	64
AMSTERDAM AVE/W 129TH ST Date Closed: 10/15/1996	AMSTERDAM AVE W 129TH S	WNW 0 - 1/8 (0.071 mi.)	E16	69
APT BLDG Date Closed: 11/25/2009	1437 AMSTERDAM AVE	NNW 0 - 1/8 (0.080 mi.)	H23	87
Not reported Date Closed: 3/30/2004	AMSTERDAM AV/129TH ST	W 0 - 1/8 (0.083 mi.)	I25	91
MANHATTANVILLE Date Closed: 12/31/1992 Date Closed: 10/30/1995	1430 AMSTERDAM AV	NNW 0 - 1/8 (0.088 mi.)	H30	103
MANHATTANVILLE -NYCHA Date Closed: 2/6/2006 Date Closed: 3/27/1991 <i>*Additional key fields are available in the Map Findings section</i>	1430 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.088 mi.)	H33	118
WEST 128TH ST BET AMSTERD Date Closed: 4/11/1994	WEST 128TH ST BET AMSTE	WSW 0 - 1/8 (0.092 mi.)	J39	143
NYCTA Date Closed: 7/23/2002 Date Closed: 8/1/2008 <i>*Additional key fields are available in the Map Findings section</i>	1381 AMSTERDAM AVE	WSW 0 - 1/8 (0.101 mi.)	J51	189

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
AMSTERDAM AVE & 128TH ST Date Closed: 11/12/2003	AMSTERDAM AVE & 128TH S	WSW 0 - 1/8 (0.118 mi.)	N59	228
128TH ST & AMSTERDAM AVE Date Closed: 3/6/1995	128TH ST / AMSTERDAM AV	WSW 0 - 1/8 (0.118 mi.)	N60	230
VACANT LOT Date Closed: 9/29/2003	128TH ST & CONVENT AVE	S 0 - 1/8 (0.119 mi.)	O64	236

NY_Hist Spills: This database contains records of chemical and petroleum spill incidents. Under State law, petroleum and hazardous chemical spills that can impact the waters of the state must be reported by the spiller (and, in some cases, by anyone who has knowledge of the spills). In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY SPILLS database.

A review of the NY Hist Spills list, as provided by EDR, and dated 01/01/2002 has revealed that there are 14 NY Hist 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>
420-418 WEST 129TH ST.	420 WEST 129TH ST.	SE 0 - 1/8 (0.113 mi.)	L52	206

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
462 WEST 129TH STREET	462 WEST 129TH STREET	SSW 0 - 1/8 (0.047 mi.)	B2	39
MANHOLE #24661	130TH ST & AMSTERDAM AV	WNW 0 - 1/8 (0.070 mi.)	D13	64
AMSTERDAM AVE/W 129TH ST	AMSTERDAM AVE W 129TH S	WNW 0 - 1/8 (0.071 mi.)	E16	69
1430 AMSTERDAM AVE/MANH	1430 AMSTERDAM AVENUE	NNW 0 - 1/8 (0.088 mi.)	H29	100
MANHATTANVILLE	1430 AMSTERDAM AV	NNW 0 - 1/8 (0.088 mi.)	H30	103
MANHATTANVILLE HOUSING	1430 AMSTERDAM AVE	NNW 0 - 1/8 (0.088 mi.)	H31	115
WEST 128TH ST BET AMSTERD	WEST 128TH ST BET AMSTE	WSW 0 - 1/8 (0.092 mi.)	J39	143
AMSTERDAM DEPOT	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J47	164
AMSTERDAM BUS DEPOT	1381 AMSTERDAM AVENUE	WSW 0 - 1/8 (0.101 mi.)	J50	174
NYCTA	1381 AMSTERDAM AVE	WSW 0 - 1/8 (0.101 mi.)	J51	189
AMSTERDAM AVE & 128TH ST	AMSTERDAM AVE & 128TH S	WSW 0 - 1/8 (0.118 mi.)	N59	228
128TH ST & AMSTERDAM AVE	128TH ST / AMSTERDAM AV	WSW 0 - 1/8 (0.118 mi.)	N60	230
VACANT LOT	128TH ST & CONVENT AVE	S 0 - 1/8 (0.119 mi.)	O64	236

Other Ascertainable Records

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 03/15/2012 has revealed that there are 19 RCRA-NonGen 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>
NYC BD OF ED - PUBLIC SCHOOL 1	425 W 130TH ST	ESE 0 - 1/8 (0.100 mi.)	K44	156
CCNY - DAY CARE CENTER	111 CONVENT AVE	NNE 1/8 - 1/4 (0.145 mi.)	S77	277

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
NYC BD OF ED - PUBLIC SCHOOL 1	499 W 133RD ST	N 1/8 - 1/4 (0.166 mi.)	X93	323
J & J CLEANERS	1480 AMSTERDAM AVE	N 1/8 - 1/4 (0.168 mi.)	X98	338
CON EDISON	1484-86 AMSTERDAM AVE &	N 1/8 - 1/4 (0.193 mi.)	AD122	402
LEE MYLES TRANSMISSION	547 W 133RD ST	NNW 1/8 - 1/4 (0.236 mi.)	AL172	538
BODY PRO INC	547 W 133RD ST	NNW 1/8 - 1/4 (0.236 mi.)	AL173	548
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON MANHOLE 30825	W 129TH ST & CONVENT AV	SSE 0 - 1/8 (0.064 mi.)	A11	60
NYC DEPT PARKS & REC - MORNING	123RD ST & MORNINGSIDE	W 0 - 1/8 (0.084 mi.)	I26	93
NYC BD OF ED - JHS 43 M	509 W 129TH ST	W 0 - 1/8 (0.092 mi.)	I37	138
BETANCOURT JOSE - PRIVATE PROP	458 W 128TH ST	SSW 0 - 1/8 (0.098 mi.)	42	149
CON EDISON TRF 1886	S/S W 127ST 30' E/O MOR	S 1/8 - 1/4 (0.173 mi.)	W105	364
NELSONS CLEANERS	1345 AMSTERDAM AVE	SW 1/8 - 1/4 (0.179 mi.)	Y113	379
NYCHA - GRANT	1320 AMSTERDAM AVE	SW 1/8 - 1/4 (0.223 mi.)	AG161	494
UNCLE SAM CHEMICAL CO INC	573-577 W 131ST ST	NW 1/8 - 1/4 (0.224 mi.)	AM165	513
CON EDISON SERVICE BOX 27824	W 126TH & BROADWAY E	WNW 1/8 - 1/4 (0.238 mi.)	AQ178	569
MOBIL BIG APPLE SVC CTR	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM181	593
U-HAUL CENTER #803-69	3270 BROADWAY	NW 1/8 - 1/4 (0.249 mi.)	AS191	623
CON EDISON MANHOLE 68966	3227 BROADWAY	WNW 1/8 - 1/4 (0.250 mi.)	AQ192	625

CONSENT: Major Legal settlements that establish responsibility and standards for cleanup at NPL (superfund) sites. Released periodically by U.S. District Courts after settlement by parties to litigation matters.

A review of the CONSENT list, as provided by EDR, and dated 12/01/2011 has revealed that there is 1 CONSENT 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>
HUDSON RIVER PCBS	NO STREET APPLICABLE	WNW 1/2 - 1 (0.536 mi.)	0	8

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, and dated 02/27/2012 has revealed that there is 1 ROD 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>
HUDSON RIVER PCBS	NO STREET APPLICABLE	WNW 1/2 - 1 (0.536 mi.)	0	8

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, and dated 05/01/2012 has revealed that there are 32 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>
CONSOLIDATED EDISON	88 CONVENT AVE	NNE 0 - 1/8 (0.079 mi.)	G22	84
NYC BD OF ED - PUBLIC SCHOOL 1	425 W 130TH ST	ESE 0 - 1/8 (0.100 mi.)	K44	156
CONSOLIDATED EDISON	96 CONVENT AVE	NNE 0 - 1/8 (0.100 mi.)	G45	158

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CONSOLIDATED EDISON	102 CONVENT AVE	NNE 0 - 1/8 (0.116 mi.)	M56	218
CONSOLIDATED EDISON	1470 AMSTERDAM AVE	N 1/8 - 1/4 (0.150 mi.)	R79	279
NYCT - HARLEM SUBSTATION	309 W 133RD STREET	NNE 1/8 - 1/4 (0.153 mi.)	S81	285
NYC BD OF ED - PUBLIC SCHOOL 1	499 W 133RD ST	N 1/8 - 1/4 (0.166 mi.)	X93	323
J & J CLEANERS	1480 AMSTERDAM AVE	N 1/8 - 1/4 (0.168 mi.)	X98	338
CONSOLIDATED EDISON	1484-86 W 133 & AMSTERD	N 1/8 - 1/4 (0.193 mi.)	AD123	403
CONED	425 W 134TH ST	N 1/8 - 1/4 (0.221 mi.)	159	490
LEE MYLES TRANSMISSION	547 W 133RD ST	NNW 1/8 - 1/4 (0.236 mi.)	AL172	538
BODY PRO INC	547 W 133RD ST	NNW 1/8 - 1/4 (0.236 mi.)	AL174	550
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CONSOLIDATED EDISON	48 CONVERT AVE	SSE 0 - 1/8 (0.048 mi.)	A3	42
CONSOLIDATED EDISON	1413 AMSTERDAM AVE & 13	WNW 0 - 1/8 (0.072 mi.)	D18	72
NYC DEPT PARKS & REC - MORNING	123RD ST & MORNINGSIDE	W 0 - 1/8 (0.084 mi.)	I26	93
NYC BD OF ED - JHS 43 M	509 W 129TH ST	W 0 - 1/8 (0.092 mi.)	I37	138
BETANCOURT JOSE - PRIVATE PROP	458 W 128TH ST	SSW 0 - 1/8 (0.098 mi.)	42	149
NYCTA	1381 AMSTERDAM AVE	WSW 0 - 1/8 (0.101 mi.)	J51	189
NYNEX	AMSTERDAM AVE & 128TH S	WSW 0 - 1/8 (0.118 mi.)	N61	233
CONSOLIDATED EDISON	473 W 126TH ST	SW 1/8 - 1/4 (0.143 mi.)	T76	274
NYCDEP	520 W 126TH ST	W 1/8 - 1/4 (0.154 mi.)	U84	303
CONSOLIDATED EDISON	OPP 414 WEST 127 STREET	S 1/8 - 1/4 (0.164 mi.)	W90	317
COOKS FURNITURE REFINISHING	410 WEST 127TH STREET	S 1/8 - 1/4 (0.166 mi.)	W92	322
CONSOLIDATED EDISON	MORNINGSIDE AVE & 127 S	S 1/8 - 1/4 (0.173 mi.)	W103	361
NYNEX	127TH ST & CONVENT AVE	S 1/8 - 1/4 (0.173 mi.)	W104	363
CON EDISION - TRF 1886	S/S W 127ST 30' E/O MOR	S 1/8 - 1/4 (0.173 mi.)	W105	364
NYCHA - MANHATTANVILLE	555 W 126TH ST	W 1/8 - 1/4 (0.194 mi.)	AF125	406
CONSOLIDATED EDISON	518 W 125 ST	WSW 1/8 - 1/4 (0.199 mi.)	AB130	418
LIONEL HAMPTON HOUSES	410 ST NICHOLAS AVE	ESE 1/8 - 1/4 (0.209 mi.)	AI145	456
CONSOLIDATED EDISON	362 ST. NICHOLAS AVE	SE 1/8 - 1/4 (0.221 mi.)	AK158	489
UNCLE SAM CHEMICAL CO INC	573-577 W 131ST ST	NW 1/8 - 1/4 (0.224 mi.)	AM165	513
MOBIL S/S	3260 BROADWAY	NW 1/8 - 1/4 (0.239 mi.)	AM179	570

NY DRYCLEANERS: A listing of all registered drycleaning facilities.

A review of the NY DRYCLEANERS list, as provided by EDR, and dated 12/20/2011 has revealed that there are 2 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 & J/LA ESTRELLA CLEANERS	1480 AMSTERDAM AVENUE	N 1/8 - 1/4 (0.168 mi.)	X97	338
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SWAN MAGIC/FRIENDLY CLEANERS	471 W 125 STREET	SW 1/8 - 1/4 (0.202 mi.)	AH134	427

NY E DESIGNATION: Lots designation with an ?E? on the Zoning Maps of the City of New York for potential hazardous material contamination, air and/or noise quality impacts.

A review of the NY E DESIGNATION list, as provided by EDR, and dated 03/28/2012 has revealed that there is 1 NY E DESIGNATION site within approximately 0.125 miles of the target property.

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LOT 12,TAXBLOCK 1969	38 CONVENT AVENUE	SSE 0 - 1/8 (0.063 mi.)	A9	55

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

A review of the Manufactured Gas Plants list, as provided by EDR, has revealed that there is 1 Manufactured Gas Plants site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CON EDISON - WEST 132ND ST. ST	12TH AVE. BETWEEN W. 13	NW 1/4 - 1/2 (0.292 mi.)	201	689

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 476 records.

Site Name	Database(s)
8 WEST 13TH STREET TENANTS CORP. C	NY LIENS
1461 AMSTERDAM AVE LLC	NY TANKS
CONSOLIDATED EDISON	NY MANIFEST
NYCP&R - WEST 101ST STREET PAVILIO	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
NYC PKS & REC - 125TH STREET SHOPS	RCRA-CESQG, NY MANIFEST
CONSOLIDATED EDISON - SERV BOX 246	NY MANIFEST
CONED	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	RCRA-NonGen, NY MANIFEST
CONED	NY MANIFEST
BELL ATLANTIC - NY	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
MTA NYCT - PUMP ROOM 3706 - 2 3 LI	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
MTA NYCT - 155TH STREET SUBSTATION	CT MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
BELL ATLANTIC NY	NY MANIFEST
BELL ATLANTIC NY	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
NYC PARKS AND REC 86TH STREET	RCRA-NonGen, FINDS, NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	RCRA-NonGen, NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	RCRA-NonGen, NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONED	NY MANIFEST
NYC CITY COLLEGE	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON SB21181	NY MANIFEST
CONSOLIDATED EDISON	RCRA-NonGen, NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST
CONSOLIDATED EDISON	NY MANIFEST

EXECUTIVE SUMMARY

NEW YORK CONDITIONALLY EXEMPT SMAL

BELL ATLANTIC-NY

CONSOLIDATED EDISON

COLUMBIA UNIVERSITY

MH24816

131 STREET CLEANERS

LOT 68,TAXBLOCK 1969

LOT 3,TAXBLOCK 1998

LOT 61,TAXBLOCK 1997

WORLD TRADE CENTER 1&2

239 WEST 264TH ST

153 W 54TH STREET

527 WEST 34TH ST

CITY COLLEGE OF NEW YORK

PUBLIC SCHOOL 223-MOTT HALL

301 WEST 108TH/300 WEST 109TH STRE

NEW WEST APARTMENTS-PHASE I

447/448 CENTRAL PARK WEST

CITY COLLEGE OF NEW YORK

125TH STREET STATION

CITY COLLEGE OF NY

MTA NYCT - PUMP ROOM 3706 - 2 3 LI

CON EDISON - SERVICE BOX 24659

CON EDISON - SERVICE BOX 23615

NYSDOT BIN 1077030

NYSDOT BIN 1077050

NYSDOT BIN 2229339

CON EDISON - SERVICE BOX 24805

CON EDISON - SERVICE BOX 17473

CON EDISON - SERVICE BOX 15952

CON EDISON - SERVICE BOX 17236

CON EDISON - SERVICE BOX 17235

CON EDISON - SERVICE BOX 22269

CON EDISON - SERVICE BOX 16347

CON EDISON

CON EDISON MANHOLE 57425

CON EDISON MANHOLE 24599

NYCDEP - SHAFT 11B

CON EDISON SERVICE BOX 24639

CON EDISON MANHOLE 24646

CON EDISON MANHOLE 42145

CON EDISON SERVICE BOX 55142

CON EDISON MANHOLE 42145

CON EDISON MANHOLE 42141

CON EDISON

NYCT - 2ND AVENUE LINE

CON EDISON MANHOLE 21092

CON EDISON MANHOLE 22386

CON EDISON MANHOLE 22386

CON EDISON MANHOLE 42148

CON EDISON SERVICE BOX 21137

NYCDEP - SHAFT 10B

CON EDISON

CON EDISON SERVICE BOX 30853

CON EDISON

PA MANIFEST

NY MANIFEST

CT MANIFEST

NY MANIFEST

NY DRYCLEANERS

NY E DESIGNATION

NY E DESIGNATION

NY E DESIGNATION

NY SWF/LF, NY Spills

NY LTANKS, NY HIST LTANKS

NY LTANKS, NY HIST LTANKS

NY LTANKS

NY UST

NY AST

NY AST

NY AST

NY AST

NY AST

NY AST

NY AST, NY HIST AST

RCRA-LQG

RCRA-NonGen

RCRA-NonGen

RCRA-NonGen, FINDS

RCRA-NonGen

RCRA-NonGen

RCRA-NonGen

RCRA-NonGen

RCRA-NonGen

RCRA-NonGen

RCRA-NonGen

RCRA-NonGen, FINDS

RCRA-NonGen

RCRA-NonGen

RCRA-NonGen

RCRA-NonGen

RCRA-NonGen

RCRA-NonGen, FINDS

RCRA-NonGen

RCRA-NonGen

RCRA-NonGen

EXECUTIVE SUMMARY

CON EDISON COMPRESS GAS STATION /	ERNS
CON-ED PIER BETWEEN 38TH & 39TH ST	ERNS
SW CORNER OF EAST 89TH STREET AND	ERNS
NORTHEAST CORNER OF WEST 120TH ST	ERNS
56 CROSBY STREET AND 512 BOARDWAY	ERNS
GENERATION STATION AT 74TH STREET	ERNS
GERARD AVE AND EAST 150TH STREET	ERNS
GOETHALS BRIDGE AND WEST AVENUE	ERNS
GRAND STREET BRIDGE	ERNS
GRAND STREET BRIDGE	ERNS
HALF MILE WEST OF	ERNS
HOYT STREET	ERNS
HUDSON RIVER AT 77TH STREET	ERNS
HUDSON AVENUE TUNNEL HUDSON AVENUE	ERNS
INTERSTATE I 295 WEST BOUND	ERNS
INTERSECCION WEST 230 8TH ST. & KIN	ERNS
INTERSECTION OF EAST 15TH STREET	ERNS
INTERSECTION OF STATION ROAD AND 1	ERNS
KNAPP STREET AND AVE Z	ERNS
LANCEY STREET AND FDR DRIVE	ERNS
MANHOLE NUMBER447 BROADWAY AND WES	ERNS
NAPP STREET AND ALLEN AVE	ERNS
NEAR SOUTH STREET SEAPORT	ERNS
NEW YORK SHIPYARD / RED HOOK TERMI	ERNS
OCEAN AVE & EAST 21ST STREET. AND	ERNS
SOUTH OF 50TH STREET	ERNS
SOUTH OF DEPOT PLACE WEST OF MAJOR	ERNS
WEST OF THE THROGGS NECK BRIDGE	ERNS
WEST OF HUNTERS POINT AVE STATION	ERNS
OFF 155 STREET	ERNS
18 ONE STREET	ERNS
PETROPORT TERMINAL STREET ADDRESS	ERNS
PIER ON SOUTH STREET BY VESSEL(SPI	ERNS
PIERS 35-40 WEST SIDE HWY AND	ERNS
PRESIDENT STREET AND THIRD AVE	ERNS
QUEENS IN CLOSE PROXIMITY TO 59TH	ERNS
QUEENSBRIDGE PARK 59TH STREET BRID	ERNS
NORTH RIVER WATER POLLUTION CONTRO	ERNS
EAST RIVER NEAR WARDS ISLAND SLUDG	ERNS
EAST RIVER PIER 9 OLD SLIP & SOUTH	ERNS
EAST RIVER BELOW 14TH STREET	ERNS
WEST SIDE HWY	ERNS
WEST SIDE STORAGE YARD	ERNS
SMITH STREET & 14TH STREET	ERNS
SMITH AND 9TH STREET	ERNS
STATION ROCKWAY WEST BRAKE WATER L	ERNS
133RS STREET AND 7TH AVE	ERNS
T STREET AND THIRMANHOLE NUMBER:25	ERNS
63 RD STREET / 15TH AVE	ERNS
163-1495 STREET	ERNS
59 TH STREET BRIDGE ON NORTH SIDE	ERNS
132 STREET	ERNS
TRANSFORMER VAULT/453 AMSTERDAM AV	ERNS
6200 WATER STREET	ERNS
138 WOSSTER STREET	ERNS
YORK AVENUE BETWEEN E63 ST AND E68	ERNS
NYC EDC- WEST HARLEM WATERFRONT	FINDS
NYCP&R - WEST 101ST STREET PAVILIO	FINDS
NYC PKS & REC - 125TH STREET SHOPS	FINDS
WEST 135TH STREET-GARBAGE MTS	FINDS
MTA NYCT - 145TH STREET STATION -	FINDS
EAST 34TH STREET	FINDS

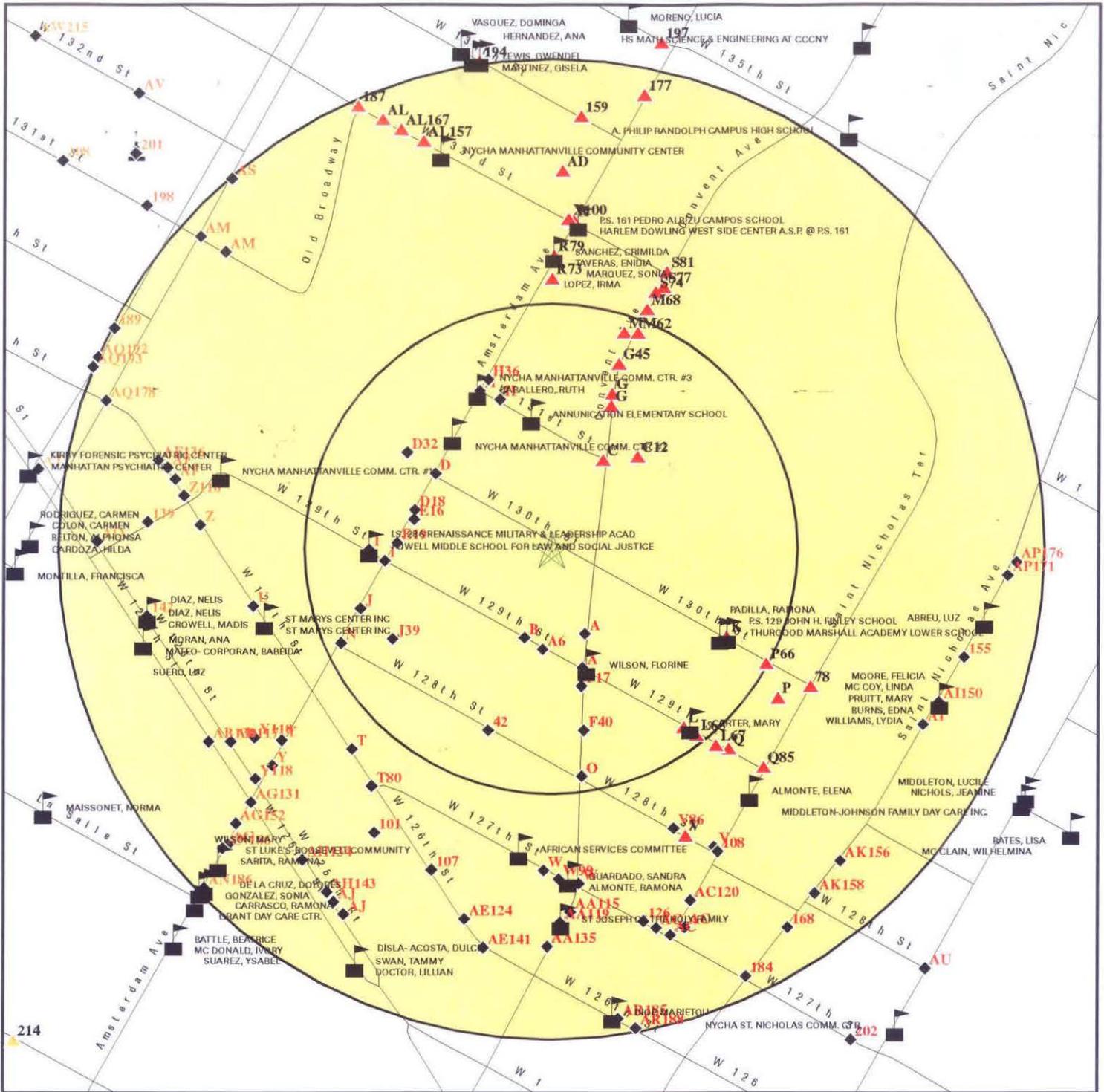
EXECUTIVE SUMMARY

215181; E 3RD STREET AND GREENWOOD	NY Spills
214253; 45 AVENUE AND 157TH STREET	NY Spills
WEST 49TH ST SUBSTATION	NY Spills
WEST 49TH ST SUBSTATION	NY Spills
215541; E 4TH STREET AND FORT HAMI	NY Spills
52ND STREET	NY Spills
215582; W 59TH STREET AND 6TH AVEN	NY Spills
59TH GENERATION STATION	NY Spills
215922; 69 STREET AND 58 AVENUE	NY Spills
215892; E 6 STREET AND FDR DRIVE S	NY Spills
ALLEY BETWEEN 40 WEST 27T	NY Spills
79TH STREET BOUT BASIN	NY Spills, NY Hist Spills
BUS STREET SPILL	NY Spills
ON STREET	NY Spills
STREET SPILL	NY Spills
215003; 92 STREET AND 32ND AVENUE	NY Spills
92 GREEN STREET	NY Spills
215882; 94 STREET AND CORONA AVENU	NY Spills
215275; 99 STREET AND 55 AVENUE	NY Spills
99TH STREET / QUEENS / HA	NY Spills, NY Hist Spills
ACADEMY STREET SUBSTATION	NY Spills
MANHOLE 58594	NY Spills
213886; BAILEY AVENUE & W231 STREE	NY Spills
215286; BATCHELDER STREET AND AVEN	NY Spills
216707; EAST BAY AVENUE AND BARETT	NY Spills
215412; BAY 47 STREET AND BATH AVE	NY Spills
214787; BAY 47TH STREET AND BATH A	NY Spills
214648; EAST BAY AVE AND HALLECK S	NY Spills
STREET	NY Spills
215348; BEDFORD AVENUE AND E 120TH	NY Spills
215555; BENNET AVENUE AND 187TH ST	NY Spills
43RD STREET	NY Spills
GRID # 39 WEST 61ST STREE	NY Spills
215514; BORDEN AVENUE AND 5TH STRE	NY Spills
213674; BOWNE STREET AND SANFORD S	NY Spills
213206; BROADWAY AND 254 STREET	NY Spills
215087; BROADWAY AND EXTERIOR STRE	NY Spills
215387; BROOKE AVENUE AND E148 STR	NY Spills
CANAL STREET	NY Spills, NY Hist Spills
213911; 327 CASANOVA STREET	NY Spills
216143; CEDAR AVENUE AND W 182 STR	NY Spills
215827; CEDAR AVENUE AND 180TH STR	NY Spills
215259; CEDAR AVENUE AND W 180TH S	NY Spills
WEST 109TH STREET AT	NY Spills, NY Hist Spills
CONNER STREET / PUMP STAT	NY Spills, NY Hist Spills
CONNORS STREET STATION /	NY Spills, NY Hist Spills
W 130 ST BETWEEN	NY Spills
MANHOLE # 44896	NY Spills
214050; CYPRESS PLACE AND EAST 133	NY Spills
220 WEST 49TH ST APT 709	NY Spills, NY Hist Spills
210815; FLUSHING AVENUE AND ADELPH	NY Spills
212353; GERARD AVENUE AND EAST 151	NY Spills
212325; GERARD AVENUE AND E151 STR	NY Spills
215632; GOLD STREET AND MYRTLE AVE	NY Spills
215554; GRAND CONCOURSE AND E 203R	NY Spills
215325; GRAND CONCOURSE BLVD AND E	NY Spills
215311; GRAND CONCOURSE BLVD AND E	NY Spills
216626; GREYSTONE AVENUE & W238 ST	NY Spills
214087; HARDING STREET AND AVENUE	NY Spills
HUDSON STREET APPROACH	NY Spills, NY Hist Spills
VARICK STREET APPROACH OF	NY Spills
ON STREET	NY Spills

EXECUTIVE SUMMARY

213157; JEROME AVENUE & EAST 198 S KNAPP STREET,PUMP STATION	NY Spills
215120; LAWRENCE STREET AND MYRTLE LEXINGTON AND 56TH STREET	NY Spills, NY Hist Spills
49 WEST 32ND STREET / NEW STREET SPILL	NY Spills
216014; MORRIS AVENUE AND EAST 165 WEST 45TH ST	NY Spills, NY Hist Spills
WEST STREET	NY Spills
215759; NORTHERN BLVD AND 216 STR	NY Spills, NY Hist Spills
215129; EAST OXFORD AVE AND E235 S	NY Spills
213335; PARK AVENUE AND NAVY STREE 15TH STREET AT PROSPECT	NY Spills
215690; RIVERDALE AVENUE AND WEST 146TH STREET/ROCKAWAY BLV	NY Spills, NY_Hist Spills
RUST STREET & 56TH STREET	NY Spills
215787; SOUTHERN BLVD AND E 172ND	NY Spills, NY Hist Spills
215566; SOUTHERN BLVD AND 172 STRE	NY Spills, NY Hist Spills
215526; SOUTHERN BLVD AND E 172ND	NY Spills
215046; E138 STREET AND LOCUST AVE	NY Spills
214998; E187 STREET AND WASHINGTON SOUTHFERRY TERM. CONSTRUCT	NY Spills
212463; WEST TREMONT AVENUE & PHEL STREET SPILL	NY Spills
215767; VETERANS ROAD WEST AND ROS	NY Spills
216819; VYSE AVENUE & E178 STREET	NY Spills
215115; WALNUT AVENUE AND EAST 138	NY Spills
216108; WATER STREET AND NEW DOCK	NY Spills
215931; WATER STREET AND NEW DOCK	NY Spills
215499; WEBSTER AVENUE AND E 182ND	NY Spills
214800; WEBSTER AVENUE AND 181ST S	NY Spills
215293; WILLOW AVENUE AND E 132ND	NY Spills
215292; WILLOW AVENUE AND E 132ND	NY Spills
208058; A AMSTERDAM AVE; AMSTERDAM	NY Spills
206267; SWC W 149 ST & AMSTERDAM A WEST 65 & WEST 49TH ST	NY Spills
74TH STREET	NY Hist Spills
206 E. 16TH STREET	NY Hist Spills
1385 WEST POINT AVENUE	NY Hist Spills
353 WEST 117TH STREET, HDFC INC.	NJ VCP
532-536 WEST 143RD STREET REALTY C	NY HIST AST
516-18 WEST 151TH STREET	NY HIST AST
611 WEST 152ND ST LLC	NY HIST AST
401 WEST 150 STREET	NY HIST AST
CITY COLLEGE OF NEW YORK - CUNY	NY HIST UST

DETAIL MAP - 3401340.6s



- ★ 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
- ⚡ Oil & Gas pipelines from USGS
- ▨ 100-year flood zone
- ▩ 500-year flood zone

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: 464 West 130th Street ADDRESS: 464 West 130th Street New York NY 10027 LAT/LONG: 40.8152 / 73.9534	CLIENT: EPDSCO CONTACT: Hiram Rothkrug INQUIRY #: 3401340.6s DATE: August 30, 2012 10:46 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
<u>STANDARD ENVIRONMENTAL RECORDS</u>								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	1	NR	1
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS NFRAP site List</i>								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	1	0	NR	1
<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		1	0	NR	NR	NR	1
RCRA-SQG	0.250		0	2	NR	NR	NR	2
RCRA-CESQG	0.250		3	3	NR	NR	NR	6
<i>Federal institutional controls / engineering controls registries</i>								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	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	0	1	NR	1
NJ SHWS	1.000		0	0	0	0	NR	0
NY VAPOR REOPENED	1.000		0	0	0	1	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
NJ SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
NY LTANKS	0.500		4	9	39	NR	NR	52
NY HIST LTANKS	0.500		4	10	25	NR	NR	39

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
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
NY TANKS	0.250		1	0	NR	NR	NR	1
NY UST	0.250		5	13	NR	NR	NR	18
NJ UST	0.250		0	0	NR	NR	NR	0
NY CBS UST	0.250		0	0	NR	NR	NR	0
NY MOSF UST	0.500		0	0	0	NR	NR	0
NY AST	0.250		21	62	NR	NR	NR	83
NY CBS AST	0.250		1	2	NR	NR	NR	3
NY MOSF AST	0.500		0	0	0	NR	NR	0
NY MOSF	0.500		0	0	0	NR	NR	0
NY CBS	0.250		1	2	NR	NR	NR	3
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
NY ENG CONTROLS	0.500		0	0	0	NR	NR	0
NJ ENG CONTROLS	0.500		0	0	0	NR	NR	0
NY INST CONTROL	0.500		0	0	0	NR	NR	0
NJ INST CONTROL	0.500		0	0	0	NR	NR	0
NY RES DECL	0.125		0	NR	NR	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
NJ VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
NY ERP	0.500		0	0	0	NR	NR	0
NY BROWNFIELDS	0.500		0	0	0	NR	NR	0
NJ BROWNFIELDS	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								
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
NY SWTIRE	0.500		0	0	0	NR	NR	0
NY SWRCY	0.500		0	0	0	NR	NR	0
NJ SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	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
NY DEL SHWS	1.000		0	0	0	0	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
NY HIST UST	0.250		5	10	NR	NR	NR	15
NY HIST AST	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
NY LIENS	TP		NR	NR	NR	NR	NR	0
NJ LIENS	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
NY Spills	0.125		14	NR	NR	NR	NR	14
NY Hist Spills	0.125		14	NR	NR	NR	NR	14
Other Ascertainable Records								
RCRA-NonGen	0.250		5	14	NR	NR	NR	19
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	1	NR	1
ROD	1.000		0	0	0	1	NR	1
UMTRA	0.500		0	0	0	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
NY HSWDS	0.500		0	0	0	NR	NR	0
NY UIC	TP		NR	NR	NR	NR	NR	0
NJ UIC	TP		NR	NR	NR	NR	NR	0
NY MANIFEST	0.250		11	21	NR	NR	NR	32
NJ MANIFEST	0.250		0	0	NR	NR	NR	0
NY DRYCLEANERS	0.250		0	2	NR	NR	NR	2
NJ DRYCLEANERS	0.250		0	0	NR	NR	NR	0
NY NPDES	TP		NR	NR	NR	NR	NR	0
NJ NPDES	TP		NR	NR	NR	NR	NR	0
NY AIRS	TP		NR	NR	NR	NR	NR	0
NY E DESIGNATION	0.125		1	NR	NR	NR	NR	1
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	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 COAL ASH	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
NJ COAL ASH	0.500		0	0	0	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
NJ FINANCIAL ASSURANCE TP			NR	NR	NR	NR	NR	0

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants	1.000		0	0	1	0	NR	1
EDR Historical Auto Stations	0.250		0	0	NR	NR	NR	0
EDR Historical Cleaners	0.250		0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

ATTACHMENT D

**CITY DIRECTORY ABSTRACT FROM
ENVIRONMENTAL DATA RESOURCES, INC.**

464 West 130th Street
464 West 130th Street
New York, NY 10027

Inquiry Number: 3401340.8
August 30, 2012

The EDR-City Directory Abstract



440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

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 1920 through 2006. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 100 feet of the target property.

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

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>IP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
2006	Hill-Donnelly Information Services	-	X	X	-
2000	Cole Information Services	-	-	-	-
1998	NYNEX Telephone	-	-	-	-
1996	NYNEX	-	-	-	-
1993	NYNEX Telephone	-	-	-	-
1988	NYNEX Telephone	-	-	-	-
1983	New York Telephone	-	-	-	-
1978	New York Telephone	-	-	-	-
1973	New York Telephone	-	-	-	-
1968	New York Telephone	-	-	-	-
1963	New York Telephone	-	-	-	-
1958	New York Telephone	-	-	-	-
1956	New York Telephone	-	-	-	-
1950	New York Telephone	-	X	X	-
1947	New York Telephone	-	-	-	-
1942	New York Telephone	-	X	X	-
1938	New York Telephone	-	X	X	-
1934	R. L. Polk & Co.	-	-	-	-
1931	Manhattan and Bronx Directory Publishing Company Residential Directory	-	-	-	-
1927	New York Telephone	-	X	X	-
1923	R. L. Polk & Co.	-	-	-	-
1920	R. L. Polk & Co.	-	-	-	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

464 West 130th Street
New York, NY 10027

FINDINGS DETAIL

Target Property research detail.

FINDINGS

ADJOINING PROPERTY DETAIL

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

W 130 ST

461 W 130 ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	DONAWA VIOLA MRS BEAUTCN	New York Telephone

474 W 130 ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1942	SONOROL LABS	New York Telephone
1938	CONVENT AV GARAGE	New York Telephone
	CONVENT AV GARAGE INC	New York Telephone
1927	BRUNSWICK GARAGE	New York Telephone
	METZGER GEO A GARAGE	New York Telephone
	BRUNSWIRK GARAGE	New York Telephone

W 130TH

474 W 130TH

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1927	Brunswick Garage	New York Telephone
	Brunswirk Garage	New York Telephone
	Metzger Geo A garage	New York Telephone

W 130TH ST

450 W 130TH ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	490 No Current Listing	Hill-Donnelly Information Services

FINDINGS

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

464 West 130th Street

Address Not Identified in Research Source

2006, 2000, 1998, 1996, 1993, 1988, 1983, 1978, 1973, 1968, 1963, 1958, 1956, 1950, 1947, 1942, 1938, 1934, 1931, 1927, 1923, 1920

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.

Address Researched

450 W 130TH ST

Address Not Identified in Research Source

2000, 1998, 1996, 1993, 1988, 1983, 1978, 1973, 1968, 1963, 1958, 1956, 1950, 1947, 1942, 1938, 1934, 1931, 1927, 1923, 1920

461 W 130 ST

2006, 2000, 1998, 1996, 1993, 1988, 1983, 1978, 1973, 1968, 1963, 1958, 1956, 1947, 1942, 1938, 1934, 1931, 1927, 1923, 1920

474 W 130 ST

2006, 2000, 1998, 1996, 1993, 1988, 1983, 1978, 1973, 1968, 1963, 1958, 1956, 1950, 1947, 1934, 1931, 1923, 1920

474 W 130TH

2006, 2000, 1998, 1996, 1993, 1988, 1983, 1978, 1973, 1968, 1963, 1958, 1956, 1950, 1947, 1942, 1938, 1934, 1931, 1923, 1920

464 West 130th Street

464 West 130th Street

New York, NY 10027

Inquiry Number: 3401340.9

September 10, 2012

EDR Environmental Lien and AUL Search



440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

ATTACHMENT E

**ENVIRONMENTAL LIENSEARCH REPORT
FROM ENVIRONMENTAL DATA RESOURCES,
INC.**

EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

464 West 130th Street
464 West 130th Street
New York, NY 10027

RESEARCH SOURCE

Source 1:

New Yorkk NYC Register
New York, NY

PROPERTY INFORMATION

Deed 1:

Type of Deed:	Deed
Title is vested in:	David Manesh
Title received from:	City of New York
Deed Dated	3/7/2000
Deed Recorded:	4/6/2000
Book:	3080
Page:	2210
Volume:	NA
Instrument:	NA
Docket:	NA
Land Record Comments:	See Exhibit
Miscellaneous Comments:	NA
Legal Description:	See Exhibit
Legal Current Owner:	David Manesh
Parcel # / Property Identifier:	Blk. 1969 / Lot 68
Comments:	See Exhibit

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found Not Found

Deed Exhibit 1

DXL/05/12/99/19 228-

8833-435091 NY

THIS INDENTURE, made the 7th day of March, 2000, nineteen hundred and ninety-nine between THE CITY OF NEW YORK, a municipal corporation, having its principal office at City Hall, Borough of Manhattan, City and State of New York the first party and DAVID MANKSH, residing at 23 Dunhill Road, New Hyde Park, NY 11040

hereinafter designated as the second party.

WHEREAS, after the appraisal under the direction of the Mayor of the City of New York and after a public hearing held on the 13th day of January, 1999, the Mayor by authorization dated the 1st day of April, 1999 (Calendar No.124), duly ordered and directed the sale at public auction of the premises therein and hereinafter described for the minimum or upset price of TWENTY SIX THOUSAND FIVE HUNDRED(\$26,500.00) DOLLARS and

WHEREAS, after advertisement in the manner provided by law, said Premises were duly sold by and under the direction of the Department of Citywide Administrative Services, Division of Real Property (now known as Division of Real Estate Services) at public auction at the time and place set forth in such advertisement for the sum of FIFTY SEVEN THOUSAND(\$57,000.00) DOLLARS that being the highest bid therefor at the said sale,

NOW, THEREFORE, WITNESSETH: That the first party, in consideration of the sum of FIFTY SEVEN THOUSAND(\$57,000.00) DOLLARS

lawful money of the United States, paid by the second party, does hereby grant and release unto the second party, the heirs or successors and assigns of the second party forever,

All that/those certain piece/s or parcel/s of land, together with any improvements thereon, situate, lying and being in the Borough of MANHATTAN City and State of New York, designated on the Tax Map of the City of New York, for the Borough of MANHATTAN, as said Tax Map was on June 9, 1982,

Block 1969 Lot/s 68

TO HAVE AND TO HOLD the premises herein granted unto the second party, the heirs or successors and assigns of the second party forever.

Subject to: (1) Any state of facts an accurate survey would show; (2) The rights, if any, of tenants and persons in possession, if any; (3) All violations of any local, State or Federal Government having jurisdiction thereof existing at the time of closing; (4) Building restrictions and zoning regulations in force at the time of the delivery of the deed and covenants, restrictions of record, and easements affecting the subject property; (5) The trust fund provisions of section thirteen of the Lien Law; and (6) All provisions of the Standard Terms and Conditions of Sale in force and effect at the time of the Sale that are applicable.

In the event of the acquisition by the City of New York, by condemnation or otherwise, of any part or portion of the premises herein granted (except for the portion of the premises herein granted containing a building as of the date of this deed), lying within the bed of any street, avenue, parkway, expressway, park, public place or catch-basin, as said street, avenue, parkway, expressway, park, public place or catch-basin is shown on the present City Map, the second party, the heirs or successors and assigns of the second party, shall only be entitled as compensation for such acquisition by the City to the amount of One Dollar, and shall not be entitled to compensation for any buildings or structures erected thereon after May 12, 1999, within the lines of the street, avenue, parkway, expressway, park, public place or catch-basin so laid out and acquired. This covenant shall be binding upon and run with the land and shall endure until the second party, the heirs or successors and assigns of the second party, obtains a written release of this covenant executed by the Deputy Commissioner of Department of Citywide Administrative Services, Division of Real Estate Services or a person designated by the City's Mayor who may in his sole discretion execute such release if the City Map has already been changed so as to eliminate the lines of said street, avenue, parkway, expressway, park, public place or catch-basin from any part or portion of the premises. If the City Map has not been so changed, the said officer may execute such a release after authorization by the City's Mayor. The second party, the heirs or successors and assigns of the second party shall pay such consideration for the release as said officer shall deem appropriate.

Premises 52 Court Street NYC NY

FILED 30 APR 2000

IN WITNESS WHEREOF, the party of the first part has caused these presents to be subscribed to by the Deputy Commissioner of the Department of Citywide Administrative Services, Division of Real Estate Services and by the City Clerk and its corporate seal to be hereunto affixed the day and year first above written.

THE CITY OF NEW YORK

Approved As To Form:

By: Lori Fierstein
Deputy Commissioner
Department of Citywide Administrative
Services, Division of Real Estate Services

Theodore K. Okun
Theodore K. Okun
Acting Corporation Counsel

By: [Signature]
City Clerk

STATE OF NEW YORK,)
COUNTY OF NEW YORK) ss.:

On the 15th day of October, in the year 19 99 before me, the undersigned, a Notary Public in and for said State, personally appeared LORI FIERSTEIN, personally known to me or proved to me the basis of satisfactory evidence to be the individual (s) whose name (s) is (are) subscribed to the within instrument and acknowledged to me that he/she/this executed the same in his/her/their capacity (ies), and that by his/her/their signature (s) on the instrument, the individual (s), or the person upon behalf of which the individual (s) acted, executed the instrument.

[Signature]
Notary Public

JOAN GONZALEZ
COMMISSIONER OF DEEDS
CITY OF NEW YORK NO. 6-2988
COMMISSION EXPIRES 7/1/00

STATE OF NEW YORK,)
COUNTY OF NEW YORK) ss.:

On the 19th day of Oct, in the year 19 99 before me, the undersigned, a Notary Public in and for said State, personally appeared CARLOS CUEVAS, personally known to me or proved to me on the basis of satisfactory evidence to be the individual (s) whose name (s) is (are) subscribed to the within instrument and acknowledged to me that he/she/this executed the same in his/her/their capacity (ies), and that by his/her/their signature (s) on the instrument, the individual (s), or the person upon behalf of which the individual (s) acted, executed the instrument.

[Signature]
Notary Public

ANN MARIE HEARY
Commissioner of Deeds
City of New York No. 1-6083
Certificate Filed in New York County
Commission Expires May 1, 2001

STATE OF NEW YORK,)
COUNTY OF NEW YORK) ss.:

On the _____ day of _____ in the year 19 _____ before me, the undersigned, a Notary Public in and for said State, personally appeared RAYMOND TEATUM, personally known to me or proved to me the basis of satisfactory evidence to be the individual (s) whose name (s) is (are) subscribed to the within instrument and acknowledged to me that he/she/this executed the same in his/her/their capacity (ies), and that by his/her/their signature (s) on the instrument, the individual (s), or the person upon behalf of which the individual (s) acted, executed the instrument.

Notary Public

DEED

BLOCK(S) 1969
LOT(S): 68
COUNTY: MANHATTAN

THE CITY OF NEW YORK

TO
DAVID MANESH

Record and return to:
David Manesh
223-17 Hempstead Ave
Queens Village NY 11429

REEL 3 0 8 0 0 6 2 2 1 2

CITY REGISTER RECORDING AND ENDORSEMENT PAGE
- NEW YORK COUNTY -
(This page forms part of the instrument)

Block/Lot(s): 1969
 Address: 52 Convent Ave
 City: Queens State: NY Zip: 11425
 Telephone: 718-334-3100

TOTAL NUMBER OF PAGES IN DOCUMENT INCLUDING THIS PAGE: 3
 Name: DAVID MANESH
 Address: 223-17 Hempstead Ave
 City: QUEENS VILLAGE State: NY Zip: 11425

THE FOREGOING INSTRUMENT WAS ENDORSED FOR THE RECORD AS FOLLOWS:

Examined by (s): EP
 Miso Tax Serial No. _____
 Miso Amount \$ _____
 Taxable Amount \$ _____
 Exempt in (1) YES NO
 Type: [] [] []
 Dwelling Type: [] [] [] []
 TAX RECEIVED ON ABOVE MORTGAGE
 County (incl) \$ _____
 City (incl) \$ _____
 Spec Advt \$ _____
 TAMF \$ _____
 NTA \$ _____
 NYCIA \$ _____
 TOTAL TAX \$ _____
 Apportionment Mortgage (1) YES NO
 J. P. Rosen, City Register

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 TP-50458 Fee (T) \$ _____ []
 RPTT Fee (T) \$ 35 []
 NPDS NPDC
 New York State Real Estate Transfer Tax
 \$ 225
 Serial Number 009344
 New York City Real Property Transfer Tax
 Serial Number R 3679
 New York State Gift Tax
 Serial Number _____

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OFFICE OF THE CITY REGISTER

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City Register
[Signature]

Appendix C

Health and Safety Plan



Geotechnical
Environmental and
Water Resources
Engineering

Health and Safety Plan Phase II Environmental Investigation

464 West 130th Street
New York, New York

GEI Consultants, Inc.
110 Walt Whitman Road, Suite 204
Huntington Station, New York 11746

Nicholas Recchia
Senior Project Manager

Robin B. DeHate, Ph.D.
Corporate Health and Safety Officer



**Health and Safety Plan
Phase II Environmental
Investigation**

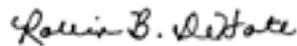
464 West 130th Street
New York, New York

GEI Consultants, Inc.
110 Walt Whitman Road, Suite 204
Huntington Station, NY 11743
631-760-9300

December 2012



Nicholas Recchia
Senior Project Manager



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Appendices

Appendix A	Site-Specific Information
Appendix B	Cold Stress Guidelines
Appendix C	Heat Stress Guidelines
Appendix D	Incident Reporting
Appendix E	GEI SOPs

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Health and Safety Plan

1. Background Information

1.1 General

Engineer	GEI Consultants, Inc. (GEI) 110 Walt Whitman Road, Suite 204 Huntington Station, New York 11746
Project Name	464 West 130 th Street New York, New York

This Health and Safety Plan (HASP) establishes policies and procedures to protect GEI personnel from the potential hazards posed by the activities at the 464 West 130th Street site located in New York, New York (see **Appendix A** – Site-Specific Information).

Reading of and adherence to the HASP is required of all onsite GEI personnel. Subcontractors for this project will be required to develop their own HASP for protection of their employees, but at a minimum must adhere to applicable requirements set forth in this HASP. Additionally, federal, state and local representatives, as well as Big Apple Developers representatives may be required to sign and adhere to this HASP, depending on the nature of their presence onsite during activities conducted by GEI.

The plan identifies measures to minimize accidents and injuries, which may result from project activities, emergencies, or during adverse weather conditions. Activities performed under this HASP will comply with applicable parts of OSHA Regulations, primarily 29 Code of Federal Regulations (CFR) Parts 1910 and 1926.

Included in **Appendix A** is a route to the nearest medical facility to the site with directions and contact information. **Appendix B** and **Appendix C** detail the signs, symptoms, care and procedures to both cold and heat stress, respectively. **Appendix D** contains the incident reporting form to be filled out in the event of an injury, accident or near-miss onsite. **Appendix E** contains the GEI Standard Operating Procedures (SOPs) related to work onsite.

1.2 Project Description

Activities conducted at the site will consist of soil borings and sampling of soil, groundwater and soil vapor.

1.3 Site Description

The project site is occupied by an unpaved lot approximately 3,900 square feet in area. The western portion of this lot is used for automobile parking, and the eastern portion of the lot appears to be a private garden.

Underground storage tanks containing petroleum products The purpose of this investigation is to determine if there are any impacts to site soils, groundwater and soil vapor potentially related to underground storage tanks on an adjacent property. These tanks historically contained gasoline as part of an automobile repair shop.

1.4 Hazard/Risk Analysis

1.4.1 Physical Hazards

Physical hazards associated with sampling operations onsite may consist of slips, trips and falls, and heavy lifting strains or sprains.

1.4.2 Cold Stress

During the winter months, workers may be exposed to the hazards of working in cold environments. Potential hazards in cold environments include frostbite, trench foot or immersion foot, hypothermia as well as slippery surfaces, brittle equipment, and poor judgment. The procedures to be followed regarding the avoidance of cold stress are provided in **Appendix B** – Cold Stress Guidelines and GEI Cold Stress Program found in the GEI Corporate Health and Safety Manual.

1.4.3 Heat Stress

A heat stress prevention program will be implemented when ambient temperatures exceed 70°F. The procedures to be followed are provided in **Appendix C** – Heat Stress Guidelines and GEI Heat Stress Program found in the GEI Corporate Health and Safety Manual.

1.4.4 Noise

Noise is a potential hazard associated with the operation of power tools. Site workers who will perform suspected or established high noise tasks and operations for short durations (less than 1-hour) will wear hearing protection. If deemed necessary by the Site Safety Officer (SSO), the Corporate Health & Safety Officer (CHSO) will be consulted on the need for additional hearing protection and the need to monitor sound levels for site activities. Other workers who do not need to be in proximity of the noise should distance themselves from the

equipment generating the noise. Refer to the Hearing Conservation Program found in the GEI Corporate Health and Safety Manual.

1.4.5 Hand and Power Tools

In order to complete various tasks at the site, personnel may use hand and power tools. The use of hand and power tools can present a variety of hazards, including physical harm from being struck by flying objects, being cut or struck by the tool, fire, and electrocution. Work gloves, safety glasses, and hard hats will be worn by the operating personnel at all times when using hand and power tools and Ground Fault Indicator (GFI)-equipped circuits will be used for all power tools. Refer to GEI's Hand and Power Tools SOP for more information and guidance.

1.4.6 Slips, Trips, and Falls

Working in and around the site will pose slip, trip and fall hazards due to slippery or uneven surfaces. Excavation at the site may cause uneven footing in trenches and around spoil piles. GEI employees will wear proper footwear (i.e. steel toe boots) and will employ good work practice and housekeeping procedures to minimize the potential for slips, trips, and falls.

1.4.7 Manual Lifting

Manual lifting of objects and equipment may be required. Failure to follow proper lifting technique can result in back injuries and strains. Site workers should use power equipment (such as a forklift) to lift heavy loads whenever possible and should evaluate loads before trying to lift them (i.e., they should be able to easily tip the load and then return it to its original position). Carrying heavy loads with a buddy and proper lifting techniques include:

- 1) make sure footing is solid
- 2) make back straight with no curving or slouching
- 3) center body over feet
- 4) grasp the object firmly and as close to your body as possible
- 5) lift with legs
- 6) turn with your feet, don't twist

Activity Hazard Analysis

Activity: Subsurface Investigation		
Task	Potential Hazard	Control Measure
Soil borings, groundwater, soil and soil vapor sample collection.	Chemical Contact from Building Inventory	Wear proper PPE during inventory including nitrile gloves and safety glasses. Dispose of gloves after use and wash hands.
	Insect Bites	Use insect repellent if needed. Avoid areas where insects may be prevalent.
	Slips, Trips and Falls	Keep trafficked areas free of slip/trip/fall hazards. Wear shoes with good traction.
	Heavy Lifting-Strains and Sprains	Use proper lifting techniques. Ask fellow worker for help.
	Poisonous Plants	Avoid brush areas. Staff should be able to identify common poisonous plants.
	Wild/Stray Animals	Avoid contact with wild/stray animals.
	Loud Noise	Wear hearing protection.
	Electrical Hand Tools	Ensure electrical equipment is connected to a Ground Fault Circuit Interrupter (GFCI).
	Heavy Equipment Proximity (Pinch Points, Crushing, Non-Secure Equipment)	Maintain awareness of location of equipment. Subcontractor use of a spotter for equipment operation.
Cuts and/or abrasions	Wear work gloves over nitrile gloves if needed.	

Site-Wide Potential Hazards	Control Measures
Inclement Weather	Weather reports, proper clothing, and work stoppage. If safe, work can resume 30 minutes after the last clash of thunder or flash of lightning.
Vehicular Traffic	Wear a high visibility, reflective safety vest at all times. Use cones, flags, barricades, and caution tape to define work area. Use a "spotter" to locate oncoming vehicles. Use vehicle to block work areas. Engage police detail if needed.
Heat/Cold Stress	Proper clothing, acclimatization, regular work breaks, fluid intake, watch

for signs of heat/cold stress.
Follow guidelines found in **Appendices B** and **C**

Physical Injury	<p>Wear work boots in good condition with non-slip soles.</p> <p>Maintain good visibility of the work area.</p> <p>Avoid walking on uneven or debris ridden ground surfaces.</p> <p>Identify and repair any condition that can be a potential tripping hazard.</p> <p>Practice good housekeeping by maintaining an orderly work area.</p>
Noise	<p>Wear hearing protection when near loud noises or operating equipment.</p> <p>Wear hearing protection whenever you need to raise your voice above normal conversational speech due to a loud noise source; this much noise indicates the need for protection.</p>

1.5 Evaluation of Potential Chemical Hazards

The characteristics of potential compounds at the Site are discussed below for information purposes. Adherence to the safety and health guidelines in this HASP should reduce the potential for exposure to the compounds discussed below. Table 1-1 presents chemical data regarding potential exposure and monitoring for the chemical types listed below.

1.5.1 Volatile Organic Compounds (VOCs)

VOCs, such as benzene, toluene, ethyl benzene, and xylene (BTEX) may be present in soil, soil vapor and groundwater. At high concentrations, these compounds generally have a depressant effect on the central nervous system (CNS), may cause chronic liver and kidney damage, and some are suspected human carcinogens. Benzene is a known human carcinogen. Acute exposure may include headache, dizziness, nausea, and skin and eye irritation. The primary route of exposure to VOCs is through inhalation and therefore respiratory protection is the primary control against exposure to VOCs.

1.5.2 Asbestos-Containing Materials

ACMs have not been identified onsite; they are not considered a potential concern at the site.

1.5.3 Polychlorinated Biphenyls

As polychlorinated Biphenyls (PCBs) have not been identified onsite, they are not considered a potential concern at the site.

1.5.4 Evaluation of Organic Vapor Exposure

During sampling activities, the requirement for air monitoring reduces the risk of overexposure by indicating when action levels have been exceeded and when PPE must be upgraded or changed. Action levels for VOCs and associated contingency plans for the work zone are discussed within Section 2. Screening of ambient air during sampling activities will be conducted with a photo-ionization detector (PID).

Exposure to organic vapors will be evaluated and/or controlled by monitoring air concentrations for organic vapors in the breathing zone with a PID.

**Table 1-1
Chemical Data**

Compound	CAS #	American Conference of Industrial Hygienists (ACGIH) threshold limit value (TLV)	OSHA personal exposure limit (PEL)	Route of Exposure	Symptoms of Exposure	Target Organs	Physical Data
Benzene	71-43-2	0.5 ppm (Skin)	1 parts per million (ppm) time weighted average (TWA) 5 ppm Short term exposure limit (STEL)	Inhalation Skin Absorption Ingestion Skin Contact	Irritation of eyes, skin, nose, respiratory system, giddiness, headache, nausea; staggering gait, fatigue, anorexia, weakness, dermatitis, bone marrow depression, known human carcinogen	Eyes, skin, central nervous system (CNS), bone marrow, blood	Flashpoint (FP): 12° F lower explosive limit (LEL): 1.2% Upper explosive limit (UEL):7.8% Vapor pressure (VP): 75 mm
Ethylbenzene	100-41-4	100 ppm	100 ppm	Inhalation Ingestion Skin Contact	Eye, skin, mucous membrane irritation; headache; dermatitis, narcosis; coma	Eyes, skin, respiratory system, CNS	FP: 55° F LEL: 0.8% UEL:6.7% VP: 7 mm
Toluene	108-88-3	50 ppm	200 ppm	Inhalation Skin Absorption Ingestion Skin Contact	Eye, nose irritation; fatigue, weakness, confusion, euphoria, dizziness, headache; dilated pupils, tearing of eyes; nervousness, muscle fatigue, insomnia, tingling in limbs; dermatitis	Eyes, skin, respiratory system, Central Nervous System, liver, kidneys	FP: 40° F LEL: 1.1% UEL:7.1% VP: 21 mm
Xylene	1330-20-7	100 ppm	100 ppm	Inhalation Skin Absorption Ingestion Skin Contact	Eye, skin, nose, throat irritation; dizziness, excitement, drowsiness; lack of coordination, staggering gait; corneal damage; appetite loss, nausea, vomiting, abdominal	Eyes, skin, respiratory system, Central Nervous System, GI tract, blood, liver,	FP: 90° F LEL: 0.9% UEL: 6.7% VP: 9 mm

**Table 1-1
Chemical Data**

Compound	CAS #	American Conference of Industrial Hygienists (ACGIH) threshold limit value (TLV)	OSHA personal exposure limit (PEL)	Route of Exposure	Symptoms of Exposure	Target Organs	Physical Data
					pain; dermatitis	kidneys	
Gasoline	8006-61-9	CA	none	Inhalation Absorption Ingestion Skin and/or Eye Contact	Irritation to eyes, skin, mucous membrane, dermatitis, headache, lassitude, blurred vision, dizziness, slurred speech, confusion, convulsions, chemical pneumonitis, possible liver and kidney damage	Eyes, Skin, Respiratory System, Liver, Kidneys, CNS	Clear liquid with a characteristic odor. FP: 45° IP: ? LEL: 1.4% UEL: 7.6% VP: 38-300 mm

Abbreviations

C = ceiling limit, not to be exceeded	LEL = Lower explosive limit
CNS = Central Nervous System	mm = millimeter
CVS = Cardiovascular System	ppm = parts per million
eV = electron volt	Skin = significant route of exposure
FP = Flash point	STEL = Short-term exposure limit (15 minutes)
IP = Ionization Potential	TWA = Time-weighted average (8 hours)
GI = Gastro-intestinal	UEL = Upper explosive limit
mg/m ³ = milligrams per cubic meter	VP = vapor pressure approximately 68° F in mm Hg (mercury)

1.6 Biological Hazards

During the course of the project, there is a potential for workers to come into contact with biological hazards such as animals, insects and plants. Workers will be instructed in hazard recognition, health hazards, and control measures during site-specific training.

1.6.1 Animals

During the conduct of site operations, wild animals such as stray dogs or cats, raccoons, and mice may be encountered. Workers will use discretion and avoid all contact with wild animals. If these animals present a problem, efforts will be made to remove these animals from the site by contacting a licensed animal control technician.

1.6.2 Insects

Insects, including bees, wasps, hornets, and spiders, may be present at the site making the chance of a bite possible. Some individuals may have a severe allergic reaction to an insect bite or sting that can result in a life threatening condition. Any individuals who have been bitten or stung by an insect should notify the SSO. The following is a list of preventive measures:

- Apply insect repellent prior to performing any field work and as often as needed throughout the work shift.
- Wear proper protective clothing (work boots, socks and light colored pants).
- Field personnel who may have insect allergies should have bee sting allergy medication onsite and should provide this information to the SSO prior to commencing work.

1.6.2.1 Tick Borne Illnesses

Lyme disease is caused by infection from a deer tick that carries a spirochete. During the painless tick bite, the spirochete may be transmitted into the bloodstream that could lead to the worker contracting Lyme disease.

Lyme disease may cause a variety of medical conditions including arthritis, which can be treated successfully if the symptoms are recognized early and medical attention is received. Treatment with antibodies has been successful in preventing more serious symptoms from developing. Early signs may include a flu-like illness, an expanding skin rash, and joint pain. If left untreated, Lyme disease can cause serious nerve or heart problems, as well as a disabling type of arthritis.

Symptoms can include a stiff neck, chills, fever, sore throat, headache, fatigue and joint pain. This flu-like illness is out of season, commonly happening between May and October when ticks are most active. A large expanding skin rash may develop around the area of the bite. More than one rash may occur. The rash may feel hot to the touch and may be painful. Rashes vary in size, shape, and color, but often look like a red ring with a clear center. The outer edges expand

in size. It's easy to miss the rash and the connection between the rash and a tick bite. The rash develops from three days to as long as a month after the tick bite. Almost one third of those with Lyme disease never get the rash.

Joint or muscle pain may be an early sign of Lyme disease. These aches and pains may be easy to confuse with the pain that comes with other types of arthritis. However, unlike many other types of arthritis, this pain seems to move or travel from joint to joint.

Lyme disease can affect the nervous system. Symptoms include stiff neck, severe headache, and fatigue usually linked to meningitis. Symptoms may also include pain and drooping of the muscles on the face, called Bell's Palsy. Lyme disease may also mimic symptoms of multiple sclerosis or other types of paralysis.

The disease can also cause serious, but reversible heart problems, such as irregular heartbeat. Finally, Lyme disease can result in a disabling, chronic type of arthritis that most often affects the knees. Treatment is more difficult and less successful in later stages. Often, the effects of Lyme disease may be confused with other medical problems.

It is recommended that personnel check themselves when in areas that could harbor deer ticks, wear light color clothing and visually check themselves and their buddy when coming from wooded or vegetated areas. If a tick is found biting an individual, the PM should be contacted immediately. The tick can be removed by pulling gently at the head with tweezers. The affected area should then be disinfected with an antiseptic wipe. The employee will be offered the option for medical treatment by a physician, which typically involves prophylactic antibiotics. If personnel feel sick or have signs similar to those above, they should notify the PM immediately.

The deer tick can also cause **Babesiosis**, an infection of the parasite *Babesia Microti*. Symptoms of Babesiosis may not be evident, but may also include fever, fatigue and hemolytic anemia lasting from several days to several months. Babesiosis is most commonly diagnosed in the elderly or in individuals whose immune systems are compromised.

Ehrlichiosis is a tick-borne disease which can be caused by either of two different organisms. Human monocytic ehrlichiosis (HME) is caused by *Ehrlichia chaffeensis*, which is transmitted by the lone star tick (*Amblyomma americanum*). Human granulocytic anaplasmosis (HGA), previously known as human granulocytic ehrlichiosis (HGE), is caused by *Anaplasma phagocytophilia*, which is transmitted by the deer tick (*Ixodes scapularis*).

In New York State, most cases of ehrlichiosis have been reported on Long Island and in the Hudson Valley. Ehrlichiosis is transmitted by the bite of infected ticks, including the deer tick and the lone star tick. The symptoms of HME and HGE are the same and usually include fever, muscle aches, weakness and headache. Patients may also experience confusion, nausea, vomiting and joint pain. Unlike Lyme disease or Rocky Mountain spotted fever, a rash is not common. Infection usually produces mild to moderately severe illness, with high fever and

headache, but may occasionally be life-threatening or even fatal. Symptoms appear one to three weeks after the bite of an infected tick. However, not every exposure results in infection.

Rocky Mountain spotted fever (RMSF) is a tick-borne disease caused by a rickettsia (a microbe that differs somewhat from bacteria and virus). Fewer than 50 cases are reported annually in New York State. In the eastern United States, children are infected most frequently, while in the western United States, disease incidence is highest among adult males. Disease incidence is directly related to exposure to tick-infested habitats or to infested pets. Most of the cases in New York State have occurred on Long Island. RMSF is characterized by a sudden onset of moderate to high fever (which can last for two or three weeks), severe headache, fatigue, deep muscle pain, chills and rash. The rash begins on the legs or arms, may include the soles of the feet or palms of the hands, and may spread rapidly to the trunk or rest of the body. Symptoms usually appear within two weeks of the bite of an infected tick.

*(Information on Ehrlichiosis, Babesiosis, and Rocky Mountain Spotted Fever was derived from the New York State Department of Health).

1.6.2.2 Wasps and Bees

Wasps (hornets and yellow-jackets) and bees (honeybees and bumblebees) are common insects that may pose a potential hazard to the field team if work is performed during spring, summer or fall. Bees normally build their nests in the soil. However, they use other natural holes such as abandoned rodent nests or tree hollows. Wasps make a football-shaped, paper-like nest either below or above the ground. Yellow-jackets tend to build their nests in the ground but hornets tend to build their nests in trees and shrubbery. Bees are generally more mild-mannered than wasps and are less likely to sting. Bees can only sting once while wasps are capable of stinging multiple times because of a barbless stinger. Wasps sting when they feel threatened. By remaining calm and not annoying wasps by swatting, you lessen the chance of being stung.

Wasps and bees inject a venomous fluid under the skin when they sting. The venom causes a painful swelling that may last for several days. If the stinger is still present, carefully remove it with tweezers. Some people may develop an allergic reaction (i.e. anaphylactic shock) to a wasp or bee sting. If such a reaction develops, seek medical attention at once. Employees should inform the SSO if they are allergic to bees or wasps, and inform the SSO if an epi-pen is required treatment and the location of the pen.

1.6.3 Plants

The potential for contact with poisonous plants exists when performing field work in undeveloped and wooded areas. Poison ivy, sumac, and oak may be present onsite. Poison ivy can be found as vines on tree trunks or as upright bushes. Poison ivy consists of three leaflets with notched edges. Two leaflets form a pair on opposite sides of the stalk, and the third leaflet stands by itself at the tip. Poison ivy is red in the early spring and turns shiny green later in the

spring. Poison sumac can be present in the form of a flat-topped shrub or tree. It has fern-like leaves, which are velvety dark green on top and pale underneath. The branches of immature trees have a velvety "down." Poison sumac has white, "hairy" berry clusters. Poison oak can be present as a sparingly branched shrub. Poison oak is similar to poison ivy in that it has the same leaflet configuration; however, the leaves have slightly deeper notches. Prophylactic application of Tecnu may prevent the occurrence of exposure symptoms. Post exposure over the counter products are available and should be identified at the local pharmacist. Susceptible individuals should be identified to the PM.

Contact with poison ivy, sumac, or oak may lead to a skin rash, characterized by reddened, itchy, blistering skin which needs first aid treatment. If a field worker believes they have contacted one of these plants, immediately wash skin thoroughly with soap and water, taking care not to touch your face or other body parts.

1.7 Sun Exposure

Employees are encouraged to liberally apply sunscreen, with a minimum sun protection factor (SPF) of 15, when working outdoors to avoid sunburn and potential skin cancer, which is associated with excessive sun exposure to unprotected skin. Additionally, employees should wear safety glasses that offer protection from UVA/UVB rays.

1.8 Personal Safety

Field activities have the potential to take site workers into areas which may pose a risk to personal safety. The following website (source) has been researched to identify potential crime activity in the area of the project:

http://www.nyc.gov/html/nypd/html/crime_prevention/crime_statistics.shtml

Type of Crime	Subject Property and Vicinity	New York City Total*
Murder	3	376
Rape	9	1330
Robbery	125	18,362
Felony Assault	107	17,871
Burglary	54	17,475
Grand Larceny	296	38,543

*New York City Total includes values from the 26th Precinct

2012 crime statistics from this website report that the 26th Precinct, which is closest to the subject property, is shown below in comparison to the current New York City total.

To protect yourself, take the following precautions:

- Use the buddy system (teams of a minimum of two persons present);
- Let the Site Safety Officer (SSO) know when you begin work in these areas and when you leave;
- Call in regularly;
- Pay attention to what is going on around you; and
- If you arrive in an area and it does not look safe to get out of your vehicle, lock the doors and drive off quickly, but safely.

Site workers must not knowingly enter into a situation where there is the potential for physical and violent behaviors to occur. If site workers encounter hostile individuals or a confrontation develops in the work area, suspend work activities, immediately leave the area of concern, and contact local 911 for assistance. Notify the SSO and CHSO of any incidents once you are out of potential danger.

In the event of an emergency, prompt communications with local emergency responders is essential. At least one charged and otherwise functioning cell phone to facilitate emergency communications will be on site.

2. Air Monitoring

Screening of ambient air with a PID will be conducted during sampling operations. An air monitoring program will not be necessary unless intrusive ground work is anticipated for the remediation of site conditions. If this is the case, air monitoring will be performed to identify and quantify airborne levels of hazardous substances and safety and health hazards in order to determine the appropriate level of worker protection needed on site in the event that intrusive work is conducted. At this time, air monitoring is not required onsite.

GEI may conduct perimeter air monitoring, and work zone monitoring for onsite workers during intrusive activities only. Activities requiring air monitoring will be conducted in accordance

with a pre-approved work plan. GEI will monitor and document daily site conditions and operations and inform field representatives (FR) of results. If action levels are exceeded GEI's field representative will immediately implement dust suppression activities and notify GEI's Project Manager and the CHSO. Work zone air monitoring will also be conducted when GEI employees are performing tasks associated with intrusive activities.

GEI will provide the following equipment for health and safety monitoring of onsite personnel:

- PID with 10.6 eV lamp or equivalent
- Dräger Chip Measurement System (CMS) with appropriate gas detection chips
- Dust Meter
- Combustible Gas Indicator (CGI): LEL / Oxygen (O₂) Sound Level Meter if deemed necessary by the PM and CHSO, type to be appropriate to the activities performed.

All air monitoring equipment will be calibrated and maintained in accordance with manufacturer's requirements. All calibrations will be recorded in the project notes daily or on a daily calibration form.

Organic vapor concentrations will be measured using the PID during intrusive activities. During intrusive operations, organic vapor concentrations will be measured continuously. Organic vapor concentrations will be measured upwind of the work site(s) to determine background concentrations at least twice a day, (once in the morning and once in the afternoon). The FR will interpret monitoring results using professional judgment and according to the alert and action limits set forth in the associated site work plan.

A dust meter will be used to measure airborne particulate matter during intrusive activities. Monitoring will be continuous and readings will be averaged over a 15-minute period for comparison with the action levels. Monitoring personnel will make a best effort to collect dust monitoring data from downwind of the intrusive activity. If offsite sources are considered to be the source of the measured dust, upwind readings will also be collected.

A combustible gas indicator (CGI) meter will be used to monitor for combustible gases and oxygen content during intrusive activities.

Guidelines have been established by the National Institute for Occupational Safety and Health (NIOSH) concerning the action levels for work in a potentially explosive environment. These guidelines are as follows: 10-percent of the lower explosive limit (% LEL) - Limit all activities to those which do not generate sparks and 20% LEL - Cease all activities in order to allow time for the combustible gases to vent.

3. Statement of Safety and Health Policy

GEI is committed to providing a safe and healthy work environment for its employees. To maintain a safe work environment, GEI has established an organizational structure and a Corporate Health and Safety Program to promote the following objectives:

- Reduce the risk of injury, illness, and loss of life to GEI employees.
- Maintain compliance with federal, state, and other applicable safety regulations.
- Minimize GEI employees' work exposure to potential physical, chemical, and biological hazards.

Safety policy and procedure on any one project cannot be administered, implemented, monitored and enforced by any one individual. The total objective of a safe, accident free work environment can only be accomplished by a dedicated, concerted effort by every individual involved with the project from management down to all employees.

Each GEI employee must understand their value to the company; the costs of accidents, both monetary, physical, and emotional; the objective of the safety policy and procedures; the safety rules that apply to the safety policy and procedures; and what their individual role is in administering, implementing, monitoring, and compliance of their safety policy and procedures. This allows for a more personal approach to compliance through planning, training, understanding and cooperative effort, rather than by strict enforcement. If for any reason an unsafe act persists, strict enforcement will be implemented.

4. Key Project Personnel/Responsibilities and Lines of Authority

GEI Personnel		
Nicholas Recchia	Project Manager	Office: 631-759-2973 Cell: 516-395-8763
Erik Curran	Site Safety Officer (SSO), Field Representative(FR)	Cell: 631-764-6691
Steve Hawkins	Regional Health and Safety Officer (RHSO)	Office: 860-368-5348 Cell: 860-916-4167
Robin DeHate	Corporate Health and Safety Officer (CHSO)	Office: 813-774-6564 Cell: 813-323-6220

Lines of Authority will be as follows:

Onsite – GEI will have responsibility for safety of its employees during the work performed at the site. GEI's FR will have a cell phone available to contact the appropriate local authorities, in the event of an emergency. The FR will be available for communication with the CHSO, SSO, and PM and with the client representative. The FR and/or SSO may change due to the nature of work being conducted onsite.

All GEI employees have the authority to stop work activities if an unanticipated hazard is encountered or a potential unsafe condition is observed. The GEI employee should contact the Corporate Health and Safety Officer and the Project Manager to discuss the stop work conditions and potential control methods that can be implemented.

4.1 Project Manager (PM)

Responsibilities of the PM include the following:

- Verifies implementation of the HASP
- Participates in incident investigations
- Verifies the HASP has all of the required approvals before any site work is conducted
- Verifies that the Big Apple site/project manager is informed of project changes, which require modifications of the HASP
- Has overall responsibility for project health and safety
- Acts as the primary point of contact with Big Apple for site related activities and coordination with non-project related site operations
- Overseeing of performance of project tasks as outlined in the scope of work
- Plans field work using appropriate safe procedures and equipment
- Verifies and documents current training and medical monitoring clearance for GEI project staff
- Verifies that subcontractor has a site-specific HASP

4.2 Corporate Health and Safety Officer (CHSO)

The CHSO is a qualified health and safety professional with experience in hazardous waste site remediation activities. Responsibilities of the CHSO include the following:

- Provides support for the development and approval of the HASP
- Serves as the primary contact to review health and safety matters that may arise
- Approves revised or new safety protocols for field operations
- Coordinates revisions of this HASP with field personnel
- Coordinates upgrading or downgrading of PPE with the site manager
- Leads the investigation of all accidents/incidents
- Provide the necessary training of GEI field crews in accordance with OSHA regulations and provides proof of training to the SSO prior to GEI personnel entering the site

4.3 Site Safety Office (SSO)

Responsibilities of the SSO include the following:

- Verifies that the HASP is implemented and that all health and safety activities identified in the HASP are conducted and/or implemented
- Verifies that field work is scheduled with adequate personnel and equipment resources to complete the job safely and enforces site health and safety rules

- Verifies that adequate communications between field crews and emergency response personnel is maintained during emergency situations
- Verifies that field site personnel are adequately trained and qualified to work at the site and that proper PPE is utilized by field teams
- Report all accidents/incidents to the CHSO, and PM
- Stop work if necessary
- Identifies operational changes which require modifications to the HASP and ensures that the procedure modifications are implemented and documented through changes to the HASP, with CHSO approval
- Determines upgrades or downgrades of PPE based on site conditions and/or real-time monitoring results with CHSO approval
- Reports to the CHSO and provides summaries of field operations and progress

4.4 Field Representative (FR)

The FR is responsible for carrying out field work on a monthly, quarterly, or as-needed basis. Responsibilities of the FR include:

- Conducts routine safety inspection of the work area
- Documenting occurrences of unsafe activity and what actions were taken to rectify the situation
- Reports any unsafe or potentially hazardous conditions to the SSO and PM
- Maintains familiarity of the information, instructions, and emergency response actions contained in the HASP
- Complies with rules, regulations and procedures set forth in the HASP
- Prevents admittance to work site by unauthorized personnel
- Inspects all tools and equipment, including PPE, prior to use and documents inspection on the daily safety meeting form or in the appropriate field book
- Verifies that monitoring instruments are calibrated
- Stops work if necessary

5. Subcontractors

GEI may subcontract with various companies to conduct work onsite on an as-needed basis. Contact information for these subcontractors will be available when such work is being conducted.

GEI requires its subcontractors to work in a responsible and safe manner. Subcontractors for this project will be required to develop their own HASP for protection of their employees and must adhere to applicable requirements set forth in this HASP.

6. Emergency Contact List

EMERGENCY INFORMATION

Important Phone Numbers		Directions to: Harlem Hospital Center 506 Lenox Avenue New York, NY 10037
Police	911	Head northwest on W 130 th Street toward Convent Avenue for 256 feet. Take the 1 st left onto Convent Avenue and go 0.2 miles. Continue onto Morningside Avenue for 0.1 miles. Turn left onto W 125 th St/Dr. Martin Luther King Jr. Boulevard and go 0.2 miles. Take the 2 nd left onto 8 th Ave/Frederick Douglass Blvd and go 0.5 miles. Turn right onto W 135 th St and go 0.3 miles. Take the 2 nd left onto Lenox Ave and go 285 feet. The hospital will be on the right. Refer to Hospital Route Map in Appendix A .
Fire Department	911	
Ambulance	911	
Occupational Health Clinic Plainview Medical Group	(516) 822-2541	
Local Hospital Harlem Hospital Center	(212) 939-1000	
Project Manager	Nicholas Recchia	Office: 631-759-2973 Cell: 516-395-8763
Corporate H&S Officer	Robin DeHate	(813) 323-6220 cell (813) 774-6564 office
Regional H&S Officer	Steve Hawkins	(860) 916-4167 cell (860) 368-5348 office
Local H&S Coordinator	Tess Landgraff	(516) 233-6706 cell (631) 759-2965 office
Client Contact		
Joseph Rastegar	(516) 482-4820 x303-office	(516) 984-4680-cell

7. Training Program

7.1 HAZWOPER Training

In accordance with 29 CFR 1910.120, hazardous waste site workers will, at the time of job assignment, have received a minimum of 40 hours of initial health and safety training for hazardous waste operations and emergency response (HAZWOPER). At a minimum, the training will have consisted of instruction in the topics outlined in the standard and can include applicable sections of 29 CFR 1926. Personnel who have not met the requirements for initial training will not be allowed to work in any site activities in which they may be exposed to hazards (chemical or physical). Proof of training will be submitted to the CHSO or her representative prior to the start of field activities.

7.2 Annual Eight-Hour Refresher Training

Annual eight-hour refresher training will be required of all hazardous waste site field personnel in order to maintain their qualifications for fieldwork. The training will cover a review of 29 CFR 1910.120 requirements and related company programs and procedures. Proof of current 8-hour refresher training will be submitted to the CHSO or her representative prior to the start of field activities.

7.3 Site-Specific Training

Prior to field activities, the GEI PM or the SSO will verify all field personnel assigned to the project will have completed training that will specifically address the activities, procedures, monitoring, and equipment used in the site operations. It will include site and facility layout, hazards and emergency services at the site, and will highlight all provisions contained within the HASP and applicable GEI H&S SOPs. This training will also allow employees to clarify anything they do not understand and to reinforce their responsibilities regarding safety and operations for their particular activity. The training will be documented on the Project Safety Briefing form. The signed form will be forwarded to the Health and Safety Committee at Health&SafetyCommittee@geiconsultants.com. In addition, all GEI project personnel will sign the plan to document that they understand the hazards and control measures presented and agree to comply with the procedures established in the HASP. Personnel that have not received site-specific training will not be allowed on-site.

7.4 Supervisor Training

Personnel acting in a supervisory capacity will have received eight hours of instruction in addition to the initial 40 hours training. In addition, supervisors will have 1 year of field experience and training specific to work activities (i.e., sampling, construction observation, etc.).

7.5 Onsite Safety Briefings

Other onsite GEI personnel will be given health and safety briefings by a FR to assist GEI personnel in safely conducting work activities. The briefings will include information on new operations to be conducted, changes in work practices or changes in the site's environmental conditions, as well as periodic reinforcement of previously discussed topics. The briefings will also provide a forum to facilitate conformance with safety requirements and to identify performance deficiencies related to safety during daily activities or as a result of safety inspections. The meetings will also be an opportunity to periodically update the workers on monitoring results. These safety briefing will be documented in the GEI field book or on the daily safety briefing form.

8. Medical Surveillance Program

GEI maintains a continuous, corporate, medical surveillance program that includes a plan designed specifically for field personnel engaged in work at sites where hazardous or toxic

materials may be present. Robin DeHate is GEI's CHSO and is responsible for the administration and coordination of medical evaluations conducted for GEI's employees at all branch office locations. Comprehensive examinations are given to all GEI field personnel participating in hazardous waste operations on an annual or biennial basis (as determined to be appropriate by the CHSO). The medical results of the examinations aid in determining the overall fitness of employees participating in field activities.

Under the CHSO's supervision, all field personnel undergo a complete initial physical examination, including a detailed medical and occupational history, before they participate in hazardous waste site investigations. Extensive annual/biennial reexaminations are also performed. Upon completion of these tests, personnel are certified by an occupational health physician as to whether they are fit for field work in general, and fit to use all levels of respiratory protection, in particular.

If a GEI employee or other project worker shows symptoms of exposure to a hazardous substance and wishes to be rechecked, he/she will be directed to the nearest area hospital or medical facility.

All GEI subcontractor personnel that will enter any active waste handling or other potentially impacted area must certify that they are participating in a medical surveillance program that complies with OSHA regulations for hazardous waste operations (i.e., 29 CFR 1910.120 and 29 CFR 1926.65). Proof of medical clearance will be submitted to the CHSO or their representative prior to the start of field activities.

9. Site Control Measures

9.1 Site Zones

During intrusive activities, site zones are intended to control the potential spread of contamination and to assure that only authorized individuals are permitted into potentially hazardous areas. Barricade tape and cones will be used to designate work zone areas. Decontamination will be conducted as outlined in Section 12. If any heavily contaminated soils are encountered during intrusive work, separate wash areas for heavy equipment and personal PPE will be established.

10. Incident Reporting

GEI will report incidents involving GEI personnel or subcontractor personnel, such as lost time injuries, injuries requiring medical attention, near miss incidents, fires, fatalities, accidents involving the public, and property damage. The report will be made to the GEI PM **verbally** within 2 hours of the incident. The PM will immediately inform the CHSO, the Director of Human Resources and a Project-Specific client representative for the incident. Staff must fill out the Incident Report form (see **Appendix D**).

Staff must be aware that addressing accidents and injuries takes precedence over completing field work. If a staff member requires medical attention, or an incident/accident has occurred that call this into question, work must stop and the situation must be addressed.

11. Medical Support

In case of minor injuries, onsite care will be administered with the Site first aid kit. Staff may also go to the nearest occupational health provider (Plainview Medical Group) located at 87 Cold Spring Road, in Syosset, NY. Directions to Plainview Medical Group can be found in **Appendix A**.

For serious injuries, call 911 and request emergency medical assistance. Seriously injured persons should not be moved, unless they are in immediate danger.

Section 6 and **Appendix A** contain detailed emergency information, including directions to the nearest hospital, and a list of emergency services and their telephone numbers. GEI field personnel will carry a cellular telephone.

12. Decontamination Procedures

12.1 Personnel Decontamination Station

As needed, a personnel decontamination station where workers can drop equipment and remove PPE will be set up at the decontamination pad by the Contractor when intrusive activities are conducted at the site. It will be equipped with basins for water and detergent, and trash bag(s) or cans for containing disposable PPE and discarded materials. Once personnel have decontaminated at this station and taken off their PPE, they will proceed to a portable sink where they will wash themselves wherever they have potentially been exposed to any contaminants (e.g., hands, face, etc.).

Contaminated PPE (gloves, suits, etc.) will be decontaminated and stored for reuse or placed in plastic bags (or other appropriate container) and disposed of in an approved facility.

Decontamination wastewater and used cleaning fluids will be collected and disposed of in accordance with all applicable state and federal regulations.

12.2 Decontamination Equipment Requirements

If heavily contaminated soils are encountered during intrusive work, the following equipment, as needed, will be in sufficient supply to implement decontamination procedures for GEI's equipment.

- Buckets
- Alconox™ detergent concentrate
- Hand pump sprayers

- Long handle soft bristle brushes
- Large sponges
- Cleaning wipes for respirators
- Bench or stool(s)
- Methanol
- Liquid detergent and paper towels
- Plastic trash bags

13. Personal Protective Equipment

PPE required for each level of protection is as follows.

Safety Equipment	Level A	Level B	Level C	Level D
Tyvek [®] suit or work overalls as appropriate for work being performed and materials handled				•
Hard hats with splash shields or safety glasses			•	•
Steel-toe boots with over-boots as appropriate for work being performed and materials handled			•	•
Chemical-resistant gloves			•	•
Reflective Vest			•	•
Half- or full-face respirators with HEPA cartridges as approved by the CHSO			•	
Tyvek [®] splash-resistant suit			•	
Chemical-resistant clothing		•		
Long Pants	•	•	•	•
Pressure-demand, full-face SCBA or pressure demand supplied air respirator with escape SCBA	•	•		
Inner and outer chemical-resistant gloves	•	•		
Chemical-resistant safety boots or shoes	•	•		
Two-way radio	•	•		
Cell Phone			•	•
Hard hat	•	•	•	•
Fully encapsulating chemical-resistant suit	•			

PPE can include hardhats, safety glasses or face shields, steel toe/steel shank boots, hearing protection, nitrile gloves, and leather gloves as necessary.

13.1 OSHA Requirements for PPE

All PPE used during the course of this field investigation must meet the following OSHA standards:

Type of Protection	Regulation	Source
Eye and Face	29 CFR 1910.133	ANSI Z87.1 1968
Respiratory	29 CFR 1910.134	ANSI Z88.1 1980
Head	29 CFR 1910.135	ANSI Z89.1 1969
Foot	29 CFR 1910.136	ANSI Z41.1 1999 or ASTM F-2412-2005, and ASTM F-2413-2005

CRF = Code of Federal Regulations

ANSI = American National Standards Institute

ASTM = American Society For Testing and Materials

Any onsite personnel who have the potential to don a respirator must have a valid fit test certification and documentation of medical clearance. The CHSO will maintain such information on file for onsite personnel. The PM will obtain such information from the subcontractor's site supervisor prior to the initiation of any such work. Both the respirator and cartridges specified for use in Level C protection must be fit-tested prior to use in accordance with OSHA regulations (29 CFR 1910.134). Air purifying respirators cannot be worn under the following conditions:

- Oxygen deficiency;
- IDLH concentrations; and
- If contaminant levels exceed designated use concentrations.

The use of respirators is not anticipated.

Use of Level A or Level B PPE is not anticipated. If conditions indicating the need for Level A or Level B PPE are encountered, personnel will leave the work zone and this HASP will be revised with oversight of the CHSO, GEI personnel will not re-enter the work zone until conditions allow.

14. Supplemental Contingency Plan Procedures

14.1 Hazard Communication Plan

GEI personnel have received hazard communication training as part of their new employee health and safety orientation and their 8-hour HAZWOPER refresher training. All hazardous materials used on the Site will be properly labeled, stored, and handled. SDSs will be available to onsite staff.

14.2 Fire

In the event of a fire, all personnel will evacuate the area. GEI's field representative will contact the local fire department and report the fire. Notification of evacuation will be made to the GEI PM and the CHSO. The field representative will account for GEI personnel and/or subcontractor personnel and report their status to the PM.

14.3 Severe Weather

The contingency plan for severe weather includes reviewing the expected weather to determine if severe weather is in the forecast. Severe weather includes high winds over 30 mph, heavy rains or snow squalls, thunderstorms, hurricanes, and lightning storms. If severe weather is approaching, the decision to evacuate GEI personnel and subcontractor personnel from the site is the responsibility of GEI's field representative. Notification of evacuation will be made to the GEI Project Manager, the CHSO, and the client PM. The field representative will account for GEI personnel and subcontractor personnel and report their status to the PM. If safe, work can resume 30 minutes after the last flash of lightening or clash of thunder.

14.4 Spills or Material Release

If a hazardous waste spill or material release, the SSO or their representative will immediately assess the magnitude and potential seriousness of the spill or release based on the following:

- SDS, if applicable, for the material spilled or released
- Source of the release or spillage of hazardous material
- An estimate of the quantity released and the rate at which it is being released
- The direction in which the spill or air release is moving
- Personnel who may be or may have been in contact with the material, or air release, and possible injury or sickness as a result
- Potential for fire and/or explosion resulting from the situation
- Estimates of area under influence of release

If the spill or release is determined to be within the onsite emergency response capabilities, the SSO will ensure implementation of the necessary remedial action. If the release is beyond the capabilities of the site personnel, all personnel will be evacuated from the immediate area and the

local fire department will be contacted. The SSO will notify the PM, the CHSO and the client PM.

14.5 Alcohol and Drug Abuse Prevention

Alcohol and drugs will not be allowed on the work site. Project personnel under the influence of alcohol or drugs will not be allowed to enter the site.

Health and Safety Plan Sign-Off

All GEI personnel conducting site activities must read this Health and Safety Plan, be familiar with its requirements, and agree to its implementation. Once the Health and Safety Plan has been read, complete this sign-off sheet, and return it to the Project Manager.

Site Name:
464 West 130th Street

- Activity:**
- Soil Vapor Sampling
 - Groundwater Sampling
 - Soil Borings
 - Soil Sampling

I have received and read the Health and Safety Plan, been briefed on it, and agree to its implementation.

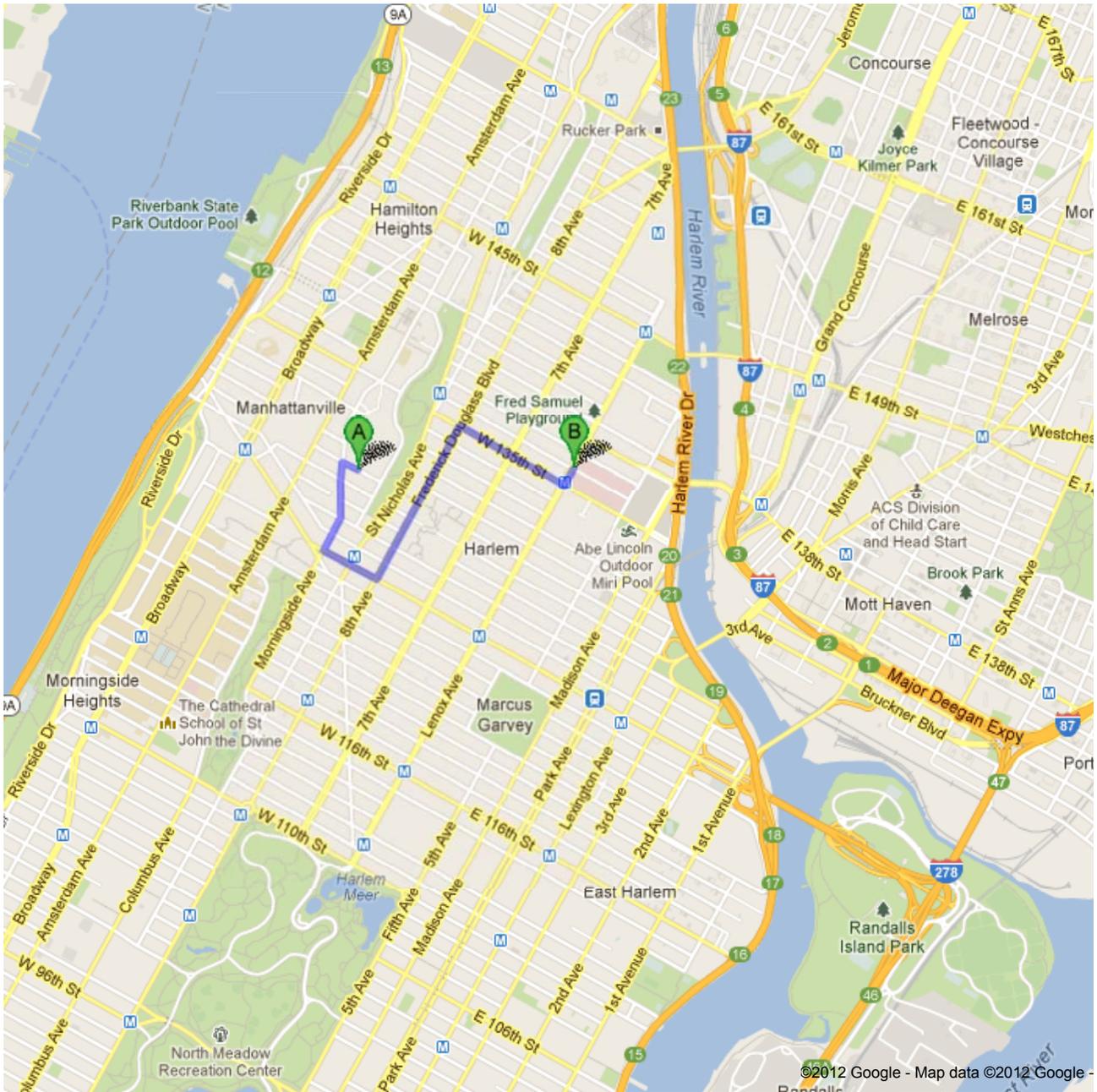
Furthermore, I understand that all GEI employees have the authority to stop work if conditions are unsafe. Unsafe conditions should always be communicated to the GEI Corporate Health and Safety Officer, the GEI PM, and the client PM. Work should not continue until unsafe conditions are resolved by working collaboratively with the CHSO, PM and a client representative.

Name:	Signature:	Date:

APPENDIX A
SITE-SPECIFIC INFORMATION



Directions to 506 Lenox Ave, New York, NY 10037
1.4 mi – about 7 mins



 464 W 130th St, New York, NY 10027

- | | | |
|---|--|---------------------------|
| | 1. Head northwest on W 130th St toward Convent Ave | go 256 ft
total 256 ft |
|  | 2. Take the 1st left onto Convent Ave
About 46 secs | go 0.2 mi
total 0.2 mi |
| | 3. Continue onto Morningside Ave | go 0.1 mi
total 0.3 mi |
|  | 4. Turn left onto W 125th St/Dr Martin Luther King Jr Blvd
About 1 min | go 0.2 mi
total 0.5 mi |
|  | 5. Take the 2nd left onto 8th Ave/Frederick Douglass Blvd
About 2 mins | go 0.5 mi
total 1.0 mi |
|  | 6. Turn right onto W 135th St
About 2 mins | go 0.3 mi
total 1.3 mi |
|  | 7. Take the 2nd left onto Lenox Ave
Destination will be on the right | go 285 ft
total 1.4 mi |

 506 Lenox Ave, New York, NY 10037

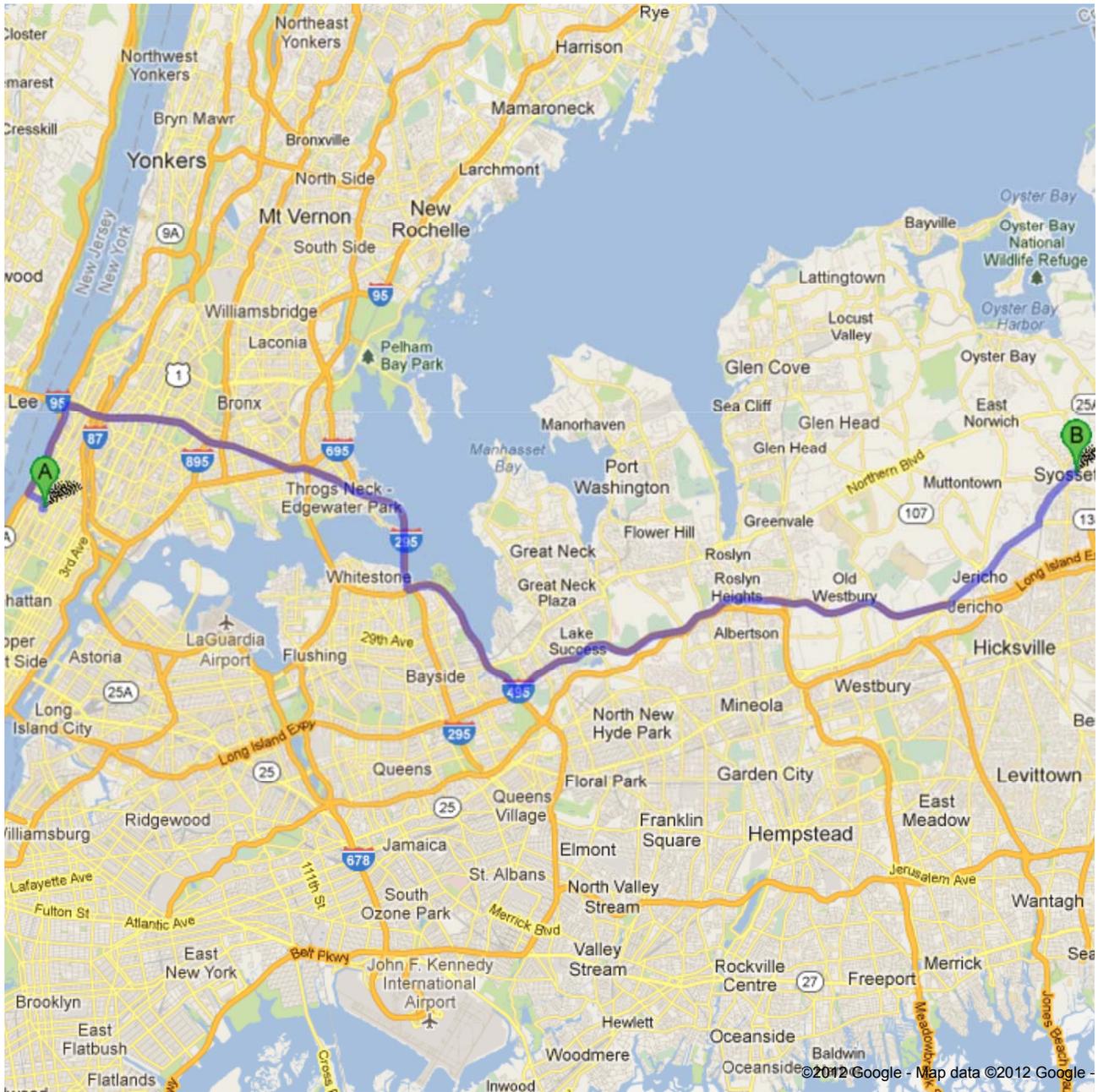
These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Map data ©2012 Google

Directions weren't right? Please find your route on maps.google.com and click "Report a problem" at the bottom left.



Directions to 87 Cold Spring Rd, Syosset, NY 11791
32.2 mi – about 45 mins



 464 W 130th St, New York, NY 10027

- | | | |
|---|--|-----------------------------|
| | 1. Head northwest on W 130th St toward Convent Ave | go 256 ft
total 256 ft |
|  | 2. Take the 1st right onto Convent Ave | go 0.2 mi
total 0.2 mi |
|  | 3. Take the 2nd left onto W 133rd St
About 3 mins | go 0.4 mi
total 0.6 mi |
|  | 4. Turn right onto the Newyork 9A N/H. Hudson Pkwy ramp | go 0.2 mi
total 0.9 mi |
|  | 5. Merge onto New York 9A N
About 2 mins | go 1.5 mi
total 2.3 mi |
|  | 6. Take exit 14 for I-95/George Washington Bridge toward Cross Bronx Expy/W 178 St | go 0.4 mi
total 2.7 mi |
|  | 7. Keep left at the fork to continue toward Interstate 95 Lower Level N/George Washington Bridge | go 98 ft
total 2.7 mi |
|  | 8. Keep right at the fork, follow signs for Cross Bronx Expressway and merge onto Interstate 95 Lower Level N/George Washington Bridge
About 2 mins | go 0.9 mi
total 3.6 mi |
|  | 9. Continue onto I-95 N
About 6 mins | go 4.8 mi
total 8.3 mi |
|  | 10. Slight right onto Cross Bronx Expy | go 0.3 mi
total 8.7 mi |
|  | 11. Continue onto I-295 S
Partial toll road
About 5 mins | go 4.1 mi
total 12.7 mi |
|  | 12. Take the exit onto Cross Island Pkwy
About 5 mins | go 3.9 mi
total 16.6 mi |
|  | 13. Take exit 30E to merge onto I-495 E/Long Island Expy toward Eastern Long Island
About 13 mins | go 11.0 mi
total 27.6 mi |
|  | 14. Take exit 40E for New York State 25 E toward Syosset | go 0.2 mi
total 27.8 mi |
|  | 15. Merge onto New York 25 E/Jericho Turnpike
About 4 mins | go 2.8 mi
total 30.7 mi |
|  | 16. Turn left onto Underhill Blvd
About 3 mins | go 1.3 mi
total 31.9 mi |
|  | 17. Slight left onto Jackson Ave | go 397 ft
total 32.0 mi |
|  | 18. Slight right onto Cold Spring Rd
Destination will be on the left | go 0.2 mi
total 32.2 mi |

 87 Cold Spring Rd, Syosset, NY 11791

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Map data ©2012 Google

Directions weren't right? Please find your route on maps.google.com and click "Report a problem" at the bottom left.

APPENDIX B
COLD STRESS GUIDELINES

Cold Stress Guidelines

	Symptoms	What to do
Mild Hypothermia	<ul style="list-style-type: none"> • Body Temp 98-90°F • Shivering • Lack of coordination, stumbling, fumbling hands • Slurred speech • Memory loss • Pale, cold skin 	<ul style="list-style-type: none"> • Move to warm area • Stay active • Remove wet clothes and replace with dry clothes of blankets • Cover the head • Drink warm (not hot) sugary drink
Moderate Hypothermia	<ul style="list-style-type: none"> • Body temp 90-86°F • Shivering stops • Unable to walk or stand • Confused irrational 	<ul style="list-style-type: none"> • All of the above, plus: • Call 911 • Cover all extremities completely • Place very warm objects, such as hot packs on the victim's head, neck, chest and groin
Severe Hypothermia	<ul style="list-style-type: none"> • Body temp 86-78°F • Severe muscle stiffness • Very sleepy or unconscious • Ice cold skin • Death 	<ul style="list-style-type: none"> • Call 911 • Treat victim very gently • Do not attempt to re-warm
Frostbite	<ul style="list-style-type: none"> • Cold, tingling, stinging or aching feeling in the frostbitten area, followed by numbness • Skin color turns red, then purple, then white or very pale skin • Cold to the touch • Blisters in severe cases 	<ul style="list-style-type: none"> • Call 911 • Do not rub the area • Wrap in soft cloth • If help is delayed, immerse in warm, not hot, water
Trench Foot	<ul style="list-style-type: none"> • Tingling, itching or burning sensation • Blisters 	<ul style="list-style-type: none"> • Soak feet in warm water, then wrap with dry cloth bandages • Drink a warm sugary drink

APPENDIX C
HEAT STRESS GUIDELINES

HEAT STRESS GUIDELINES

Form	Signs & Symptoms	Care	Prevention ³
Heat Rash	Tiny red vesicles in affected skin area. If the area is extensive, sweating can be impaired.	Apply mild lotions and cleanse the affected area.	Cool resting and sleeping areas to permit skin to dry between heat exposures
Heat Cramps	Spasm, muscular pain (cramps) in stomach area and extremities (arms and legs).	Provide replacement fluids with minerals (salt) such as Gatorade.	Adequate salt intake with meals ¹ ACCLIMATIZATION ²
Heat Exhaustion	Profuse sweating, cool (clammy) moist skin, dizziness, confusion, pale skin color, faint, rapid willow breathing, headache, weakness, muscle cramps.	Remove from heat, sit or lie down, rest, replace lost water with electrolyte replacement fluids (water, Gatorade) take frequent sips of liquids in amounts greater than required to satisfy thirst.	ACCLIMATIZATION ² Adequate salt intake with meals 1 only during early part of heat season. Ample water intake, frequently during the day
Heat Stroke	HOT Dry Skin. Sweating has stopped. Mental confusion, dizziness, nausea, severe headache, collapse, delirium, coma.	HEAT STROKE IS A MEDICAL EMERGENCY - Remove from heat. - COOL THE BODY AS RAPIDLY AS POSSIBLE by immersing in cold (or cool) water, or splash with water and fan. Call for Emergency Assistance. Observe for signs of shock.	ACCLIMATIZATION ² Initially moderate workload in heat (8 to 14 days). Monitor worker's activities.

Footnotes:

- 1.) American diets are normally high in salt, sufficient to aid acclimatization. However, during the early part of the heat season, (May, June), one extra shake of salt during one to two meals per day may help, so long as this is permitted by your physician. Check with your personal physician.
- 2.) ACCLIMATIZATION – The process of adapting to heat is indicated by worker's ability to perform hot jobs less fluid loss, lower concentrations of salt loss in sweat, and a reduced core (body) temperature and heart rate.
- 3.) Method to Achieve Acclimatization:
 - o Moderate work or exercise in hot temperatures during early part of heat season;
 - o Adequate salt (mineral) and water intake;
 - o Gradually increasing work time in hot temperatures;
 - o Avoid alcohol;
 - o Normally takes 8 to 14 days to achieve acclimatization; lost rapidly, if removed from strenuous work (or exercise) in hot temperature for more than approximately five days.

APPENDIX D
INCIDENT REPORT FORM



Accident/Incident Report Form

Please complete this form and send it to your Branch Manager, HR and CHSO **within 24 hours** of the incident.

SECTION A ACCIDENT/INCIDENT DETAILS

EMPLOYEE INFORMATION:		OTHER INJURED (IF APPLICABLE):	
Name: _____		Name: _____	
Home Address: _____ Street Address City State Zip Code		Home Address: _____ Street Address City State Zip Code	
Contact Information: () () Primary Secondary		Contact Information: () () Primary Secondary	
Date of Birth: _____		Date of Birth: _____	
Date of Hire: _____		Date of Hire: _____	
Branch: _____		Branch: _____	
Supervisor: _____		Supervisor: _____	

Date and Time Accident/Incident	Date and Time Reported	LOCATION OF INCIDENT/ACCIDENT
____ / ____ / ____ Month Day Year	____ / ____ / ____ Month Day Year	Project Name: _____
____ A.M. ____ P.M.	____ A.M. ____ P.M.	Client and Location: _____ or _____
		Office Location: _____

INCIDENT TYPE: (Check All That Applies)	WITNESS INFORMATION
<input type="checkbox"/> Personal Injury/Illness <input type="checkbox"/> Vehicle Accident <input type="checkbox"/> Property Damage <input type="checkbox"/> Environmental Spill <input type="checkbox"/> Other	Name: _____ Contact Number: _____ Company: _____

WHAT HAPPENED TO THE INJURED PARTY: First Aid Administered Refused Treatment/Transport Transported to Hospital
 Returned to Work Went Home Went to Physician Unknown

Clinic/Hospital or Treating Physician: _____ Phone: _____
 Name Street Address City State Zip Code

SECTION B PERSONAL INJURY

Cause of Injury: _____

Part of Body Injured: _____ Multiple Injuries: Y N

Was PPE worn when injured? : Y N What PPE was worn? _____

WAS INJURY A RESULT OF THE USE A MOTOR VEHICLE: YES NO (If yes, complete Section C)

APPENDIX E

GEI STANDARD OPERATING PROCEDURES

STANDARD OPERATING PROCEDURE

DM-006 Geoprobe® Direct Push Boring

1. Objective

Describe standard operating procedures (SOP) for drilling of overburden soil borings using Geoprobe® and MacroCore® technologies.

2. Execution

- Confirm that appropriate measures have been taken for clearance of potential subsurface utilities. The responsibility for clearance may vary, depending on the client.
- Inspect the drilling rig to make sure it is clean and that the down-hole equipment has been decontaminated (QA-001). Record condition of all down-hole drilling equipment.
- Make sure the sampler is fitted with a piston rod assembly to block the sample tube until the desired subsurface sample interval is attained. Upon reaching the target sample depth, the piston tip will be released and the discrete sampler device is then advanced to collect the representative sample. This reduces the volume of slough that is collected.
- When the sampler is brought to the ground surface, it should be opened immediately, and the length of recovery should be measured and recorded.
- Log the soil sample using USCS procedures (SOP SM-003). Collect analytical samples if necessary (SOP SM-001).
- Decontaminate the cutting shoe if necessary (SOP QA-001 Equipment Decontamination) and have driller reassemble the parts with a new liner.
- Repeat the procedure described above until refusal or the boring is terminated.
- Periodically verify that depths cited by drillers are accurate.

3. Limitations

- If significant unanticipated contamination is encountered during drilling, stop drilling to confer with the project manager and re-evaluate health and safety conditions.
- Arrange for the storage of contaminated soil cuttings and water in drums or other appropriate containers in a secure place at the site (see SOP SC-003, *Investigation Derived Waste Management*).
- If possible, plan the drilling program to drill borings from the least to most contaminated areas. Be prepared in advance and know where alternative drilling locations are in the event that problems are encountered at soil boring locations. These locations must also have been cleared by the state or local utility service prior to drilling.

4. References

ASTM D6001-05 Guide for Direct Push Water Sampling for Geoenvironmental Investigations, April 2005

Geoprobe Systems, "Geoprobe MacroCore MC-5 1.25-inch Light Weight Center Rod Soil Sample System SOP", Technical Bulletin No. MK 3139, November 2006

5. Attachments

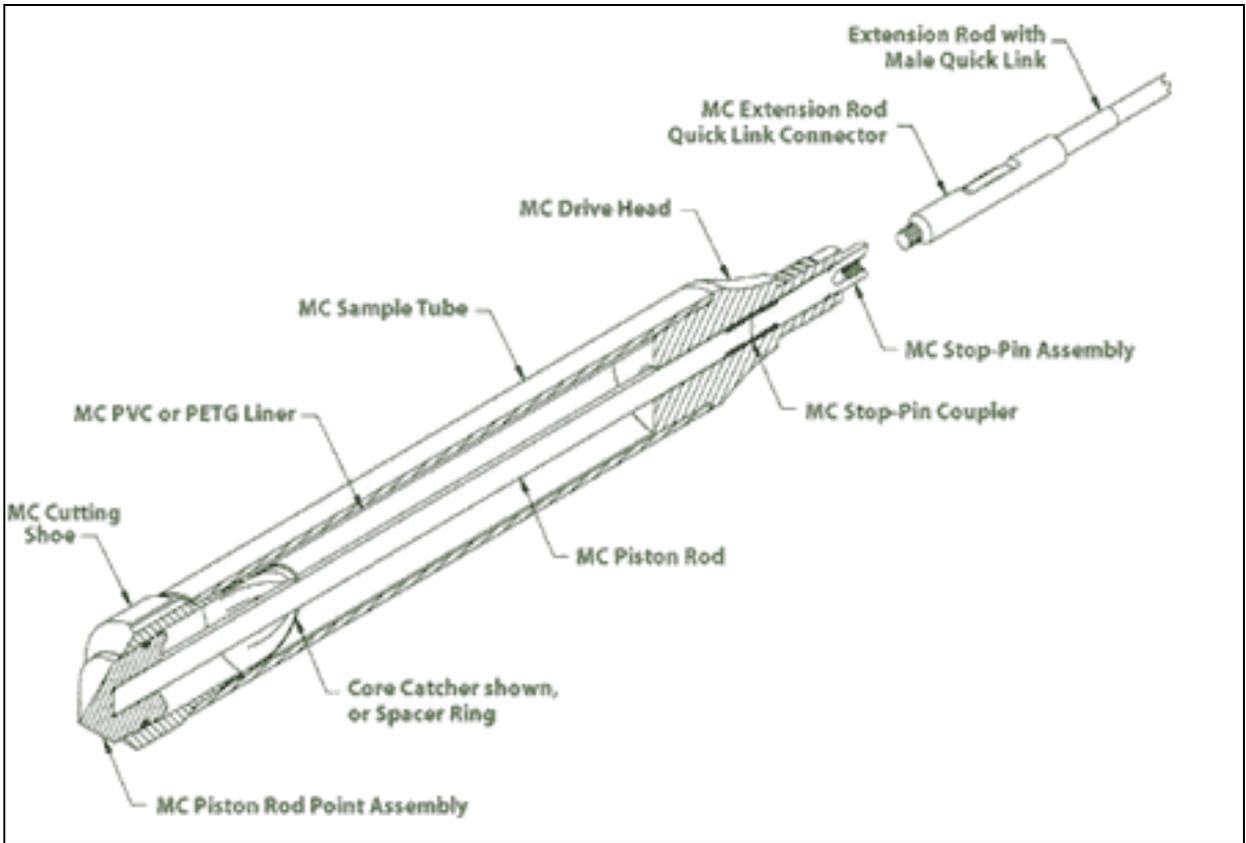
Attachment A – Geoprobe[®] with Macrocore[®] Sampler Assembly

6. Contact

Melissa Felter
Cathy Johnson

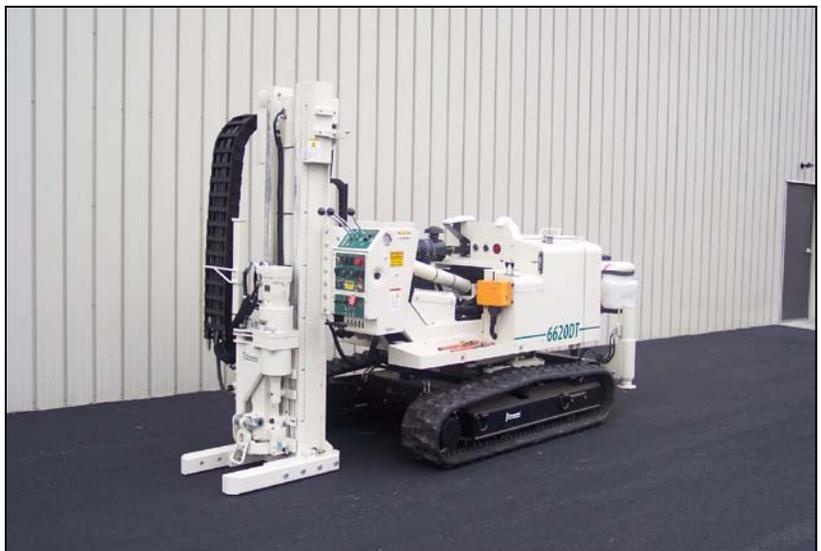
SOP DM-006

Attachment A – GeoProbe® with Macrocore® Sampler Assembly



Above: Diagram of a Macrocore® sampler

Right: A track-mounted GeoProbe® Rig



STANDARD OPERATING PROCEDURE

GW-003 Low Flow (Low Stress) Groundwater Sampling

1. Objective

Describe methods to collect groundwater samples most likely to produce results that represent aquifer conditions.

Low-flow purging is limited to wells that, with sustained pumping, exhibit no continuous drawdown.

2. Execution

- Prior to groundwater sampling consult with the project manager to confirm that the type of pump is appropriate and consistent with the approved work plan.
- Record activities in the field notebook (see SOP FD-001 Field Notebook) and on a Monitoring Well Sampling Record such as the examples in Attachment A. Use a separate form for each sampling location and event. You may forego the forms and record all information in the field notebook if the Project Manager approves.
- Calibrate pH, temperature, Specific Conductance (SC), turbidity, Dissolved Oxygen (DO), and Oxidation-Reduction Potential (ORP) on the meter(s). Use calibration methods provided by the manufacturer of the equipment. Note that appropriate calibration for dissolved oxygen requires a water saturated air environment, along with measured temperature and barometric pressure.
- Begin with the monitoring well believed to have the least contaminated groundwater and proceed systematically to the well with the most contaminated groundwater. Check the well, the lock, and the locking cap for damage or evidence of tampering.
- Slowly and gently measure the depth to water with a water level probe and/or oil-water interface probe. Do not measure depth to well bottom at this time (wait until sampling has been completed). Measure water level in accordance with SOP GW-001 Water Level Measurement.
- Attach new polyethylene or Teflon lined tubing to the sampling pump and the flow-through cell that contains the meter probes.
- Slowly and gently insert new polyethylene or Teflon lined tubing to the pump intake (or use dedicated tubing that remains in the well) and to the middle of the saturated screened interval or to the pre-determined sampling depth.
- The tubing intake should be kept at least two (2) feet above the bottom of the well to prevent disturbance or suspension of any sediment or Non-Aqueous Phase Liquid (NAPL) present in the bottom of the well. Record the depth of the pump intake.

- If possible, position your sampling equipment and tubing so that it is in the shade. The goal is to minimize the effect of sunlight raising the temperature of water being collected.
- Start the pump on the lowest setting and increase slowly until flow begins. Adjust the pumping rate so that drawdown in the well is minimal (0.3 feet or less, is desirable but not mandatory). Use a pumping rate between 100 to 1,000 milliliters per minute (mL/min) (or approximately 0.1 to 1 quarts per minute). Measure flow rate on the pump or using a graduated container every 3 to 5 minutes and record. The minimum purge volume will be twice the combined volumes of the sampling string (i.e. pump, tubing, and flow-through cell).
- While purging, record water levels every 3 to 5 minutes and monitor and record the water quality indicator parameters: pH, temperature, specific conductance (SC), dissolved oxygen (DO), and turbidity. If specified in the field sampling plan also include ORP.
- Purging is complete when, after three consecutive measurements, the water quality parameters have stabilized as follows:
 - pH (+/- 0.1 standard units)
 - temperature (+/- 3%)
 - SC (+/- 3%)
 - turbidity (+/- 10% if >5 NTU; if 3 values are <5 NTU, consider the values as stabilized)
 - DO (+/-10% if >0.5 mg/L; if 3 values are <0.5 mg/L, consider the values as stabilized)
 - ORP (+/- 10 mV)
- Dispose of purge water according to the field plan.

Sample Collection:

- Following purge, remove the discharge tubing from the flow-through cell. Do not disturb pump and tubing between stabilization and sample collection.
- Fill sample containers directly from the sampling device in order of decreasing volatility (i.e., Volatile Organic Compounds (VOC) samples are collected first; see SOP SC-002 Sampling Handling). Fill all containers from the discharge end of the tubing. Collect samples at a flow rate equal to the steady state purge rate.
- If not using a dedicated pump, remove sampling device and decontaminate (see SOP QA-001 Equipment Decontamination). Discard used tubing.
- Store samples in a cooler on ice for transport to the laboratory.
- Measure depth to bottom of well.

- Secure the well cap.

3. Limitations

- Prior to departure for the field, obtain available information on well construction for use in field investigation (i.e., screen and riser material, well diameter and depth, screened interval, optimum sampling depth, etc.).
- If possible, when using dedicated equipment, install equipment into well at least 24 hours before sample collection to minimize disturbance of the water column and/or suspension of sediments or NAPL on bottom.
- If water quality indicator parameters do not stabilize after removing 3 to 5 well volumes or 2 hours, contact the Project Manager. Three options will be available: 1) continue purging until stabilization; 2) discontinue purging and do not sample; or 3) discontinue purging and sample.
- The key indicator parameter for VOCs is DO. The key indicator parameter for all other samples is turbidity.
- Fill all sample containers with minimal turbulence by allowing the groundwater to flow from the tubing gently down the inside of the container.
- Consult with the project manager before field filtering samples for metals if using low-flow sampling.
- Be aware of any preservatives in the sample bottles and handle with care, in accordance with the Health and Safety Plan.

4. References

Standard Reference for Monitoring Wells (April 19, 1991), Massachusetts DEP, DEP Publication No. WSC-310-91.

Reproducible Well-Purging Procedures and VOC Stabilization Criteria for Ground Water Sampling (1994), M.J. Barcelona, H. A. Wehram, and M.D. Varljen, Ground Water, Vol. 32, No. 1, 12-22.

Low-Flow Purging and Sampling of Ground Water Monitoring Wells with Dedicated Systems (1995), R.W. Puls, and C.J. Paul, Groundwater Monitoring and Review, Summer 1995 116-123.

Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells (2010), EQASOP-GW 001 Low Stress (Low Flow) SOP, Revision 3, U.S. Environmental Protection Agency, Region I, January 19, 2010.

Ground Water Sampling Procedure Low Stress (Low Flow) Purging and Sampling, (1998), Ground-Water Sampling SOP, Final, U.S. Environmental Protection Agency, Region II, March 16, 1998.

RCRA Ground-Water Monitoring: Draft Technical Guidance, (1993), U.S. Environmental Protection Agency, EPA/530-R-93-001.

To Filter, or Not to Filter, That is the Question, (1997), Special Topics Subcommittee Letter Report EPA-SAF-EEC-LTR-97-011, April 29, 1997, Meeting, U.S. Environmental Protection Agency, Science Advisory Board Environmental Engineering Committee, September 5, 1997.

Should Filtered or Unfiltered Groundwater and Surface Water Samples be Collected for the Risk Assessment?, (1995), MCP Q&A: Subparts I and J, Special #4, Bureau of Waste Site Cleanup, Massachusetts Department of Environmental Protection (DEP), February, 1995.

5. Attachments

Attachment A - Monitoring Well Sampling Record

6. Contacts

Brian Conte
Saskia Oosting



MONITORING WELL SAMPLING RECORD

PID Reading _____ Job Name _____
 Job Number _____ By _____ Date _____
 Location _____ Measurement Datum _____
 Well Number _____

Pre-Development Information

Time (start) _____
 Water Level _____ Total Depth of Well _____
 One Purge Vol _____ Three Well Volume _____

Water Characteristics

Color _____ Clear _____ Cloudy _____
 Odor _____ None _____ Weak _____ Moderate _____ Strong _____

Any films or immiscible material _____

Volume (gal)	Time	pH	Temp (°C)	Spec. Conductance (µS/cm)	Turbidity (NTU)	DO Conc. (mg/L)	ORP (mV)	TDS

Total Volume Removed (gal) _____ pH _____
 Temperature (°C) _____ Specific Conductance (µS/cm) _____
 DO Concentration (mg/L) _____ ORP (mV) _____
 TDS _____



Post Development Information

Water Level _____

Time (Finished) _____

Total Depth of Well _____

Approximate Volume Removed (gal) _____

Water Characteristics

Color _____ Clear _____ Cloudy _____

Odor _____ None _____ Weak _____ Moderate _____ Strong _____

Any films or immiscible material _____

Comments

STANDARD OPERATING PROCEDURE

SG-001 General Guidance on Soil Vapor Intrusion Evaluations

1. Objective

The goal of a soil vapor intrusion evaluation is to assess whether complete exposure pathways of soil vapor to indoor air exist. A complete exposure pathway exists if vapors from constituents are migrating through various pathways into residential or commercial buildings at concentrations that may result in an unacceptable human health risk. If a complete exposure pathway does not exist, then further assessment of soil vapor intrusion is not required.

Depending on the status of investigation performed at the site it may be appropriate to approach an evaluation of soil vapor intrusion at different tiers. If little work has been performed relative to the potential for contaminants to affect soil vapor near a structure, then a screening level assessment is an appropriate first step. However, if a plume is well delineated and the potential for groundwater impacts, or nearby source material, to affect soil vapor near a potential receptor structure is well understood, then it may be more appropriate to directly develop and implement a soil vapor and/or indoor air sampling plan. To accommodate the potential varied states of knowledge when a vapor intrusion evaluation is required, a flexible approach is needed that incorporates the following elements.

- SOP SG-002 Soil Vapor Sample Collection
- SOP SG-003 Sub-Slab Soil Vapor Collection
- Indoor Air Sampling
- SOP SG-004 Ambient Air Sample Collection

Soil vapor intrusion evaluations should be approached on a site-specific basis and depending on the site-specific setting and proximity to impacted groundwater or source material, it may be appropriate to proceed in a hierarchical fashion through each tier of evaluation or a variety of tiers may be combined and implemented simultaneously. The SOPs presented in this SOP address each of these sampling procedures.

2. Execution

2.1. Implementation Triggers

Soil vapor intrusion evaluations may be implemented at various times based on event triggers throughout the Site Characterization (SC), Remedial Investigation (RI), and site remedial action plan. The following event triggers would require the implementation of this soil vapor intrusion investigation.

- Identification of a potential complete exposure pathway
- Private property owner request for sampling

- State or Federal administrative order

2.2. Factors Affecting Soil Vapor Intrusion

Prior to conducting a soil vapor intrusion assessment at a private property, an analysis of the factors contributing to the migration of soil vapor to indoor air should be conducted. The completion of this analysis should take into account the two types of factors: environmental and building factors.

2.2.1. Environmental Factors

Environmental factors include site specific conditions in the subsurface and above the ground surface that may affect the rate and direction at which soil vapor may migrate.

The soil and groundwater conditions between the contamination and the residential/commercial building should be evaluated and recorded in any soil vapor intrusion investigation. If the SC/RI has been completed, then the data are available for this review. If the SC/RI has not been completed, then at a minimum the nature and extent of impacted soil and/or groundwater between the site and the residential/commercial building should be defined.

After compiling the necessary site-specific data, that information should be reviewed to determine groundwater conditions at the site. The potential for man-made or natural preferential pathways for vapor migration in the vadose zone and/or for groundwater migration in the saturated zone should also be determined at this time.

- The depth to groundwater below the residential or commercial building will be determined. For example, in cases where groundwater intersects the foundation there is no vadose zone to collect a sub-slab sample. In cases where the groundwater is close to the foundation, there is a risk of causing/exacerbating groundwater intrusion through the foundation during periods of high groundwater.

Additional Site Observations

- Direction of groundwater flow from the contaminant source to the residential or commercial building;
- The location, depth, extent, and concentration of potential constituents in unsaturated soil and groundwater on the property; and,
- Presence of an overlying water bearing zone that does not have impacts beneath the residential or commercial building. An un-impacted shallow water zone will significantly retard or completely prohibit the potential for deeper impacted groundwater to affect soil vapor.
- Potential “smear zones” (residual non-aqueous phase liquid (NAPL) present at depths over which the water table fluctuates) should also be identified as they may also affect the rate of soil vapor migration.
- Location, depth, extent of NAPL, if present.

Soils which are highly organic, wet, and/or of low permeability should be identified. If these soils are present beneath a structure and above impacted groundwater or soil, they may effectively shield the building from potential vapor intrusion. Conversely, dry and porous soils underlying a building may provide a less inhibited soil vapor intrusion pathway. The limits of backfill surrounding residential or commercial building should be also noted.

2.2.2. Building Factors

Building Factors include the physical characteristics, such as structure, floor layout, air flow, and physical conditions. These conditions will be documented during the evaluation. The New York State Department of Health (NYSDOH) Center for Environmental Health's Indoor Air Quality Questionnaire and Building Inventory form is presented in Attachment A. At a minimum, the following information should be recorded.

- Building foundation construction characteristics (basement, footers, crawl spaces, etc), including potential preferential vapor intrusion pathways such as foundations cracks and utility penetrations.
- Basement wall materials (hollow block, stone, or poured concrete, etc.)
- Presence of an attached garage.
- Recent renovations to the building such as new paint or new carpet.
- Mechanical heating/cooling equipment that may affect air flow.
- Use and storage of petroleum products such as home heating oil storage tanks, underground storage tanks (USTs), or kerosene heaters.
- Recent use of petroleum-based finish or other products containing volatile organic compounds (VOCs).
- Areas of pavement on the property should also be identified in the event sub slab vapor sampling is not feasible or appropriate due to a high groundwater table. Paved areas could serve as surrogate locations in lieu of sub slab soil vapor sampling if high water table conditions exist.

The construction materials and integrity of the floor of the structure closest to the potential point of entry for soil vapor (basement level or first floor for slab-on-grade constructions) should be identified. In addition to the foundation type and integrity, this survey should note any preferential pathways (utility lines/pipes, sumps, etc.) that may exist within the bottom-most level of the structure.

The operation and presence of heating systems, including fireplaces and clothes dryers, may create a pressure differential between the structure and the outside environment, causing an increase of migration of soil vapor into the building. The NYSDOH guidance document suggests limiting indoor air sampling to the heating season (with the exception of immediate inhalation hazard situations), which is roughly defined as November 15th to March 31st. However, sampling may be completed at any time during the year for any sampling completed in response to a request by a community member. In situations where non-heating season sampling

has taken place, consideration should be given to re-sampling the property within the heating season. The operation of HVAC systems should be noted on the building inventory form (Attachment A).

During the initial building assessment and visit, and again when sub-slab soil vapor and/or indoor air sampling are performed, differential pressure measurements between indoor air, ambient air, and soil vapor should be collected and recorded to document the potential effect building conditions have on soil vapor migration.

2.2.3. Property Visit

A property visit will be conducted prior to sampling. During the site visit, technical representatives will complete site visit observations, inventories and occupant questionnaire forms (Appendix A). During the course of the interview, observations will be made to identify any potential areas or issues of concern or the presence of any odors, and if sampling appears necessary, identify potential sampling points and general building characteristics. The questionnaire is also used to identify potential sources and activities that may interfere with sampling results. The questionnaire will specifically address the activities of the occupant's (e.g., smoking, work place activities) that may contribute to indoor air concentrations of volatile chemicals.

The responses to the questionnaire will be evaluated and a determination will be made as to whether additional investigation is required.

2.2.4. Chemical Inventory

The chemical inventory complements the identification of the building factors affecting soil vapor intrusion. The chemical inventory will identify the occurrence and use of chemicals and products throughout the building. These products can be used to develop an indoor environmental profile. A separate inventory should be prepared for each room on the floor being tested as well as any other indoor areas physically connected to the areas being tested. Inventories will include product names, chemical ingredients, or both. If possible, photographs of the products should be taken of the location and condition of the inventoried products and the photographic records should be indexed with the inventory records. The products inventory can also be used to document odors and if possible portable vapor monitoring equipment measurements should be taken and recorded. A product inventory will be repeated prior to each round of testing at the building. If available, the volatile ingredients should be recorded for each product. If the ingredients are not listed on the label, record the manufacturer's name and address or phone number if available. The product inventory form is presented in Attachment A.

2.2.5. Water Table Conditions and Vapor Intrusion Assessment Approach

Sub-slab soil vapor sampling is intended to evaluate the potential for vapor intrusion. However, there are circumstances where collection of sub-slab soil vapor samples may not be feasible if the water table is near, at, or above the elevation of a buildings foundation slab. An evaluation of the water table elevation relative to the

building slab should be made before attempting to install a sub-slab vapor sampling point.

If the water table is found to be sufficiently below the building slab and sub-slab vapor sampling can be performed, then the following Low Water Table Scenario should be followed.

2.2.5.1. Low Water Table Scenario

If the water table elevation is lower than the basement slab, then the following samples should be collected.

- Sub-slab soil vapor samples
- Indoor air samples from basement level
- Indoor air samples from main living space (First floor)
- Outdoor ambient air sample

If the water table is deemed to be at too high of an elevation to allow sub-slab vapor sampling, then alternate means of evaluating the potential for vapor intrusion must be employed. If a building has a groundwater sump, the sump should be evaluated to determine if there is water present in the sump and if that water is representative of groundwater or if the water is stagnant. If water in the sump represents groundwater, then a sample from the sump should be collected. The High Water Scenario below summarizes the methods to evaluate potential vapor intrusion if sub-slab vapor sampling cannot be conducted due to high groundwater conditions.

2.2.5.2. High Water Table Scenario

If the water table elevation is higher than the basement slab, then the following tasks should be performed.

- Determine if a sump pump is present and actively pumping water.
- If sump is actively pumping, collect a sample of groundwater from the sump.
- Collect an indoor air sample from basement level.
- Collect an indoor air sample from main living space (first floor).
- Identify exterior soil vapor sample location near foundation (outside of foundation backfill) and preferably beneath a surrogate vapor cap (e.g. paved driveway, patio).
- Collect soil vapor samples from exterior soil vapor location
- Collect an outdoor ambient air sample.

3. References

USEPA modified Method TO-15 and helium via ASTM D-1945.

Section 2.7.1 of the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

4. Attachments

Attachment A - NYSDOH Center for Environmental Health's Indoor Air Quality Questionnaire and Building Inventory Form

5. Contact

Chris Berotti

ATTACHMENT A

**Off-Site Property Sampling
Documentation Form**

Property Location/Address: _____

Property: _____

Sampling Date: _____

Property Location/Address: _____

Property: _____

Sampling Date: _____

Preparer's Name: _____ Date/Time Prepared: _____

Preparer's Affiliation: _____ Phone No.: _____

Purpose of Investigation: _____

1. OCCUPANT

Interviewed: Yes No

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD (Check if same as occupant) Interviewed: Yes No

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. CONTACT NAME (Check if same as Occupant , Owner)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

4. PROPERTY LOCATION: _____

Relative to Site:

Direction _____ Direction to Nearest Cross Street: _____

Distance _____ Distance to Nearest Cross Street: _____

Surrounding Land Use:

North: _____ East: _____

South: _____ West: _____

Property Location/Address: _____

Property: _____

Sampling Date: _____

5. PROPERTY BOUNDARIES

Delineate the boundaries of the property (on a separate project map, outline property location, private well location, septic/leachfield location, groundwater flow, compass direction, windrose.)

6. BUILDING CONSTRUCTION

Type of Building (Circle appropriate response)

Residential

School

Commercial/Multi-use

Industrial

Church

Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch

2-Family

3-Family

Raised Ranch

Split Level

Colonial

Cape Cod

Contemporary

Mobile Home

Duplex

Apartment House

Townhouses/Condos

Modular

Log Home

Other: _____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) _____

Does it include residences (i.e., multi-use)? Yes No

If yes, how many? _____

Other characteristics:

Number of floors _____

Building age _____

Is the building insulated? Yes No How air tight? Tight / Average / Not Tight

Construction Material _____

7. BASEMENT AND CONSTRUCTION CHARACTERISTICS

Does the building have a basement and/or crawl space, or is it slab-on-grade construction?

Describe the construction of the basement/crawl space (Circle all that apply)

a. Above grade construction: wood frame concrete stone brick

b. Basement type: full crawlspace slab other _____

Property Location/Address: _____

Property: _____

Sampling Date: _____

Level General Use of Each Floor (e.g., family room, bedroom, laundry, workshop, storage)

Basement _____

1st Floor _____

2nd Floor _____

3rd Floor _____

4th Floor _____

10. BULK PETROLEUM STORAGE

Aboveground storage tank on the property Yes No

If yes, how old is tank? _____ Condition? _____

Last inspected? _____ Location: _____

Describe conduits to building (type, location, and entry portal condition): _____

Underground storage tank on the property. Yes No

If yes, how old is tank? _____ Condition? _____

Last inspected? _____ Location: _____

Describe conduits to building (type, location, and entry portal condition): _____

11. WATER AND SEWAGE

Water Supply:

Public Water Drilled Well Driven Well Dug Well Other _____

Is there use of groundwater water for irrigation purposes? Yes No

Sewage Disposal:

Public Sewer Septic Tank Leach Field Dry Well Other _____

12. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Yes No

 If not, is there a separate garage or carport? Yes No

b. Does the garage have a separate heating unit? Yes No NA

Property Location/Address: _____

Property: _____

Sampling Date: _____

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, ATV, car)

Yes No NA Please specify _____

Is gasoline stored in the garage? Yes No

Quantity? _____

d. Has the building ever had a fire? Yes No

When? _____

e. Is a kerosene or unvented gas space heater present? Yes No

Where? _____

f. Is there a workshop or hobby/craft area? Yes No

Where & Type? _____

g. Is there smoking in the building? Yes No

How frequently? _____

h. Have cleaning products been used recently? Yes No

When & Type? _____

i. Have cosmetic products been used recently? Yes No

When & Type? _____

j. Has painting/staining been done in the last 6 months? Yes No

Where & When? _____

Is house paint stored inside? Yes No

Where? _____

k. Is there new carpet, drapes or other textiles? Yes No

Where & When? _____

l. Have air fresheners been used recently? Yes No

When & Type? _____

m. Is there a kitchen exhaust fan? Yes No

If yes, where vented? _____

n. Is there a bathroom exhaust fan? Yes No

If yes, where vented? _____

o. Is there a clothes dryer? Yes No

If yes, is it vented outside? Yes No

p. Has there been a pesticide/chemical fertilizer application? Yes No

Property Location/Address: _____

Property: _____

Sampling Date: _____

When & Type? _____

Conducted by Owner or Private Yard Service _____

Is yard waste/trash burned on-site? Yes No

Do any of the building occupants use solvents at work? Yes No

(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Yes No

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, Use dry-cleaning regularly (weekly) No

Use dry-cleaning infrequently (monthly or less) Unknown

Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Yes No

Date of Installation: _____

Is the system active or passive? Active Passive

Are there any recent/past improvements to building? Yes No

Interior painting? _____

Any landscaping improvements that involved bringing fill on site? Yes No

Other _____

Approximately when (how long ago) did these improvements occur? _____

Does anyone living here engage in any of the following activities or hobbies?

a. Art projects (e.g. oil painting, ceramics, pottery, stained glass, metal sculpture)

Yes No

Name: _____ Age: _____ Sex: _____

Name: _____ Age: _____ Sex: _____

Property Location/Address: _____

Property: _____

Sampling Date: _____

b. Furniture refinishing Yes No

Name: _____ Age: _____ Sex: _____

Name: _____ Age: _____ Sex: _____

c. Model building(e.g. planes,boats,cars) Yes No

Name: _____ Age: _____ Sex: _____

Name: _____ Age: _____ Sex: _____

d. Gardening Yes No

Name: _____ Age: _____ Sex: _____

Name: _____ Age: _____ Sex: _____

e. Automotive work Yes No

Name: _____ Age: _____ Sex: _____

Name: _____ Age: _____ Sex: _____

f. Ammunition reloading Yes No

Name: _____ Age: _____ Sex: _____

Name: _____ Age: _____ Sex: _____

Is there a wood burning stove? Yes No

If so, how frequently is it used?

Is there a barbeque grill? Yes No

If so, how frequently is it used? What is the type of fuel?

Has the building ever had fumigation? Yes No

Property Location/Address: _____

Property: _____

Sampling Date: _____

If so, when and how frequently? Type?

13. ODOR SUMMARY

Have the occupants observed any unusual odors? _____

History of odor observation – date of onset, duration, severity, etc.

14. PRODUCT INVENTORY

Record the specific products found in building that have the potential to affect indoor air quality on the attached product inventory form.

15. INDOOR SKETCH

Draw a plan view sketch (on grid paper) of the basement, first floor, and any other floor where sampling was conducted in the building as well as any outdoor sample locations. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Property Location/Address: _____

Property: _____

Sampling Date: _____

**Product Inventory
Off-Site Property Sampling Documentation
Soil Vapor Intrusion Investigation**

Property Address:	Performed by:
Date of Inventory:	Field Instrument Make & Model:

Location	Product Description	Size (units)	Condition *	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y/N

Notes

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

** Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

STANDARD OPERATING PROCEDURE

SG-002 Soil Vapor Sample Collection

1. Objective

This procedure outlines the general steps to collect soil vapor samples. The site-specific Sampling and Analysis Work Plan should be consulted for proposed sample locations, sample depths, and sampling duration.

2. Execution

Permanent and temporary soil vapor probes should be installed using the procedures outlined below. All soil vapor probes should be installed using a direct-push drill rig (e.g., Geoprobe[®] or similar), hand auger, or manually using a slide hammer.

2.1. Document Field Conditions

Document pertinent field conditions prior to installation of any probe points.

- Record weather information (precipitation, temperature, barometric pressure, relative humidity, wind speed, and wind direction) at the beginning of the sampling event. Record substantial changes to these conditions that may occur during the course of sampling. The information may be measured with on-site equipment or obtained from a reliable source of local measurements (e.g., a local airport). Data should be obtained for the past 24 to 48 hours.
- If sampling near a commercial or industrial building, uses of volatile chemicals during normal operations of the facility should be identified.
- Outdoor plot sketches should be drawn that include the site, area streets, neighboring commercial or industrial facilities (with estimated distance to the site), outdoor air sampling locations (if applicable), and compass orientation (North);
- Any pertinent observations should be recorded, such as odors and readings from field instrumentation.

2.2. Soil Vapor Point Installation Specifications

Each soil vapor point should be constructed as follows:

- Six-inch stainless steel Geoprobe[®] AT86 series Permanent Implants (soil vapor screens) or equivalent and threaded to an (expendable) stainless steel anchor point.
- The implants should be fitted with inert Teflon or stainless steel tubing of laboratory or food grade quality.
- The annular space surrounding the vapor screen interval and a minimum of 6-inches above the top of the screen should be filled with a porous backfill

material (e.g., glass beads or coarse silica sand) to create a sampling zone 1 foot in length.

For temporary points, a hydrated bentonite surface seal should be created at the surface to minimize infiltration. For permanent points, the additional measures described below should be included.

- The soil vapor points should be sealed above the sampling zone with a bentonite slurry for a minimum distance of 3 feet (or to grade, whichever is smaller) to prevent ambient air infiltration.
- If needed, the remainder of the borehole should be backfilled with clean material.
- A protective casing should be set around the top of the point tubing and grouted in place to the top of the bentonite to minimize infiltration of water or ambient air, as well as to prevent accidental damage to the soil vapor point.
- The tubing top should be fitted with a Swagelok® and cap to prevent moisture and foreign material from infiltrating the tubing.

2.3. Soil Vapor Sample Collection

Soil vapor samples should be collected as indicated in the work plan and in accordance with applicable state or federal guidance documents. Specifically, samples from the points should be collected as follows:

- Permanent soil vapor points should not be sampled or purged for a minimum of 24 hours after installation. Temporary points may be purged and sampled immediately following installation.
- Document pertinent field conditions prior to sampling as described above.
- A suction pump should be used to remove a minimum of three implant volumes from the soil vapor points prior to sampling. Include the volume of any additional tubing added to affix sampling equipment and the annular space between the probe and the native material if sand or glass beads were used.
- The purge rate shall not exceed 0.2 liters per minute.
- Samples should be collected for volatile organic compounds (VOCs) in an individually laboratory certified clean 1-liter SUMMA® canister (or equivalent) using a certified flow controller calibrated for the anticipated sample duration (4 minutes). The regulator flow rate should not exceed 0.2 liters per minute.
- A helium tracer gas should be used to identify any potential migration or short circuiting of ambient air during sampling as described below.
- Remove the protective brass plug from the canister. Connect the pre-calibrated flow controller to the canister.
- Record the identification numbers for the canister and flow controller.
- Record the initial canister pressure on the vacuum gauge (check equipment-specific instructions for taking this measurement). A canister with a significantly different pressure than originally recorded by the testing

laboratory should not be used for sampling. Record these numbers and values on the chain-of-custody form for each sample.

- Connect the tubing from the soil vapor probe to the flow controller.
- Open the valve on the canister. Record the time that the valve was opened (beginning of sampling) and the canister pressure on the vacuum gauge.
- Photograph the canister and the area surrounding the canister.
- Monitor the vacuum pressure in the canister routinely during sampling.
- Stop sample collection when the canister still has a minimum amount of vacuum remaining. Check with the laboratory supplying the canister and flow controller for the ideal final vacuum pressure. Typically, the minimum vacuum is between 2 and 5 inches of mercury, but not zero. If there is no vacuum remaining, the sample should be rejected and collected again in a new canister.
- Record the final vacuum pressure and close the canister valve. Record the date and time that sample collection was stopped.
- Remove the flow controller from the canister and replace the protective brass plug.
- Attach labels/tags (sample name, time/date of sampling, etc.) to the canister as directed by the laboratory.
- Place the canister and other laboratory-supplied equipment in the packaging provided by the laboratory.
- Enter the information required for each sample on the chain-of-custody form, making sure to include the identification numbers for the canister and flow controller, and the initial and final canister pressures on the vacuum gauge.
- Samples should be analyzed for VOCs and naphthalene via modified USEPA modified Method TO-15 and helium via ASTM D-1945.
- Include the required copies of the chain-of-custody form in the shipping packaging, as directed by the laboratory. Maintain a copy of the chain-of-custody for the project file.
- Deliver or ship the samples to the laboratory as soon as practical.
- All laboratory analytical data should be validated by a data validation professional in accordance with the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, January 2005 and the USEPA Region II Standard Operating Procedure (SOP) for the Validation of Organic Data modified to accommodate the USEPA Method TO-15 and natural gas analysis by ASTM D-1945.

2.4. Tracer Gas Evaluation

The tracer gas evaluation provides a means to evaluate the integrity of the soil vapor probe seal and assess the potential for introduction of ambient air into the soil vapor sample.

A tracer gas evaluation should be conducted on the each temporary soil vapor probe to be sampled in a sampling event. A tracer gas evaluation should be conducted on

the each permanent soil vapor probe during the initial sampling event and a minimum of 10% of the soil vapor probes during subsequent sampling events.

The following tracer gas evaluation procedure uses helium as a tracer gases which can be measured through laboratory analysis or by a portable detector.

Retain the tracer gas around the sample probe by filling an air-tight chamber (such as a plastic bucket) positioned over the sample location.

- Make sure the chamber is suitably sealed to the ground surface.
- Introduce the tracer gas into the chamber. The chamber should have tubing at the top of the chamber to introduce the tracer gas into the chamber and a valved fitting at the bottom to let the ambient air out while introducing tracer gas. Close the valve after the chamber has been enriched with tracer gas at concentrations >10%.
- The chamber should have a gas-tight fitting or sealable penetration to allow the soil vapor sample probe tubing to pass through and exit the chamber.
- After the chamber has been filled with tracer gas, attach the sample probe tubing to a pump that should be pre-calibrated to extract soil vapor at a rate of no more than 0.2 liters per minute. Purge the tubing using the pump. Calculate the volume of air in the tubing and probe and purge one to three tubing/probe volumes prior collecting an analytical sample or using a portable device to measuring the tracer gas concentration.
- Samples collected from vapor points during a tracer gas evaluation should be analyzed for VOCs and naphthalene via modified USEPA modified Method TO-15 and helium via ASTM D-1945.
- Alternately, a tracer gas detector may be used to verify the presence of the tracer gas in the chamber by affixing it to the valve fitting at the bottom of the chamber. The tracer gas detector may also be used to measure the tracer gas concentration in the pump exhaust during purging. If used, then record the tracer gas concentrations in the chamber and in the soil vapor sample.
- Based on the concentrations of the tracer gas detected during analysis or direct measurement, determine whether additional gas tracer evaluations are necessary.

If the evaluation on a probe indicates a high concentration of tracer gas in the sample (>10% of the concentration of the tracer gas in the chamber), then the surface seal is not sufficient and requires improvement via repair or replacement prior to commencement subsequent sample collection.

A non-detectable level of tracer gas is preferred, however, if the evaluation on a probe indicates a low potential for introduction of ambient air into the sample (<10% of the concentration of the tracer gas in the chamber), then proceed with the soil

vapor sampling. While lower concentrations of tracer gas are acceptable, the impact of the detectable leak on sample results should be evaluated in the sampling report.

3. References

USEPA modified Method TO-15 and helium via ASTM D-1945

Section 2.7.1 of the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

4. Contact

Chris Berotti

STANDARD OPERATING PROCEDURE

SG-003 Sub-slab Soil Vapor Collection

1. Objective

This procedure outlines the general steps to collect sub-slab soil vapor samples. The site-specific Sampling and Analysis Work Plan should be consulted for proposed sample locations, sample depths, and sampling duration.

2. Execution

Permanent and temporary sub-slab soil vapor probes will be installed using the procedures outlined below. All sub-slab soil vapor probes will be installed using a direct-push drill rig (e.g., Geoprobe[®] or similar), hand auger, or manually using a slide hammer.

2.1. Document Field Conditions

Document pertinent field conditions prior to installation of any probe locations.

- Record weather information (precipitation, temperature, barometric pressure, relative humidity, wind speed, and wind direction) at the beginning of the sampling event. Record substantial changes to these conditions that may occur during the course of sampling. The information may be measured with on-site equipment or obtained from a reliable source of local measurements (e.g., a local airport). Data should be obtained for the past 24 to 48 hours. Record the indoor conditions (temperature, heating/cooling system active, windows open/closed, etc.).
- Measure the differential pressure at the building. Measure the indoor and outdoor barometric pressure using a high resolution device. Where possible, measure the sub-slab barometric pressure at the sampling point.
- If sampling near a commercial or industrial building, uses of volatile chemicals during normal operations of the facility should be identified.
- Indoor floor plan sketches should be drawn that include the floor layout with sampling locations, chemical storage areas, garages, doorways, stairways, location of basement sumps or subsurface drains and utility perforations through building foundations, heating, ventilating and air conditioning (HVAC) system air supply and return registers, compass orientation (North), footings that create separate foundation sections, and any other pertinent information should be completed;
- Outdoor plot sketches should be drawn that include the building site, area streets, outdoor air sampling locations (if applicable), compass orientation (north), and paved areas.
- Any pertinent observations should be recorded, such as odors and readings from field instrumentation.

2.2. Sub-Slab Soil Vapor Point Installation Specifications

Each sub-slab soil vapor point will be constructed as follows:

- Drill an approximately 3/8-inch hole through the slab. If necessary, advance the drill bit 2-3 inches into the sub-slab material to create an open cavity.
- Using dedicated inert Teflon or stainless steel tubing of laboratory or food grade quality, insert the inlet of the tubing to the specified depth below the slab. For permanent installation, only stainless steel tubing and fittings will be used.
- For permanent point installations, the annular space surrounding the vapor probe tip will be filled with a porous backfill material (e.g., glass beads or coarse silica sand) to cover 1-inch of the above the tip of the probe.
- Seal the annular space between the hole and the tubing using an inert non-shrinking sealant such as melted 100% beeswax, permagum grout, putty, etc. For permanent installations, cement may be used.
- For permanent points, a protective casing will be set around the top of the point tubing and grouted in place minimize infiltration of water or ambient air, as well as to prevent accidental damage to the permanent point.
- The tubing top will be fitted with a Swagelok[®] and cap to prevent moisture and foreign material from infiltrating the tubing.

In cases where sub-slab sampling is impractical or infeasible, a surrogate location (attached garage, concrete patio, asphalt driveway, etc.) may be used if it is representative of sub-slab conditions. In surrogate locations, the vapor sampling point may be installed in accordance with SOP SG-002 Soil Vapor Collection.

2.3. Sub-Slab Soil Vapor Sample Collection

Sub-slab soil vapor samples will be collected as indicated in the site-specific Sampling and Analysis Work Plan and in accordance with state or Federal guidance documents. Specifically, sub-slab samples from the points will be collected as follows:

- Document pertinent field conditions prior to sampling as described above.
- A suction pump will be used to remove one to three implant volumes from the sub-slab soil vapor points prior to sampling. Include the volume of any additional tubing added to affix sampling equipment and the annular space between the probe and the native material if sand or glass beads were used.
- The purge rate shall not exceed 0.2 liters per minute.
- Samples will be collected in an individually laboratory certified clean 1-liter SUMMA[®] canister (or equivalent) using a certified flow controller calibrated for the anticipated sample duration (4 minutes). The regulator flow rate will not exceed 0.2 liters per minute.
- A helium tracer gas will be used to identify any potential migration or short circuiting of ambient air during sampling as described below.

- Remove the protective brass plug from the canister. Connect the pre-calibrated flow controller to the canister.
- Record the identification numbers for the canister and flow controller.
- Record the initial canister pressure on the vacuum gauge (check equipment-specific instructions for taking this measurement). A canister with a significantly different pressure than originally recorded by the testing laboratory should not be used for sampling. Record these numbers and values on the chain-of-custody form for each sample.
- Connect the tubing from the sub-slab soil vapor probe to the flow controller.
- Open the valve on the canister. Record the time that the valve was opened (beginning of sampling) and the canister pressure on the vacuum gauge.
- Photograph the canister and the area surrounding the canister.
- Monitor the vacuum pressure in the canister routinely during sampling.
- Stop sample collection when the canister still has a minimum amount of vacuum remaining. Check with the laboratory supplying the canister and flow controller for the ideal final vacuum pressure. Typically, the minimum vacuum is between 2 and 5 inches of mercury, but not zero. If there is no vacuum remaining, the sample will be rejected and collected again in a new canister.
- Record the final vacuum pressure and close the canister valve. Record the date and time that sample collection was stopped.
- Remove the flow controller from the canister and replace the protective brass plug.
- Attach labels/tags (sample name, time/date of sampling, etc.) to the canister as directed by the laboratory.
- Place the canister and other laboratory-supplied equipment in the packaging provided by the laboratory.
- Enter the information required for each sample on the chain-of-custody form, making sure to include the identification numbers for the canister and flow controller, and the initial and final canister pressures on the vacuum gauge.
- Samples will be analyzed for volatile organic compounds (VOCs) and naphthalene via modified USEPA modified Method TO-15 and helium via ASTM D-1945
- Include the required copies of the chain-of-custody form in the shipping packaging, as directed by the laboratory. Maintain a copy of the chain-of-custody for the project file.
- Deliver or ship the samples to the laboratory as soon as practical.
- All laboratory analytical data will be validated by a data validation professional in accordance with the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, January 2005 and the USEPA Region II Standard Operating Procedure (SOP) for the Validation of Organic Data modified to accommodate the USEPA Method TO-15 and natural gas analysis by ASTM D-1945.

2.4. Tracer Gas Evaluation

The tracer gas evaluation provides a means to evaluate the integrity of the sub-slab soil vapor probe seal and assess the potential for introduction of indoor air into the sub-slab soil vapor sample. A tracer gas evaluation should be conducted on the each temporary sub-slab soil vapor probe to be sampled in a sampling event. A tracer gas evaluation should be conducted on the each permanent sub-slab soil vapor probe during the initial sampling event and a minimum of 10% of the sub-slab soil vapor probes during subsequent sampling events.

The following tracer gas evaluation procedure uses helium as a tracer gases which can be measured through laboratory analysis or by a portable detector.

- Retain the tracer gas around the sub-slab sample probe by filling an air-tight chamber (such as a plastic bucket) positioned over the sample location.
- Make sure the chamber is suitably sealed to the ground surface.
- Introduce the tracer gas into the chamber. The chamber will have tubing at the top of the chamber to introduce the tracer gas into the chamber and a valved fitting at the bottom to let the ambient air out while introducing tracer gas. Close the valve after the chamber has been enriched with tracer gas at concentrations >10%.
- The chamber will have a gas-tight fitting or sealable penetration to allow the sub-slab soil vapor sample probe tubing to pass through and exit the chamber.
- After the chamber has been filled with tracer gas, attach the sample probe tubing to a pump that will be pre-calibrated to extract sub-slab soil vapor at a rate of no more than 0.2 lpm. Purge the tubing using the pump. Calculate the volume of air in the tubing and purge one to three tubing volumes prior collecting an analytical sample or using a portable device to measuring the tracer gas concentration.
- Samples collected from vapor points during a tracer gas evaluation will be analyzed for VOCs and naphthalene via modified USEPA modified Method TO-15 and helium via ASTM D-1945.
- Alternately, a tracer gas detector may be used to verify the presence of the tracer gas in the chamber by affixing it to the valve fitting at the bottom of the chamber. The tracer gas detector may also be used to measure the tracer gas concentration in the pump exhaust during purging. If used, then record the tracer gas concentrations in the chamber and in the soil vapor sample.
- Based on the concentrations of the tracer gas detected during analysis or direct measurement, determine whether additional gas tracer evaluations are necessary:

If the evaluation on a probe indicates a high concentration of tracer gas in the sample (>10% of the concentration of the tracer gas in the chamber), then the

surface seal is not sufficient and requires improvement via repair or replacement prior to commencement subsequent sample collection.

A non-detectable level of tracer gas is preferred; however, if the evaluation on a probe indicates a low potential for introduction of ambient air into the sample (<10% of the concentration of the tracer gas in the chamber), then proceed with the soil vapor sampling. While lower concentrations of tracer gas are acceptable, the impact of the detectable leak on sample results should be evaluated in the sampling report.

3. References

USEPA modified Method TO-15 and helium via ASTM D-1945.

Section 2.7.1 of the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

4. Contact

Chris Berotti

STANDARD OPERATING PROCEDURE

SG-004 Ambient Air Sample Collection

1. Objective

Describe procedures to collect ambient air samples. The site-specific Work Plan should be consulted for proposed sample locations and sampling duration.

2. Execution

2.1. Document Field Conditions

Document pertinent field conditions prior to sample collection:

- Record weather information, if available (such as precipitation, temperature, barometric pressure, relative humidity, wind speed, and wind direction) at the beginning of the sampling event. Record substantial changes to these conditions that may occur during the course of sampling. The information may be measured with on-site equipment or obtained from a reliable source of local measurements (e.g., a local airport). Data should be obtained for at least the past 12 hours.
- If sampling near a commercial or industrial building, uses of volatile chemicals during normal operations of the facility should be identified.
- Outdoor plot sketches should be drawn that include the site, area streets, neighboring commercial or industrial facilities (with estimated distance to the site), outdoor air sampling locations (if applicable), and compass orientation (North).
- Any pertinent observations should be recorded, such as odors and readings from field instrumentation.

2.2. Sample Collection

- Samples should be collected in laboratory-certified clean SUMMA® canister (or equivalent) using a flow controller calibrated for the anticipated sample duration (1-hour, 8-hour, etc.). The regulator flow rate should not exceed 0.2 liters per minute.
- Place the canister at the sampling location. If the sample is collected from breathing height (e.g., 3 to 5 feet above ground), then mount the canister on a stable platform such that the sample inlet should be at the proper height.
- Remove the protective brass plug from canister. Connect the pre-calibrated flow controller to the canister.
- Record the identification numbers for the canister and flow controller.
- Record the initial canister pressure on the vacuum gauge (check equipment-specific instructions for taking this measurement). A canister with a significantly different pressure than originally recorded by the testing laboratory should not be used for sampling. Record these numbers and values on the chain-of-custody form for each sample.

- Connect the tubing to the flow controller.
- Open the valve on the canister. Record the time that the valve was opened (beginning of sampling) and the canister pressure on the vacuum gauge.
- Photograph the canister and the area surrounding the canister.
- If possible, monitor the vacuum pressure in the canister routinely during sampling. During monitoring, note the vacuum pressure on the gauge.
- Stop sample collection after the scheduled duration of sample collection but make sure that the canister still has a minimum amount of vacuum remaining. Check with the laboratory supplying the canister and flow controller for the ideal final vacuum pressure. Typically, the minimum vacuum is between 2 and 5 inches of mercury, but not zero. If there is no vacuum remaining, call the laboratory and discuss the sample viability with them. Determine whether another sample will be taken after sharing the laboratory's opinion with your project manager.
- Record the final vacuum pressure and close the canister valves. Record the date and time that sample collection was stopped.
- Remove the flow controller from the canister and replace the protective brass plug.
- Attach labels/tags (sample name, time/date of sampling, etc.) to the canister as directed by the laboratory.
- Place the canister and other laboratory-supplied equipment in the packaging provided by the laboratory.
- Enter the information required for each sample on the chain-of-custody form, making sure to include the identification numbers for the canister and flow controller, and the initial and final canister pressures on the vacuum gauge.
- Include the required copies of the chain-of-custody form in the shipping packaging, as directed by the laboratory. Maintain a copy of the chain-of-custody for the project file.
- Deliver or ship the samples to the laboratory as soon as practical.

3. References

USEPA modified Method TO-15 and helium via ASTM D-1945

Section 2.7.1 of the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

4. Contacts

Chris Berotti
Bill Simons

STANDARD OPERATING PROCEDURE

SM-001 Soil Sampling Techniques Including Split-Spoon

1. Objective

Describe standard procedures for the collection of surface and subsurface soil samples.

The definition of “surface” soil varies considerably between regulatory organizations. Surface soils may be classified as soils between the ground surface and 2 inches below ground surface, ground surface and 6 inches below ground surface, and even as much as ground surface and 24 inches below ground surface.

The definition of subsurface soil will vary in relation to the definition of surface soil. In general, subsurface soil is everything deeper than surface soil.

Refer to state-specific regulations for the definitions of surface and subsurface soils.

2. Execution

2.1. Surface Soil Sampling

Collection of surface soil samples can be accomplished with tools such as spades, shovels, trowels, scoops, etc. A flat, pointed mason trowel to cut a block of the desired soil is helpful when undisturbed profiles are required.

- Carefully remove the top layer of soil or debris to the desired sample depth with a pre-cleaned spade.
- Using a decontaminated stainless steel scoop, plastic spoon, or trowel, remove and discard a thin layer of soil from the area which came in contact with the spade.
- If volatile organic compound (VOC) analysis is to be performed, transfer the sample directly into an appropriate labeled sample container with a stainless steel lab spoon, small diameter core device, or equivalent and secure the cap tightly.
- Place the remainder of the sample into a decontaminated stainless steel, plastic, or other appropriate container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval.
- Either place the sample into appropriate labeled containers and secure the caps tightly; or, if composite samples are to be collected, place a sample from another sampling interval or location into the container and mix thoroughly.
- When compositing is complete, place the sample into appropriate labeled containers and secure the caps tightly.

2.2. Sampling with Hand Augers and Thin Wall Tube Samplers

Several types of augers are available; these include: bucket type, continuous flight (screw), and post-hole augers. Bucket type augers are generally better for direct sample recovery because they provide a large volume of sample in a short time. When continuous flight augers are used, the sample can be collected directly from the flights. The continuous flight augers are satisfactory when a composite of the complete soil column is desired. Post-hole augers have limited utility for sample collection as they are designed to cut through fibrous, rooted, swampy soil and generally cannot be used below a depth of approximately three feet.

2.2.1 Auger Sampling

- Clear the area to be sampled of any surface debris (e.g., twigs, rocks, litter). It may be advisable to remove the first three to six inches of surface soil for an area approximately six inches in radius around the drilling location.
- Attach the decontaminated auger bit to a drill rod extension, and attach the "T" handle to the drill rod.
- Begin augering, periodically removing and depositing accumulated soils onto a plastic sheet spread near the hole. This prevents accidental brushing of loose material back down the borehole when removing the auger or adding drill rods. It also facilitates refilling the hole, and avoids possible contamination of the surrounding area.
- After reaching the desired depth, carefully remove the auger from the hole. When sampling directly from the auger, collect the sample after the auger is removed from the hole.

2.2.2 Thin-Walled Core Sampling

- Remove auger tip from the extension rods and replace with a pre-cleaned thin wall tube sampler. Install the proper cutting tip.
- Carefully lower the tube sampler down the borehole. Gradually force the tube sampler into the soil. Do not scrape the borehole sides. Avoid hammering the rods as the vibrations may cause the boring walls to collapse.
- Remove the tube sampler, and unscrew the drill rods.
- Remove the cutting tip and the core from the device.
- Discard the top of the core (approximately 1 inch), as this may represent material knocked down from the sides of the boring and not the layer of interest. Place the remaining core into the appropriate labeled sample container.

One type of thin-wall sampler is depicted in Attachment A (this is typically used with a mechanical drill rig).

For either method, If VOC analysis is to be performed, transfer the sample into an appropriate, labeled sample container with a stainless steel lab spoon, small diameter core sampler, or equivalent and secure the cap tightly. VOC samples should be collected first to minimize the potential for losing volatiles prior to sample collection.

Place the remainder of the sample into a stainless steel, plastic, or other appropriate container and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into appropriate, labeled containers and secure the caps tightly; or, if composite samples are to be collected, place a sample from another sampling interval into the container and mix thoroughly.

When compositing is complete, place the sample into appropriate, labeled containers and secure the caps tightly.

If another sample is to be collected in the same hole, but at a greater depth, reattach the auger bit to the drill and assembly, and follow previous steps, making sure to decontaminate the auger and tube sampler between samples.

Abandon the hole according to applicable state regulations. Generally, shallow holes can simply be backfilled with the removed soil material.

2.3. Sampling at Depth with a Split-Spoon (Barrel) Sampler

Split-spoon sampling is generally used with a mechanical drill rig to collect undisturbed soil cores of 18 or 24 inches in length. A series of consecutive cores may be extracted with a split-spoon sampler to give a complete soil column profile, or an auger may be used to drill down to the desired depth for sampling. The split-spoon is then driven to its sampling depth through the bottom of the augured hole and the core extracted. A diagram of the split-spoon sampler assembly is provided as Attachment A.

When split-spoon soil sampling is performed to gain geologic information, work should be performed in accordance with ASTM D1586-08a, "Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils". The following procedures are used for collecting soil samples with a split-spoon:

- Select the size (length and diameter) of split-spoon sampler based on the amount of soil that is needed for characterization. The ASTM standard for N-values is 1 3/8 - inch I.D (2-inch O.D.). Specify spoon size and basket type to driller prior to mobilization to the site. Split spoon samplers are typically available in 1 3/8 – and 3 – inch I.D. sizes. A larger barrel may be necessary to obtain the required sample volume. Note on the boring log where larger split spoon barrels are used because the ASTM standard penetration test does not apply when driving split spoons larger than 1 3/8 I.D. (2-inch O.D.).

- Select a soft or stiff basket for the spoon (a softer basket generally works better for loose or soft material).
- Prior to hammering the split spoon to collect the sample, verify that the split-spoon is seated at the beginning of the desired sample interval. If it is seated above the interval, have driller clean out the hole prior to sampling. Record all depth measurements relative to ground surface.
- Assemble the sampler by aligning both sides of barrel and then screwing the drive shoe on the bottom and the head piece on top. See diagram in Attachment A.
- Place the sampler in a perpendicular position on the sample material.
- For all soil samples, use a 140-lb hammer falling 30 inches to drive the sampler, unless conditions necessitate using a 300-lb hammer.
- Record in the site fieldbook or on field data sheets the length of the tube used to penetrate the material being sampled, the split-spoon inside and outside diameters, and the hammer weight,
- Count and record the number of blow counts per 6-inch increments (confirming blow counts with driller if necessary).
- Withdraw the sampler, and open by unscrewing the bit and head and splitting the barrel. The length of recovery and soil type should be recorded on the boring log. If a soil sample is desired, a decontaminated stainless steel knife or spatula should be used to divide the tube contents in half, longitudinally. If possible, avoid collecting soil that has come in contact with the walls of the spoon, and soil at the top of the spoon.
- Without disturbing the core, transfer it to appropriate labeled sample container(s) and seal tightly.
- Note any material in the nose (shoe) of the spoon.
- Immediately collect a sample for VOCs (if required by the site-specific field sampling plan) by collecting soil from the entire length of the split spoon, unless otherwise specified by the project manager. When the most impacted interval is sampled for laboratory analysis, screen the spoon with the field instrument first, then collect the soil sample for VOC analysis from the appropriate interval.

3. Limitations

- Weather conditions (e.g., frozen ground) may prevent the collection of samples and should be considered prior to sample collection.
- Tools plated with chrome or other materials should not be used.
- Be aware of local laws regarding subsurface utility clearance prior to conducting subsurface investigations. Contact DigSafe or local utility companies as required.
- Be aware of the length of the drill string, the sample depth, and the required stickup of the drill string to ensure accurate sample interval measurement.
- If drilling with hollow-stem augers, the removal of the drill string from the hole, prior to attaching the split-spoon sampler, may cause soils to be sucked up

- into the augers (blow-in running sands). Upon recovery, determine if there is blow-in in the split spoon sampler. In general, blow-in is more unconsolidated than the rest of the sample and lacks stratification (do not include blow-in for recovery of sample collection).
- If soils consist of loose sands or soft clay, the drill string and sampler may advance slightly under its own weight, giving a false depth for soil collection.
 - Never sample more than two spoons consecutively without advancing the augers unless material is tight. Do not let the split spoon penetrate more than it can hold.
 - In many instances, groundwater will fill the auger and the split-spoon.

4. References

ASTM D1586-08a, "Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils". 2008.

United States Environmental Protection Agency, SOP 2012 "Soil Sampling", Revision 0.0, February 18, 2000.

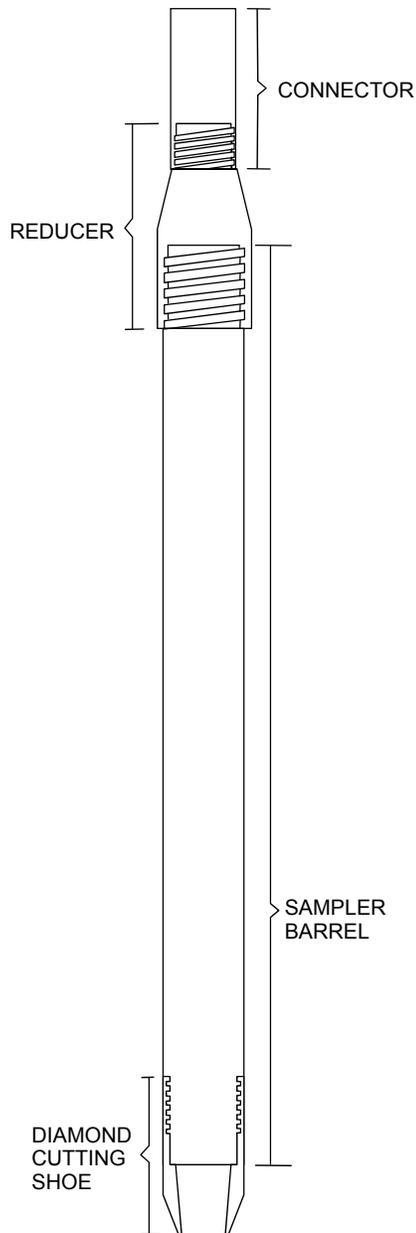
5. Attachments

Attachment A - Sampler Design Assembly

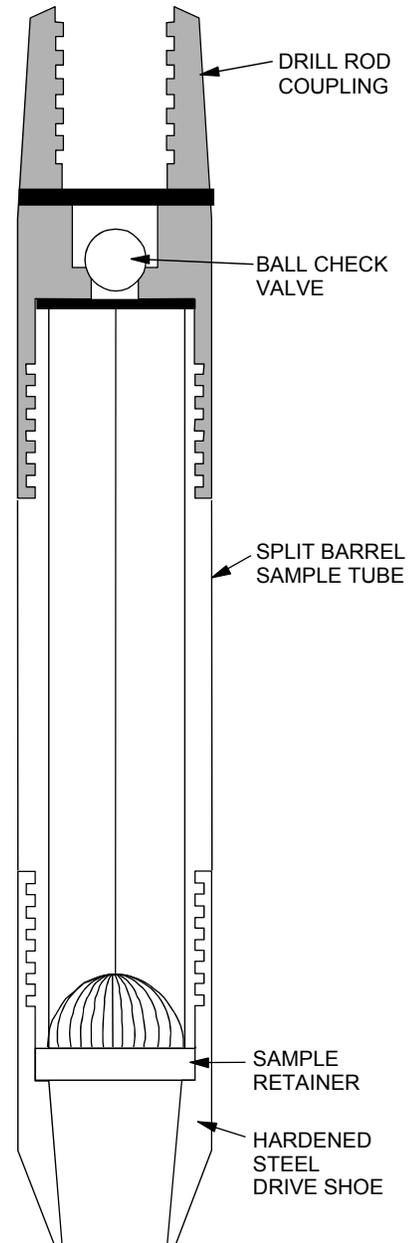
6. Contacts

Gary Fuerstenberg
Mark Ensign

**THIN WALL HQ CORE SAMPLER
(2" width x 60" length)**



**SPLIT-SPOON SAMPLER
(2" width x 24" length)**



STANDARD OPERATING PROCEDURES
SM-001

NEW ENGLAND AND ATLANTIC REGIONS



June 2011

**THIN WALL AND
SPLIT-SPOON
SAMPLERS**

Attachment A

STANDARD OPERATING PROCEDURE

SM-002 VOC Soil Sample Collection and Preservation Method

1. Objective

Describe methods to collect and preserve soil samples for analysis of Volatile Organic Compounds (VOCs) in accordance with the U.S. Environmental Protection Agency (EPA) Method 5035.

Some states have adopted soil sampling and preservation methods that vary from the procedures presented herein. Confirm that this method is appropriate for your project.

2. Execution

VOCs evaporate readily at normal temperatures and pressures. Care should be taken during sampling and preservation to limit the potential for VOCs to off-gas from the soil sample prior to being analyzed by the laboratory.

Soil samples should be obtained utilizing a small diameter core sampler such as a 10 milliliter (ml) plastic disposable syringe, an EnCore[®] sampler, an EasyDraw Syringe[®]. The EnCore[®] sampler is the only EPA-approved small diameter core sampler that can be used to collect the sample, store the sample, and transport the sample to the lab.

A separate soil sample must be collected and submitted to the laboratory for percent solids testing. At least approximately 20 grams of soil must be collected in a separate glass or plastic sampling container.

2.1. Collection and Preservation of Soil Samples

Three types of soil samples may be collected for VOCs analysis:

- High (typically >200 µg/kg) VOC concentration soil sample (Section 2.2 below)
- Low (typically 0.05-200 µg/kg) VOC concentration soil sample (Section 2.3 below)
- Synthetic Precipitation Leaching Procedure/Toxicity Characteristic Leaching Procedure (SPLP/TCLP) soil sample (Section 2.4 below)

2.2. Collection and Preservation of a Soil Sample with “High” Concentrations of VOCs (typically >200 µg/kg)

2.2.1. Option 1 – Methanol Preservation Method

Supplies include: an electronic field balance (in some cases), two VOC vials (per sample) with 10 ml methanol (the number of vials and amount of methanol might vary among labs), and a small diameter core sampler to collect an approximately 10 gram soil sample. Some labs, and EPA method 5035, specify a 5 gram soil sample. Check with the lab or project manager for the amount to collect.

Sampling Procedure:

- Weigh the VOC vials containing the methanol and record the weight. Some laboratories provide pre-weighed VOC vials.
- If you are weighing your samples, take a test sample with the sampler and weigh it to evaluate how close you are to the appropriate sample weight. If the laboratory VOC vial is pre-marked with a line, then you do not need to weigh the soil, just fill the VOC vial with soil until the methanol and soil mixture reaches the line.
- Collect the sample using the sampling device and extrude the sample into the preserved VOC vial. Be sure that the VOC vial and cap threads are free of soil, and then screw the cap tightly onto the VOC vial. Gently swirl the methanol in the VOC vial to coat the soil sample. Do not vigorously shake the vial.
- If necessary, weigh the VOC vial and record the weight. Some laboratories will weigh the vials at the lab, and it is not required in the field.
- Collect separate soil samples from the same area for percent solids and head space sampling.
- Samples must be frozen or analyzed within 14 days.

2.2.2. Option 2 – EnCore® Sampling Method

Supplies needed: One 5 or 10 ml EnCore® sampler.

Sampling Procedure:

- Label the EnCore® sampling container.
- Collect the soil sample quickly, wipe the sampler free of soil, and seal the sampler.
- Place sampler in a clean ziplock bag and place on ice in a cooler.
- Collect separate samples in separate containers for percent solids and head space sampling.
- Samples must be frozen, or preserved, or analyzed within 48 hours (requires coordination with the laboratory).

2.3. Collection and Preservation of a Soil Sample with “Low” Concentrations of VOCs (typically 0.5 to 200 µg/kg)

2.3.1. Option 1 – Water Preservation Method

Supplies required: an electronic field balance, two 40 ml VOC vials pre-weighed and containing 5 ml of water, a magnetic stirrer, and a sampling device.

Sampling Procedure:

- Use a small diameter core sampler to collect two soil samples (5 grams each) into pre-weighed 40 ml VOC vials with 5 ml of water and a magnetic stirrer. Wipe threads and cap and seal the VOC vial. Repeat for the second VOC vial.
- Weigh the VOC vials and record the weights.
- Collect separate samples in separate containers for percent solids and head space sampling.
- Samples must be frozen or analyzed within 14 days.

2.3.2. Option 2 – Collection into Unpreserved VOC Vials

Supplies required: electronic field balance, two 40 ml VOC vials pre-weighed, and a sampling device.

Sampling Procedure:

- Collect the sample using the sampling device and extrude the sample into the VOC vial. Be sure that the threads are free of soil, and cap and seal the VOC vial. Repeat for the second vial.
- Weigh the VOC vials and record the weights.
- Collect separate samples in separate containers for percent solids and head space sampling.
- Samples must be frozen or analyzed within 48 hours (requires coordination with the laboratory).

2.3.3. Option 3 – Collection in VOC Vials Preserved with Sodium Bisulfate

Supplies required: electronic field balance, two VOC vials pre-weighed with 5 ml of sodium bisulfate, a magnetic stir bar, and a sampling device.

Sampling Procedure:

- Collect the sample using the sampling device and extrude a 5 gram sample into the VOC vial containing the sodium bisulfate. Wipe threads and cap and seal the VOC vial. Repeat for the second VOC vial.
- Weigh the VOC vials and record the weights.

- Collect separate samples in separate containers for percent solids and head space sampling.
- Samples must be frozen or analyzed within 14 days.

2.3.4. Option 4 –EnCore® Sampling Method

Supplies required: two 5 gram EnCore® samplers.

Sampling Procedure:

- Label the EnCore® sampling container.
- Collect the soil sample quickly, wipe the sampler free of soil, and seal the sampler.
- Place sampler in a clean ziplock bag and place on ice in a cooler.
- Collect separate samples in separate containers for percent solids and head space sampling.
- Repeat previous steps with the second EnCore® device.
Samples must be frozen, or preserved, or analyzed within 48 hours (requires coordination with the laboratory).

2.4. Collection of samples being analyzed for VOCs by the TCLP or SPLP method

Sampling methods for TCLP or SPLP are similar to the methods presented above. The appropriate method is determined by local regulations. If using an EnCore® sampler, a 25 gram sampler should be used.

3. General Guidance

- Each state and federal regulatory agency has unique soil preservation requirements. Always verify collection and preservation methods with governing bodies.
- Verify preservation techniques with laboratory prior to sample collection.

4. Contacts

Lynn Willey
Mark Ensign

STANDARD OPERATING PROCEDURE

SM-003 Classification of Soil Samples in the Field

1. Objective

Describe methods to classify soil samples collected in the field in a consistent manner.

2. Execution

- Describe soil samples according to *ASTM D2488-09a, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)* and Attachments A and B. This standard is the basis for the Unified Soil Classification System.
- Identify and record the soil in terms of the major and minor constituents (i.e., sand gravel, silt, clay), Unified Soil Classification Symbol, sample structure, plasticity and dilatancy for fine-grained soils, color, local or geologic name if known (e.g., Boston Blue Clay or glacial till), odor, presence of iron or other staining, and presence of organic matter, shells, debris, or other unusual characteristics of the same.
- If a soil split-spoon sample contains more than one soil type (for example, the upper portion is silty sand and the lower portion is clay) describe each type separately.
- Record sampler type, blow counts, soil description, etc. on the boring log (see Attachment C).
- GEI consistently applies one modification to the ASTM standard: Use "widely graded" and "narrowly graded" instead of "well-graded" and "poorly graded," respectively.

3. Limitations

Certain projects or clients will require the use of other classification systems. Other classification systems should not be used unless specifically required by the client. If the client requires that we use the Burmister method, obtain the details from the client. An example breakdown is shown below, but some clients (MassDOT, for example) have their own breakdown.

- "and" = 35-50%
 - "some" = 20-35%
 - "little" = 10-20%
 - "trace" = 1-10%
- Describing soil samples is often difficult during cold or wet weather. Make sure your field notes describe these conditions. When possible, collect archive samples and verify sample descriptions in the office.

- The ASTM Standard Practice for Classification of Soils for Engineering Purposes (D2487) may be used in conjunction with the Visual-Manual Method to confirm the soil classification. D2487 includes laboratory testing.

4. References

ASTM D2487-06e1, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System), ASTM, 2006.

ASTM D2488-09a, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), ASTM, 2009.

Field Guide for Soil and Stratigraphic Analysis, Midwest Geosciences Group Press, 2001-2005.

Coarse-Grained Soils Visual-Manual Descriptions, GEI Consultants, Soil Description Chart.

Fine-Grained Soils Visual-Manual Descriptions, GEI Consultants, Soil Description Chart.

5. Attachments

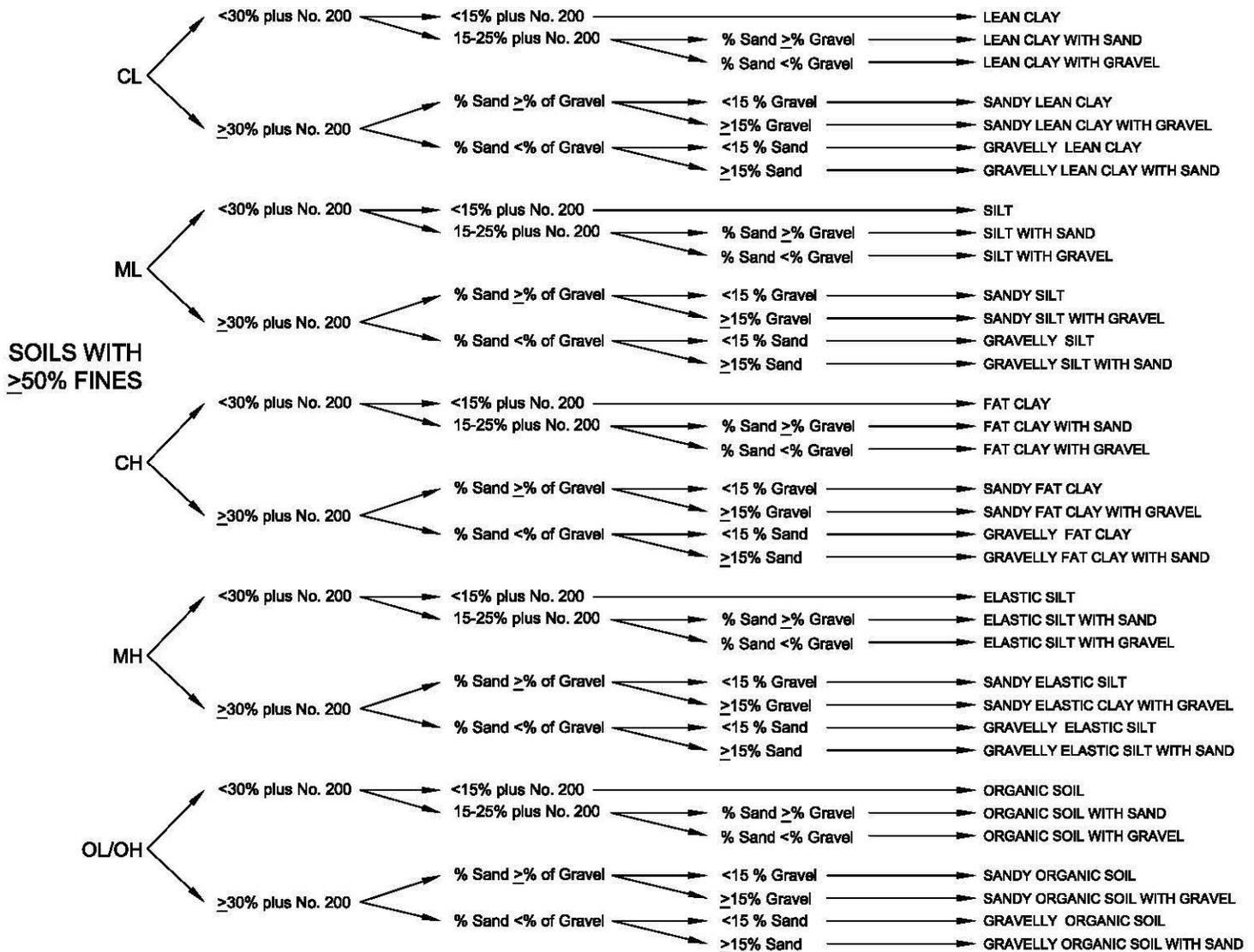
Attachment A – GEI Soil Description Charts (2007)

Attachment B – Visual Manual Descriptions with example boring log

Attachment C – Describing the Plasticity of Soil Samples

6. Contacts

Lynn Willey
Cathy Johnson



ID OF INORGANIC FINE SOILS FROM MANUAL TESTS

Symbol	Name	Dry Strength	Dilatancy	Toughness*
ML	Silt	None to low	Slow to rapid	Low or thread cannot be formed
CL	Lean Clay	Medium to high	None to slow	Medium
MH	Elastic Silt	Low to medium	None to slow	Low to medium
CH	Fat Clay	High to very high	None	High

CRITERIA FOR DESCRIBING PLASTICITY

Description	Criteria
Nonplastic ML	A 1/8-in. (3 -mm) thread cannot be rolled at any water content
Low Plasticity ML, MH	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit *
Medium Plasticity MH, CL	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit
High Plasticity CH	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit

- GROUP NAME and (SYMBOL)
- Describe fines, sand, and gravel components, in order of predominance. Include plasticity of fines. Include percentages of sand and gravel.
- Color
- Sheen, odor, roots, ash, brick, cementation, torvane and penetrometer results, etc.
- "Fill," local name or geologic name, if known

PEAT

Peat refers to a sample composed primarily of vegetable matter in varying stages of decomposition. The description should begin: PEAT (PT) and need not include percentages of sand, gravel or fines.

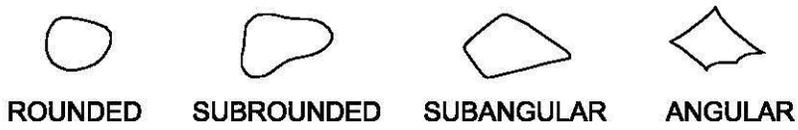
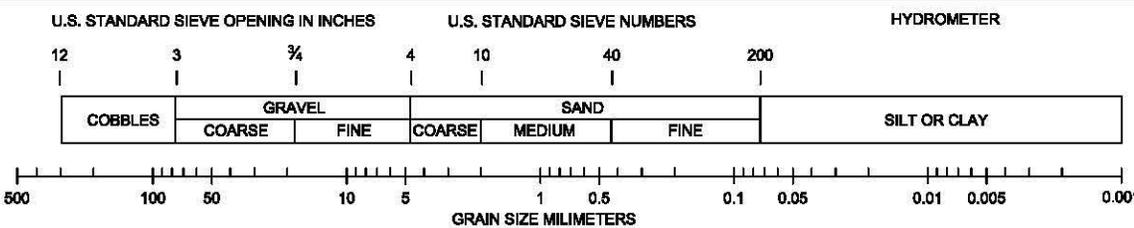
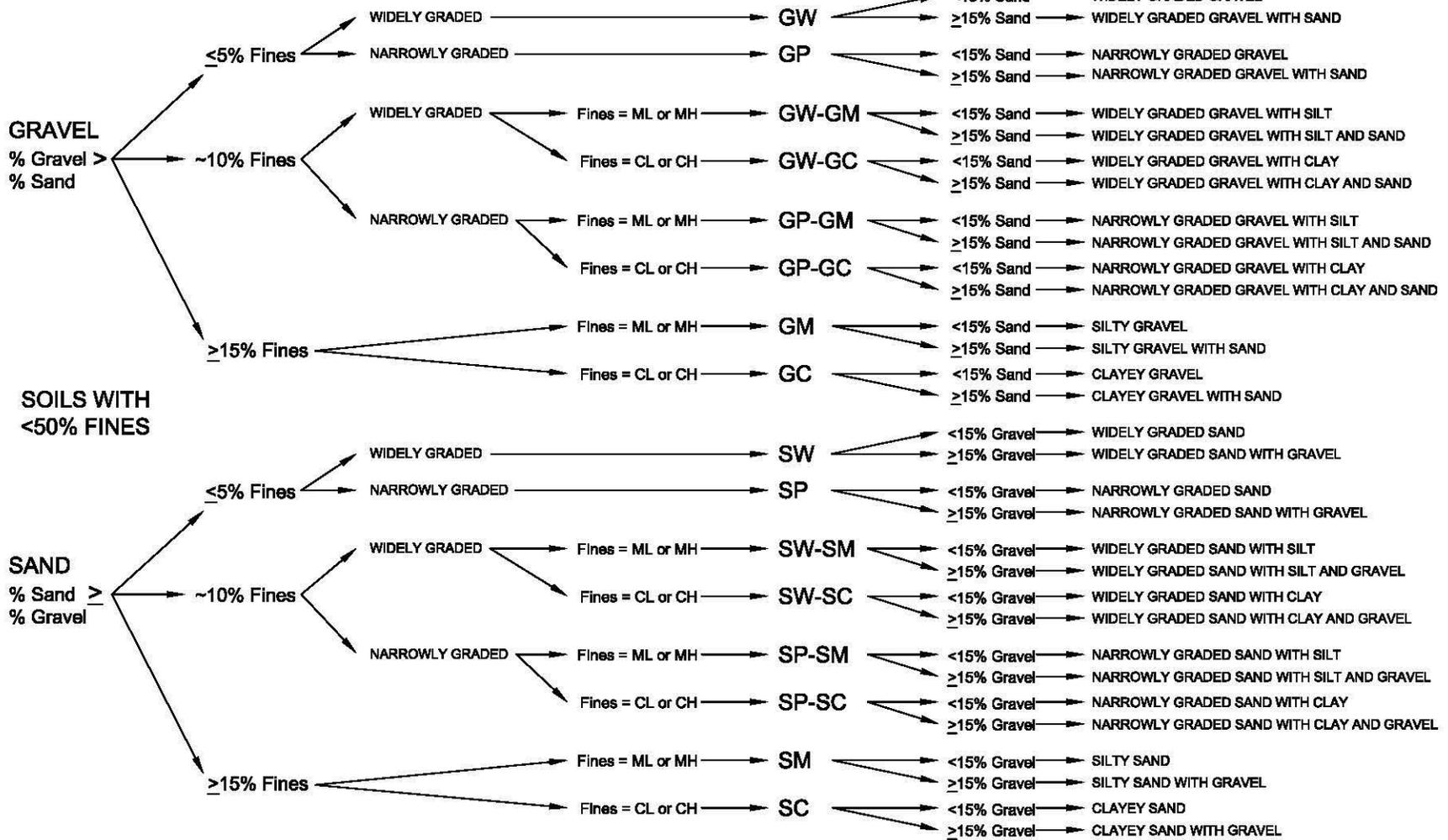
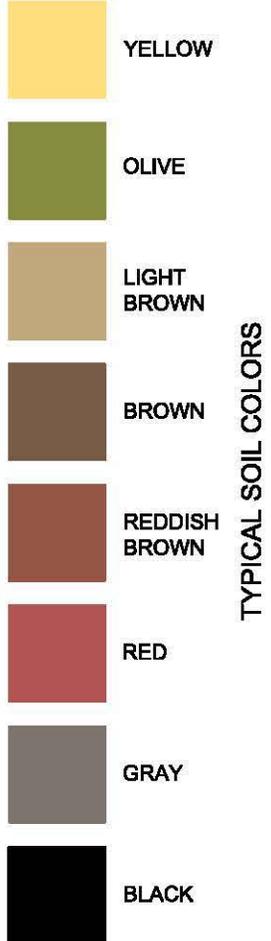
* Toughness refers to the strength of the thread near plastic limit. The lump refers to a lump of soil drier than the plastic, similar to dry strength.

COARSE-GRAINED SOILS

VISUAL-MANUAL DESCRIPTIONS

GROUP SYMBOL

GROUP NAME



1. **GROUP NAME** and (**SYMBOL**)
2. **Structure**, if any. (stratified layer thicknesses, lenses, varves, gradational changes)
3. Describe sand, gravel and fines components, with percentages, in order of predominance. Include max gravel size. For test pits give percent cobbles and boulders, by volume, and include max size.
4. **Color**
5. **Sheen**, odor, roots, ash, brick, cementation, reaction with HCL, etc.
6. "Fill," local name or geologic name, if known

Describing the Plasticity of Soil Samples

M. Paster – November 2008

References ASTM D 2487 – Soil descriptions – lab
ASTM D 2488 – Soil descriptions – field
ASTM D 4318 – Atterberg limits testing

GEI Practice for Boring and Test Pit Logs

Describe the fines as:

Non-plastic

Low plasticity (The GEI laminated sheets incorrectly use “slightly plastic” for “low plasticity.”)

Medium plasticity

High plasticity

Example: ~25% low plasticity fines

Toughness and dry strength:

You should use these tests to help decide how plastic the fines are. Record the results in the remarks column of the field log, but not in the soil description and not necessarily in the typed log.

On final logs, if Atterberg limits tests have been performed:

Do not use the descriptive terms non-plastic, low plasticity, etc. for samples on which Atterberg limits tests have been run. Instead, just give the percentage of fines and then report the actual Atterberg limits at the end of the description.

For example, the end of a silty sand description might be:

. . . ~25% fines, ~10% gravel max size ½ inch, gray. PL=23, LL=35.

(Atterberg limits tests are performed on the fraction of the sample finer than the No. 40 sieve, not just the fines. So the Atterberg limits data applies to the sample, not just to the fines.)

Hints:

High plasticity soils are rare in New England. If you think it's high plasticity, it's probably medium. Some Boston blue clay and some Connecticut River varved clays are high plasticity, but if you think you've found some, check with the project manager.

In New England, if ~10% fines or more, generally stick with GM, SM, ML, and CL. Occasionally GC, SC, CH. Don't use MH unless you have Atterberg limits data.

Estimating plasticity in the field, GEI guidance based on ASTM D 2488:

Plasticity	1/8-inch thread	Dry strength	Toughness
non	Cannot be rolled at any water content.	Dry specimen crumbles when handled.	Only slight pressure needed to roll thread near plastic limit.
low	Thread can barely be rolled.	Dry specimen crumbles with some finger pressure.	Slight to medium pressure needed to roll thread near plastic limit.
medium	Thread is easy to roll. Not much time needed to reach plastic limit.	Dry specimen crumbles with considerable finger pressure.	Medium pressure needed to roll thread near plastic limit.
high	Takes considerable time rolling and kneading to reach plastic limit.	Dry specimen cannot be broken with finger pressure.	Considerable pressure needed to roll thread near plastic limit.

Non-plastic vs. low plasticity:

ASTM D 2488 (soil descriptions - field) defines non-plastic and low plasticity based on the 1/8-inch thread as shown in the table above.

ASTM D 4318 (Atterberg limits testing) indicates that a sample should be called non-plastic for either of the following cases:

- The liquid limit test (dropping the cup) or the plastic limit test (rolling out the thread) cannot be performed because the plasticity is too low.
- The plastic limit is greater than or equal to the liquid limit.

Unfortunately, there are some soils that are low plasticity based on D 2488 (a thread can be rolled), but are non-plastic based on D 4318 (the liquid limit cannot be measured or $PL \geq LL$).

GEI considers these soils to have low plasticity, because that is how they “look” and “feel.” We want to document this information so that other people will have a better feel for what the soil looks like and how it behaves. So, if the soil was low plasticity based on D 2488, but non-plastic based on D 4318, that should be explained in the letter or report, and possibly in a note on the log.

EXAMPLE SOIL DESCRIPTIONS

SANDY SILT (ML) ~60% slightly plastic fines, ~40% mostly fine sand, 1" thick layer of fine to medium sand with <20% fines, gray.

LEAN CLAY (CL) ~90% moderately plastic fines, ~10% fine sand, olive. Boston Blue Clay. $S_v = 0.5, 0.5, 0.8$ tsf, $Q_p = 1.0, 1.5, 1.6$ tsf

Stratified CLAYEY SAND (SC) and WIDELY GRADED SAND (SW) SC layers 1 to 2 inches thick consist of fine sand with ~30% moderately plastic fines, gray. SW layers 1 to 4 inches thick consist of fine to coarse sand, ~10% gravel to 1/2 inch, <5% fines, brown. Hydraulic Fill.

EXAMPLE ROCK DESCRIPTIONS

(0-9"): **GRANITE**, hard, one piece, joint surface slightly weathered, pink.

(6-60"): **PHYLLITE**, joints ~ 45° generally parallel to foliation, 9" to 44" moderate to severe jointing and joint weathering. 44" to 60" single piece, green-gray.

ARGILLITE, medium hard, moderately weathered joints, gray. Cambridge Argillite.

GEOPROBE AND ROTOSONIC

When SPTs are not performed, note sample density (sands) or stiffness (clays) in description.

CRITERIA FOR DESCRIBING DILATANCY OF FINE-GRAINED SOILS

Description	Criteria
None	No visible change in the specimen
Slow	Water appears slowly on the surface of the specimen during shaking and does not disappear or disappears slowly upon squeezing.
Rapid	Water appears quickly on the surface of the specimen during shaking and disappears quickly upon squeezing.

SPT: Standard Penetration Test

30-inch drop with 140-lb hammer
1 3/4 to 2 1/4 turns around cathead
2-inch O.D. split spoon sampler

ENV'L TERMINOLOGY FOR SOIL DESCRIPTIONS

- **Ash** - Typically silt-size to medium sand-size.
- Do not use the term "cinders." This is not a technical term. Instead, use "ash," "burnt wood," "burnt material," or a similar term.
- **Coal-like material** - If it looks like coal but you aren't sure.
- **Clinker** - Vitriified (glass-like) or heat-fused material. Often burned impurities in coal. Often looks like pumice, but heavier.
- **Slag** - Similar to clinker, but normally refers to residue from metal ore processing.
- **Sheen** - Iridescent petroleum-like sheen. Not to be used for a "bacterial sheen," which can be distinguished by its tendency to break up on the water surface at angles. Petroleum sheen will be continuous and will not break up.
- **Stained** - Use with a color ("brown-stained") to indicate that the soil is stained a color other than its natural (unimpacted) color.
- **Coated** - Soil grains are coated with NAPL (oil, tar, etc.). There is not enough NAPL to saturate the pore spaces. ("Split spoon sampler coated with brown oil." "Soil grains coated with gray substance with slight gasoline-like odor.")
- **Saturated** - The entire sample pore space is saturated with NAPL. If you use this term, be sure it is not water saturating the pore spaces. Depending on viscosity, the NAPL may drain from a soil sample. ("Sample saturated with green, sticky substance.")
- **Blebs** - Discrete sphericals of NAPL in a soil matrix that was not visibly coated or saturated. ("Occasional blebs of reddish-brown tar.")
- **Oil** - Exhibits a petroleum odor, different from MGP odors.
- **Tar** - Exhibits an MGP odor (e.g. naphthalene-like odor).
- **Odors** - Use terms such as "naphthalene-like odor" or "petroleum-like odor." Use modifiers (strong, moderate, slight) to indicate odor intensity.

Appendix D

Soil Boring Geologic Logs

GEI CONSULTANTS, INC.

110 WALT WHITMAN ROAD, HUNTINGTON STATION, NEW YORK

SOIL BORING REPORT LOG

DATE	1/22/13	SHEET 1 OF 1
CLIENT	Big Apple Developers	LOCATION ID#
PROJECT LOCATION	464 West 130 th Street, New York, New York	B-3
REMARKS		PROJECT 130030
DRILLING CONTRACTOR	Tri-State Drilling	LOGGED BY CA DRILLER Paul R.
EQUIPMENT	SOIL SAMPLER	HAMMER WEIGHT/FALL
		Groundwater Collection
TYPE	Macrocore	DRILL RIG DRILL METHOD
SIZE	4 foot	Geoprobe
SURFACE ELEVATION		

WATER LEVEL (IN OPEN BOREHOLE) None

DEPTH	SAMPLE	RECOVERY	OVA/PID READINGS	MOISTURE	STRATA	SOIL – ROCK DESCRIPTION – CLASSIFICATION
0		28"	0.0			0-28" – Fill, black ash, glass fragments
			↓			
4'		30"	0.0			0-16" – Fill, glass fragments, ash
			↓			
						16-30" – Brown fine-medium sand 70%, 25% fine gravel, rock, 5% fines
			↓			
8'		48"	0.0			0-12" – Fill, black - broken glass, some ash
			↓			
						12-44" – Brown fine-coarse sand 70%, 25% fine gravel, 5% fines
			↓			
12'		40"	0.0			0-28" – Fill, black, broken glass, some ash,
			↓			
						28-40" – Fine to coarse gravel, fine to coarse sand, brick fragments
			↓			
16'		40"	0.0			0-20" – Black urban fill, crushed stone, fine to coarse gravel 20%
			↓			
						20-24" – Brown fine to coarse sand 30%, crushed stone, fine to coarse gravel 50%, fill, brick fragments
			↓			
20'		24"	0.0			0-10" – Fill, black, some ash, glass
			↓			
						10-24" – Brown fine sand 80%, 10% fines, 10% fine-coarse gravel
			↓			
24'						Refusal at 22 feet
						*soil samples collected for laboratory analysis from 0 to 2 feet and 8 to 10 feet below grade.
						Temporary well set at 22' with 10' screen

GEI CONSULTANTS, INC.

110 WALT WHITMAN ROAD, HUNTINGTON STATION, NEW YORK

SOIL BORING REPORT LOG

DATE	1/22/13	SHEET 1 OF 1
CLIENT	Big Apple Developers	LOCATION ID#
PROJECT LOCATION	464 West 130 th Street, New York, New York	B-5
REMARKS		PROJECT 3130030
DRILLING CONTRACTOR	Tri-State Drilling	LOGGED BY CM DRILLER
EQUIPMENT	SOIL SAMPLER	HAMMER WEIGHT/FALL
TYPE		Groundwater Collection
SIZE		DRILL RIG DRILL METHOD
SURFACE ELEVATION		

WATER LEVEL (IN OPEN BOREHOLE)

DEPTH	SAMPLE	RECOVERY	OVA/PID READINGS	MOISTURE	STRATA	SOIL – ROCK DESCRIPTION – CLASSIFICATION
0-4'	B-5	24"	0.0 ↓			0-15" – Brown fine sand 80%, 10% fine-coarse gravel, 10% fines 15-24" – Urban fill, coal ash 0-24" – Urban fill, coal ash layering *soil samples collected for laboratory analysis from 0 to 4 feet, and 4 to 6 feet below grade
4-6'		24"	0.0 ↓			
5			↓			
10						
15						
20						
25						
30						

Appendix E

Laboratory Data Deliverable for Soil Analytical Data

YORK

ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for:

GEI Consultants, Inc
110 Walt Whitman Road, Suite 204
Huntington Station NY, 11746
Attention: Nick Recchia

Report Date: 01/30/2013
Client Project ID: 130030
York Project (SDG) No.: 13A0654

CT License No. PH-0723

New Jersey License No. CT-005



New York License No. 10854

PA License No. 68-04440

Report Date: 01/30/2013
Client Project ID: 130030
York Project (SDG) No.: 13A0654

GEI Consultants, Inc
110 Walt Whitman Road, Suite 204
Huntington Station NY, 11746
Attention: Nick Recchia

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 January 23, 2013 and listed below. The project was identified as your project: **130030**.

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 Notes 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 attachment to 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>
13A0654-01	SB-6 (0-2')	Soil	01/22/2013	01/23/2013
13A0654-02	SB-6 (6-8')	Soil	01/22/2013	01/23/2013
13A0654-03	SB-7 (0-2')	Soil	01/22/2013	01/23/2013
13A0654-04	SB-7 (6-8')	Soil	01/22/2013	01/23/2013
13A0654-05	SB-5 (0-2')	Soil	01/22/2013	01/23/2013
13A0654-06	SB-5 (4-6')	Soil	01/22/2013	01/23/2013
13A0654-07	SB-4 (0-2')	Soil	01/22/2013	01/23/2013
13A0654-08	SB-4 (7-9')	Soil	01/22/2013	01/23/2013
13A0654-09	SB-3 (0-2')	Soil	01/22/2013	01/23/2013
13A0654-10	SB-3 (8-10')	Soil	01/22/2013	01/23/2013
13A0654-11	SB-2 (0-2')	Soil	01/22/2013	01/23/2013
13A0654-12	SB-2 (2-4')	Soil	01/22/2013	01/23/2013
13A0654-13	SB-1 (0-2')	Soil	01/22/2013	01/23/2013
13A0654-14	SB-1 (2-4')	Soil	01/22/2013	01/23/2013
13A0654-15	TB 012213	Water	01/22/2013	01/23/2013

General Notes for York Project (SDG) No.: 13A0654

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 samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By:



Robert Q. Bradley
Laboratory Director

Date: 01/30/2013

YORK

Sample Information

Client Sample ID: SB-6 (0-2')

York Sample ID: 13A0654-01

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 9:55 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.3	5.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.3	5.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.3	5.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	7.0	26	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
78-93-3	2-Butanone	ND		ug/kg dry	1.3	5.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
95-49-8	2-Chlorotoluene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
67-64-1	Acetone	ND		ug/kg dry	1.3	5.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
71-43-2	Benzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
108-86-1	Bromobenzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
75-25-2	Bromoform	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
74-83-9	Bromomethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS

Sample Information

Client Sample ID: SB-6 (0-2')

York Sample ID: 13A0654-01

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 9:55 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
75-00-3	Chloroethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
67-66-3	Chloroform	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
74-87-3	Chloromethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
74-95-3	Dibromomethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
75-09-2	Methylene chloride	ND		ug/kg dry	1.3	5.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
91-20-3	Naphthalene	ND		ug/kg dry	1.3	5.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
95-47-6	o-Xylene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	1.3	5.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
100-42-5	Styrene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
108-88-3	Toluene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.3	2.6	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	1.3	7.9	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	1.3	5.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:13	SS
Surrogate Recoveries		Result	Acceptance Range								

Sample Information

Client Sample ID: SB-6 (0-2')

York Sample ID: 13A0654-01

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 9:55 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	103 %			73-130						
460-00-4	Surrogate: p-Bromofluorobenzene	99.2 %			72-127						
2037-26-5	Surrogate: Toluene-d8	102 %			84-117						

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	99.0	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	131	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
62-53-3	Aniline	ND		ug/kg dry	156	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
120-12-7	Anthracene	ND		ug/kg dry	149	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	102	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	108	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	229	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	90.8	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	274	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	274	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	151	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	132	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	184	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	71.1	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	94.1	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	140	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	96.3	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	189	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	148	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	90.3	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	160	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
218-01-9	Chrysene	ND		ug/kg dry	126	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	110	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	127	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	111	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	179	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	169	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	86.5	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR

Sample Information

Client Sample ID: SB-6 (0-2')

York Sample ID: 13A0654-01

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 9:55 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	143	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	223	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	172	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	192	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	122	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	345	547	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	239	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	230	547	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	141	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	121	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	274	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
206-44-0	Fluoranthene	ND		ug/kg dry	160	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
86-73-7	Fluorene	ND		ug/kg dry	131	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	161	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	92.5	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	204	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	78.2	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	125	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
78-59-1	Isophorone	ND		ug/kg dry	94.1	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	210	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	104	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	119	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
91-20-3	Naphthalene	ND		ug/kg dry	67.3	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	272	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	113	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	80.4	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	103	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	74.4	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	91.4	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	112	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	124	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	206	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
85-01-8	Phenanthrene	ND		ug/kg dry	143	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
108-95-2	Phenol	ND		ug/kg dry	118	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR

Sample Information

Client Sample ID: SB-6 (0-2')

York Sample ID: 13A0654-01

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 9:55 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
129-00-0	Pyrene	ND		ug/kg dry	112	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
110-86-1	Pyridine	ND		ug/kg dry	192	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	99.0	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	212	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	139	274	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:49	SR
Surrogate Recoveries		Result			Acceptance Range						
5175-83-7	Surrogate: 2,4,6-Tribromophenol	53.0 %			15-110						
321-60-8	Surrogate: 2-Fluorobiphenyl	59.5 %			30-130						
367-12-4	Surrogate: 2-Fluorophenol	37.1 %			15-110						
4165-60-0	Surrogate: Nitrobenzene-d5	37.3 %			30-130						
4165-62-2	Surrogate: Phenol-d5	51.0 %			15-110						
1718-51-0	Surrogate: Terphenyl-d14	76.3 %			30-130						

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	91.4	91.4	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
72-43-5	Methoxychlor	ND		ug/kg dry	9.03	9.03	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
72-20-8	Endrin	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
60-57-1	Dieldrin	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
319-86-8	delta-BHC	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
57-74-9	Chlordane, total	ND		ug/kg dry	7.22	7.22	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
309-00-2	Aldrin	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
50-29-3	4,4'-DDT	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.81	1.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 21:49	JW

Sample Information

Client Sample ID: SB-6 (0-2')

York Sample ID: 13A0654-01

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 9:55 am

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
11096-82-5	Aroclor 1260	ND		ug/kg dry	18.6	18.6	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:31	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	18.6	18.6	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:31	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	18.6	18.6	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:31	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	18.6	18.6	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:31	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	18.6	18.6	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:31	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	18.6	18.6	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:31	JW
12674-11-2	Aroclor 1016	ND		ug/kg dry	18.6	18.6	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:31	JW
1336-36-3	Total PCBs	ND		ug/kg dry	7.44	18.6	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:31	JW
Surrogate Recoveries		Result			Acceptance Range						
877-09-8	<i>Surrogate: Tetrachloro-m-xylene</i>	112 %			30-150						
2051-24-3	<i>Surrogate: Decachlorobiphenyl</i>	104 %			30-150						

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	5740		mg/kg dry	1.12	2.19	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-36-0	Antimony	ND		mg/kg dry	0.241	0.547	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-38-2	Arsenic	2.02		mg/kg dry	0.372	1.09	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-39-3	Barium	51.2		mg/kg dry	0.142	0.547	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.109	0.109	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.109	0.547	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-70-2	Calcium	2960		mg/kg dry	0.044	5.47	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-47-3	Chromium	11.7		mg/kg dry	0.131	0.547	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-48-4	Cobalt	5.33		mg/kg dry	0.088	0.547	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-50-8	Copper	13.3		mg/kg dry	0.131	0.547	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7439-89-6	Iron	11500		mg/kg dry	0.711	2.19	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7439-92-1	Lead	21.3		mg/kg dry	0.186	0.328	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7439-95-4	Magnesium	3050		mg/kg dry	0.492	5.47	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7439-96-5	Manganese	369		mg/kg dry	0.120	1.09	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-02-0	Nickel	13.5		mg/kg dry	0.142	0.547	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-09-7	Potassium	981		mg/kg dry	3.70	10.9	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7782-49-2	Selenium	2.23		mg/kg dry	0.547	0.547	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-22-4	Silver	ND		mg/kg dry	0.109	0.547	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-23-5	Sodium	183		mg/kg dry	5.77	10.9	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-28-0	Thallium	ND		mg/kg dry	0.350	0.547	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-62-2	Vanadium	13.5		mg/kg dry	0.120	0.547	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW
7440-66-6	Zinc	31.4		mg/kg dry	0.098	0.547	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:33	MW

Sample Information

Client Sample ID: SB-6 (0-2')

York Sample ID: 13A0654-01

<u>York Project (SDG) No.</u> 13A0654	<u>Client Project ID</u> 130030	<u>Matrix</u> Soil	<u>Collection Date/Time</u> January 22, 2013 9:55 am	<u>Date Received</u> 01/23/2013
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Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.103	0.109	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	91.4		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: SB-6 (6-8')

York Sample ID: 13A0654-02

<u>York Project (SDG) No.</u> 13A0654	<u>Client Project ID</u> 130030	<u>Matrix</u> Soil	<u>Collection Date/Time</u> January 22, 2013 10:00 am	<u>Date Received</u> 01/23/2013
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Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	2.5	10	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	2.5	10	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	2.5	10	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS

Sample Information

Client Sample ID: SB-6 (6-8')

York Sample ID: 13A0654-02

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:00 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	13	50	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
78-93-3	2-Butanone	ND		ug/kg dry	2.5	10	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
95-49-8	2-Chlorotoluene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
67-64-1	Acetone	ND		ug/kg dry	2.5	10	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
71-43-2	Benzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
108-86-1	Bromobenzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
75-25-2	Bromoform	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
74-83-9	Bromomethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
75-00-3	Chloroethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
67-66-3	Chloroform	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
74-87-3	Chloromethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
74-95-3	Dibromomethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
75-09-2	Methylene chloride	ND		ug/kg dry	2.5	10	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
91-20-3	Naphthalene	II		ug/kg dry	2.5	10	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
95-47-6	o-Xylene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	2.5	10	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS

Sample Information

Client Sample ID: SB-6 (6-8')

York Sample ID: 13A0654-02

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:00 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
100-42-5	Styrene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
108-88-3	Toluene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	2.5	5.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	2.5	15	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	2.5	10	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 02:51	SS
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	108 %			73-130						
460-00-4	Surrogate: p-Bromofluorobenzene	105 %			72-127						
2037-26-5	Surrogate: Toluene-d8	103 %			84-117						

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	535	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	710	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
62-53-3	Aniline	ND		ug/kg dry	846	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
120-12-7	Anthracene	ND		ug/kg dry	807	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	553	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	585	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	1240	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	491	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	1480	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	1480	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	816	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	713	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	996	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	384	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	509	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR

Sample Information

Client Sample ID: SB-6 (6-8')

York Sample ID: 13A0654-02

York Project (SDG) No.
13A0654

Client Project ID
130030

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Collection Date/Time
January 22, 2013 10:00 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	754	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	520	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	1020	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	798	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	488	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	866	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
218-01-9	Chrysene	ND		ug/kg dry	680	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	594	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	689	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	600	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	967	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	911	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	467	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	775	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	1210	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	928	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	1030	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	659	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	1860	2960	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	1290	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	1240	2960	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	760	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	653	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	1480	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
206-44-0	Fluoranthene	ND		ug/kg dry	866	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
86-73-7	Fluorene	ND		ug/kg dry	710	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	872	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	500	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	1100	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	423	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	674	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
78-59-1	Isophorone	ND		ug/kg dry	509	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	1140	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	562	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR

Sample Information

Client Sample ID: SB-6 (6-8')

York Sample ID: 13A0654-02

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:00 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	642	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
91-20-3	Naphthalene	ND		ug/kg dry	364	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	1470	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	612	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	435	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	556	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	402	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	494	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	606	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	668	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	1110	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
85-01-8	Phenanthrene	ND		ug/kg dry	772	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
108-95-2	Phenol	ND		ug/kg dry	639	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
129-00-0	Pyrene	ND		ug/kg dry	603	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
110-86-1	Pyridine	ND		ug/kg dry	1040	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	535	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	1150	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	751	1480	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 21:10	SR
	Surrogate Recoveries	Result			Acceptance Range						
5175-83-7	Surrogate: 2,4,6-Tribromophenol	56.0 %			15-110						
321-60-8	Surrogate: 2-Fluorobiphenyl	88.8 %			30-130						
367-12-4	Surrogate: 2-Fluorophenol	27.6 %			15-110						
4165-60-0	Surrogate: Nitrobenzene-d5	39.2 %			30-130						
4165-62-2	Surrogate: Phenol-d5	53.5 %			15-110						
1718-51-0	Surrogate: Terphenyl-d14	81.1 %			30-130						

Sample Information

Client Sample ID: SB-6 (6-8')

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13A0654

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130030

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Soil

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January 22, 2013 10:00 am

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	98.8	98.8	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
72-43-5	Methoxychlor	ND		ug/kg dry	9.76	9.76	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
72-20-8	Endrin	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
60-57-1	Dieldrin	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
319-86-8	delta-BHC	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
57-74-9	Chlordane, total	ND		ug/kg dry	7.81	7.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
309-00-2	Aldrin	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
50-29-3	4,4'-DDT	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:19	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 17:47	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 17:47	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 17:47	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 17:47	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 17:47	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 17:47	JW
12674-11-2	Aroclor 1016	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 17:47	JW
1336-36-3	Total PCBs	ND		ug/kg dry	8.04	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 17:47	JW
Surrogate Recoveries		Result	Acceptance Range								
877-09-8	Surrogate: Tetrachloro-m-xylene	135 %	30-150								
2051-24-3	Surrogate: Decachlorobiphenyl	135 %	30-150								

Sample Information

Client Sample ID: SB-6 (6-8')

York Sample ID: 13A0654-02

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:00 am

Date Received
01/23/2013

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	3890		mg/kg dry	1.21	2.37	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-36-0	Antimony	ND		mg/kg dry	0.260	0.591	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-38-2	Arsenic	4.24		mg/kg dry	0.402	1.18	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-39-3	Barium	121		mg/kg dry	0.154	0.591	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.118	0.118	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.118	0.591	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-70-2	Calcium	2150		mg/kg dry	0.047	5.91	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-47-3	Chromium	8.55		mg/kg dry	0.142	0.591	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-48-4	Cobalt	6.55		mg/kg dry	0.095	0.591	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-50-8	Copper	35.2		mg/kg dry	0.142	0.591	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7439-89-6	Iron	11400		mg/kg dry	0.769	2.37	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7439-92-1	Lead	141		mg/kg dry	0.201	0.355	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7439-95-4	Magnesium	1760		mg/kg dry	0.532	5.91	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7439-96-5	Manganese	114		mg/kg dry	0.130	1.18	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-02-0	Nickel	14.9		mg/kg dry	0.154	0.591	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-09-7	Potassium	1250		mg/kg dry	4.00	11.8	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7782-49-2	Selenium	2.57		mg/kg dry	0.591	0.591	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-22-4	Silver	ND		mg/kg dry	0.118	0.591	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-23-5	Sodium	159		mg/kg dry	6.23	11.8	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-28-0	Thallium	ND		mg/kg dry	0.378	0.591	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-62-2	Vanadium	16.7		mg/kg dry	0.130	0.591	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW
7440-66-6	Zinc	286		mg/kg dry	0.106	0.591	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:37	MW

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.111	0.118	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Sample Information

Client Sample ID: SB-6 (6-8')

York Sample ID: 13A0654-02

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:00 am

Date Received
01/23/2013

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	84.5		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: SB-7 (0-2')

York Sample ID: 13A0654-03

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:15 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.4	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.4	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.4	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	7.3	28	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
78-93-3	2-Butanone	ND		ug/kg dry	1.4	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS

Sample Information

Client Sample ID: SB-7 (0-2')

York Sample ID: 13A0654-03

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:15 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-49-8	2-Chlorotoluene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
67-64-1	Acetone	ND		ug/kg dry	1.4	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
71-43-2	Benzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
108-86-1	Bromobenzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
75-25-2	Bromoform	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
74-83-9	Bromomethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
75-00-3	Chloroethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
67-66-3	Chloroform	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
74-87-3	Chloromethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
74-95-3	Dibromomethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
75-09-2	Methylene chloride	ND		ug/kg dry	1.4	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
91-20-3	Naphthalene	ND		ug/kg dry	1.4	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
95-47-6	o-Xylene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	1.4	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
100-42-5	Styrene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS

Sample Information

Client Sample ID: SB-7 (0-2')

York Sample ID: 13A0654-03

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:15 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-88-3	Toluene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.4	2.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	1.4	8.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	1.4	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 03:30	SS
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	106 %			73-130						
460-00-4	Surrogate: p-Bromofluorobenzene	98.5 %			72-127						
2037-26-5	Surrogate: Toluene-d8	101 %			84-117						

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	97.4	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	129	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
62-53-3	Aniline	ND		ug/kg dry	154	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
120-12-7	Anthracene	ND		ug/kg dry	147	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	101	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	107	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	225	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	89.3	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	269	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	269	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	149	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	130	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	181	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	70.0	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	92.6	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	137	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	94.7	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	186	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	145	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR

Sample Information

Client Sample ID: SB-7 (0-2')

York Sample ID: 13A0654-03

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:15 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-57-8	2-Chlorophenol	ND		ug/kg dry	88.8	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	158	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
218-01-9	Chrysene	ND		ug/kg dry	124	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	108	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	125	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	109	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	176	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	166	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	85.0	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	141	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	220	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	169	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	188	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	120	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	235	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	339	538	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	226	538	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	138	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	119	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	269	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
206-44-0	Fluoranthene	ND		ug/kg dry	158	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
86-73-7	Fluorene	ND		ug/kg dry	129	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	159	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	90.9	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	200	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	77.0	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	123	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
78-59-1	Isophorone	ND		ug/kg dry	92.6	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	207	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	102	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	117	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
91-20-3	Naphthalene	ND		ug/kg dry	66.2	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	267	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	111	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR

Sample Information

Client Sample ID: SB-7 (0-2')

York Sample ID: 13A0654-03

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:15 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
98-95-3	Nitrobenzene	ND		ug/kg dry	79.1	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	101	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	73.2	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
621-64-7	N-nitroso-di-n-propylamine	267	J	ug/kg dry	89.9	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	110	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	122	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	203	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
85-01-8	Phenanthrene	ND		ug/kg dry	140	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
108-95-2	Phenol	ND		ug/kg dry	116	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
129-00-0	Pyrene	ND		ug/kg dry	110	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
110-86-1	Pyridine	ND		ug/kg dry	189	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	97.4	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	209	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	137	269	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:49	SR

Surrogate Recoveries

Result

Acceptance Range

5175-83-7	Surrogate: 2,4,6-Tribromophenol	70.2 %	15-110
321-60-8	Surrogate: 2-Fluorobiphenyl	64.3 %	30-130
367-12-4	Surrogate: 2-Fluorophenol	40.1 %	15-110
4165-60-0	Surrogate: Nitrobenzene-d5	50.8 %	30-130
4165-62-2	Surrogate: Phenol-d5	73.3 %	15-110
1718-51-0	Surrogate: Terphenyl-d14	70.9 %	30-130

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	89.9	89.9	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
72-43-5	Methoxychlor	ND		ug/kg dry	8.88	8.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
72-20-8	Endrin	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW

Sample Information

Client Sample ID: SB-7 (0-2')

York Sample ID: 13A0654-03

York Project (SDG) No.
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130030

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January 22, 2013 10:15 am

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
60-57-1	Dieldrin	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
319-86-8	delta-BHC	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
57-74-9	Chlordane, total	ND		ug/kg dry	7.10	7.10	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
309-00-2	Aldrin	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
50-29-3	4,4'-DDT	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.78	1.78	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:34	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	18.3	18.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:51	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	18.3	18.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:51	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	18.3	18.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:51	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	18.3	18.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:51	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	18.3	18.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:51	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	18.3	18.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:51	JW
12674-11-2	Aroclor 1016	ND		ug/kg dry	18.3	18.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:51	JW
1336-36-3	Total PCBs	ND		ug/kg dry	7.32	18.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 22:51	JW
	Surrogate Recoveries	Result			Acceptance Range						
877-09-8	Surrogate: Tetrachloro-m-xylene	142 %			30-150						
2051-24-3	Surrogate: Decachlorobiphenyl	119 %			30-150						

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	6090		mg/kg dry	1.10	2.15	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-36-0	Antimony	ND		mg/kg dry	0.237	0.538	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-38-2	Arsenic	1.93		mg/kg dry	0.366	1.08	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-39-3	Barium	42.1		mg/kg dry	0.140	0.538	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.108	0.108	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.108	0.538	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-70-2	Calcium	1430		mg/kg dry	0.043	5.38	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-47-3	Chromium	10.6		mg/kg dry	0.129	0.538	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-48-4	Cobalt	5.65		mg/kg dry	0.086	0.538	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-50-8	Copper	11.8		mg/kg dry	0.129	0.538	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7439-89-6	Iron	13000		mg/kg dry	0.700	2.15	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7439-92-1	Lead	11.9		mg/kg dry	0.183	0.323	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW

Sample Information

Client Sample ID: SB-7 (0-2')

York Sample ID: 13A0654-03

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:15 am

Date Received
01/23/2013

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-95-4	Magnesium	2800		mg/kg dry	0.484	5.38	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7439-96-5	Manganese	302		mg/kg dry	0.118	1.08	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-02-0	Nickel	14.4		mg/kg dry	0.140	0.538	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-09-7	Potassium	934		mg/kg dry	3.64	10.8	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7782-49-2	Selenium	2.26		mg/kg dry	0.538	0.538	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-22-4	Silver	ND		mg/kg dry	0.108	0.538	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-23-5	Sodium	137		mg/kg dry	5.67	10.8	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-28-0	Thallium	ND		mg/kg dry	0.344	0.538	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-62-2	Vanadium	12.9		mg/kg dry	0.118	0.538	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW
7440-66-6	Zinc	30.3		mg/kg dry	0.097	0.538	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:42	MW

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.101	0.108	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	92.9		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: SB-7 (6-8')

York Sample ID: 13A0654-04

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

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January 22, 2013 10:20 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS

Sample Information

Client Sample ID: SB-7 (6-8')

York Sample ID: 13A0654-04

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:20 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.7	6.9	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.7	6.9	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.7	6.9	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	9.0	34	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
78-93-3	2-Butanone	ND		ug/kg dry	1.7	6.9	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
95-49-8	2-Chlorotoluene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
67-64-1	Acetone	ND		ug/kg dry	1.7	6.9	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
71-43-2	Benzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
108-86-1	Bromobenzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
75-25-2	Bromoform	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
74-83-9	Bromomethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
75-00-3	Chloroethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
67-66-3	Chloroform	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
74-87-3	Chloromethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
74-95-3	Dibromomethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS

Sample Information

Client Sample ID: SB-7 (6-8')

York Sample ID: 13A0654-04

York Project (SDG) No.
13A0654

Client Project ID
130030

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Soil

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January 22, 2013 10:20 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
75-09-2	Methylene chloride	ND		ug/kg dry	1.7	6.9	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
91-20-3	Naphthalene	ND		ug/kg dry	1.7	6.9	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
95-47-6	o-Xylene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	1.7	6.9	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
100-42-5	Styrene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
108-88-3	Toluene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.7	3.4	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	1.7	10	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	1.7	6.9	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:09	SS

Surrogate Recoveries

Result

Acceptance Range

17060-07-0	Surrogate: 1,2-Dichloroethane-d4	106 %	73-130
460-00-4	Surrogate: p-Bromofluorobenzene	99.1 %	72-127
2037-26-5	Surrogate: Toluene-d8	99.8 %	84-117

Sample Information

Client Sample ID: SB-7 (6-8')

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January 22, 2013 10:20 am

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01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	95.5	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	127	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
62-53-3	Aniline	ND		ug/kg dry	151	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
120-12-7	Anthracene	ND		ug/kg dry	144	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	98.7	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	104	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	221	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	87.6	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	264	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	264	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	146	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	127	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	178	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	68.6	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	90.7	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	135	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	92.9	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	182	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	142	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	87.1	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	155	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
218-01-9	Chrysene	ND		ug/kg dry	121	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	106	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	123	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	107	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	173	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	163	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	83.4	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	138	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	215	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	166	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	185	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	118	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	230	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR

Sample Information

Client Sample ID: SB-7 (6-8')

York Sample ID: 13A0654-04

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:20 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	332	528	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	222	528	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	136	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	117	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	264	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
206-44-0	Fluoranthene	ND		ug/kg dry	155	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
86-73-7	Fluorene	ND		ug/kg dry	127	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	156	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	89.2	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	196	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	75.4	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	120	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
78-59-1	Isophorone	ND		ug/kg dry	90.7	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	203	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	100	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	114	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
91-20-3	Naphthalene	ND		ug/kg dry	64.9	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	262	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	109	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	77.6	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	99.2	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	71.8	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	88.1	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	108	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	119	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	199	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
85-01-8	Phenanthrene	ND		ug/kg dry	138	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
108-95-2	Phenol	ND		ug/kg dry	114	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
129-00-0	Pyrene	ND		ug/kg dry	108	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
110-86-1	Pyridine	ND		ug/kg dry	185	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	95.5	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	205	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	134	264	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:23	SR
	Surrogate Recoveries	Result			Acceptance Range						

Sample Information

Client Sample ID: SB-7 (6-8')

York Sample ID: 13A0654-04

York Project (SDG) No.
13A0654

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130030

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January 22, 2013 10:20 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
5175-83-7	Surrogate: 2,4,6-Tribromophenol	70.0 %			15-110						
321-60-8	Surrogate: 2-Fluorobiphenyl	64.4 %			30-130						
367-12-4	Surrogate: 2-Fluorophenol	46.6 %			15-110						
4165-60-0	Surrogate: Nitrobenzene-d5	44.6 %			30-130						
4165-62-2	Surrogate: Phenol-d5	77.9 %			15-110						
1718-51-0	Surrogate: Terphenyl-d14	76.1 %			30-130						

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	88.1	88.1	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
72-43-5	Methoxychlor	ND		ug/kg dry	8.71	8.71	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
72-20-8	Endrin	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
60-57-1	Dieldrin	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
319-86-8	delta-BHC	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
57-74-9	Chlordane, total	ND		ug/kg dry	6.96	6.96	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
309-00-2	Aldrin	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
50-29-3	4,4'-DDT	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 22:50	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:11	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:11	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:11	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:11	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:11	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:11	JW

Sample Information

Client Sample ID: SB-7 (6-8')

York Sample ID: 13A0654-04

York Project (SDG) No.
13A0654

Client Project ID
130030

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Collection Date/Time
January 22, 2013 10:20 am

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:11	JW
1336-36-3	Total PCBs	ND		ug/kg dry	7.18	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:11	JW
Surrogate Recoveries		Result	Acceptance Range								
877-09-8	Surrogate: Tetrachloro-m-xylene	119 %	30-150								
2051-24-3	Surrogate: Decachlorobiphenyl	107 %	30-150								

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	13800		mg/kg dry	1.08	2.11	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-36-0	Antimony	ND		mg/kg dry	0.232	0.528	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-38-2	Arsenic	1.76		mg/kg dry	0.359	1.06	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-39-3	Barium	123		mg/kg dry	0.137	0.528	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.106	0.106	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.106	0.528	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-70-2	Calcium	10600		mg/kg dry	0.042	5.28	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-47-3	Chromium	20.1		mg/kg dry	0.127	0.528	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-48-4	Cobalt	18.0		mg/kg dry	0.084	0.528	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-50-8	Copper	13.8		mg/kg dry	0.127	0.528	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7439-89-6	Iron	21400		mg/kg dry	0.686	2.11	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7439-92-1	Lead	18.0		mg/kg dry	0.179	0.317	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7439-95-4	Magnesium	10600		mg/kg dry	0.475	5.28	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7439-96-5	Manganese	396		mg/kg dry	0.116	1.06	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-02-0	Nickel	36.0		mg/kg dry	0.137	0.528	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-09-7	Potassium	8770		mg/kg dry	3.57	10.6	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7782-49-2	Selenium	4.08		mg/kg dry	0.528	0.528	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-22-4	Silver	ND		mg/kg dry	0.106	0.528	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-23-5	Sodium	389		mg/kg dry	5.56	10.6	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-28-0	Thallium	ND		mg/kg dry	0.338	0.528	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-62-2	Vanadium	26.3		mg/kg dry	0.116	0.528	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW
7440-66-6	Zinc	78.8		mg/kg dry	0.095	0.528	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 20:46	MW

Sample Information

Client Sample ID: SB-7 (6-8')

York Sample ID: 13A0654-04

York Project (SDG) No.
13A0654

Client Project ID
130030

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January 22, 2013 10:20 am

Date Received
01/23/2013

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.0992	0.106	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	94.8		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: SB-5 (0-2')

York Sample ID: 13A0654-05

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:45 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	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 SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.5	6.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.5	6.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.5	6.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS

Sample Information

Client Sample ID: SB-5 (0-2')

York Sample ID: 13A0654-05

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:45 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	8.0	30	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
78-93-3	2-Butanone	ND		ug/kg dry	1.5	6.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
95-49-8	2-Chlorotoluene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
67-64-1	Acetone	ND		ug/kg dry	1.5	6.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
71-43-2	Benzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
108-86-1	Bromobenzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
75-25-2	Bromoform	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
74-83-9	Bromomethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
75-00-3	Chloroethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
67-66-3	Chloroform	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
74-87-3	Chloromethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
74-95-3	Dibromomethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
75-09-2	Methylene chloride	ND		ug/kg dry	1.5	6.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
91-20-3	Naphthalene	ND		ug/kg dry	1.5	6.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
95-47-6	o-Xylene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	1.5	6.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS

Sample Information

Client Sample ID: SB-5 (0-2')

York Sample ID: 13A0654-05

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:45 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
100-42-5	Styrene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
108-88-3	Toluene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.5	3.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	1.5	9.1	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	1.5	6.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 04:47	SS
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	104 %			73-130						
460-00-4	Surrogate: p-Bromofluorobenzene	98.9 %			72-127						
2037-26-5	Surrogate: Toluene-d8	99.3 %			84-117						

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	98.1	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	130	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
62-53-3	Aniline	ND		ug/kg dry	155	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
120-12-7	Anthracene	ND		ug/kg dry	148	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	101	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	107	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	227	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	90.0	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	271	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	271	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	150	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	131	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	183	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	70.5	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	93.2	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR

Sample Information

Client Sample ID: SB-5 (0-2')

York Sample ID: 13A0654-05

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:45 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	138	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	95.4	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	187	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	146	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	89.4	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	159	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
218-01-9	Chrysene	ND		ug/kg dry	125	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	109	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	126	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	110	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	177	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	167	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	85.6	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	142	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	221	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	170	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	190	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	121	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	236	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	341	542	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	228	542	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	139	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	120	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	271	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
206-44-0	Fluoranthene	ND		ug/kg dry	159	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
86-73-7	Fluorene	ND		ug/kg dry	130	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	160	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	91.6	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	202	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	77.5	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	124	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
78-59-1	Isophorone	ND		ug/kg dry	93.2	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	208	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	103	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR

Sample Information

Client Sample ID: SB-5 (0-2')

York Sample ID: 13A0654-05

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:45 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	118	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
91-20-3	Naphthalene	ND		ug/kg dry	66.7	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	269	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	112	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	79.7	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	102	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	73.7	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	90.5	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	111	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	123	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	204	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
85-01-8	Phenanthrene	ND		ug/kg dry	141	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
108-95-2	Phenol	ND		ug/kg dry	117	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
129-00-0	Pyrene	ND		ug/kg dry	111	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
110-86-1	Pyridine	ND		ug/kg dry	190	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	98.1	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	210	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	138	271	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:56	SR
	Surrogate Recoveries	Result			Acceptance Range						
5175-83-7	Surrogate: 2,4,6-Tribromophenol	83.6 %			15-110						
321-60-8	Surrogate: 2-Fluorobiphenyl	76.9 %			30-130						
367-12-4	Surrogate: 2-Fluorophenol	40.5 %			15-110						
4165-60-0	Surrogate: Nitrobenzene-d5	42.3 %			30-130						
4165-62-2	Surrogate: Phenol-d5	100 %			15-110						
1718-51-0	Surrogate: Terphenyl-d14	82.6 %			30-130						

Sample Information

Client Sample ID: SB-5 (0-2')

York Sample ID: 13A0654-05

York Project (SDG) No.
13A0654

Client Project ID
130030

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January 22, 2013 10:45 am

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	90.5	90.5	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
72-43-5	Methoxychlor	ND		ug/kg dry	8.94	8.94	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
72-20-8	Endrin	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
60-57-1	Dieldrin	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
319-86-8	delta-BHC	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
57-74-9	Chlordane, total	ND		ug/kg dry	7.15	7.15	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
309-00-2	Aldrin	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
50-29-3	4,4'-DDT	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.79	1.79	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:05	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	18.4	18.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:06	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	18.4	18.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:06	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	18.4	18.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:06	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	18.4	18.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:06	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	18.4	18.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:06	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	18.4	18.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:06	JW
12674-11-2	Aroclor 1016	ND		ug/kg dry	18.4	18.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:06	JW
1336-36-3	Total PCBs	ND		ug/kg dry	7.37	18.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:06	JW

Surrogate Recoveries

Result

Acceptance Range

877-09-8 *Surrogate: Tetrachloro-m-xylene* 112 %
2051-24-3 *Surrogate: Decachlorobiphenyl* 99.0 %

Sample Information

Client Sample ID: SB-5 (0-2')

York Sample ID: 13A0654-05

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:45 am

Date Received
01/23/2013

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	6580		mg/kg dry	1.11	2.17	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-36-0	Antimony	ND		mg/kg dry	0.238	0.542	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-38-2	Arsenic	2.52		mg/kg dry	0.369	1.08	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-39-3	Barium	50.5		mg/kg dry	0.141	0.542	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.108	0.108	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.108	0.542	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-70-2	Calcium	2710		mg/kg dry	0.043	5.42	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-47-3	Chromium	12.6		mg/kg dry	0.130	0.542	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-48-4	Cobalt	5.42		mg/kg dry	0.087	0.542	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-50-8	Copper	13.0		mg/kg dry	0.130	0.542	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7439-89-6	Iron	12100		mg/kg dry	0.705	2.17	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7439-92-1	Lead	15.8		mg/kg dry	0.184	0.325	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7439-95-4	Magnesium	3130		mg/kg dry	0.488	5.42	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7439-96-5	Manganese	341		mg/kg dry	0.119	1.08	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-02-0	Nickel	15.2		mg/kg dry	0.141	0.542	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-09-7	Potassium	1130		mg/kg dry	3.66	10.8	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7782-49-2	Selenium	2.49		mg/kg dry	0.542	0.542	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-22-4	Silver	ND		mg/kg dry	0.108	0.542	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-23-5	Sodium	148		mg/kg dry	5.71	10.8	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-28-0	Thallium	ND		mg/kg dry	0.347	0.542	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-62-2	Vanadium	15.8		mg/kg dry	0.119	0.542	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW
7440-66-6	Zinc	43.4		mg/kg dry	0.098	0.542	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:02	MW

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.102	0.108	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Sample Information

Client Sample ID: SB-5 (0-2')

York Sample ID: 13A0654-05

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:45 am

Date Received
01/23/2013

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	92.2		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: SB-5 (4-6')

York Sample ID: 13A0654-06

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:55 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	3.4	14	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	3.4	14	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	3.4	14	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	18	68	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
78-93-3	2-Butanone	ND		ug/kg dry	3.4	14	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS

Sample Information

Client Sample ID: SB-5 (4-6')

York Sample ID: 13A0654-06

York Project (SDG) No.
13A0654

Client Project ID
130030

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Collection Date/Time
January 22, 2013 10:55 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-49-8	2-Chlorotoluene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
67-64-1	Acetone	ND		ug/kg dry	3.4	14	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
71-43-2	Benzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
108-86-1	Bromobenzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
75-25-2	Bromoform	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
74-83-9	Bromomethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
75-00-3	Chloroethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
67-66-3	Chloroform	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
74-87-3	Chloromethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
74-95-3	Dibromomethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
75-09-2	Methylene chloride	ND		ug/kg dry	3.4	14	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
91-20-3	Naphthalene	ND		ug/kg dry	3.4	14	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
95-47-6	o-Xylene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	3.4	14	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
100-42-5	Styrene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS

Sample Information

Client Sample ID: SB-5 (4-6')

York Sample ID: 13A0654-06

York Project (SDG) No.
13A0654

Client Project ID
130030

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January 22, 2013 10:55 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-88-3	Toluene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	3.4	6.8	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	3.4	21	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	3.4	14	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 05:26	SS
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	116 %			73-130						
460-00-4	Surrogate: p-Bromofluorobenzene	108 %			72-127						
2037-26-5	Surrogate: Toluene-d8	116 %			84-117						

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	103	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	136	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
62-53-3	Aniline	ND		ug/kg dry	162	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
120-12-7	Anthracene	ND		ug/kg dry	155	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	106	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
50-32-8	Benzo(a)pyrene	166	J	ug/kg dry	112	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	238	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	94.2	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	284	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	284	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	157	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	137	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	191	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	73.7	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	97.6	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	145	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	99.8	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	196	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	153	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR

Sample Information

Client Sample ID: SB-5 (4-6')

York Sample ID: 13A0654-06

York Project (SDG) No.
13A0654

Client Project ID
130030

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Soil

Collection Date/Time
January 22, 2013 10:55 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-57-8	2-Chlorophenol	ND		ug/kg dry	93.6	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	166	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
218-01-9	Chrysene	ND		ug/kg dry	130	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	114	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	132	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	115	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	185	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	175	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	89.6	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	149	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	231	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	178	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	199	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	126	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	357	567	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	247	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	238	567	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	146	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	125	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	284	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
206-44-0	Fluoranthene	ND		ug/kg dry	166	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
86-73-7	Fluorene	ND		ug/kg dry	136	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	167	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	95.9	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	211	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	81.1	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	129	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
78-59-1	Isophorone	ND		ug/kg dry	97.6	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	218	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	108	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	123	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
91-20-3	Naphthalene	ND		ug/kg dry	69.8	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	282	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	117	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR

Sample Information

Client Sample ID: SB-5 (4-6')

York Sample ID: 13A0654-06

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:55 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
98-95-3	Nitrobenzene	ND		ug/kg dry	83.4	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	107	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	77.1	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	94.7	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	116	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	128	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	214	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
85-01-8	Phenanthrene	ND		ug/kg dry	148	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
108-95-2	Phenol	ND		ug/kg dry	123	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
129-00-0	Pyrene	122	J	ug/kg dry	116	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
110-86-1	Pyridine	ND		ug/kg dry	199	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	103	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	220	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	144	284	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 19:30	SR

Surrogate Recoveries

Result

Acceptance Range

5175-83-7	Surrogate: 2,4,6-Tribromophenol	66.2 %									
321-60-8	Surrogate: 2-Fluorobiphenyl	69.6 %									
367-12-4	Surrogate: 2-Fluorophenol	47.0 %									
4165-60-0	Surrogate: Nitrobenzene-d5	59.3 %									
4165-62-2	Surrogate: Phenol-d5	84.2 %									
1718-51-0	Surrogate: Terphenyl-d14	75.9 %									

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	94.7	94.7	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
72-43-5	Methoxychlor	ND		ug/kg dry	9.36	9.36	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
72-20-8	Endrin	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW

Sample Information

Client Sample ID: SB-5 (4-6')

York Sample ID: 13A0654-06

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:55 am

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
60-57-1	Dieldrin	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
319-86-8	delta-BHC	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
57-74-9	Chlordane, total	ND		ug/kg dry	7.49	7.49	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
309-00-2	Aldrin	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
50-29-3	4,4'-DDT	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.87	1.87	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:20	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:08	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:08	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:08	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:08	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:08	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:08	JW
12674-11-2	Aroclor 1016	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:08	JW
1336-36-3	Total PCBs	ND		ug/kg dry	7.71	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:08	JW
Surrogate Recoveries		Result			Acceptance Range						
877-09-8	Surrogate: Tetrachloro-m-xylene	141 %			30-150						
2051-24-3	Surrogate: Decachlorobiphenyl	124 %			30-150						

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	2890		mg/kg dry	1.16	2.27	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-36-0	Antimony	ND		mg/kg dry	0.250	0.567	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-38-2	Arsenic	3.57		mg/kg dry	0.386	1.13	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-39-3	Barium	87.0		mg/kg dry	0.147	0.567	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.113	0.113	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.113	0.567	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-70-2	Calcium	2840		mg/kg dry	0.045	5.67	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-47-3	Chromium	6.62		mg/kg dry	0.136	0.567	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-48-4	Cobalt	5.26		mg/kg dry	0.091	0.567	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-50-8	Copper	30.8		mg/kg dry	0.136	0.567	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7439-89-6	Iron	7050		mg/kg dry	0.737	2.27	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7439-92-1	Lead	71.1		mg/kg dry	0.193	0.340	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW

Sample Information

Client Sample ID: SB-5 (4-6')

York Sample ID: 13A0654-06

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 10:55 am

Date Received
01/23/2013

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-95-4	Magnesium	824		mg/kg dry	0.511	5.67	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7439-96-5	Manganese	89.9		mg/kg dry	0.125	1.13	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-02-0	Nickel	12.6		mg/kg dry	0.147	0.567	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-09-7	Potassium	506		mg/kg dry	3.83	11.3	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7782-49-2	Selenium	1.23		mg/kg dry	0.567	0.567	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-22-4	Silver	ND		mg/kg dry	0.113	0.567	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-23-5	Sodium	160		mg/kg dry	5.98	11.3	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-28-0	Thallium	ND		mg/kg dry	0.363	0.567	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-62-2	Vanadium	12.7		mg/kg dry	0.125	0.567	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW
7440-66-6	Zinc	81.8		mg/kg dry	0.102	0.567	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:18	MW

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.107	0.113	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	88.1		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: SB-4 (0-2')

York Sample ID: 13A0654-07

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:25 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS

Sample Information

Client Sample ID: SB-4 (0-2')

York Sample ID: 13A0654-07

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:25 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	2.2	9.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	2.2	9.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	2.2	9.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	12	45	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
78-93-3	2-Butanone	ND		ug/kg dry	2.2	9.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
95-49-8	2-Chlorotoluene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
67-64-1	Acetone	ND		ug/kg dry	2.2	9.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
71-43-2	Benzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
108-86-1	Bromobenzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
75-25-2	Bromoform	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
74-83-9	Bromomethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
75-00-3	Chloroethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
67-66-3	Chloroform	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
74-87-3	Chloromethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
74-95-3	Dibromomethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS

Sample Information

Client Sample ID: SB-4 (0-2')

York Sample ID: 13A0654-07

York Project (SDG) No.
13A0654

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January 22, 2013 11:25 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
75-09-2	Methylene chloride	ND		ug/kg dry	2.2	9.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
91-20-3	Naphthalene	ND		ug/kg dry	2.2	9.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
95-47-6	o-Xylene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	2.2	9.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
100-42-5	Styrene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
108-88-3	Toluene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	2.2	4.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	2.2	13	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	2.2	9.0	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:04	SS
Surrogate Recoveries		Result	Acceptance Range								
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	104 %	73-130								
460-00-4	Surrogate: p-Bromofluorobenzene	102 %	72-127								
2037-26-5	Surrogate: Toluene-d8	101 %	84-117								

Sample Information

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01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	507	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	672	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
62-53-3	Aniline	ND		ug/kg dry	801	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
120-12-7	Anthracene	ND		ug/kg dry	765	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	524	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	555	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	1170	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	465	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	1400	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	1400	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	773	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	675	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	944	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	364	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	482	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	714	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	493	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	967	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	756	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	462	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	821	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
218-01-9	Chrysene	ND		ug/kg dry	644	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	563	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	653	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	569	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	916	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	863	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	443	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	734	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	1140	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	880	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	981	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	625	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	1770	2800	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR

Sample Information

Client Sample ID: SB-4 (0-2')

York Sample ID: 13A0654-07

York Project (SDG) No.
13A0654

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January 22, 2013 11:25 am

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01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
88-74-4	2-Nitroaniline	ND		ug/kg dry	1220	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	1180	2800	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	720	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	619	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	1400	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
206-44-0	Fluoranthene	ND		ug/kg dry	821	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
86-73-7	Fluorene	ND		ug/kg dry	672	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	827	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	473	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	1040	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	401	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	639	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
78-59-1	Isophorone	ND		ug/kg dry	482	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	1080	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	532	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	608	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
91-20-3	Naphthalene	ND		ug/kg dry	345	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	1390	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	580	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	412	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	527	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	381	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	468	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	574	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	633	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	1060	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
85-01-8	Phenanthrene	ND		ug/kg dry	731	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
108-95-2	Phenol	ND		ug/kg dry	605	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
129-00-0	Pyrene	ND		ug/kg dry	572	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
110-86-1	Pyridine	ND		ug/kg dry	983	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	507	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	1090	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	712	1400	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:04	SR
	Surrogate Recoveries	Result		Acceptance Range							

Sample Information

Client Sample ID: SB-4 (0-2')

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Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
5175-83-7	Surrogate: 2,4,6-Tribromophenol	73.8 %			15-110						
321-60-8	Surrogate: 2-Fluorobiphenyl	57.0 %			30-130						
367-12-4	Surrogate: 2-Fluorophenol	39.6 %			15-110						
4165-60-0	Surrogate: Nitrobenzene-d5	41.2 %			30-130						
4165-62-2	Surrogate: Phenol-d5	81.9 %			15-110						
1718-51-0	Surrogate: Terphenyl-d14	95.4 %			30-130						

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	93.6	93.6	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
72-43-5	Methoxychlor	ND		ug/kg dry	9.25	9.25	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
72-20-8	Endrin	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
60-57-1	Dieldrin	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
319-86-8	delta-BHC	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
57-74-9	Chlordane, total	ND		ug/kg dry	7.40	7.40	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
309-00-2	Aldrin	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
50-29-3	4,4'-DDT	3.99		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.85	1.85	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:35	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	19.1	19.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:26	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	19.1	19.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:26	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	19.1	19.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:26	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	19.1	19.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:26	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	19.1	19.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:26	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	19.1	19.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:26	JW

Sample Information

Client Sample ID: SB-4 (0-2')

York Sample ID: 13A0654-07

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:25 am

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		ug/kg dry	19.1	19.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:26	JW
1336-36-3	Total PCBs	ND		ug/kg dry	7.62	19.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:26	JW
Surrogate Recoveries		Result	Acceptance Range								
877-09-8	Surrogate: Tetrachloro-m-xylene	120 %	30-150								
2051-24-3	Surrogate: Decachlorobiphenyl	120 %	30-150								

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	6040		mg/kg dry	1.14	2.24	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-36-0	Antimony	ND		mg/kg dry	0.247	0.560	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-38-2	Arsenic	4.88		mg/kg dry	0.381	1.12	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-39-3	Barium	691		mg/kg dry	0.146	0.560	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.112	0.112	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.112	0.560	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-70-2	Calcium	7540		mg/kg dry	0.045	5.60	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-47-3	Chromium	13.3		mg/kg dry	0.134	0.560	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-48-4	Cobalt	7.53		mg/kg dry	0.090	0.560	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-50-8	Copper	33.2		mg/kg dry	0.134	0.560	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7439-89-6	Iron	11700		mg/kg dry	0.728	2.24	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7439-92-1	Lead	107		mg/kg dry	0.191	0.336	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7439-95-4	Magnesium	3710		mg/kg dry	0.504	5.60	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7439-96-5	Manganese	221		mg/kg dry	0.123	1.12	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-02-0	Nickel	21.9		mg/kg dry	0.146	0.560	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-09-7	Potassium	1630		mg/kg dry	3.79	11.2	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7782-49-2	Selenium	2.45		mg/kg dry	0.560	0.560	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-22-4	Silver	ND		mg/kg dry	0.112	0.560	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-23-5	Sodium	195		mg/kg dry	5.91	11.2	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-28-0	Thallium	ND		mg/kg dry	0.359	0.560	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-62-2	Vanadium	20.4		mg/kg dry	0.123	0.560	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW
7440-66-6	Zinc	276		mg/kg dry	0.101	0.560	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:23	MW

Sample Information

Client Sample ID: SB-4 (0-2')

York Sample ID: 13A0654-07

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:25 am

Date Received
01/23/2013

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.105	0.112	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	89.2		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: SB-4 (7-9')

York Sample ID: 13A0654-08

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:30 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.8	7.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.8	7.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.8	7.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS

Sample Information

Client Sample ID: SB-4 (7-9')

York Sample ID: 13A0654-08

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:30 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	9.7	37	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
78-93-3	2-Butanone	ND		ug/kg dry	1.8	7.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
95-49-8	2-Chlorotoluene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
67-64-1	Acetone	ND		ug/kg dry	1.8	7.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
71-43-2	Benzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
108-86-1	Bromobenzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
75-25-2	Bromoform	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
74-83-9	Bromomethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
75-00-3	Chloroethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
67-66-3	Chloroform	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
74-87-3	Chloromethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
74-95-3	Dibromomethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
75-09-2	Methylene chloride	ND		ug/kg dry	1.8	7.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
91-20-3	Naphthalene	ND		ug/kg dry	1.8	7.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
95-47-6	o-Xylene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	1.8	7.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS

Sample Information

Client Sample ID: SB-4 (7-9')

York Sample ID: 13A0654-08

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:30 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
100-42-5	Styrene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
108-88-3	Toluene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.8	3.7	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	1.8	11	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	1.8	7.3	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 06:43	SS
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	105 %			73-130						
460-00-4	Surrogate: p-Bromofluorobenzene	105 %			72-127						
2037-26-5	Surrogate: Toluene-d8	105 %			84-117						

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	95.2	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	126	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
62-53-3	Aniline	ND		ug/kg dry	150	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
120-12-7	Anthracene	ND		ug/kg dry	144	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	98.3	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	104	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	220	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	87.3	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	263	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	263	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	145	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	127	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	177	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	68.4	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	90.4	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR

Sample Information

Client Sample ID: SB-4 (7-9')

York Sample ID: 13A0654-08

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:30 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	134	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	92.5	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	181	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	142	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	86.8	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	154	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
218-01-9	Chrysene	ND		ug/kg dry	121	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	106	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	123	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	107	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	172	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	162	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	83.1	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	138	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	215	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	165	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	184	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	117	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	229	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	331	526	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	221	526	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	135	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	116	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	263	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
206-44-0	Fluoranthene	ND		ug/kg dry	154	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
86-73-7	Fluorene	ND		ug/kg dry	126	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	155	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	88.9	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	196	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	75.2	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	120	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
78-59-1	Isophorone	ND		ug/kg dry	90.4	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	202	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	99.9	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR

Sample Information

Client Sample ID: SB-4 (7-9')

York Sample ID: 13A0654-08

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:30 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	114	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
91-20-3	Naphthalene	ND		ug/kg dry	64.7	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	261	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	109	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	77.3	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	98.9	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	71.5	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	87.8	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	108	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	119	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	198	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
85-01-8	Phenanthrene	ND		ug/kg dry	137	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
108-95-2	Phenol	ND		ug/kg dry	114	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
129-00-0	Pyrene	ND		ug/kg dry	107	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
110-86-1	Pyridine	ND		ug/kg dry	185	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	95.2	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	204	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	134	263	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 20:38	SR
	Surrogate Recoveries	Result			Acceptance Range						
5175-83-7	Surrogate: 2,4,6-Tribromophenol	80.8 %			15-110						
321-60-8	Surrogate: 2-Fluorobiphenyl	61.8 %			30-130						
367-12-4	Surrogate: 2-Fluorophenol	36.5 %			15-110						
4165-60-0	Surrogate: Nitrobenzene-d5	38.2 %			30-130						
4165-62-2	Surrogate: Phenol-d5	78.7 %			15-110						
1718-51-0	Surrogate: Terphenyl-d14	88.3 %			30-130						

Sample Information

Client Sample ID: SB-4 (7-9')

York Sample ID: 13A0654-08

York Project (SDG) No.
13A0654

Client Project ID
130030

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Soil

Collection Date/Time
January 22, 2013 11:30 am

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	87.8	87.8	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
72-43-5	Methoxychlor	ND		ug/kg dry	8.68	8.68	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
72-20-8	Endrin	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
60-57-1	Dieldrin	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
319-86-8	delta-BHC	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
57-74-9	Chlordane, total	ND		ug/kg dry	6.94	6.94	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
309-00-2	Aldrin	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
50-29-3	4,4'-DDT	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.74	1.74	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 23:50	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:30	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:30	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:30	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:30	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:30	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:30	JW
12674-11-2	Aroclor 1016	ND		ug/kg dry	17.9	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:30	JW
1336-36-3	Total PCBs	ND		ug/kg dry	7.15	17.9	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:30	JW
	Surrogate Recoveries	Result		Acceptance Range							
877-09-8	Surrogate: Tetrachloro-m-xylene	147 %		30-150							
2051-24-3	Surrogate: Decachlorobiphenyl	123 %		30-150							

Sample Information

Client Sample ID: SB-4 (7-9')

York Sample ID: 13A0654-08

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:30 am

Date Received
01/23/2013

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	16900		mg/kg dry	1.07	2.10	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-36-0	Antimony	ND		mg/kg dry	0.231	0.526	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-38-2	Arsenic	4.12		mg/kg dry	0.358	1.05	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-39-3	Barium	223		mg/kg dry	0.137	0.526	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.105	0.105	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.105	0.526	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-70-2	Calcium	1470		mg/kg dry	0.042	5.26	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-47-3	Chromium	26.5		mg/kg dry	0.126	0.526	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-48-4	Cobalt	30.5		mg/kg dry	0.084	0.526	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-50-8	Copper	17.7		mg/kg dry	0.126	0.526	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7439-89-6	Iron	33600		mg/kg dry	0.684	2.10	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7439-92-1	Lead	138		mg/kg dry	0.179	0.315	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7439-95-4	Magnesium	10700		mg/kg dry	0.473	5.26	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7439-96-5	Manganese	358		mg/kg dry	0.116	1.05	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-02-0	Nickel	60.8		mg/kg dry	0.137	0.526	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-09-7	Potassium	11100		mg/kg dry	3.55	10.5	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7782-49-2	Selenium	5.43		mg/kg dry	0.526	0.526	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-22-4	Silver	ND		mg/kg dry	0.105	0.526	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-23-5	Sodium	374		mg/kg dry	5.54	10.5	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-28-0	Thallium	ND		mg/kg dry	0.337	0.526	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-62-2	Vanadium	32.6		mg/kg dry	0.116	0.526	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW
7440-66-6	Zinc	110		mg/kg dry	0.095	0.526	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:27	MW

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.0989	0.105	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Sample Information

Client Sample ID: SB-4 (7-9')

York Sample ID: 13A0654-08

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:30 am

Date Received
01/23/2013

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	95.1		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: SB-3 (0-2')

York Sample ID: 13A0654-09

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:55 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	2.8	11	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	2.8	11	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	2.8	11	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	15	55	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
78-93-3	2-Butanone	ND		ug/kg dry	2.8	11	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS

Sample Information

Client Sample ID: SB-3 (0-2')

York Sample ID: 13A0654-09

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:55 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-49-8	2-Chlorotoluene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
67-64-1	Acetone	ND		ug/kg dry	2.8	11	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
71-43-2	Benzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
108-86-1	Bromobenzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
75-25-2	Bromoform	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
74-83-9	Bromomethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
75-00-3	Chloroethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
67-66-3	Chloroform	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
74-87-3	Chloromethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
74-95-3	Dibromomethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
75-09-2	Methylene chloride	ND		ug/kg dry	2.8	11	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
91-20-3	Naphthalene	ND		ug/kg dry	2.8	11	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
95-47-6	o-Xylene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	2.8	11	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
100-42-5	Styrene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS

Sample Information

Client Sample ID: SB-3 (0-2')

York Sample ID: 13A0654-09

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:55 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-88-3	Toluene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	2.8	5.5	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	2.8	17	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	2.8	11	1	EPA SW846-8260B	01/28/2013 16:22	01/29/2013 07:22	SS
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	108 %			73-130						
460-00-4	Surrogate: p-Bromofluorobenzene	102 %			72-127						
2037-26-5	Surrogate: Toluene-d8	112 %			84-117						

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	109	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	144	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
62-53-3	Aniline	ND		ug/kg dry	172	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
120-12-7	Anthracene	ND		ug/kg dry	164	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
56-55-3	Benzo(a)anthracene	194	J	ug/kg dry	112	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
50-32-8	Benzo(a)pyrene	186	J	ug/kg dry	119	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	251	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
191-24-2	Benzo(g,h,i)perylene	115	J	ug/kg dry	99.6	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	300	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	300	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	166	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	145	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	202	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	78.0	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	103	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	153	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	106	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	207	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	162	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	99.0	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR

Sample Information

Client Sample ID: SB-3 (0-2')

York Sample ID: 13A0654-09

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:55 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	176	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
218-01-9	Chrysene	206	J	ug/kg dry	138	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	121	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	140	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	122	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	196	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	185	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	94.8	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	157	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	245	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	188	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	210	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	134	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	378	600	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	262	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	252	600	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	154	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	133	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	300	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
206-44-0	Fluoranthene	380		ug/kg dry	176	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
86-73-7	Fluorene	ND		ug/kg dry	144	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	177	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	101	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	223	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	85.8	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	137	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
78-59-1	Isophorone	ND		ug/kg dry	103	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	230	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	114	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	130	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
91-20-3	Naphthalene	ND		ug/kg dry	73.8	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	298	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	124	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	88.2	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR

Sample Information

Client Sample ID: SB-3 (0-2')

York Sample ID: 13A0654-09

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:55 am

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-02-7	4-Nitrophenol	ND		ug/kg dry	113	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	81.6	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
621-64-7	N-nitroso-di-n-propylamine	339		ug/kg dry	100	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	123	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	136	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	226	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
85-01-8	Phenanthrene	199	J	ug/kg dry	157	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
108-95-2	Phenol	ND		ug/kg dry	130	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
129-00-0	Pyrene	288	J	ug/kg dry	122	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
110-86-1	Pyridine	ND		ug/kg dry	211	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	109	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	233	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	152	300	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:11	SR
Surrogate Recoveries		Result	Acceptance Range								
5175-83-7	Surrogate: 2,4,6-Tribromophenol	58.1 %	15-110								
321-60-8	Surrogate: 2-Fluorobiphenyl	63.8 %	30-130								
367-12-4	Surrogate: 2-Fluorophenol	43.4 %	15-110								
4165-60-0	Surrogate: Nitrobenzene-d5	55.1 %	30-130								
4165-62-2	Surrogate: Phenol-d5	82.7 %	15-110								
1718-51-0	Surrogate: Terphenyl-d14	72.4 %	30-130								

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	100	100	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
72-43-5	Methoxychlor	ND		ug/kg dry	9.90	9.90	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
72-20-8	Endrin	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
60-57-1	Dieldrin	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW

Sample Information

Client Sample ID: SB-3 (0-2')

York Sample ID: 13A0654-09

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:55 am

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
319-86-8	delta-BHC	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
57-74-9	Chlordane, total	ND		ug/kg dry	7.92	7.92	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
309-00-2	Aldrin	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
50-29-3	4,4'-DDT	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:05	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:50	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:50	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:50	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:50	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:50	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:50	JW
12674-11-2	Aroclor 1016	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:50	JW
1336-36-3	Total PCBs	ND		ug/kg dry	8.16	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/28/2013 23:50	JW
Surrogate Recoveries		Result			Acceptance Range						
877-09-8	<i>Surrogate: Tetrachloro-m-xylene</i>	141 %			30-150						
2051-24-3	<i>Surrogate: Decachlorobiphenyl</i>	107 %			30-150						

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	3480		mg/kg dry	1.22	2.40	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-36-0	Antimony	ND		mg/kg dry	0.264	0.600	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-38-2	Arsenic	4.86		mg/kg dry	0.408	1.20	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-39-3	Barium	86.7		mg/kg dry	0.156	0.600	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.120	0.120	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.120	0.600	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-70-2	Calcium	2310		mg/kg dry	0.048	6.00	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-47-3	Chromium	6.10		mg/kg dry	0.144	0.600	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-48-4	Cobalt	6.39		mg/kg dry	0.096	0.600	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-50-8	Copper	20.4		mg/kg dry	0.144	0.600	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7439-89-6	Iron	5430		mg/kg dry	0.780	2.40	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7439-92-1	Lead	6.50		mg/kg dry	0.204	0.360	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7439-95-4	Magnesium	294		mg/kg dry	0.540	6.00	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW

Sample Information

Client Sample ID: SB-3 (0-2')

York Sample ID: 13A0654-09

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 11:55 am

Date Received
01/23/2013

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-96-5	Manganese	62.2		mg/kg dry	0.132	1.20	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-02-0	Nickel	12.6		mg/kg dry	0.156	0.600	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-09-7	Potassium	541		mg/kg dry	4.06	12.0	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7782-49-2	Selenium	1.24		mg/kg dry	0.600	0.600	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-22-4	Silver	ND		mg/kg dry	0.120	0.600	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-23-5	Sodium	199		mg/kg dry	6.32	12.0	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-28-0	Thallium	ND		mg/kg dry	0.384	0.600	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-62-2	Vanadium	11.8		mg/kg dry	0.132	0.600	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW
7440-66-6	Zinc	163		mg/kg dry	0.108	0.600	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:31	MW

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.113	0.120	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	83.3		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

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

York Sample ID: 13A0654-10

York Project (SDG) No.
13A0654

Client Project ID
130030

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Soil

Collection Date/Time
January 22, 2013 12:00 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
76-13-1	1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	2.1	8.3	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS

Sample Information

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

York Sample ID: 13A0654-10

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:00 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	2.1	8.3	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	2.1	8.3	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	11	42	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
78-93-3	2-Butanone	ND		ug/kg dry	2.1	8.3	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
95-49-8	2-Chlorotoluene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
67-64-1	Acetone	ND		ug/kg dry	2.1	8.3	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
71-43-2	Benzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
108-86-1	Bromobenzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
75-25-2	Bromoform	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
74-83-9	Bromomethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
75-00-3	Chloroethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
67-66-3	Chloroform	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
74-87-3	Chloromethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
74-95-3	Dibromomethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS

Sample Information

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

York Sample ID: 13A0654-10

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
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Collection Date/Time
January 22, 2013 12:00 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	Ethyl Benzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
75-09-2	Methylene chloride	ND		ug/kg dry	2.1	8.3	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
91-20-3	Naphthalene	ND		ug/kg dry	2.1	8.3	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
95-47-6	o-Xylene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	2.1	8.3	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
100-42-5	Styrene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
108-88-3	Toluene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	2.1	4.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	2.1	13	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	2.1	8.3	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:17	SS
Surrogate Recoveries		Result	Acceptance Range								
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	97.4 %	73-130								
460-00-4	Surrogate: p-Bromofluorobenzene	97.6 %	72-127								
2037-26-5	Surrogate: Toluene-d8	101 %	84-117								

Sample Information

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

York Sample ID: 13A0654-10

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:00 pm

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	98.7	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	131	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
62-53-3	Aniline	ND		ug/kg dry	156	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
120-12-7	Anthracene	ND		ug/kg dry	149	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
56-55-3	Benzo(a)anthracene	128	J	ug/kg dry	102	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
50-32-8	Benzo(a)pyrene	153	J	ug/kg dry	108	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	228	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
191-24-2	Benzo(g,h,i)perylene	122	J	ug/kg dry	90.5	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	273	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	273	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	150	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	131	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	184	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	70.9	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	93.8	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	139	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	96.0	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	188	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	147	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	90.0	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	160	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
218-01-9	Chrysene	132	J	ug/kg dry	125	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	110	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	127	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	111	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	178	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	168	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	86.2	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	143	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	222	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	171	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	191	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	122	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	238	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR

Sample Information

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

York Sample ID: 13A0654-10

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:00 pm

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	344	545	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	229	545	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	140	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	121	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	273	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
206-44-0	Fluoranthene	217	J	ug/kg dry	160	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
86-73-7	Fluorene	ND		ug/kg dry	131	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	161	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	92.1	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	203	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	78.0	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	124	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
78-59-1	Isophorone	ND		ug/kg dry	93.8	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	209	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	104	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	118	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
91-20-3	Naphthalene	ND		ug/kg dry	67.1	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	271	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	113	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	80.2	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	103	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	74.2	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	91.1	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	112	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	123	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	206	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
85-01-8	Phenanthrene	ND		ug/kg dry	142	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
108-95-2	Phenol	ND		ug/kg dry	118	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
129-00-0	Pyrene	175	J	ug/kg dry	111	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
110-86-1	Pyridine	ND		ug/kg dry	191	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	98.7	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	212	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	138	273	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 21:45	SR
	Surrogate Recoveries	Result		Acceptance Range							

Sample Information

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

York Sample ID: 13A0654-10

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:00 pm

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
5175-83-7	Surrogate: 2,4,6-Tribromophenol	83.4 %			15-110						
321-60-8	Surrogate: 2-Fluorobiphenyl	72.6 %			30-130						
367-12-4	Surrogate: 2-Fluorophenol	36.7 %			15-110						
4165-60-0	Surrogate: Nitrobenzene-d5	39.2 %			30-130						
4165-62-2	Surrogate: Phenol-d5	90.1 %			15-110						
1718-51-0	Surrogate: Terphenyl-d14	76.7 %			30-130						

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	91.1	91.1	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
72-43-5	Methoxychlor	ND		ug/kg dry	9.00	9.00	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
72-20-8	Endrin	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
60-57-1	Dieldrin	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
319-86-8	delta-BHC	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
57-74-9	Chlordane, total	ND		ug/kg dry	7.20	7.20	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
309-00-2	Aldrin	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
50-29-3	4,4'-DDT	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.80	1.80	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:21	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	18.5	18.5	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:10	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	18.5	18.5	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:10	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	18.5	18.5	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:10	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	18.5	18.5	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:10	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	18.5	18.5	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:10	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	18.5	18.5	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:10	JW

Sample Information

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

York Sample ID: 13A0654-10

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:00 pm

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		ug/kg dry	18.5	18.5	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:10	JW
1336-36-3	Total PCBs	ND		ug/kg dry	7.42	18.5	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:10	JW
Surrogate Recoveries		Result			Acceptance Range						
877-09-8	Surrogate: Tetrachloro-m-xylene	95.0 %			30-150						
2051-24-3	Surrogate: Decachlorobiphenyl	72.9 %			30-150						

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	10100		mg/kg dry	1.11	2.18	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-36-0	Antimony	ND		mg/kg dry	0.240	0.545	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-38-2	Arsenic	4.23		mg/kg dry	0.371	1.09	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-39-3	Barium	108		mg/kg dry	0.142	0.545	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.109	0.109	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.109	0.545	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-70-2	Calcium	2260		mg/kg dry	0.044	5.45	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-47-3	Chromium	18.1		mg/kg dry	0.131	0.545	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-48-4	Cobalt	9.29		mg/kg dry	0.087	0.545	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-50-8	Copper	25.8		mg/kg dry	0.131	0.545	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7439-89-6	Iron	17000		mg/kg dry	0.709	2.18	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7439-92-1	Lead	51.8		mg/kg dry	0.185	0.327	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7439-95-4	Magnesium	2810		mg/kg dry	0.491	5.45	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7439-96-5	Manganese	290		mg/kg dry	0.120	1.09	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-02-0	Nickel	20.0		mg/kg dry	0.142	0.545	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-09-7	Potassium	2010		mg/kg dry	3.69	10.9	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7782-49-2	Selenium	3.07		mg/kg dry	0.545	0.545	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-22-4	Silver	ND		mg/kg dry	0.109	0.545	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-23-5	Sodium	149		mg/kg dry	5.75	10.9	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-28-0	Thallium	ND		mg/kg dry	0.349	0.545	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-62-2	Vanadium	25.6		mg/kg dry	0.120	0.545	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW
7440-66-6	Zinc	81.0		mg/kg dry	0.098	0.545	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:36	MW

Sample Information

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

York Sample ID: 13A0654-10

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:00 pm

Date Received
01/23/2013

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.103	0.109	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	91.7		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: SB-2 (0-2')

York Sample ID: 13A0654-11

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:15 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	2.0	8.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	2.0	8.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	2.0	8.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS

Sample Information

Client Sample ID: SB-2 (0-2')

York Sample ID: 13A0654-11

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:15 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	11	41	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
78-93-3	2-Butanone	ND		ug/kg dry	2.0	8.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
95-49-8	2-Chlorotoluene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
67-64-1	Acetone	ND		ug/kg dry	2.0	8.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
71-43-2	Benzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
108-86-1	Bromobenzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
75-25-2	Bromoform	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
74-83-9	Bromomethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
75-00-3	Chloroethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
67-66-3	Chloroform	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
74-87-3	Chloromethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
74-95-3	Dibromomethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
75-09-2	Methylene chloride	ND		ug/kg dry	2.0	8.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
91-20-3	Naphthalene	ND		ug/kg dry	2.0	8.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
95-47-6	o-Xylene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	2.0	8.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS

Sample Information

Client Sample ID: SB-2 (0-2')

York Sample ID: 13A0654-11

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:15 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
100-42-5	Styrene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
108-88-3	Toluene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	2.0	4.1	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	2.0	12	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	2.0	8.2	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 15:52	SS
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	97.2 %			73-130						
460-00-4	Surrogate: p-Bromofluorobenzene	93.9 %			72-127						
2037-26-5	Surrogate: Toluene-d8	101 %			84-117						

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	107	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	142	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
62-53-3	Aniline	ND		ug/kg dry	169	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
120-12-7	Anthracene	ND		ug/kg dry	162	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	111	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	117	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	248	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	98.2	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	296	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	296	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	163	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	143	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	199	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	76.9	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	102	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR

Sample Information

Client Sample ID: SB-2 (0-2')

York Sample ID: 13A0654-11

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:15 pm

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	151	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	104	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	204	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	160	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	97.6	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	173	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
218-01-9	Chrysene	ND		ug/kg dry	136	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	119	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	138	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	120	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	194	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	182	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	93.5	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	155	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	241	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	186	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	207	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	132	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	373	592	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	258	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	249	592	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
606-20-2	2,6-Dinitrotoluene	850		ug/kg dry	152	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	131	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	296	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
206-44-0	Fluoranthene	ND		ug/kg dry	173	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
86-73-7	Fluorene	ND		ug/kg dry	142	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	175	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	100	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	220	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	84.6	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	135	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
78-59-1	Isophorone	ND		ug/kg dry	102	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	227	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	112	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR

Sample Information

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January 22, 2013 12:15 pm

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	128	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
91-20-3	Naphthalene	ND		ug/kg dry	72.8	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	294	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	122	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	87.0	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	111	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	80.5	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
621-64-7	N-nitroso-di-n-propylamine	429		ug/kg dry	98.8	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	121	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	134	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	223	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
85-01-8	Phenanthrene	ND		ug/kg dry	154	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
108-95-2	Phenol	ND		ug/kg dry	128	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
129-00-0	Pyrene	ND		ug/kg dry	121	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
110-86-1	Pyridine	ND		ug/kg dry	208	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	107	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	230	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	150	296	1	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 22:18	SR
Surrogate Recoveries		Result	Acceptance Range								
5175-83-7	Surrogate: 2,4,6-Tribromophenol	55.7 %	15-110								
321-60-8	Surrogate: 2-Fluorobiphenyl	70.6 %	30-130								
367-12-4	Surrogate: 2-Fluorophenol	43.9 %	15-110								
4165-60-0	Surrogate: Nitrobenzene-d5	74.0 %	30-130								
4165-62-2	Surrogate: Phenol-d5	62.3 %	15-110								
1718-51-0	Surrogate: Terphenyl-d14	79.7 %	30-130								

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01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	98.8	98.8	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
72-43-5	Methoxychlor	ND		ug/kg dry	9.76	9.76	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
72-20-8	Endrin	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
60-57-1	Dieldrin	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
319-86-8	delta-BHC	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
57-74-9	Chlordane, total	ND		ug/kg dry	7.81	7.81	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
309-00-2	Aldrin	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
50-29-3	4,4'-DDT	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.95	1.95	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:36	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:29	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:29	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:29	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:29	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:29	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:29	JW
12674-11-2	Aroclor 1016	ND		ug/kg dry	20.1	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:29	JW
1336-36-3	Total PCBs	ND		ug/kg dry	8.05	20.1	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 00:29	JW
Surrogate Recoveries		Result	Acceptance Range								
877-09-8	Surrogate: Tetrachloro-m-xylene	141 %	30-150								
2051-24-3	Surrogate: Decachlorobiphenyl	134 %	30-150								

Sample Information

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Soil

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January 22, 2013 12:15 pm

Date Received
01/23/2013

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	3790		mg/kg dry	1.21	2.37	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-36-0	Antimony	ND		mg/kg dry	0.260	0.592	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-38-2	Arsenic	10.5		mg/kg dry	0.402	1.18	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-39-3	Barium	56.5		mg/kg dry	0.154	0.592	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.118	0.118	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.118	0.592	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-70-2	Calcium	24600		mg/kg dry	0.047	5.92	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-47-3	Chromium	9.52		mg/kg dry	0.142	0.592	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-48-4	Cobalt	5.64		mg/kg dry	0.095	0.592	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-50-8	Copper	62.1		mg/kg dry	0.142	0.592	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7439-89-6	Iron	8330		mg/kg dry	0.769	2.37	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7439-92-1	Lead	36.7		mg/kg dry	0.201	0.355	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7439-95-4	Magnesium	1920		mg/kg dry	0.533	5.92	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7439-96-5	Manganese	132		mg/kg dry	0.130	1.18	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-02-0	Nickel	17.0		mg/kg dry	0.154	0.592	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-09-7	Potassium	1120		mg/kg dry	4.00	11.8	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7782-49-2	Selenium	2.39		mg/kg dry	0.592	0.592	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-22-4	Silver	ND		mg/kg dry	0.118	0.592	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-23-5	Sodium	145		mg/kg dry	6.24	11.8	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-28-0	Thallium	ND		mg/kg dry	0.379	0.592	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-62-2	Vanadium	17.4		mg/kg dry	0.130	0.592	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW
7440-66-6	Zinc	134		mg/kg dry	0.107	0.592	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:41	MW

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.111	0.118	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

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Collection Date/Time
January 22, 2013 12:15 pm

Date Received
01/23/2013

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	84.5		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: SB-2 (2-4')

York Sample ID: 13A0654-12

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:20 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	2.4	9.8	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	2.4	9.8	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	2.4	9.8	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	13	49	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
78-93-3	2-Butanone	ND		ug/kg dry	2.4	9.8	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS

Sample Information

Client Sample ID: SB-2 (2-4')

York Sample ID: 13A0654-12

York Project (SDG) No.
13A0654

Client Project ID
130030

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Collection Date/Time
January 22, 2013 12:20 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-49-8	2-Chlorotoluene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
67-64-1	Acetone	ND		ug/kg dry	2.4	9.8	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
71-43-2	Benzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
108-86-1	Bromobenzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
75-25-2	Bromoform	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
74-83-9	Bromomethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
75-00-3	Chloroethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
67-66-3	Chloroform	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
74-87-3	Chloromethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
74-95-3	Dibromomethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
75-09-2	Methylene chloride	ND		ug/kg dry	2.4	9.8	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
91-20-3	Naphthalene	ND		ug/kg dry	2.4	9.8	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
95-47-6	o-Xylene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	2.4	9.8	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
100-42-5	Styrene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS

Sample Information

Client Sample ID: SB-2 (2-4')

York Sample ID: 13A0654-12

York Project (SDG) No.
13A0654

Client Project ID
130030

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Collection Date/Time
January 22, 2013 12:20 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-88-3	Toluene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	2.4	4.9	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	2.4	15	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	2.4	9.8	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 16:27	SS
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	90.6 %			73-130						
460-00-4	Surrogate: p-Bromofluorobenzene	94.6 %			72-127						
2037-26-5	Surrogate: Toluene-d8	98.1 %			84-117						

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	839	J	ug/kg dry	515	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	683	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
62-53-3	Aniline	ND		ug/kg dry	814	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
120-12-7	Anthracene	1230	J	ug/kg dry	777	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
56-55-3	Benzo(a)anthracene	4520		ug/kg dry	532	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
50-32-8	Benzo(a)pyrene	2930		ug/kg dry	563	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
205-99-2	Benzo(b)fluoranthene	4190		ug/kg dry	1190	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
191-24-2	Benzo(g,h,i)perylene	1970		ug/kg dry	472	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	1420	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
207-08-9	Benzo(k)fluoranthene	4550		ug/kg dry	1420	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	785	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	686	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	959	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	370	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	489	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	726	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	501	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	982	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	768	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	469	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR

Sample Information

Client Sample ID: SB-2 (2-4')

York Sample ID: 13A0654-12

York Project (SDG) No.
13A0654

Client Project ID
130030

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January 22, 2013 12:20 pm

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	834	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
218-01-9	Chrysene	4740		ug/kg dry	654	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
53-70-3	Dibenzo(a,h)anthracene	916	J	ug/kg dry	572	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	663	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	578	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	930	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	876	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	450	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	745	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	1160	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	893	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	996	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	635	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	1790	2850	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	1240	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	1200	2850	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	731	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	629	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	1420	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
206-44-0	Fluoranthene	7740		ug/kg dry	834	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
86-73-7	Fluorene	ND		ug/kg dry	683	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	839	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	481	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	1060	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	407	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
193-39-5	Indeno(1,2,3-cd)pyrene	1770		ug/kg dry	649	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
78-59-1	Isophorone	ND		ug/kg dry	489	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	1090	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	541	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	617	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
91-20-3	Naphthalene	674	J	ug/kg dry	350	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	1410	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	589	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	418	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR

Sample Information

Client Sample ID: SB-2 (2-4')

York Sample ID: 13A0654-12

York Project (SDG) No.
13A0654

Client Project ID
130030

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Soil

Collection Date/Time
January 22, 2013 12:20 pm

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-02-7	4-Nitrophenol	ND		ug/kg dry	535	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	387	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	475	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	583	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	643	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	1070	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
85-01-8	Phenanthrene	5960		ug/kg dry	743	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
108-95-2	Phenol	ND		ug/kg dry	615	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
129-00-0	Pyrene	5860		ug/kg dry	580	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
110-86-1	Pyridine	ND		ug/kg dry	999	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	515	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	1100	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	723	1420	5	EPA SW-846 8270C	01/24/2013 14:26	01/29/2013 14:29	SR
Surrogate Recoveries		Result	Acceptance Range								
5175-83-7	Surrogate: 2,4,6-Tribromophenol	40.1 %	15-110								
321-60-8	Surrogate: 2-Fluorobiphenyl	92.7 %	30-130								
367-12-4	Surrogate: 2-Fluorophenol	28.4 %	15-110								
4165-60-0	Surrogate: Nitrobenzene-d5	46.5 %	30-130								
4165-62-2	Surrogate: Phenol-d5	50.4 %	15-110								
1718-51-0	Surrogate: Terphenyl-d14	77.3 %	30-130								

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	95.0	95.0	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
72-43-5	Methoxychlor	ND		ug/kg dry	9.39	9.39	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
72-20-8	Endrin	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
60-57-1	Dieldrin	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW

Sample Information

Client Sample ID: SB-2 (2-4')

York Sample ID: 13A0654-12

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:20 pm

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
319-86-8	delta-BHC	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
57-74-9	Chlordane, total	ND		ug/kg dry	7.51	7.51	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
309-00-2	Aldrin	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
50-29-3	4,4'-DDT	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.88	1.88	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 00:51	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:45	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:45	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:45	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:45	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:45	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:45	JW
12674-11-2	Aroclor 1016	ND		ug/kg dry	19.3	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:45	JW
1336-36-3	Total PCBs	ND		ug/kg dry	7.74	19.3	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 18:45	JW
Surrogate Recoveries		Result			Acceptance Range						
877-09-8	<i>Surrogate: Tetrachloro-m-xylene</i>	125 %			30-150						
2051-24-3	<i>Surrogate: Decachlorobiphenyl</i>	136 %			30-150						

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	6210		mg/kg dry	1.16	2.28	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-36-0	Antimony	1.20		mg/kg dry	0.250	0.569	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-38-2	Arsenic	11.0		mg/kg dry	0.387	1.14	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-39-3	Barium	339		mg/kg dry	0.148	0.569	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.114	0.114	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.114	0.569	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-70-2	Calcium	3350		mg/kg dry	0.046	5.69	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-47-3	Chromium	20.6		mg/kg dry	0.137	0.569	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-48-4	Cobalt	5.86		mg/kg dry	0.091	0.569	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-50-8	Copper	54.4		mg/kg dry	0.137	0.569	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7439-89-6	Iron	12600		mg/kg dry	0.740	2.28	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7439-92-1	Lead	246		mg/kg dry	0.193	0.341	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7439-95-4	Magnesium	605		mg/kg dry	0.512	5.69	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW

Sample Information

Client Sample ID: SB-2 (2-4')

York Sample ID: 13A0654-12

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:20 pm

Date Received
01/23/2013

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-96-5	Manganese	235		mg/kg dry	0.125	1.14	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-02-0	Nickel	20.1		mg/kg dry	0.148	0.569	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-09-7	Potassium	746		mg/kg dry	3.85	11.4	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7782-49-2	Selenium	4.14		mg/kg dry	0.569	0.569	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-22-4	Silver	ND		mg/kg dry	0.114	0.569	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-23-5	Sodium	183		mg/kg dry	6.00	11.4	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-28-0	Thallium	ND		mg/kg dry	0.364	0.569	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-62-2	Vanadium	21.0		mg/kg dry	0.125	0.569	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW
7440-66-6	Zinc	415		mg/kg dry	0.102	0.569	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:45	MW

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	0.114		mg/kg dry	0.107	0.114	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	87.9		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: SB-1 (0-2')

York Sample ID: 13A0654-13

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:30 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	1.8	7.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS

Sample Information

Client Sample ID: SB-1 (0-2')

York Sample ID: 13A0654-13

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:30 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	1.8	7.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	1.8	7.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	9.3	35	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
78-93-3	2-Butanone	ND		ug/kg dry	1.8	7.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
95-49-8	2-Chlorotoluene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
67-64-1	Acetone	1.9	J	ug/kg dry	1.8	7.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
71-43-2	Benzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
108-86-1	Bromobenzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
75-25-2	Bromoform	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
74-83-9	Bromomethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
75-00-3	Chloroethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
67-66-3	Chloroform	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
74-87-3	Chloromethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
74-95-3	Dibromomethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS

Sample Information

Client Sample ID: SB-1 (0-2')

York Sample ID: 13A0654-13

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:30 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	Ethyl Benzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
75-09-2	Methylene chloride	ND		ug/kg dry	1.8	7.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
91-20-3	Naphthalene	ND		ug/kg dry	1.8	7.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
95-47-6	o-Xylene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	1.8	7.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
100-42-5	Styrene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
108-88-3	Toluene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	1.8	3.5	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	1.8	11	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	1.8	7.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:02	SS
Surrogate Recoveries		Result	Acceptance Range								
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	96.4 %	73-130								
460-00-4	Surrogate: p-Bromofluorobenzene	102 %	72-127								
2037-26-5	Surrogate: Toluene-d8	96.3 %	84-117								

Sample Information

Client Sample ID: SB-1 (0-2')

York Sample ID: 13A0654-13

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:30 pm

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	517	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	686	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
62-53-3	Aniline	ND		ug/kg dry	817	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
120-12-7	Anthracene	ND		ug/kg dry	780	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	534	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	566	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	1200	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	474	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	1430	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	1430	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	789	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	689	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	963	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	371	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	491	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	729	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	503	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	986	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	771	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	471	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	837	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
218-01-9	Chrysene	ND		ug/kg dry	657	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	574	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	666	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	580	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	934	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	880	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	451	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	749	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	1170	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	897	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	1000	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	637	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	1800	2860	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR

Sample Information

Client Sample ID: SB-1 (0-2')

York Sample ID: 13A0654-13

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:30 pm

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
88-74-4	2-Nitroaniline	ND		ug/kg dry	1250	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	1200	2860	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	734	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	631	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	1430	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
206-44-0	Fluoranthene	ND		ug/kg dry	837	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
86-73-7	Fluorene	ND		ug/kg dry	686	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	843	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	483	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	1060	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	409	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	651	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
78-59-1	Isophorone	ND		ug/kg dry	491	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	1100	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	543	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	620	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
91-20-3	Naphthalene	ND		ug/kg dry	351	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	1420	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	591	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	420	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	537	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	389	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	477	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	586	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	646	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	1080	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
85-01-8	Phenanthrene	ND		ug/kg dry	746	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
108-95-2	Phenol	ND		ug/kg dry	617	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
129-00-0	Pyrene	ND		ug/kg dry	583	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
110-86-1	Pyridine	ND		ug/kg dry	1000	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	517	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	1110	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	726	1430	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 17:31	SR
	Surrogate Recoveries	Result		Acceptance Range							

Sample Information

Client Sample ID: SB-1 (0-2')

York Sample ID: 13A0654-13

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:30 pm

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
5175-83-7	Surrogate: 2,4,6-Tribromophenol	80.1 %			15-110						
321-60-8	Surrogate: 2-Fluorobiphenyl	68.3 %			30-130						
367-12-4	Surrogate: 2-Fluorophenol	63.1 %			15-110						
4165-60-0	Surrogate: Nitrobenzene-d5	82.5 %			30-130						
4165-62-2	Surrogate: Phenol-d5	63.3 %			15-110						
1718-51-0	Surrogate: Terphenyl-d14	55.7 %			30-130						

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	95.4	95.4	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
72-43-5	Methoxychlor	ND		ug/kg dry	9.43	9.43	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
72-20-8	Endrin	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
60-57-1	Dieldrin	2.42		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
319-86-8	delta-BHC	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
57-74-9	Chlordane, total	26.7		ug/kg dry	7.54	7.54	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
309-00-2	Aldrin	ND		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
50-29-3	4,4'-DDT	40.3		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
72-55-9	4,4'-DDE	6.78		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
72-54-8	4,4'-DDD	2.06		ug/kg dry	1.89	1.89	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:06	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	19.4	19.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 19:05	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	19.4	19.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 19:05	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	19.4	19.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 19:05	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	19.4	19.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 19:05	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	19.4	19.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 19:05	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	19.4	19.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 19:05	JW
12674-11-2	Aroclor 1016	ND		ug/kg dry	19.4	19.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 19:05	JW

Sample Information

Client Sample ID: SB-1 (0-2')

York Sample ID: 13A0654-13

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:30 pm

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1336-36-3	Total PCBs	ND		ug/kg dry	7.77	19.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 19:05	JW
Surrogate Recoveries		Result			Acceptance Range						
877-09-8	Surrogate: Tetrachloro-m-xylene	120 %			30-150						
2051-24-3	Surrogate: Decachlorobiphenyl	110 %			30-150						

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	4710		mg/kg dry	1.17	2.29	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-36-0	Antimony	0.750		mg/kg dry	0.251	0.571	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-38-2	Arsenic	7.01		mg/kg dry	0.389	1.14	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-39-3	Barium	287		mg/kg dry	0.149	0.571	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.114	0.114	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-43-9	Cadmium	0.587		mg/kg dry	0.114	0.571	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-70-2	Calcium	5900		mg/kg dry	0.046	5.71	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-47-3	Chromium	11.4		mg/kg dry	0.137	0.571	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-48-4	Cobalt	5.27		mg/kg dry	0.091	0.571	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-50-8	Copper	40.1		mg/kg dry	0.137	0.571	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7439-89-6	Iron	6830		mg/kg dry	0.743	2.29	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7439-92-1	Lead	249		mg/kg dry	0.194	0.343	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7439-95-4	Magnesium	1350		mg/kg dry	0.514	5.71	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7439-96-5	Manganese	110		mg/kg dry	0.126	1.14	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-02-0	Nickel	18.9		mg/kg dry	0.149	0.571	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-09-7	Potassium	581		mg/kg dry	3.86	11.4	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7782-49-2	Selenium	1.73		mg/kg dry	0.571	0.571	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-22-4	Silver	ND		mg/kg dry	0.114	0.571	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-23-5	Sodium	141		mg/kg dry	6.02	11.4	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-28-0	Thallium	ND		mg/kg dry	0.366	0.571	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-62-2	Vanadium	19.6		mg/kg dry	0.126	0.571	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW
7440-66-6	Zinc	260		mg/kg dry	0.103	0.571	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:50	MW

Sample Information

Client Sample ID: SB-1 (0-2')

York Sample ID: 13A0654-13

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:30 pm

Date Received
01/23/2013

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.107	0.114	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	87.5		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: SB-1 (2-4')

York Sample ID: 13A0654-14

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:35 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	3.0	12	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	3.0	12	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	3.0	12	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS

Sample Information

Client Sample ID: SB-1 (2-4')

York Sample ID: 13A0654-14

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:35 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
123-91-1	1,4-Dioxane	ND		ug/kg dry	16	60	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
78-93-3	2-Butanone	ND		ug/kg dry	3.0	12	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
95-49-8	2-Chlorotoluene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
106-43-4	4-Chlorotoluene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
67-64-1	Acetone	ND		ug/kg dry	3.0	12	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
71-43-2	Benzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
108-86-1	Bromobenzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
74-97-5	Bromochloromethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
75-27-4	Bromodichloromethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
75-25-2	Bromoform	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
74-83-9	Bromomethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
56-23-5	Carbon tetrachloride	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
108-90-7	Chlorobenzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
75-00-3	Chloroethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
67-66-3	Chloroform	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
74-87-3	Chloromethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
124-48-1	Dibromochloromethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
74-95-3	Dibromomethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
75-09-2	Methylene chloride	ND		ug/kg dry	3.0	12	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
91-20-3	Naphthalene	ND		ug/kg dry	3.0	12	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
95-47-6	o-Xylene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	3.0	12	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS

Sample Information

Client Sample ID: SB-1 (2-4')

York Sample ID: 13A0654-14

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:35 pm

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
135-98-8	sec-Butylbenzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
100-42-5	Styrene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
127-18-4	Tetrachloroethylene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
108-88-3	Toluene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
79-01-6	Trichloroethylene	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
75-01-4	Vinyl Chloride	ND		ug/kg dry	3.0	6.0	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	3.0	18	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
108-05-4	Vinyl acetate	ND		ug/kg dry	3.0	12	1	EPA SW846-8260B	01/29/2013 08:20	01/29/2013 17:37	SS
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	94.6 %			73-130						
460-00-4	Surrogate: p-Bromofluorobenzene	93.4 %			72-127						
2037-26-5	Surrogate: Toluene-d8	95.0 %			84-117						

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	544	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	721	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
62-53-3	Aniline	ND		ug/kg dry	859	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
120-12-7	Anthracene	ND		ug/kg dry	820	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	562	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	595	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	1260	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	499	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	1500	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	1500	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	829	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	724	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	1010	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	391	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	517	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR

Sample Information

Client Sample ID: SB-1 (2-4')

York Sample ID: 13A0654-14

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:35 pm

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	766	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	529	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	1040	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	811	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	496	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	880	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
218-01-9	Chrysene	ND		ug/kg dry	691	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	604	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	700	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	610	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	982	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	925	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	475	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
91-94-1	3,3'-Dichlorobenzidine	ND		ug/kg dry	787	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	1230	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	943	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	1050	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	670	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	1890	3000	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	1310	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	1260	3000	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	772	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	664	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	1500	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
206-44-0	Fluoranthene	ND		ug/kg dry	880	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
86-73-7	Fluorene	ND		ug/kg dry	721	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	886	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	508	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	1120	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	430	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	685	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
78-59-1	Isophorone	ND		ug/kg dry	517	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	1150	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	571	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR

Sample Information

Client Sample ID: SB-1 (2-4')

York Sample ID: 13A0654-14

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:35 pm

Date Received
01/23/2013

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-01-6	3- & 4-Methylphenols	ND		ug/kg dry	652	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
91-20-3	Naphthalene	ND		ug/kg dry	370	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	1490	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	622	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	442	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	565	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	409	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	502	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	616	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	679	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	1130	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
85-01-8	Phenanthrene	ND		ug/kg dry	784	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
108-95-2	Phenol	ND		ug/kg dry	649	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
129-00-0	Pyrene	ND		ug/kg dry	613	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
110-86-1	Pyridine	ND		ug/kg dry	1050	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	544	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	1170	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	763	1500	5	EPA SW-846 8270C	01/24/2013 14:26	01/25/2013 18:03	SR
	Surrogate Recoveries	Result			Acceptance Range						
5175-83-7	Surrogate: 2,4,6-Tribromophenol	63.6 %			15-110						
321-60-8	Surrogate: 2-Fluorobiphenyl	67.7 %			30-130						
367-12-4	Surrogate: 2-Fluorophenol	56.8 %			15-110						
4165-60-0	Surrogate: Nitrobenzene-d5	94.5 %			30-130						
4165-62-2	Surrogate: Phenol-d5	49.8 %			15-110						
1718-51-0	Surrogate: Terphenyl-d14	55.8 %			30-130						

Sample Information

Client Sample ID: SB-1 (2-4')

York Sample ID: 13A0654-14

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:35 pm

Date Received
01/23/2013

Pesticides/PCBs, EPA 8081/8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
8001-35-2	Toxaphene	ND		ug/kg dry	100	100	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
72-43-5	Methoxychlor	ND		ug/kg dry	9.91	9.91	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
1024-57-3	Heptachlor epoxide	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
76-44-8	Heptachlor	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
53494-70-5	Endrin ketone	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
7421-93-4	Endrin aldehyde	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
72-20-8	Endrin	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
33213-65-9	Endosulfan II	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
959-98-8	Endosulfan I	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
60-57-1	Dieldrin	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
319-86-8	delta-BHC	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
57-74-9	Chlordane, total	ND		ug/kg dry	7.93	7.93	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
319-85-7	beta-BHC	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
319-84-6	alpha-BHC	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
309-00-2	Aldrin	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
50-29-3	4,4'-DDT	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
72-55-9	4,4'-DDE	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
72-54-8	4,4'-DDD	ND		ug/kg dry	1.98	1.98	5	EPA SW 846-8081/8082	01/25/2013 07:18	01/30/2013 01:22	JW
11096-82-5	Aroclor 1260	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:28	JW
11097-69-1	Aroclor 1254	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:28	JW
12672-29-6	Aroclor 1248	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:28	JW
53469-21-9	Aroclor 1242	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:28	JW
11141-16-5	Aroclor 1232	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:28	JW
11104-28-2	Aroclor 1221	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:28	JW
12674-11-2	Aroclor 1016	ND		ug/kg dry	20.4	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:28	JW
1336-36-3	Total PCBs	ND		ug/kg dry	8.17	20.4	1	EPA SW 846-8081/8082	01/25/2013 07:18	01/29/2013 09:28	JW
Surrogate Recoveries		Result	Acceptance Range								
877-09-8	Surrogate: Tetrachloro-m-xylene	139 %	30-150								
2051-24-3	Surrogate: Decachlorobiphenyl	101 %	30-150								

Sample Information

Client Sample ID: SB-1 (2-4')

York Sample ID: 13A0654-14

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:35 pm

Date Received
01/23/2013

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	2830		mg/kg dry	1.23	2.40	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-36-0	Antimony	4.79		mg/kg dry	0.264	0.601	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-38-2	Arsenic	8.14		mg/kg dry	0.409	1.20	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-39-3	Barium	191		mg/kg dry	0.156	0.601	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-41-7	Beryllium	ND		mg/kg dry	0.120	0.120	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-43-9	Cadmium	ND		mg/kg dry	0.120	0.601	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-70-2	Calcium	5030		mg/kg dry	0.048	6.01	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-47-3	Chromium	19.1		mg/kg dry	0.144	0.601	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-48-4	Cobalt	4.75		mg/kg dry	0.096	0.601	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-50-8	Copper	35.3		mg/kg dry	0.144	0.601	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7439-89-6	Iron	11800		mg/kg dry	0.781	2.40	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7439-92-1	Lead	89.5		mg/kg dry	0.204	0.361	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7439-95-4	Magnesium	393		mg/kg dry	0.541	6.01	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7439-96-5	Manganese	67.5		mg/kg dry	0.132	1.20	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-02-0	Nickel	15.6		mg/kg dry	0.156	0.601	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-09-7	Potassium	415		mg/kg dry	4.06	12.0	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7782-49-2	Selenium	2.99		mg/kg dry	0.601	0.601	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-22-4	Silver	ND		mg/kg dry	0.120	0.601	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-23-5	Sodium	182		mg/kg dry	6.33	12.0	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-28-0	Thallium	ND		mg/kg dry	0.385	0.601	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-62-2	Vanadium	19.3		mg/kg dry	0.132	0.601	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW
7440-66-6	Zinc	412		mg/kg dry	0.108	0.601	1	EPA SW846-6010B	01/24/2013 14:26	01/28/2013 21:55	MW

Mercury by 7470/7471

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-7471

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.113	0.120	1	EPA SW846-7471	01/25/2013 09:17	01/25/2013 16:57	AA

Sample Information

Client Sample ID: SB-1 (2-4')

York Sample ID: 13A0654-14

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Soil

Collection Date/Time
January 22, 2013 12:35 pm

Date Received
01/23/2013

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	83.2		%	0.100	0.100	1	SM 2540G	01/28/2013 13:07	01/28/2013 13:07	AMC

Sample Information

Client Sample ID: TB 012213

York Sample ID: 13A0654-15

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Water

Collection Date/Time
January 22, 2013 12:00 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.32	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.23	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.59	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.34	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/L	1.3	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	0.42	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.52	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
563-58-6	1,1-Dichloropropylene	ND		ug/L	0.26	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.99	10	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.73	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.91	10	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.41	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.98	10	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
106-93-4	1,2-Dibromoethane	ND		ug/L	0.44	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.40	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	0.36	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
78-87-5	1,2-Dichloropropane	ND		ug/L	0.23	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.48	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.47	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
142-28-9	1,3-Dichloropropane	ND		ug/L	0.55	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.62	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
594-20-7	2,2-Dichloropropane	ND		ug/L	0.42	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
78-93-3	2-Butanone	ND		ug/L	1.5	10	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
95-49-8	2-Chlorotoluene	ND		ug/L	0.43	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS

Sample Information

Client Sample ID: TB 012213

York Sample ID: 13A0654-15

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Water

Collection Date/Time
January 22, 2013 12:00 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-43-4	4-Chlorotoluene	ND		ug/L	0.31	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
67-64-1	Acetone	ND		ug/L	6.1	10	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
71-43-2	Benzene	ND		ug/L	0.30	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
108-86-1	Bromobenzene	ND		ug/L	1.0	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
74-97-5	Bromochloromethane	ND		ug/L	0.54	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
75-27-4	Bromodichloromethane	ND		ug/L	0.41	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
75-25-2	Bromoform	ND		ug/L	0.58	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
74-83-9	Bromomethane	ND		ug/L	2.0	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.56	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
108-90-7	Chlorobenzene	ND		ug/L	0.38	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
75-00-3	Chloroethane	ND		ug/L	2.8	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
67-66-3	Chloroform	ND		ug/L	0.42	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
74-87-3	Chloromethane	ND		ug/L	0.41	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.43	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.41	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
124-48-1	Dibromochloromethane	ND		ug/L	0.39	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
74-95-3	Dibromomethane	ND		ug/L	0.58	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.35	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.25	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
87-68-3	Hexachlorobutadiene	ND		ug/L	0.68	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
98-82-8	Isopropylbenzene	ND		ug/L	0.63	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.53	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
75-09-2	Methylene chloride	12	B	ug/L	2.4	10	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
91-20-3	Naphthalene	ND		ug/L	1.2	10	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
104-51-8	n-Butylbenzene	ND		ug/L	0.30	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
103-65-1	n-Propylbenzene	ND		ug/L	0.54	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
95-47-6	o-Xylene	ND		ug/L	0.21	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/L	0.53	10	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
99-87-6	p-Isopropyltoluene	ND		ug/L	0.34	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
135-98-8	sec-Butylbenzene	ND		ug/L	0.59	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
100-42-5	Styrene	ND		ug/L	0.22	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
98-06-6	tert-Butylbenzene	ND		ug/L	1.4	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
127-18-4	Tetrachloroethylene	ND		ug/L	0.41	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
108-88-3	Toluene	ND		ug/L	0.17	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS

Sample Information

Client Sample ID: TB 012213

York Sample ID: 13A0654-15

York Project (SDG) No.
13A0654

Client Project ID
130030

Matrix
Water

Collection Date/Time
January 22, 2013 12:00 am

Date Received
01/23/2013

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.52	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.67	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
79-01-6	Trichloroethylene	ND		ug/L	0.16	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
75-69-4	Trichlorofluoromethane	ND		ug/L	0.54	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
75-01-4	Vinyl Chloride	ND		ug/L	0.68	5.0	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
1330-20-7	Xylenes, Total	ND		ug/L	0.55	15	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
108-05-4	Vinyl acetate	ND		ug/L	0.73	10	1	EPA SW846-8260B	01/29/2013 14:55	01/30/2013 01:50	SS
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	88.6 %			72.6-129						
460-00-4	Surrogate: p-Bromofluorobenzene	90.3 %			63.5-145						
2037-26-5	Surrogate: Toluene-d8	98.1 %			81.2-127						

Analytical Batch Summary

Batch ID: BA30877

Preparation Method: EPA 3550B

Prepared By: DB

YORK Sample ID	Client Sample ID	Preparation Date
13A0654-01	SB-6 (0-2')	01/24/13
13A0654-02	SB-6 (6-8')	01/24/13
13A0654-03	SB-7 (0-2')	01/24/13
13A0654-04	SB-7 (6-8')	01/24/13
13A0654-05	SB-5 (0-2')	01/24/13
13A0654-06	SB-5 (4-6')	01/24/13
13A0654-07	SB-4 (0-2')	01/24/13
13A0654-08	SB-4 (7-9')	01/24/13
13A0654-09	SB-3 (0-2')	01/24/13
13A0654-10	SB-3 (8-10')	01/24/13
13A0654-11	SB-2 (0-2')	01/24/13
13A0654-12	SB-2 (2-4')	01/24/13
13A0654-13	SB-1 (0-2')	01/24/13
13A0654-14	SB-1 (2-4')	01/24/13
BA30877-BLK1	Blank	01/24/13
BA30877-BS1	LCS	01/24/13

Batch ID: BA30878

Preparation Method: EPA 3050B

Prepared By: MW

YORK Sample ID	Client Sample ID	Preparation Date
13A0654-01	SB-6 (0-2')	01/24/13
13A0654-02	SB-6 (6-8')	01/24/13
13A0654-03	SB-7 (0-2')	01/24/13
13A0654-04	SB-7 (6-8')	01/24/13
13A0654-05	SB-5 (0-2')	01/24/13
13A0654-06	SB-5 (4-6')	01/24/13
13A0654-07	SB-4 (0-2')	01/24/13
13A0654-08	SB-4 (7-9')	01/24/13
13A0654-09	SB-3 (0-2')	01/24/13
13A0654-10	SB-3 (8-10')	01/24/13
13A0654-11	SB-2 (0-2')	01/24/13
13A0654-12	SB-2 (2-4')	01/24/13
13A0654-13	SB-1 (0-2')	01/24/13
13A0654-14	SB-1 (2-4')	01/24/13
BA30878-BLK1	Blank	01/24/13
BA30878-DUP1	Duplicate	01/24/13
BA30878-MS1	Matrix Spike	01/24/13
BA30878-SRM1	Reference	01/24/13

Batch ID: BA30886

Preparation Method: EPA 3550B

Prepared By: CC

YORK Sample ID	Client Sample ID	Preparation Date
13A0654-01	SB-6 (0-2')	01/25/13
13A0654-02	SB-6 (6-8')	01/25/13
13A0654-03	SB-7 (0-2')	01/25/13
13A0654-04	SB-7 (6-8')	01/25/13
13A0654-05	SB-5 (0-2')	01/25/13
13A0654-06	SB-5 (4-6')	01/25/13

YORK

ANALYTICAL LABORATORIES, INC.

13A0654-07	SB-4 (0-2')	01/25/13
13A0654-08	SB-4 (7-9')	01/25/13
13A0654-09	SB-3 (0-2')	01/25/13
13A0654-10	SB-3 (8-10')	01/25/13
13A0654-11	SB-2 (0-2')	01/25/13
13A0654-12	SB-2 (2-4')	01/25/13
13A0654-13	SB-1 (0-2')	01/25/13
13A0654-14	SB-1 (2-4')	01/25/13
BA30886-BLK1	Blank	01/25/13
BA30886-BS1	LCS	01/25/13
BA30886-BS2	LCS	01/25/13

Batch ID: BA30893 **Preparation Method:** % Solids Prep **Prepared By:** AMC

YORK Sample ID	Client Sample ID	Preparation Date
13A0654-01	SB-6 (0-2')	01/28/13
13A0654-02	SB-6 (6-8')	01/28/13
13A0654-03	SB-7 (0-2')	01/28/13
13A0654-04	SB-7 (6-8')	01/28/13
13A0654-05	SB-5 (0-2')	01/28/13
13A0654-06	SB-5 (4-6')	01/28/13
13A0654-07	SB-4 (0-2')	01/28/13
13A0654-08	SB-4 (7-9')	01/28/13
13A0654-09	SB-3 (0-2')	01/28/13
13A0654-10	SB-3 (8-10')	01/28/13
13A0654-11	SB-2 (0-2')	01/28/13
13A0654-12	SB-2 (2-4')	01/28/13
13A0654-13	SB-1 (0-2')	01/28/13
13A0654-14	SB-1 (2-4')	01/28/13

Batch ID: BA30898 **Preparation Method:** EPA SW846-7471 **Prepared By:** AA

YORK Sample ID	Client Sample ID	Preparation Date
13A0654-01	SB-6 (0-2')	01/25/13
13A0654-02	SB-6 (6-8')	01/25/13
13A0654-03	SB-7 (0-2')	01/25/13
13A0654-04	SB-7 (6-8')	01/25/13
13A0654-05	SB-5 (0-2')	01/25/13
13A0654-06	SB-5 (4-6')	01/25/13
13A0654-07	SB-4 (0-2')	01/25/13
13A0654-08	SB-4 (7-9')	01/25/13
13A0654-09	SB-3 (0-2')	01/25/13
13A0654-10	SB-3 (8-10')	01/25/13
13A0654-11	SB-2 (0-2')	01/25/13
13A0654-12	SB-2 (2-4')	01/25/13
13A0654-13	SB-1 (0-2')	01/25/13
13A0654-14	SB-1 (2-4')	01/25/13
BA30898-BLK1	Blank	01/25/13
BA30898-BS1	LCS	01/25/13

Batch ID: BA30987 **Preparation Method:** EPA 5035A **Prepared By:** BK

YORK Sample ID	Client Sample ID	Preparation Date
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YORK

ANALYTICAL LABORATORIES, INC.

13A0654-01	SB-6 (0-2')	01/28/13
13A0654-02	SB-6 (6-8')	01/28/13
13A0654-03	SB-7 (0-2')	01/28/13
13A0654-04	SB-7 (6-8')	01/28/13
13A0654-05	SB-5 (0-2')	01/28/13
13A0654-06	SB-5 (4-6')	01/28/13
13A0654-07	SB-4 (0-2')	01/28/13
13A0654-08	SB-4 (7-9')	01/28/13
13A0654-09	SB-3 (0-2')	01/28/13
BA30987-BLK1	Blank	01/28/13
BA30987-BS1	LCS	01/28/13
BA30987-BSD1	LCS Dup	01/28/13

Batch ID: BA30999 **Preparation Method:** EPA 5035A **Prepared By:** EKM

YORK Sample ID	Client Sample ID	Preparation Date
13A0654-10	SB-3 (8-10')	01/29/13
13A0654-11	SB-2 (0-2')	01/29/13
13A0654-12	SB-2 (2-4')	01/29/13
13A0654-13	SB-1 (0-2')	01/29/13
13A0654-14	SB-1 (2-4')	01/29/13
BA30999-BLK1	Blank	01/29/13
BA30999-BS1	LCS	01/29/13
BA30999-BSD1	LCS Dup	01/29/13

Batch ID: BA31026 **Preparation Method:** EPA 5030B **Prepared By:** EKM

YORK Sample ID	Client Sample ID	Preparation Date
13A0654-15	TB 012213	01/29/13
BA31026-BLK1	Blank	01/29/13
BA31026-BS1	LCS	01/29/13
BA31026-BSD1	LCS Dup	01/29/13

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BA30987 - EPA 5035A

Blank (BA30987-BLK1)

Prepared: 01/28/2013 Analyzed: 01/29/2013

1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg wet								
1,1,1-Trichloroethane	ND	5.0	"								
1,1,2,2-Tetrachloroethane	ND	5.0	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	5.0	"								
1,1,2-Trichloroethane	ND	5.0	"								
1,1-Dichloroethane	ND	5.0	"								
1,1-Dichloroethylene	ND	5.0	"								
1,1-Dichloropropylene	ND	5.0	"								
1,2,3-Trichlorobenzene	ND	10	"								
1,2,3-Trichloropropane	ND	5.0	"								
1,2,4-Trichlorobenzene	ND	10	"								
1,2,4-Trimethylbenzene	ND	5.0	"								
1,2-Dibromo-3-chloropropane	ND	10	"								
1,2-Dibromoethane	ND	5.0	"								
1,2-Dichlorobenzene	ND	5.0	"								
1,2-Dichloroethane	ND	5.0	"								
1,2-Dichloropropane	ND	5.0	"								
1,3,5-Trimethylbenzene	ND	5.0	"								
1,3-Dichlorobenzene	ND	5.0	"								
1,3-Dichloropropane	ND	5.0	"								
1,4-Dichlorobenzene	ND	5.0	"								
1,4-Dioxane	ND	50	"								
2,2-Dichloropropane	ND	5.0	"								
2-Butanone	ND	10	"								
2-Chlorotoluene	ND	5.0	"								
4-Chlorotoluene	ND	5.0	"								
Acetone	3.6	10	"								
Benzene	ND	5.0	"								
Bromobenzene	ND	5.0	"								
Bromochloromethane	ND	5.0	"								
Bromodichloromethane	ND	5.0	"								
Bromoform	ND	5.0	"								
Bromomethane	ND	5.0	"								
Carbon tetrachloride	ND	5.0	"								
Chlorobenzene	ND	5.0	"								
Chloroethane	ND	5.0	"								
Chloroform	ND	5.0	"								
Chloromethane	ND	5.0	"								
cis-1,2-Dichloroethylene	ND	5.0	"								
cis-1,3-Dichloropropylene	ND	5.0	"								
Dibromochloromethane	ND	5.0	"								
Dibromomethane	ND	5.0	"								
Dichlorodifluoromethane	ND	5.0	"								
Ethyl Benzene	ND	5.0	"								
Hexachlorobutadiene	ND	5.0	"								
Isopropylbenzene	ND	5.0	"								
Methyl tert-butyl ether (MTBE)	ND	5.0	"								
Methylene chloride	ND	10	"								
Naphthalene	ND	10	"								
n-Butylbenzene	ND	5.0	"								
n-Propylbenzene	ND	5.0	"								
o-Xylene	ND	5.0	"								
p- & m- Xylenes	ND	10	"								
p-Isopropyltoluene	ND	5.0	"								

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BA30987 - EPA 5035A

Blank (BA30987-BLK1)

Prepared: 01/28/2013 Analyzed: 01/29/2013

sec-Butylbenzene	ND	5.0	ug/kg wet								
Styrene	ND	5.0	"								
tert-Butylbenzene	ND	5.0	"								
Tetrachloroethylene	ND	5.0	"								
Toluene	ND	5.0	"								
trans-1,2-Dichloroethylene	ND	5.0	"								
trans-1,3-Dichloropropylene	ND	5.0	"								
Trichloroethylene	ND	5.0	"								
Trichlorofluoromethane	ND	5.0	"								
Vinyl Chloride	ND	5.0	"								
Xylenes, Total	ND	15	"								
Vinyl acetate	ND	10	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	51.9		ug/L	50.0		104	73-130				
<i>Surrogate: p-Bromofluorobenzene</i>	49.6		"	50.0		99.2	72-127				
<i>Surrogate: Toluene-d8</i>	50.5		"	50.0		101	84-117				

LCS (BA30987-BS1)

Prepared: 01/28/2013 Analyzed: 01/29/2013

1,1,1,2-Tetrachloroethane	49		ug/L	50.0		98.4	72-132				
1,1,1-Trichloroethane	49		"	50.0		97.4	77-131				
1,1,2,2-Tetrachloroethane	51		"	50.0		102	68-129				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	46		"	50.0		91.5	75-143				
1,1,2-Trichloroethane	49		"	50.0		98.6	72-128				
1,1-Dichloroethane	50		"	50.0		99.0	78-133				
1,1-Dichloroethylene	47		"	50.0		94.5	71-142				
1,1-Dichloropropylene	48		"	50.0		96.7	77-124				
1,2,3-Trichlorobenzene	50		"	50.0		99.4	65-134				
1,2,3-Trichloropropane	51		"	50.0		102	65-127				
1,2,4-Trichlorobenzene	49		"	50.0		98.3	59-133				
1,2,4-Trimethylbenzene	49		"	50.0		97.7	68-128				
1,2-Dibromo-3-chloropropane	52		"	50.0		104	58-145				
1,2-Dibromoethane	50		"	50.0		99.8	73-128				
1,2-Dichlorobenzene	48		"	50.0		96.9	69-126				
1,2-Dichloroethane	50		"	50.0		99.1	78-131				
1,2-Dichloropropane	49		"	50.0		98.2	72-129				
1,3,5-Trimethylbenzene	49		"	50.0		98.1	67-125				
1,3-Dichlorobenzene	49		"	50.0		97.9	67-125				
1,3-Dichloropropane	50		"	50.0		100	73-126				
1,4-Dichlorobenzene	49		"	50.0		97.6	67-127				
1,4-Dioxane	610		"	50.0		NR	10-265	High Bias			
2,2-Dichloropropane	44		"	50.0		88.1	68-133				
2-Butanone	52		"	50.0		103	49-138				
2-Chlorotoluene	49		"	50.0		99.0	61-121				
4-Chlorotoluene	49		"	50.0		97.3	65-126				
Acetone	54		"	50.0		107	21-131				
Benzene	49		"	50.0		97.6	81-125				
Bromobenzene	50		"	50.0		99.4	65-125				
Bromochloromethane	50		"	50.0		99.4	78-127				
Bromodichloromethane	50		"	50.0		100	73-131				
Bromoform	53		"	50.0		106	66-137				
Bromomethane	43		"	50.0		85.4	55-144				
Carbon tetrachloride	49		"	50.0		97.9	74-137				
Chlorobenzene	49		"	50.0		98.0	75-127				
Chloroethane	44		"	50.0		88.4	65-138				
Chloroform	50		"	50.0		100	82-128				

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BA30987 - EPA 5035A										
LCS (BA30987-BS1)										
Prepared: 01/28/2013 Analyzed: 01/29/2013										
Chloromethane	42		ug/L	50.0		84.6			51-138	
cis-1,2-Dichloroethylene	49		"	50.0		98.7			77-130	
cis-1,3-Dichloropropylene	48		"	50.0		95.6			68-123	
Dibromochloromethane	50		"	50.0		99.1			73-136	
Dibromomethane	50		"	50.0		99.0			75-131	
Dichlorodifluoromethane	35		"	50.0		69.6			10-183	
Ethyl Benzene	49		"	50.0		97.1			75-130	
Hexachlorobutadiene	47		"	50.0		94.5			59-130	
Isopropylbenzene	49		"	50.0		97.8			68-135	
Methyl tert-butyl ether (MTBE)	57		"	50.0		114			76-136	
Methylene chloride	47		"	50.0		94.4			55-143	
Naphthalene	52		"	50.0		103			65-140	
n-Butylbenzene	48		"	50.0		96.4			63-123	
n-Propylbenzene	49		"	50.0		97.4			65-127	
o-Xylene	49		"	50.0		97.3			71-123	
p- & m- Xylenes	96		"	100		95.8			72-127	
p-Isopropyltoluene	48		"	50.0		96.3			69-128	
sec-Butylbenzene	49		"	50.0		97.9			69-125	
Styrene	49		"	50.0		98.4			74-127	
tert-Butylbenzene	47		"	50.0		94.8			59-164	
Tetrachloroethylene	53		"	50.0		106			65-151	
Toluene	48		"	50.0		96.7			72-127	
trans-1,2-Dichloroethylene	48		"	50.0		96.1			73-137	
trans-1,3-Dichloropropylene	48		"	50.0		96.6			67-131	
Trichloroethylene	47		"	50.0		94.4			73-129	
Trichlorofluoromethane	45		"	50.0		90.8			69-136	
Vinyl Chloride	43		"	50.0		86.6			58-132	
Vinyl acetate	50		"	50.0		101			10-84	High Bias
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>52.3</i>		<i>"</i>	<i>50.0</i>		<i>105</i>			<i>73-130</i>	
<i>Surrogate: p-Bromofluorobenzene</i>	<i>51.7</i>		<i>"</i>	<i>50.0</i>		<i>103</i>			<i>72-127</i>	
<i>Surrogate: Toluene-d8</i>	<i>50.7</i>		<i>"</i>	<i>50.0</i>		<i>101</i>			<i>84-117</i>	

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source*		%REC Limits	Flag	RPD	
					Result	%REC			RPD	Limit
Batch BA30987 - EPA 5035A										
LCS Dup (BA30987-BSD1)										
Prepared: 01/28/2013 Analyzed: 01/29/2013										
1,1,1,2-Tetrachloroethane	50		ug/L	50.0	101		72-132		2.47	30
1,1,1-Trichloroethane	48		"	50.0	96.9		77-131		0.515	30
1,1,2,2-Tetrachloroethane	51		"	50.0	102		68-129		0.0591	30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	44		"	50.0	88.6		75-143		3.24	30
1,1,2-Trichloroethane	50		"	50.0	99.7		72-128		1.09	30
1,1-Dichloroethane	50		"	50.0	99.1		78-133		0.0606	30
1,1-Dichloroethylene	46		"	50.0	92.7		71-142		1.99	30
1,1-Dichloropropylene	48		"	50.0	96.0		77-124		0.685	30
1,2,3-Trichlorobenzene	49		"	50.0	98.7		65-134		0.727	30
1,2,3-Trichloropropane	53		"	50.0	105		65-127		2.90	30
1,2,4-Trichlorobenzene	49		"	50.0	97.1		59-133		1.25	30
1,2,4-Trimethylbenzene	49		"	50.0	97.7		68-128		0.0409	30
1,2-Dibromo-3-chloropropane	54		"	50.0	107		58-145		3.62	30
1,2-Dibromoethane	52		"	50.0	104		73-128		3.91	30
1,2-Dichlorobenzene	49		"	50.0	98.2		69-126		1.35	30
1,2-Dichloroethane	50		"	50.0	99.2		78-131		0.0403	30
1,2-Dichloropropane	50		"	50.0	100		72-129		2.08	30
1,3,5-Trimethylbenzene	48		"	50.0	96.9		67-125		1.23	30
1,3-Dichlorobenzene	48		"	50.0	96.9		67-125		1.03	30
1,3-Dichloropropane	51		"	50.0	102		73-126		2.31	30
1,4-Dichlorobenzene	48		"	50.0	95.2		67-127		2.47	30
1,4-Dioxane	630		"	50.0	NR		10-265	High Bias	4.56	30
2,2-Dichloropropane	44		"	50.0	87.2		68-133		1.03	30
2-Butanone	55		"	50.0	110		49-138		6.50	30
2-Chlorotoluene	48		"	50.0	97.0		61-121		2.04	30
4-Chlorotoluene	49		"	50.0	97.5		65-126		0.205	30
Acetone	59		"	50.0	119		21-131		9.82	30
Benzene	49		"	50.0	97.2		81-125		0.390	30
Bromobenzene	49		"	50.0	98.9		65-125		0.565	30
Bromochloromethane	49		"	50.0	98.2		78-127		1.17	30
Bromodichloromethane	51		"	50.0	102		73-131		1.66	30
Bromoform	53		"	50.0	106		66-137		0.302	30
Bromomethane	44		"	50.0	87.2		55-144		2.09	30
Carbon tetrachloride	48		"	50.0	96.4		74-137		1.48	30
Chlorobenzene	49		"	50.0	98.7		75-127		0.651	30
Chloroethane	44		"	50.0	87.9		65-138		0.522	30
Chloroform	50		"	50.0	100		82-128		0.160	30
Chloromethane	42		"	50.0	84.3		51-138		0.308	30
cis-1,2-Dichloroethylene	49		"	50.0	97.7		77-130		1.04	30
cis-1,3-Dichloropropylene	50		"	50.0	99.2		68-123		3.65	30
Dibromochloromethane	52		"	50.0	103		73-136		3.98	30
Dibromomethane	51		"	50.0	103		75-131		3.86	30
Dichlorodifluoromethane	34		"	50.0	69.0		10-183		0.895	30
Ethyl Benzene	49		"	50.0	98.7		75-130		1.61	30
Hexachlorobutadiene	46		"	50.0	91.6		59-130		3.05	30
Isopropylbenzene	49		"	50.0	98.4		68-135		0.591	30
Methyl tert-butyl ether (MTBE)	58		"	50.0	115		76-136		0.854	30
Methylene chloride	46		"	50.0	91.2		55-143		3.36	30
Naphthalene	51		"	50.0	102		65-140		1.29	30
n-Butylbenzene	48		"	50.0	95.6		63-123		0.812	30
n-Propylbenzene	48		"	50.0	96.3		65-127		1.12	30
o-Xylene	50		"	50.0	99.4		71-123		2.11	30
p- & m- Xylenes	99		"	100	99.3		72-127		3.61	30
p-Isopropyltoluene	48		"	50.0	95.2		69-128		1.07	30

YORK

ANALYTICAL LABORATORIES, INC.

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting	Units	Spike	Source*	%REC	%REC	Flag	RPD	
		Limit			Result				Limits	RPD

Batch BA30987 - EPA 5035A

LCS Dup (BA30987-BSD1)

Prepared: 01/28/2013 Analyzed: 01/29/2013

sec-Butylbenzene	48		ug/L	50.0		96.8	69-125		1.11	30
Styrene	50		"	50.0		99.3	74-127		0.951	30
tert-Butylbenzene	47		"	50.0		93.4	59-164		1.51	30
Tetrachloroethylene	60		"	50.0		120	65-151		12.6	30
Toluene	49		"	50.0		98.7	72-127		2.03	30
trans-1,2-Dichloroethylene	47		"	50.0		94.7	73-137		1.45	30
trans-1,3-Dichloropropylene	50		"	50.0		99.6	67-131		3.06	30
Trichloroethylene	50		"	50.0		99.8	73-129		5.50	30
Trichlorofluoromethane	46		"	50.0		91.4	69-136		0.724	30
Vinyl Chloride	43		"	50.0		86.2	58-132		0.556	30
Vinyl acetate	48		"	50.0		95.5	10-84	High Bias	5.20	30
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>51.3</i>		<i>"</i>	<i>50.0</i>		<i>103</i>	<i>73-130</i>			
<i>Surrogate: p-Bromofluorobenzene</i>	<i>50.3</i>		<i>"</i>	<i>50.0</i>		<i>101</i>	<i>72-127</i>			
<i>Surrogate: Toluene-d8</i>	<i>51.2</i>		<i>"</i>	<i>50.0</i>		<i>102</i>	<i>84-117</i>			

Batch BA30999 - EPA 5035A

Blank (BA30999-BLK1)

Prepared & Analyzed: 01/29/2013

1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg wet							
1,1,1-Trichloroethane	ND	5.0	"							
1,1,2,2-Tetrachloroethane	ND	5.0	"							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	5.0	"							
1,1,2-Trichloroethane	ND	5.0	"							
1,1-Dichloroethane	ND	5.0	"							
1,1-Dichloroethylene	ND	5.0	"							
1,1-Dichloropropylene	ND	5.0	"							
1,2,3-Trichlorobenzene	ND	10	"							
1,2,3-Trichloropropane	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	10	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
1,2-Dibromo-3-chloropropane	ND	10	"							
1,2-Dibromoethane	ND	5.0	"							
1,2-Dichlorobenzene	ND	5.0	"							
1,2-Dichloroethane	ND	5.0	"							
1,2-Dichloropropane	ND	5.0	"							
1,3,5-Trimethylbenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	5.0	"							
1,3-Dichloropropane	ND	5.0	"							
1,4-Dichlorobenzene	ND	5.0	"							
1,4-Dioxane	ND	50	"							
2,2-Dichloropropane	ND	5.0	"							
2-Butanone	ND	10	"							
2-Chlorotoluene	ND	5.0	"							
4-Chlorotoluene	ND	5.0	"							
Acetone	ND	10	"							
Benzene	ND	5.0	"							
Bromobenzene	ND	5.0	"							
Bromochloromethane	ND	5.0	"							
Bromodichloromethane	ND	5.0	"							
Bromoform	ND	5.0	"							
Bromomethane	ND	5.0	"							
Carbon tetrachloride	ND	5.0	"							
Chlorobenzene	ND	5.0	"							
Chloroethane	ND	5.0	"							

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BA30999 - EPA 5035A

Blank (BA30999-BLK1)

Prepared & Analyzed: 01/29/2013

Chloroform	ND	5.0	ug/kg wet							
Chloromethane	ND	5.0	"							
cis-1,2-Dichloroethylene	ND	5.0	"							
cis-1,3-Dichloropropylene	ND	5.0	"							
Dibromochloromethane	ND	5.0	"							
Dibromomethane	ND	5.0	"							
Dichlorodifluoromethane	ND	5.0	"							
Ethyl Benzene	ND	5.0	"							
Hexachlorobutadiene	ND	5.0	"							
Isopropylbenzene	ND	5.0	"							
Methyl tert-butyl ether (MTBE)	ND	5.0	"							
Methylene chloride	8.8	10	"							
Naphthalene	ND	10	"							
n-Butylbenzene	ND	5.0	"							
n-Propylbenzene	ND	5.0	"							
o-Xylene	ND	5.0	"							
p- & m- Xylenes	ND	10	"							
p-Isopropyltoluene	ND	5.0	"							
sec-Butylbenzene	ND	5.0	"							
Styrene	ND	5.0	"							
tert-Butylbenzene	ND	5.0	"							
Tetrachloroethylene	ND	5.0	"							
Toluene	ND	5.0	"							
trans-1,2-Dichloroethylene	ND	5.0	"							
trans-1,3-Dichloropropylene	ND	5.0	"							
Trichloroethylene	ND	5.0	"							
Trichlorofluoromethane	ND	5.0	"							
Vinyl Chloride	ND	5.0	"							
Xylenes, Total	ND	15	"							
Vinyl acetate	ND	10	"							
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<i>Surrogate: 1,2-Dichloroethane-d4</i>	47.1		ug/L	50.0		94.2		73-130		
<i>Surrogate: p-Bromofluorobenzene</i>	47.2		"	50.0		94.4		72-127		
<i>Surrogate: Toluene-d8</i>	49.6		"	50.0		99.1		84-117		

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BA30999 - EPA 5035A											
LCS (BA30999-BS1)										Prepared & Analyzed: 01/29/2013	
1,1,1,2-Tetrachloroethane	50		ug/L	50.0		100	72-132				
1,1,1-Trichloroethane	46		"	50.0		92.6	77-131				
1,1,2,2-Tetrachloroethane	52		"	50.0		103	68-129				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	47		"	50.0		94.7	75-143				
1,1,2-Trichloroethane	54		"	50.0		107	72-128				
1,1-Dichloroethane	50		"	50.0		99.7	78-133				
1,1-Dichloroethylene	45		"	50.0		90.1	71-142				
1,1-Dichloropropylene	48		"	50.0		96.4	77-124				
1,2,3-Trichlorobenzene	54		"	50.0		108	65-134				
1,2,3-Trichloropropane	49		"	50.0		98.8	65-127				
1,2,4-Trichlorobenzene	53		"	50.0		106	59-133				
1,2,4-Trimethylbenzene	47		"	50.0		93.1	68-128				
1,2-Dibromo-3-chloropropane	51		"	50.0		102	58-145				
1,2-Dibromoethane	52		"	50.0		105	73-128				
1,2-Dichlorobenzene	47		"	50.0		94.1	69-126				
1,2-Dichloroethane	48		"	50.0		96.6	78-131				
1,2-Dichloropropane	52		"	50.0		105	72-129				
1,3,5-Trimethylbenzene	46		"	50.0		91.4	67-125				
1,3-Dichlorobenzene	48		"	50.0		96.2	67-125				
1,3-Dichloropropane	52		"	50.0		105	73-126				
1,4-Dichlorobenzene	49		"	50.0		98.1	67-127				
1,4-Dioxane	1000		"	50.0		NR	10-265	High Bias			
2,2-Dichloropropane	46		"	50.0		92.1	68-133				
2-Butanone	64		"	50.0		129	49-138				
2-Chlorotoluene	46		"	50.0		92.2	61-121				
4-Chlorotoluene	47		"	50.0		93.2	65-126				
Acetone	60		"	50.0		120	21-131				
Benzene	50		"	50.0		100	81-125				
Bromobenzene	49		"	50.0		97.1	65-125				
Bromochloromethane	52		"	50.0		105	78-127				
Bromodichloromethane	51		"	50.0		103	73-131				
Bromoform	50		"	50.0		100	66-137				
Bromomethane	43		"	50.0		86.1	55-144				
Carbon tetrachloride	48		"	50.0		95.6	74-137				
Chlorobenzene	50		"	50.0		99.5	75-127				
Chloroethane	49		"	50.0		97.3	65-138				
Chloroform	46		"	50.0		92.3	82-128				
Chloromethane	49		"	50.0		98.1	51-138				
cis-1,2-Dichloroethylene	51		"	50.0		103	77-130				
cis-1,3-Dichloropropylene	53		"	50.0		105	68-123				
Dibromochloromethane	51		"	50.0		101	73-136				
Dibromomethane	52		"	50.0		103	75-131				
Dichlorodifluoromethane	39		"	50.0		79.0	10-183				
Ethyl Benzene	49		"	50.0		97.2	75-130				
Hexachlorobutadiene	46		"	50.0		92.4	59-130				
Isopropylbenzene	46		"	50.0		92.6	68-135				
Methyl tert-butyl ether (MTBE)	49		"	50.0		97.3	76-136				
Methylene chloride	56		"	50.0		112	55-143				
Naphthalene	58		"	50.0		117	65-140				
n-Butylbenzene	49		"	50.0		97.7	63-123				
n-Propylbenzene	47		"	50.0		93.0	65-127				
o-Xylene	48		"	50.0		95.6	71-123				
p- & m- Xylenes	97		"	100		97.3	72-127				
p-Isopropyltoluene	47		"	50.0		94.3	69-128				

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BA30999 - EPA 5035A										
LCS (BA30999-BS1)										
Prepared & Analyzed: 01/29/2013										
sec-Butylbenzene	48		ug/L	50.0		96.1		69-125		
Styrene	52		"	50.0		103		74-127		
tert-Butylbenzene	48		"	50.0		95.4		59-164		
Tetrachloroethylene	49		"	50.0		98.9		65-151		
Toluene	49		"	50.0		97.4		72-127		
trans-1,2-Dichloroethylene	50		"	50.0		99.5		73-137		
trans-1,3-Dichloropropylene	51		"	50.0		101		67-131		
Trichloroethylene	50		"	50.0		99.0		73-129		
Trichlorofluoromethane	43		"	50.0		87.0		69-136		
Vinyl Chloride	48		"	50.0		96.5		58-132		
Vinyl acetate	55		"	50.0		109		10-84	High Bias	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>47.7</i>		<i>"</i>	<i>50.0</i>		<i>95.4</i>		<i>73-130</i>		
<i>Surrogate: p-Bromofluorobenzene</i>	<i>49.3</i>		<i>"</i>	<i>50.0</i>		<i>98.5</i>		<i>72-127</i>		
<i>Surrogate: Toluene-d8</i>	<i>50.8</i>		<i>"</i>	<i>50.0</i>		<i>102</i>		<i>84-117</i>		
LCS Dup (BA30999-BSD1)										
Prepared & Analyzed: 01/29/2013										
1,1,1,2-Tetrachloroethane	50		ug/L	50.0		99.4		72-132	0.602	30
1,1,1-Trichloroethane	44		"	50.0		88.4		77-131	4.69	30
1,1,2,2-Tetrachloroethane	51		"	50.0		103		68-129	0.233	30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	47		"	50.0		93.3		75-143	1.49	30
1,1,2-Trichloroethane	51		"	50.0		103		72-128	4.24	30
1,1-Dichloroethane	50		"	50.0		100		78-133	0.719	30
1,1-Dichloroethylene	45		"	50.0		89.9		71-142	0.289	30
1,1-Dichloropropylene	48		"	50.0		96.8		77-124	0.394	30
1,2,3-Trichlorobenzene	57		"	50.0		113		65-134	4.69	30
1,2,3-Trichloropropane	51		"	50.0		101		65-127	2.52	30
1,2,4-Trichlorobenzene	56		"	50.0		111		59-133	4.69	30
1,2,4-Trimethylbenzene	48		"	50.0		95.9		68-128	2.94	30
1,2-Dibromo-3-chloropropane	51		"	50.0		103		58-145	0.468	30
1,2-Dibromoethane	51		"	50.0		102		73-128	3.17	30
1,2-Dichlorobenzene	50		"	50.0		100		69-126	6.54	30
1,2-Dichloroethane	48		"	50.0		96.1		78-131	0.498	30
1,2-Dichloropropane	50		"	50.0		100		72-129	4.57	30
1,3,5-Trimethylbenzene	49		"	50.0		97.7		67-125	6.62	30
1,3-Dichlorobenzene	50		"	50.0		101		67-125	4.55	30
1,3-Dichloropropane	49		"	50.0		97.5		73-126	7.14	30
1,4-Dichlorobenzene	49		"	50.0		98.9		67-127	0.751	30
1,4-Dioxane	1000		"	50.0		NR		10-265	High Bias	1.34
2,2-Dichloropropane	47		"	50.0		95.0		68-133	3.01	30
2-Butanone	61		"	50.0		122		49-138	5.46	30
2-Chlorotoluene	49		"	50.0		97.2		61-121	5.22	30
4-Chlorotoluene	50		"	50.0		99.0		65-126	6.12	30
Acetone	47		"	50.0		94.7		21-131	23.3	30
Benzene	49		"	50.0		98.9		81-125	1.31	30
Bromobenzene	50		"	50.0		99.9		65-125	2.86	30
Bromochloromethane	51		"	50.0		101		78-127	2.95	30
Bromodichloromethane	47		"	50.0		93.4		73-131	9.54	30
Bromoform	50		"	50.0		101		66-137	0.219	30
Bromomethane	44		"	50.0		89.0		55-144	3.36	30
Carbon tetrachloride	46		"	50.0		91.8		74-137	4.08	30
Chlorobenzene	49		"	50.0		98.7		75-127	0.888	30
Chloroethane	47		"	50.0		93.3		65-138	4.16	30
Chloroform	48		"	50.0		95.4		82-128	3.30	30
Chloromethane	48		"	50.0		95.2		51-138	2.96	30

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BA30999 - EPA 5035A										
LCS Dup (BA30999-BSD1)										
										Prepared & Analyzed: 01/29/2013
cis-1,2-Dichloroethylene	54		ug/L	50.0		107	77-130		4.65	30
cis-1,3-Dichloropropylene	49		"	50.0		97.8	68-123		7.29	30
Dibromochloromethane	50		"	50.0		100	73-136		1.25	30
Dibromomethane	49		"	50.0		98.3	75-131		4.79	30
Dichlorodifluoromethane	36		"	50.0		72.2	10-183		8.92	30
Ethyl Benzene	48		"	50.0		96.2	75-130		1.08	30
Hexachlorobutadiene	52		"	50.0		104	59-130		11.4	30
Isopropylbenzene	49		"	50.0		98.5	68-135		6.09	30
Methyl tert-butyl ether (MTBE)	47		"	50.0		94.4	76-136		2.96	30
Methylene chloride	54		"	50.0		109	55-143		3.01	30
Naphthalene	59		"	50.0		118	65-140		1.13	30
n-Butylbenzene	49		"	50.0		97.4	63-123		0.226	30
n-Propylbenzene	48		"	50.0		95.3	65-127		2.46	30
o-Xylene	49		"	50.0		98.9	71-123		3.39	30
p- & m- Xylenes	93		"	100		93.1	72-127		4.42	30
p-Isopropyltoluene	49		"	50.0		98.2	69-128		3.99	30
sec-Butylbenzene	49		"	50.0		97.2	69-125		1.14	30
Styrene	52		"	50.0		104	74-127		0.656	30
tert-Butylbenzene	49		"	50.0		97.8	59-164		2.49	30
Tetrachloroethylene	45		"	50.0		90.9	65-151		8.43	30
Toluene	47		"	50.0		94.5	72-127		2.98	30
trans-1,2-Dichloroethylene	49		"	50.0		97.8	73-137		1.72	30
trans-1,3-Dichloropropylene	50		"	50.0		99.6	67-131		1.73	30
Trichloroethylene	48		"	50.0		96.4	73-129		2.68	30
Trichlorofluoromethane	43		"	50.0		86.4	69-136		0.692	30
Vinyl Chloride	47		"	50.0		93.3	58-132		3.37	30
Vinyl acetate	55		"	50.0		109	10-84	High Bias	0.0915	30
<i>Surrogate: 1,2-Dichloroethane-d4</i>	47.2		"	50.0		94.4	73-130			
<i>Surrogate: p-Bromofluorobenzene</i>	51.7		"	50.0		103	72-127			
<i>Surrogate: Toluene-d8</i>	48.5		"	50.0		97.0	84-117			

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BA31026 - EPA 5030B

Blank (BA31026-BLK1)

Prepared & Analyzed: 01/29/2013

1,1,1,2-Tetrachloroethane	ND	5.0	ug/L								
1,1,1-Trichloroethane	ND	5.0	"								
1,1,2,2-Tetrachloroethane	ND	5.0	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	5.0	"								
1,1,2-Trichloroethane	ND	5.0	"								
1,1-Dichloroethane	ND	5.0	"								
1,1-Dichloroethylene	ND	5.0	"								
1,1-Dichloropropylene	ND	5.0	"								
1,2,3-Trichlorobenzene	ND	10	"								
1,2,3-Trichloropropane	ND	5.0	"								
1,2,4-Trichlorobenzene	ND	10	"								
1,2,4-Trimethylbenzene	ND	5.0	"								
1,2-Dibromo-3-chloropropane	ND	10	"								
1,2-Dibromoethane	ND	5.0	"								
1,2-Dichlorobenzene	ND	5.0	"								
1,2-Dichloroethane	ND	5.0	"								
1,2-Dichloropropane	ND	5.0	"								
1,3,5-Trimethylbenzene	ND	5.0	"								
1,3-Dichlorobenzene	ND	5.0	"								
1,3-Dichloropropane	ND	5.0	"								
1,4-Dichlorobenzene	ND	5.0	"								
2,2-Dichloropropane	ND	5.0	"								
2-Butanone	ND	10	"								
2-Chlorotoluene	ND	5.0	"								
4-Chlorotoluene	ND	5.0	"								
Acetone	ND	10	"								
Benzene	ND	5.0	"								
Bromobenzene	ND	5.0	"								
Bromochloromethane	ND	5.0	"								
Bromodichloromethane	ND	5.0	"								
Bromoform	ND	5.0	"								
Bromomethane	ND	5.0	"								
Carbon tetrachloride	ND	5.0	"								
Chlorobenzene	ND	5.0	"								
Chloroethane	ND	5.0	"								
Chloroform	ND	5.0	"								
Chloromethane	ND	5.0	"								
cis-1,2-Dichloroethylene	ND	5.0	"								
cis-1,3-Dichloropropylene	ND	5.0	"								
Dibromochloromethane	ND	5.0	"								
Dibromomethane	ND	5.0	"								
Dichlorodifluoromethane	ND	5.0	"								
Ethyl Benzene	ND	5.0	"								
Hexachlorobutadiene	ND	5.0	"								
Isopropylbenzene	ND	5.0	"								
Methyl tert-butyl ether (MTBE)	ND	5.0	"								
Methylene chloride	4.4	10	"								
Naphthalene	ND	10	"								
n-Butylbenzene	ND	5.0	"								
n-Propylbenzene	ND	5.0	"								
o-Xylene	ND	5.0	"								
p- & m- Xylenes	ND	10	"								
p-Isopropyltoluene	ND	5.0	"								
sec-Butylbenzene	ND	5.0	"								

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BA31026 - EPA 5030B

Blank (BA31026-BLK1)

Prepared & Analyzed: 01/29/2013

Styrene	ND	5.0	ug/L							
tert-Butylbenzene	ND	5.0	"							
Tetrachloroethylene	ND	5.0	"							
Toluene	ND	5.0	"							
trans-1,2-Dichloroethylene	ND	5.0	"							
trans-1,3-Dichloropropylene	ND	5.0	"							
Trichloroethylene	ND	5.0	"							
Trichlorofluoromethane	ND	5.0	"							
Vinyl Chloride	ND	5.0	"							
Xylenes, Total	ND	15	"							
Vinyl acetate	ND	10	"							

<i>Surrogate: 1,2-Dichloroethane-d4</i>	44.1		"	50.0		88.3	72.6-129			
<i>Surrogate: p-Bromofluorobenzene</i>	47.6		"	50.0		95.2	63.5-145			
<i>Surrogate: Toluene-d8</i>	50.6		"	50.0		101	81.2-127			

LCS (BA31026-BS1)

Prepared & Analyzed: 01/29/2013

1,1,1,2-Tetrachloroethane	50		ug/L	50.0		99.5	82.3-130			
1,1,1-Trichloroethane	45		"	50.0		90.2	75.6-137			
1,1,2,2-Tetrachloroethane	54		"	50.0		108	71.3-131			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	53		"	50.0		105	71.1-129			
1,1,2-Trichloroethane	51		"	50.0		103	74.5-129			
1,1-Dichloroethane	50		"	50.0		100	79.6-132			
1,1-Dichloroethylene	44		"	50.0		87.8	80.2-146			
1,1-Dichloropropylene	44		"	50.0		88.7	75-136			
1,2,3-Trichlorobenzene	54		"	50.0		109	66.1-136			
1,2,3-Trichloropropane	49		"	50.0		97.5	63-131			
1,2,4-Trichlorobenzene	54		"	50.0		109	70.6-136			
1,2,4-Trimethylbenzene	44		"	50.0		87.4	75.3-135			
1,2-Dibromo-3-chloropropane	44		"	50.0		88.8	58.9-140			
1,2-Dibromoethane	53		"	50.0		105	79-130			
1,2-Dichlorobenzene	49		"	50.0		97.4	76.1-122			
1,2-Dichloroethane	46		"	50.0		91.5	74.6-132			
1,2-Dichloropropane	52		"	50.0		105	76.9-129			
1,3,5-Trimethylbenzene	46		"	50.0		91.4	70.6-127			
1,3-Dichlorobenzene	48		"	50.0		95.2	77-124			
1,3-Dichloropropane	52		"	50.0		103	75.8-126			
1,4-Dichlorobenzene	47		"	50.0		94.1	76.6-125			
2,2-Dichloropropane	42		"	50.0		83.4	69-133			
2-Butanone	52		"	50.0		103	70-130			
2-Chlorotoluene	44		"	50.0		87.9	66.3-119			
4-Chlorotoluene	47		"	50.0		93.9	69.2-127			
Acetone	31		"	50.0		62.4	70-130	Low Bias		
Benzene	47		"	50.0		94.7	76.2-129			
Bromobenzene	49		"	50.0		97.1	71.3-123			
Bromochloromethane	51		"	50.0		102	70.8-137			
Bromodichloromethane	49		"	50.0		97.5	79.7-134			
Bromoform	50		"	50.0		101	70.5-141			
Bromomethane	43		"	50.0		85.2	43.9-147			
Carbon tetrachloride	47		"	50.0		93.0	78.1-138			
Chlorobenzene	48		"	50.0		96.9	80.4-125			
Chloroethane	48		"	50.0		95.1	55.8-140			
Chloroform	47		"	50.0		94.0	76.6-133			
Chloromethane	50		"	50.0		99.6	48.8-115			
cis-1,2-Dichloroethylene	51		"	50.0		101	75.1-128			

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	Flag	RPD Limit	Flag
Batch BA31026 - EPA 5030B									
LCS (BA31026-BS1)									
Prepared & Analyzed: 01/29/2013									
cis-1,3-Dichloropropylene	50		ug/L	50.0		101 74.5-128			
Dibromochloromethane	51		"	50.0		101 79.8-134			
Dibromomethane	53		"	50.0		105 79-130			
Dichlorodifluoromethane	50		"	50.0		99.9 47.1-101			
Ethyl Benzene	49		"	50.0		97.3 80.8-128			
Hexachlorobutadiene	46		"	50.0		91.6 64.8-128			
Isopropylbenzene	44		"	50.0		88.5 75.5-135			
Methyl tert-butyl ether (MTBE)	47		"	50.0		94.5 65.1-140			
Methylene chloride	60		"	50.0		120 61.3-120			
Naphthalene	61		"	50.0		123 62.3-148			
n-Butylbenzene	45		"	50.0		89.8 67.2-123			
n-Propylbenzene	43		"	50.0		85.5 70.5-127			
o-Xylene	46		"	50.0		91.4 75.9-122			
p- & m- Xylenes	92		"	100		92.2 77.7-127			
p-Isopropyltoluene	47		"	50.0		93.8 75.6-129			
sec-Butylbenzene	46		"	50.0		91.7 71.5-125			
Styrene	50		"	50.0		100 77.8-123			
tert-Butylbenzene	46		"	50.0		92.1 75.9-151			
Tetrachloroethylene	49		"	50.0		97.6 63.6-167			
Toluene	47		"	50.0		93.2 77-123			
trans-1,2-Dichloroethylene	48		"	50.0		96.8 76.3-139			
trans-1,3-Dichloropropylene	47		"	50.0		94.9 72.5-137			
Trichloroethylene	48		"	50.0		96.4 77.9-130			
Trichlorofluoromethane	44		"	50.0		89.0 57.4-133			
Vinyl Chloride	50		"	50.0		99.5 54.9-124			
Vinyl acetate	23		"	50.0		46.5 70-130	Low Bias		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>44.3</i>		<i>"</i>	<i>50.0</i>		<i>88.7</i> <i>72.6-129</i>			
<i>Surrogate: p-Bromofluorobenzene</i>	<i>48.3</i>		<i>"</i>	<i>50.0</i>		<i>96.7</i> <i>63.5-145</i>			
<i>Surrogate: Toluene-d8</i>	<i>49.1</i>		<i>"</i>	<i>50.0</i>		<i>98.3</i> <i>81.2-127</i>			

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BA31026 - EPA 5030B											
LCS Dup (BA31026-BSD1)											
Prepared & Analyzed: 01/29/2013											
1,1,1,2-Tetrachloroethane	47		ug/L	50.0		94.5	82.3-130		5.17	21.1	
1,1,1-Trichloroethane	44		"	50.0		88.5	75.6-137		1.90	19.7	
1,1,2,2-Tetrachloroethane	50		"	50.0		100	71.3-131		7.62	20.8	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	54		"	50.0		108	71.1-129		2.83	21.7	
1,1,2-Trichloroethane	49		"	50.0		98.3	74.5-129		4.38	20.3	
1,1-Dichloroethane	50		"	50.0		99.0	79.6-132		1.05	20.6	
1,1-Dichloroethylene	45		"	50.0		90.1	80.2-146		2.63	20	
1,1-Dichloropropylene	44		"	50.0		88.7	75-136		0.0451	19.3	
1,2,3-Trichlorobenzene	51		"	50.0		102	66.1-136		6.83	21.6	
1,2,3-Trichloropropane	47		"	50.0		94.0	63-131		3.66	23.9	
1,2,4-Trichlorobenzene	49		"	50.0		97.2	70.6-136		11.1	21.7	
1,2,4-Trimethylbenzene	43		"	50.0		85.6	75.3-135		2.13	18.8	
1,2-Dibromo-3-chloropropane	42		"	50.0		83.6	58.9-140		6.08	27.7	
1,2-Dibromoethane	50		"	50.0		99.2	79-130		6.00	23	
1,2-Dichlorobenzene	45		"	50.0		90.9	76.1-122		6.93	19.8	
1,2-Dichloroethane	47		"	50.0		93.1	74.6-132		1.80	20.2	
1,2-Dichloropropane	49		"	50.0		98.8	76.9-129		5.61	20.7	
1,3,5-Trimethylbenzene	42		"	50.0		84.4	70.6-127		7.99	18.9	
1,3-Dichlorobenzene	45		"	50.0		90.5	77-124		5.08	19.2	
1,3-Dichloropropane	47		"	50.0		93.5	75.8-126		9.65	22.1	
1,4-Dichlorobenzene	43		"	50.0		86.8	76.6-125		8.09	18.6	
2,2-Dichloropropane	42		"	50.0		84.2	69-133		1.05	19.8	
2-Butanone	51		"	50.0		102	70-130		1.11	30	
2-Chlorotoluene	41		"	50.0		82.9	66.3-119		5.83	21.6	
4-Chlorotoluene	44		"	50.0		88.2	69.2-127		6.28	19	
Acetone	34		"	50.0		68.4	70-130	Low Bias	9.14	30	
Benzene	50		"	50.0		101	76.2-129		6.32	19	
Bromobenzene	46		"	50.0		91.7	71.3-123		5.78	20.3	
Bromochloromethane	51		"	50.0		102	70.8-137		0.452	23.9	
Bromodichloromethane	47		"	50.0		94.3	79.7-134		3.34	21	
Bromoform	50		"	50.0		100	70.5-141		0.536	21.8	
Bromomethane	42		"	50.0		83.9	43.9-147		1.54	28.4	
Carbon tetrachloride	46		"	50.0		91.5	78.1-138		1.65	20.1	
Chlorobenzene	46		"	50.0		91.5	80.4-125		5.67	19.9	
Chloroethane	50		"	50.0		99.4	55.8-140		4.40	23.3	
Chloroform	47		"	50.0		93.5	76.6-133		0.491	20.3	
Chloromethane	52		"	50.0		104	48.8-115		3.96	24.5	
cis-1,2-Dichloroethylene	51		"	50.0		103	75.1-128		1.39	20.5	
cis-1,3-Dichloropropylene	49		"	50.0		97.4	74.5-128		3.21	19.9	
Dibromochloromethane	50		"	50.0		99.0	79.8-134		2.43	21.3	
Dibromomethane	50		"	50.0		100	79-130		4.97	22.4	
Dichlorodifluoromethane	50		"	50.0		100	47.1-101		0.100	23.9	
Ethyl Benzene	47		"	50.0		94.0	80.8-128		3.49	19.2	
Hexachlorobutadiene	44		"	50.0		89.0	64.8-128		2.88	20.6	
Isopropylbenzene	44		"	50.0		88.4	75.5-135		0.113	20	
Methyl tert-butyl ether (MTBE)	45		"	50.0		89.5	65.1-140		5.44	23.6	
Methylene chloride	59		"	50.0		118	61.3-120		1.96	20.4	
Naphthalene	59		"	50.0		118	62.3-148		3.47	27.1	
n-Butylbenzene	42		"	50.0		83.5	67.2-123		7.32	19.1	
n-Propylbenzene	42		"	50.0		84.3	70.5-127		1.44	23.4	
o-Xylene	45		"	50.0		90.2	75.9-122		1.28	19.3	
p- & m- Xylenes	90		"	100		90.2	77.7-127		2.23	18.6	
p-Isopropyltoluene	46		"	50.0		91.3	75.6-129		2.72	19.1	
sec-Butylbenzene	46		"	50.0		92.8	71.5-125		1.15	18.9	

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BA31026 - EPA 5030B										
LCS Dup (BA31026-BSD1)										
Prepared & Analyzed: 01/29/2013										
Styrene	49		ug/L	50.0		98.4 77.8-123		2.05	20.9	
tert-Butylbenzene	43		"	50.0		86.5 75.9-151		6.32	20.9	
Tetrachloroethylene	49		"	50.0		98.2 63.6-167		0.613	27.7	
Toluene	45		"	50.0		89.4 77-123		4.23	18.7	
trans-1,2-Dichloroethylene	48		"	50.0		95.4 76.3-139		1.42	19.5	
trans-1,3-Dichloropropylene	44		"	50.0		88.8 72.5-137		6.60	19.3	
Trichloroethylene	47		"	50.0		93.3 77.9-130		3.29	20.5	
Trichlorofluoromethane	44		"	50.0		88.1 57.4-133		0.949	21.4	
Vinyl Chloride	49		"	50.0		98.5 54.9-124		0.949	22.3	
Vinyl acetate	22		"	50.0		44.6 70-130	Low Bias	4.26	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>44.8</i>		<i>"</i>	<i>50.0</i>		<i>89.7 72.6-129</i>				
<i>Surrogate: p-Bromofluorobenzene</i>	<i>50.1</i>		<i>"</i>	<i>50.0</i>		<i>100 63.5-145</i>				
<i>Surrogate: Toluene-d8</i>	<i>49.2</i>		<i>"</i>	<i>50.0</i>		<i>98.3 81.2-127</i>				

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BA30877 - EPA 3550B

Blank (BA30877-BLK1)

Prepared: 01/24/2013 Analyzed: 01/25/2013

Acenaphthene	ND	250	ug/kg wet							
Acenaphthylene	ND	250	"							
Aniline	ND	250	"							
Anthracene	ND	250	"							
Benzo(a)anthracene	ND	250	"							
Benzo(a)pyrene	ND	250	"							
Benzo(b)fluoranthene	ND	250	"							
Benzo(g,h,i)perylene	ND	250	"							
Benzyl alcohol	ND	250	"							
Benzo(k)fluoranthene	ND	250	"							
Benzyl butyl phthalate	ND	250	"							
4-Bromophenyl phenyl ether	ND	250	"							
4-Chloro-3-methylphenol	ND	250	"							
4-Chloroaniline	ND	250	"							
Bis(2-chloroethoxy)methane	ND	250	"							
Bis(2-chloroethyl)ether	ND	250	"							
Bis(2-chloroisopropyl)ether	ND	250	"							
Bis(2-ethylhexyl)phthalate	ND	250	"							
2-Chloronaphthalene	ND	250	"							
2-Chlorophenol	ND	250	"							
4-Chlorophenyl phenyl ether	ND	250	"							
Chrysene	ND	250	"							
Dibenzo(a,h)anthracene	ND	250	"							
Dibenzofuran	ND	250	"							
Di-n-butyl phthalate	ND	250	"							
1,2-Dichlorobenzene	ND	250	"							
1,4-Dichlorobenzene	ND	250	"							
1,3-Dichlorobenzene	ND	250	"							
3,3'-Dichlorobenzidine	ND	250	"							
2,4-Dichlorophenol	ND	250	"							
Diethyl phthalate	ND	250	"							
2,4-Dimethylphenol	ND	250	"							
Dimethyl phthalate	ND	250	"							
2-Nitroaniline	ND	250	"							
4,6-Dinitro-2-methylphenol	ND	500	"							
2,4-Dinitrophenol	ND	500	"							
2,6-Dinitrotoluene	ND	250	"							
2,4-Dinitrotoluene	ND	250	"							
Di-n-octyl phthalate	ND	250	"							
Fluoranthene	ND	250	"							
Fluorene	ND	250	"							
Hexachlorobenzene	ND	250	"							
Hexachlorobutadiene	ND	250	"							
Hexachlorocyclopentadiene	ND	250	"							
Hexachloroethane	ND	250	"							
Indeno(1,2,3-cd)pyrene	ND	250	"							
Isophorone	ND	250	"							
2-Methylnaphthalene	ND	250	"							
2-Methylphenol	ND	250	"							
3- & 4-Methylphenols	ND	250	"							
Naphthalene	ND	250	"							
3-Nitroaniline	ND	250	"							
4-Nitroaniline	ND	250	"							
Nitrobenzene	ND	250	"							

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting	Units	Spike	Source*	%REC	Flag	RPD		
		Limit			Level	Result		Limits	RPD	Limit
Batch BA30877 - EPA 3550B										
Blank (BA30877-BLK1)										
Prepared: 01/24/2013 Analyzed: 01/25/2013										
4-Nitrophenol	ND	250	ug/kg wet							
2-Nitrophenol	ND	250	"							
N-nitroso-di-n-propylamine	ND	250	"							
N-Nitrosodimethylamine	ND	250	"							
N-Nitrosodiphenylamine	ND	250	"							
Pentachlorophenol	ND	250	"							
Phenanthrene	ND	250	"							
Phenol	ND	250	"							
Pyrene	ND	250	"							
Pyridine	ND	250	"							
1,2,4-Trichlorobenzene	ND	250	"							
2,4,5-Trichlorophenol	ND	250	"							
2,4,6-Trichlorophenol	ND	250	"							
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>3170</i>		<i>"</i>	<i>3750</i>		<i>84.5</i>		<i>15-110</i>		
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>2390</i>		<i>"</i>	<i>2500</i>		<i>95.5</i>		<i>30-130</i>		
<i>Surrogate: 2-Fluorophenol</i>	<i>3130</i>		<i>"</i>	<i>3760</i>		<i>83.2</i>		<i>15-110</i>		
<i>Surrogate: Nitrobenzene-d5</i>	<i>3060</i>		<i>"</i>	<i>2500</i>		<i>122</i>		<i>30-130</i>		
<i>Surrogate: Phenol-d5</i>	<i>3690</i>		<i>"</i>	<i>3750</i>		<i>98.3</i>		<i>15-110</i>		
<i>Surrogate: Terphenyl-d14</i>	<i>1780</i>		<i>"</i>	<i>2500</i>		<i>71.2</i>		<i>30-130</i>		
LCS (BA30877-BS1)										
Prepared: 01/24/2013 Analyzed: 01/25/2013										
Acenaphthene	2660	250	ug/kg wet	2500		106		31.1-109		
Acenaphthylene	2420	250	"	2500		97.0		31.1-106		
Aniline	1350	250	"	2500		54.1		5.07-149		
Anthracene	2670	250	"	2500		107		31.5-107		
Benzo(a)anthracene	2880	250	"	2500		115		31.5-115		
Benzo(a)pyrene	2270	250	"	2500		90.9		29.1-138		
Benzo(b)fluoranthene	1390	250	"	2500		55.6		14.9-131		
Benzo(g,h,i)perylene	1030	250	"	2500		41.1		6.56-121		
Benzyl alcohol	2290	250	"	2500		91.6		25.4-119		
Benzo(k)fluoranthene	1860	250	"	2500		74.2		29.1-121		
Benzyl butyl phthalate	2210	250	"	2500		88.5		31.3-112		
4-Bromophenyl phenyl ether	2460	250	"	2500		98.3		25.2-113		
4-Chloro-3-methylphenol	2570	250	"	2500		103		29.5-124		
4-Chloroaniline	1210	250	"	2500		48.3		10-177		
Bis(2-chloroethoxy)methane	2290	250	"	2500		91.5		27.9-111		
Bis(2-chloroethyl)ether	1810	250	"	2500		72.6		18-122		
Bis(2-chloroisopropyl)ether	2960	250	"	2500		118		9.62-123		
Bis(2-ethylhexyl)phthalate	2570	250	"	2500		103		25-105		
2-Chloronaphthalene	2400	250	"	2500		96.0		31.7-108		
2-Chlorophenol	2130	250	"	2500		85.2		20.3-125		
4-Chlorophenyl phenyl ether	2610	250	"	2500		104		23.6-110		
Chrysene	2290	250	"	2500		91.7		27.4-117		
Dibenzo(a,h)anthracene	1440	250	"	2500		57.7		14.6-119		
Dibenzofuran	2620	250	"	2500		105		30.2-108		
Di-n-butyl phthalate	2110	250	"	2500		84.6		33.5-100		
1,2-Dichlorobenzene	2520	250	"	2500		101		22.8-114		
1,4-Dichlorobenzene	2430	250	"	2500		97.4		19.8-121		
1,3-Dichlorobenzene	2190	250	"	2500		87.6		20.6-119		
3,3'-Dichlorobenzidine	2450	250	"	2500		98.1		10-180		
2,4-Dichlorophenol	2630	250	"	2500		105		23.3-125		
Diethyl phthalate	1790	250	"	2500		71.6		29.7-111		
2,4-Dimethylphenol	2000	250	"	2500		79.9		29.8-115		
Dimethyl phthalate	1900	250	"	2500		76.2		27-118		

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source*		%REC Limits	Flag	RPD	
					Result	%REC			RPD	Limit
Batch BA30877 - EPA 3550B										
LCS (BA30877-BS1)										
Prepared: 01/24/2013 Analyzed: 01/25/2013										
2-Nitroaniline	1820	250	ug/kg wet	2500			72.7	40-140		
4,6-Dinitro-2-methylphenol	706	500	"	2500			28.2	10-122		
2,4-Dinitrophenol	1010	500	"	2500			40.5	10-151		
2,6-Dinitrotoluene	2340	250	"	2500			93.6	26.1-119		
2,4-Dinitrotoluene	2100	250	"	2500			83.8	21.4-126		
Di-n-octyl phthalate	2050	250	"	2500			82.0	19-129		
Fluoranthene	2480	250	"	2500			99.2	31.3-110		
Fluorene	2740	250	"	2500			110	29.9-108	High Bias	
Hexachlorobenzene	2160	250	"	2500			86.4	31.7-102		
Hexachlorobutadiene	2660	250	"	2500			106	10.1-134		
Hexachlorocyclopentadiene	245	250	"	2500			9.80	10-122	Low Bias	
Hexachloroethane	2130	250	"	2500			85.3	20.2-114		
Indeno(1,2,3-cd)pyrene	1430	250	"	2500			57.1	12.6-120		
Isophorone	1990	250	"	2500			79.6	27.2-113		
2-Methylnaphthalene	1510	250	"	2500			60.5	17.4-119		
2-Methylphenol	2310	250	"	2500			92.5	23.6-125		
3- & 4-Methylphenols	1010	250	"	2500			40.5	21.3-115		
Naphthalene	2580	250	"	2500			103	25.2-111		
3-Nitroaniline	1450	250	"	2500			58.1	9.73-147		
4-Nitroaniline	1620	250	"	2500			64.7	6.42-169		
Nitrobenzene	2490	250	"	2500			99.5	21.8-118		
4-Nitrophenol	1010	250	"	2500			40.5	10-136		
2-Nitrophenol	1860	250	"	2500			74.4	20.6-119		
N-nitroso-di-n-propylamine	2640	250	"	2500			106	25.3-118		
N-Nitrosodimethylamine	1480	250	"	2500			59.3	10-142		
N-Nitrosodiphenylamine	2570	250	"	2500			103	35.8-132		
Pentachlorophenol	2410	250	"	2500			96.2	3.68-146		
Phenanthrene	2730	250	"	2500			109	31.2-105	High Bias	
Phenol	2600	250	"	2500			104	23.2-117		
Pyrene	2570	250	"	2500			103	26.3-124		
Pyridine	616	250	"	2500			24.6	10-122		
1,2,4-Trichlorobenzene	2700	250	"	2500			108	19.3-128		
2,4,5-Trichlorophenol	2350	250	"	2500			93.9	19.5-131		
2,4,6-Trichlorophenol	2490	250	"	2500			99.8	24.2-123		
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>3300</i>		<i>"</i>	<i>3750</i>			<i>87.9</i>	<i>15-110</i>		
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>2880</i>		<i>"</i>	<i>2500</i>			<i>115</i>	<i>30-130</i>		
<i>Surrogate: 2-Fluorophenol</i>	<i>2670</i>		<i>"</i>	<i>3760</i>			<i>71.1</i>	<i>15-110</i>		
<i>Surrogate: Nitrobenzene-d5</i>	<i>2530</i>		<i>"</i>	<i>2500</i>			<i>101</i>	<i>30-130</i>		
<i>Surrogate: Phenol-d5</i>	<i>3800</i>		<i>"</i>	<i>3750</i>			<i>101</i>	<i>15-110</i>		
<i>Surrogate: Terphenyl-d14</i>	<i>1760</i>		<i>"</i>	<i>2500</i>			<i>70.6</i>	<i>30-130</i>		

YORK

ANALYTICAL LABORATORIES, INC.

Organochlorine Pesticides by EPA SW 846-8081 - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BA30886 - EPA 3550B

Blank (BA30886-BLK1)

Prepared: 01/25/2013 Analyzed: 01/29/2013

Toxaphene	ND	16.7	ug/kg wet								
Methoxychlor	ND	1.65	"								
Heptachlor epoxide	ND	0.330	"								
Heptachlor	ND	0.330	"								
gamma-BHC (Lindane)	ND	0.330	"								
Endrin ketone	ND	0.330	"								
Endrin aldehyde	ND	0.330	"								
Endrin	ND	0.330	"								
Endosulfan sulfate	ND	0.330	"								
Endosulfan II	ND	0.330	"								
Endosulfan I	ND	0.330	"								
Dieldrin	ND	0.330	"								
delta-BHC	ND	0.330	"								
Chlordane, total	ND	1.32	"								
beta-BHC	ND	0.330	"								
alpha-BHC	ND	0.330	"								
Aldrin	ND	0.330	"								
4,4'-DDT	ND	0.330	"								
4,4'-DDE	ND	0.330	"								
4,4'-DDD	ND	0.330	"								
Aroclor 1260	ND	17.0	"								
Aroclor 1254	ND	17.0	"								
Aroclor 1248	ND	17.0	"								
Aroclor 1242	ND	17.0	"								
Aroclor 1232	ND	17.0	"								
Aroclor 1221	ND	17.0	"								
Aroclor 1016	ND	17.0	"								
Total PCBs	ND	17.0	"								
<i>Surrogate: Tetrachloro-m-xylene</i>	48.4		"	66.7		72.6	30-150				
<i>Surrogate: Decachlorobiphenyl</i>	43.2		"	67.0		64.5	30-150				

YORK

ANALYTICAL LABORATORIES, INC.

Organochlorine Pesticides by EPA SW 846-8081 - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BA30886 - EPA 3550B										
LCS (BA30886-BS1)						Prepared: 01/25/2013 Analyzed: 01/29/2013				
Methoxychlor	24.9	1.65	ug/kg wet	33.3		74.6			40-140	
Heptachlor epoxide	28.4	0.330	"	33.3		85.3			40-140	
Heptachlor	28.3	0.330	"	33.3		84.9			40-140	
gamma-BHC (Lindane)	29.6	0.330	"	33.3		88.9			40-140	
Endrin ketone	26.5	0.330	"	33.3		79.6			40-140	
Endrin aldehyde	18.8	0.330	"	33.3		56.4			40-140	
Endrin	29.1	0.330	"	33.3		87.3			40-140	
Endosulfan sulfate	26.9	0.330	"	33.3		80.8			40-140	
Endosulfan II	27.4	0.330	"	33.3		82.2			40-140	
Endosulfan I	30.2	0.330	"	33.3		90.7			40-140	
Dieldrin	29.4	0.330	"	33.3		88.1			40-140	
delta-BHC	28.0	0.330	"	33.3		83.9			40-140	
beta-BHC	30.1	0.330	"	33.3		90.2			40-140	
alpha-BHC	31.2	0.330	"	33.3		93.5			40-140	
Aldrin	30.5	0.330	"	33.3		91.5			40-140	
4,4'-DDT	27.7	0.330	"	33.3		83.2			40-140	
4,4'-DDE	28.5	0.330	"	33.3		85.6			40-140	
4,4'-DDD	32.3	0.330	"	33.3		97.0			40-140	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>68.0</i>		<i>"</i>	<i>66.7</i>		<i>102</i>			<i>30-150</i>	
<i>Surrogate: Decachlorobiphenyl</i>	<i>59.6</i>		<i>"</i>	<i>67.0</i>		<i>88.9</i>			<i>30-150</i>	
LCS (BA30886-BS2)						Prepared: 01/25/2013 Analyzed: 01/28/2013				
Aroclor 1260	301	17.0	ug/kg wet	333		90.3			40-140	
Aroclor 1016	356	17.0	"	333		107			40-140	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>85.7</i>		<i>"</i>	<i>66.7</i>		<i>128</i>			<i>30-150</i>	
<i>Surrogate: Decachlorobiphenyl</i>	<i>64.0</i>		<i>"</i>	<i>67.0</i>		<i>95.5</i>			<i>30-150</i>	

Metals by EPA 6000 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting	Units	Spike	Source*	%REC		Flag	RPD	
		Limit		Level	Result	%REC	Limits		RPD	Limit

Batch BA30878 - EPA 3050B

Blank (BA30878-BLK1)

Prepared: 01/24/2013 Analyzed: 01/28/2013

Aluminum	ND	2.00	mg/kg wet							
Antimony	ND	0.500	"							
Arsenic	ND	1.00	"							
Barium	ND	0.500	"							
Beryllium	ND	0.100	"							
Cadmium	ND	0.500	"							
Calcium	ND	5.00	"							
Chromium	ND	0.500	"							
Cobalt	ND	0.500	"							
Copper	ND	0.500	"							
Iron	ND	2.00	"							
Lead	ND	0.300	"							
Magnesium	ND	5.00	"							
Manganese	ND	1.00	"							
Nickel	ND	0.500	"							
Potassium	ND	10.0	"							
Selenium	ND	0.500	"							
Silver	ND	0.500	"							
Sodium	ND	10.0	"							
Thallium	ND	0.500	"							
Vanadium	ND	0.500	"							
Zinc	ND	0.500	"							

Duplicate (BA30878-DUP1)

*Source sample: 13A0654-04 (SB-7 (6-8'))

Prepared: 01/24/2013 Analyzed: 01/28/2013

Aluminum	13900	2.11	mg/kg dry	13800				0.662	35
Antimony	ND	0.528	"	ND					35
Arsenic	1.55	1.06	"	1.76				12.7	35
Barium	125	0.528	"	123				1.69	35
Beryllium	ND	0.106	"	ND					35
Cadmium	ND	0.528	"	ND					35
Calcium	10600	5.28	"	10600				0.0738	35
Chromium	20.6	0.528	"	20.1				2.08	35
Cobalt	18.2	0.528	"	18.0				1.32	35
Copper	14.1	0.528	"	13.8				1.97	35
Iron	21400	2.11	"	21400				0.225	35
Lead	18.5	0.317	"	18.0				2.45	35
Magnesium	10700	5.28	"	10600				0.402	35
Manganese	400	1.06	"	396				0.952	35
Nickel	36.6	0.528	"	36.0				1.53	35
Potassium	8790	10.6	"	8770				0.319	35
Selenium	3.69	0.528	"	4.08				10.0	35
Silver	ND	0.528	"	ND					35
Sodium	384	10.6	"	389				1.42	35
Thallium	ND	0.528	"	ND					35
Vanadium	26.8	0.528	"	26.3				1.87	35
Zinc	80.0	0.528	"	78.8				1.45	35

Metals by EPA 6000 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BA30878 - EPA 3050B

Matrix Spike (BA30878-MS1) *Source sample: 13A0654-04 (SB-7 (6-8')) Prepared: 01/24/2013 Analyzed: 01/28/2013

Aluminum	14000	2.11	mg/kg dry	211	13800	89.3	75-125				
Antimony	28.1	0.528	"	26.4	ND	106	75-125				
Arsenic	217	1.06	"	211	1.76	102	75-125				
Barium	344	0.528	"	211	123	105	75-125				
Beryllium	0.600	0.106	"	5.28	ND	11.4	75-125	Low Bias			
Cadmium	4.21	0.528	"	5.28	ND	79.7	75-125				
Chromium	43.0	0.528	"	21.1	20.1	108	75-125				
Cobalt	72.2	0.528	"	52.8	18.0	103	75-125				
Copper	42.0	0.528	"	26.4	13.8	107	75-125				
Iron	21500	2.11	"	106	21400	70.5	75-125	Low Bias			
Lead	69.6	0.317	"	52.8	18.0	97.8	75-125				
Magnesium	10600	5.28	"		10600		75-125				
Manganese	453	1.06	"	52.8	396	109	75-125				
Nickel	93.8	0.528	"	52.8	36.0	110	75-125				
Potassium	8740	10.6	"		8770		75-125				
Silver	ND	0.528	"	5.28	ND		75-125	Low Bias			
Sodium	375	10.6	"		389		75-125				
Thallium	198	0.528	"	211	ND	93.8	75-125				
Vanadium	79.2	0.528	"	52.8	26.3	100	75-125				
Zinc	131	0.528	"	52.8	78.8	99.8	75-125				

Reference (BA30878-SRM1)

Prepared: 01/24/2013 Analyzed: 01/28/2013

Aluminum	7080	2.00	mg/kg wet	9310		76.0	43.3-157				
Antimony	98.1	0.500	"	120		81.8	20.8-253				
Arsenic	156	1.00	"	168		92.6	70.8-130				
Barium	196	0.500	"	213		91.8	73.2-127				
Beryllium	100	0.100	"	110		91.0	75.1-125				
Cadmium	92.2	0.500	"	103		89.5	73-126				
Calcium	6270	5.00	"	6870		91.3	74.4-126				
Chromium	106	0.500	"	119		89.1	69.7-129				
Cobalt	124	0.500	"	131		94.7	74.4-125				
Copper	112	0.500	"	118		94.7	74.6-125				
Iron	10700	2.00	"	13000		82.6	32.2-168				
Lead	68.5	0.300	"	76.9		89.1	68.7-131				
Magnesium	2360	5.00	"	2780		84.8	61.5-135				
Manganese	322	1.00	"	338		95.3	75.4-125				
Nickel	74.1	0.500	"	70.0		106	70.9-129				
Potassium	2620	10.0	"	3130		83.6	62.9-137				
Selenium	119	0.500	"	126		94.6	66.7-134				
Silver	35.9	0.500	"	42.3		84.8	66.2-134				
Sodium	383	10.0	"	350		109	42.9-157				
Thallium	189	0.500	"	208		90.8	69.2-121				
Vanadium	75.7	0.500	"	87.1		86.9	63.1-137				
Zinc	252	0.500	"	276		91.5	71.3-129				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BA30898 - EPA SW846-7471										
Blank (BA30898-BLK1)							Prepared & Analyzed: 01/25/2013			
Mercury	ND	0.100	mg/kg wet							
LCS (BA30898-BS1)							Prepared & Analyzed: 01/25/2013			
Mercury	2.78		mg/kg	2.96		93.9			67.6-131	

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
13A0654-01	SB-6 (0-2')	40mL Vial with Stir Bar-Cool 4° C
13A0654-02	SB-6 (6-8')	40mL Vial with Stir Bar-Cool 4° C
13A0654-03	SB-7 (0-2')	40mL Vial with Stir Bar-Cool 4° C
13A0654-04	SB-7 (6-8')	40mL Vial with Stir Bar-Cool 4° C
13A0654-05	SB-5 (0-2')	40mL Vial with Stir Bar-Cool 4° C
13A0654-06	SB-5 (4-6')	40mL Vial with Stir Bar-Cool 4° C
13A0654-07	SB-4 (0-2')	40mL Vial with Stir Bar-Cool 4° C
13A0654-08	SB-4 (7-9')	40mL Vial with Stir Bar-Cool 4° C
13A0654-09	SB-3 (0-2')	40mL Vial with Stir Bar-Cool 4° C
13A0654-10	SB-3 (8-10')	40mL Vial with Stir Bar-Cool 4° C
13A0654-11	SB-2 (0-2')	40mL Vial with Stir Bar-Cool 4° C
13A0654-12	SB-2 (2-4')	40mL Vial with Stir Bar-Cool 4° C
13A0654-13	SB-1 (0-2')	40mL Vial with Stir Bar-Cool 4° C
13A0654-14	SB-1 (2-4')	40mL Vial with Stir Bar-Cool 4° C
13A0654-15	TB 012213	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Notes and Definitions

- QL-02** This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
- J** Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL); therefore, the result is an estimated concentration.
- B** Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <10x the blank value as artifact.
-
- ND** Analyte NOT DETECTED at the stated Reporting Limit (RL) or above.
- RL** REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
- MDL** METHOD DETECTION LIMIT - the minimum concentration that can be measured and reported with a 99% confidence that the concentration is greater than zero. If requested or required, a value reported below the RL and above the MDL is considered estimated and is noted with a "J" flag.
- 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.

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ANALYTICAL LABORATORIES, INC.

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 MDL, with values between the MDL and the RL being "J" flagged as estimated results.

YORK

ANALYTICAL LABORATORIES, INC.

120 RESEARCH DR. STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

Page 1 of 2

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 13A0654

YOUR Information		Report To:	Invoice To:	YOUR Project ID	Turn-Around Time	Report Type
Company: <u>GEI Consultants</u>		Company: <u>GEI Consultants</u>	Company: <u>GEI</u>	130030	RUSH - Same Day <input type="checkbox"/>	Summary Report <input type="checkbox"/>
Address: <u>110 W. Lt. Whitman Rd, Suite 204, 11746</u>		Address: _____	Address: <u>400 Unicorn Pkwy, Drive Woburn, MA 01801</u>		RUSH - Next Day <input type="checkbox"/>	Summary w/ QA Summary <input checked="" type="checkbox"/>
Phone No. <u>631-754-2973</u>		Phone No. _____	Phone No. _____	Purchase Order No. _____	RUSH - Two Day <input type="checkbox"/>	CTRCP DQA/DUE Pkg <input type="checkbox"/>
Contact Person: <u>Nick Recchia</u>		Attention: <u>Nick Recchia</u>	Attention: _____	Samples from: CT <input type="checkbox"/> NY <input checked="" type="checkbox"/> NJ <input type="checkbox"/>	RUSH - Three Day <input type="checkbox"/>	NY ASP A Package <input type="checkbox"/>
E-Mail Address: <u>NRecchia@geiconsultants.com</u>		E-Mail Address: _____	E-Mail Address: <u>send to</u>		RUSH - Four Day <input type="checkbox"/>	NY ASP B Package <input type="checkbox"/>
				Standard (5-7 Days) <input checked="" type="checkbox"/>	Electronic Data Deliverables (EDD) <input type="checkbox"/>	

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.

Chris Arkstein
Samples Collected/Authorized By (Signature)

Name (printed)

Volatiles	Semi-Vols	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full TICs	8270 or 625	8082 PCB	RCRA8	TPH GRO	Pri. Poll.	Corrosivity
624 Site Spec.	STARS list	8081 Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list Nassau Co.	BN Only	815 Herb	TAL	CT ETPH	TAL MeCN	Ignitability
BTEX Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360-Routine	Heterotrophs
TAGM list TCLP list	CT RCP list	SPL or TCLP	Total	Air TO15	Part 360-Baseline	TOX
CT RCP list 524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360-Appendix 100	BTU/lb.
Arom. only 502.2	NJDEP list	TCLP Herb	SPL or TCLP	Air VPH	Part 360-Appendix 100	Aquatic Tox.
Halog. only NJDEP list	App. IX	Chlordane	Judic. Metals	Air TICs	NYCDEP Severe	TOC
App. IX list SPL or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSECD Severe	Asbestos
8021B list	SPL or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
SB-6 (0-2')	0955 1/22/13	Soil	8260, 8270, Pest/PCB/TAL metals.	1802 jar, 4 vials
SB-6 (6-8')	1000			
SB-7 (0-2')	1015			
SB-7 (6-8')	1020			
SB-5 (0-2')	1045			
SB-5 (4-6')	1055			
SB-4 (0-2')	1125			
SB-7 (7-9)	1130			
SB-3 (0-2')	1155			
SB-3 (8-10')	1200			

Comments Also send data to: cmc@nsegeiconsultants.com	Preservation Check those Applicable Special Instructions Field Filtered <input type="checkbox"/> Lab to Filter <input type="checkbox"/>	4°C <input checked="" type="checkbox"/> Frozen HCl _____ MeOH <input checked="" type="checkbox"/> ZnAc _____ Ascorbic Acid _____ HNO ₃ _____ H ₂ SO ₄ _____ NaOH _____ Other _____	Temperature on Receipt <u>3.4</u> °C	
	Samples Relinquished By <u>Chris Arkstein</u> Date/Time <u>1/23/13 1330</u>	Samples Received By <u>J. M. [Signature]</u> Date/Time <u>1/23/13 1530</u>		
	Samples Relinquished By _____ Date/Time _____	Samples Received in LAB by <u>J. M. [Signature]</u> Date/Time <u>1/23/13-1630</u>		

YORK

ANALYTICAL LABORATORIES, INC.

120 RESEARCH DR. STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

Page 2 of 2

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 13A0654

YOUR Information		Report To:	Invoice To:	YOUR Project ID	Turn-Around Time	Report Type
Company: <u>GEI Consultants/Inc</u>	Company: <u>Same</u>	Company: <u>See Page 1</u>		<u>130030</u>	RUSH - Same Day <input type="checkbox"/>	Summary Report <input type="checkbox"/>
Address: <u>110 half h. town rd</u>	Address: _____	Address: _____			RUSH - Next Day <input type="checkbox"/>	Summary w/ QA Summary <input checked="" type="checkbox"/>
Phone No. <u>631-759-2973</u>	Phone No. _____	Phone No. _____		Purchase Order No.	RUSH - Two Day <input type="checkbox"/>	CT RCP Package _____
Contact Person: <u>Nick Recchia</u>	Attention: _____	Attention: _____			RUSH - Three Day <input type="checkbox"/>	CTRCP DQA/DUE Pkg _____
E-Mail Address: <u>nick@geiconsultants.com</u>	E-Mail Address: _____	E-Mail Address: _____			RUSH - Four Day <input checked="" type="checkbox"/>	NY ASP A Package _____
				Samples from: CT <input type="checkbox"/> NY <input checked="" type="checkbox"/> NJ <input type="checkbox"/>	Standard (5-7 Days) <input checked="" type="checkbox"/>	NJDEP Red. Deliv. _____

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.

[Signature]
Samples Collected/Authorized By (Signature)
Chris Anastasiu
Name (printed)

Volatiles	Semi-Vols	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full TICs	8270 of 625	8082 PCB	RCRA8	TPH GRO	Pri. Poll.	Corrosivity
624 Site Spec.	STARS list	8081 Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list Nassau Co.	BN Only	8151 Herb	TAL	CT ETPH	TAL Method	Ignitability
BTEX Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list Organics	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360 Reagents	Heterotrophs
TAGM list TCLP list	CT RCP list	SPL Por TCLP	Total	Air TO15	Part 360 Reagents	TOX
CT RCP list 524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360 Reagents	BTU/lb
Arom. only 502.2	NJDEP list	TCLP Herb	SPL Por TCLP	Air VPH	Part 360 Reagents	Aquatic Tox.
Halog. only NJDEP list	App. IX	Chlordane	Inhib. Metals	Air TICs	NYCDEP Reagents	TOC
App. IX list SPL Por TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSEDEC Reagents	Asbestos
8021B list	SPL Por TCLP	608 PCB		Helium	TAGM	Silica

Electronic Data Deliverables (EDD)

Simple Excel

NYSDEC EQulS

EQulS (std) _____

EZ-EDD (EQulS) _____

NJDEP SRP HazSite EDD _____

GIS/KEY (std) _____

Other _____

York Regulatory Comparison

Excel Spreadsheet _____

Compare to the following Regs. (please fill in)

Sample Identification	Date Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
SB-2 (0-2)	12/15 1/22/13	SOIL	8260, 8270, Pest/PCB/TAL Metals	1 8oz jar - 4 vials
SB-2 (2-4)	1220	I	↓	
SB-1 (0-2)	1230	I	↓	
SB-1 (02-4)	1235	I	↓	
TB 012213	—	WATER	8260	2 vials

Comments	Preservation Check those Applicable Special Instructions Field Filtered <input type="checkbox"/> Lab to Filter <input type="checkbox"/>	4°C <input checked="" type="checkbox"/> Frozen HCl _____ MeOH <input checked="" type="checkbox"/> HNO ₃ _____ H ₂ SO ₄ _____ NaOH _____ ZnAc _____ Ascorbic Acid _____ Other _____	Temperature on Receipt <u>3.4</u> °C
	Samples Relinquished By <u>Chris M.</u> Date/Time <u>1/23/13 1330</u>	Samples Received By <u>[Signature]</u> Date/Time <u>1/23/13 1330</u>	
	Samples Relinquished By _____ Date/Time _____	Samples Received in L.A.B. by _____ Date/Time _____	

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Appendix F

Laboratory Data Deliverables for Soil Vapor Analytical Data

YORK

ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for:

GEI Consultants, Inc
110 Walt Whitman Road, Suite 204
Huntington Station NY, 11746
Attention: Nick Recchia

Report Date: 01/28/2013
Client Project ID: 130030
York Project (SDG) No.: 13A0633

CT License No. PH-0723

New Jersey License No. CT-005



New York License No. 10854

PA License No. 68-04440

Report Date: 01/28/2013
Client Project ID: 130030
York Project (SDG) No.: 13A0633

GEI Consultants, Inc
110 Walt Whitman Road, Suite 204
Huntington Station NY, 11746
Attention: Nick Recchia

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 January 23, 2013 and listed below. The project was identified as your project: **130030**.

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 Notes 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 attachment to 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>
13A0633-01	SG-1	Soil Vapor	01/22/2013	01/23/2013
13A0633-02	SG-2	Soil Vapor	01/22/2013	01/23/2013
13A0633-03	SG-3	Soil Vapor	01/22/2013	01/23/2013

General Notes for York Project (SDG) No.: 13A0633

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 samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By:



Robert Q. Bradley
Laboratory Director

Date: 01/28/2013

YORK

Sample Information

Client Sample ID: SG-1

York Sample ID: 13A0633-01

York Project (SDG) No.
13A0633

Client Project ID
130030

Matrix
Soil Vapor

Collection Date/Time
January 22, 2013 3:00 pm

Date Received
01/23/2013

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/m ³	0.50	0.50	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
108-05-4	Vinyl acetate	ND		ug/m ³	0.68	0.68	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
79-01-6	Trichloroethylene	ND		ug/m ³	0.52	0.52	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.88	0.88	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.77	0.77	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
108-88-3	Toluene	22		ug/m ³	0.73	0.73	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
109-99-9	Tetrahydrofuran	ND		ug/m ³	0.57	0.57	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
127-18-4	Tetrachloroethylene	2.2		ug/m ³	1.3	1.3	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
100-42-5	Styrene	ND		ug/m ³	0.83	0.83	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
115-07-01	Propylene	ND		ug/m ³	0.33	0.33	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
622-96-8	p-Ethyltoluene	ND		ug/m ³	4.8	4.8	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
1330-20-7P/M	p- & m- Xylenes	ND		ug/m ³	0.84	0.84	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
95-47-6	o-Xylene	ND		ug/m ³	0.84	0.84	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
110-54-3	n-Hexane	ND		ug/m ³	0.68	0.68	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
142-82-5	n-Heptane	ND		ug/m ³	0.80	0.80	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
75-09-2	Methylene chloride	ND		ug/m ³	0.67	0.67	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.70	0.70	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	0.80	0.80	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
67-63-0	Isopropanol	ND		ug/m ³	0.48	0.48	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
87-68-3	Hexachlorobutadiene	ND		ug/m ³	2.1	2.1	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
100-41-4	Ethyl Benzene	ND		ug/m ³	0.84	0.84	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
141-78-6	Ethyl acetate	ND		ug/m ³	0.70	0.70	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
110-82-7	Cyclohexane	ND		ug/m ³	0.67	0.67	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.88	0.88	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m ³	0.77	0.77	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
74-87-3	Chloromethane	ND		ug/m ³	0.40	0.40	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
67-66-3	Chloroform	ND		ug/m ³	0.95	0.95	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
75-00-3	Chloroethane	ND		ug/m ³	0.51	0.51	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
56-23-5	Carbon tetrachloride	ND		ug/m ³	0.61	0.61	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
75-15-0	Carbon disulfide	ND		ug/m ³	0.60	0.60	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
74-83-9	Bromomethane	ND		ug/m ³	0.75	0.75	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
75-25-2	Bromoform	ND		ug/m ³	2.0	2.0	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
75-27-4	Bromodichloromethane	ND		ug/m ³	1.2	1.2	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD

Sample Information

Client Sample ID: SG-1

York Sample ID: 13A0633-01

York Project (SDG) No.
13A0633

Client Project ID
130030

Matrix
Soil Vapor

Collection Date/Time
January 22, 2013 3:00 pm

Date Received
01/23/2013

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-44-7	Benzyl chloride	ND		ug/m ³	1.0	1.0	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
71-43-2	Benzene	6.7		ug/m ³	0.62	0.62	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
67-64-1	Acetone	20		ug/m ³	0.46	0.46	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
591-78-6	2-Hexanone	ND		ug/m ³	0.80	0.80	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
78-93-3	2-Butanone	ND		ug/m ³	0.57	0.57	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
123-91-1	1,4-Dioxane	ND		ug/m ³	0.70	0.70	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	1.2	1.2	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	1.2	1.2	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
106-99-0	1,3-Butadiene	ND		ug/m ³	0.84	0.84	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m ³	0.95	0.95	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	1.4	1.4	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.90	0.90	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.79	0.79	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	1.2	1.2	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m ³	0.95	0.95	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	1.4	1.4	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.77	0.77	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.79	0.79	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
75-69-4	Trichlorofluoromethane (Freon 11)	ND		ug/m ³	1.1	1.1	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	1.1	1.1	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	1.5	1.5	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	1.3	1.3	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	1.1	1.1	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
75-71-8	Dichlorodifluoromethane	ND		ug/m ³	0.96	0.96	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
106-93-4	1,2-Dibromoethane	ND		ug/m ³	1.5	1.5	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
124-48-1	Dibromochloromethane	ND		ug/m ³	1.6	1.6	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
80-62-6	Methyl Methacrylate	ND		ug/m ³	0.79	0.79	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
108-90-7	Chlorobenzene	ND		ug/m ³	0.89	0.89	1.909	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 19:37	TD
Surrogate Recoveries		Result	Acceptance Range								
460-00-4	Surrogate: <i>p</i> -Bromofluorobenzene	116 %	70-130								

Sample Information

Client Sample ID: SG-2

York Sample ID: 13A0633-02

York Project (SDG) No.
13A0633

Client Project ID
130030

Matrix
Soil Vapor

Collection Date/Time
January 22, 2013 3:00 pm

Date Received
01/23/2013

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/m ³	0.42	0.42	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
108-05-4	Vinyl acetate	ND		ug/m ³	0.58	0.58	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
79-01-6	Trichloroethylene	ND		ug/m ³	0.44	0.44	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.75	0.75	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.66	0.66	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
108-88-3	Toluene	3.7		ug/m ³	0.62	0.62	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
109-99-9	Tetrahydrofuran	ND		ug/m ³	0.49	0.49	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
127-18-4	Tetrachloroethylene	ND		ug/m ³	1.1	1.1	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
100-42-5	Styrene	ND		ug/m ³	0.70	0.70	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
115-07-01	Propylene	ND		ug/m ³	0.28	0.28	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
622-96-8	p-Ethyltoluene	ND		ug/m ³	4.1	4.1	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
1330-20-7P/M	p- & m- Xylenes	ND		ug/m ³	0.72	0.72	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
95-47-6	o-Xylene	ND		ug/m ³	0.72	0.72	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
110-54-3	n-Hexane	1.2		ug/m ³	0.58	0.58	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
142-82-5	n-Heptane	ND		ug/m ³	0.68	0.68	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
75-09-2	Methylene chloride	ND		ug/m ³	0.57	0.57	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.59	0.59	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	0.68	0.68	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
67-63-0	Isopropanol	ND		ug/m ³	0.41	0.41	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
87-68-3	Hexachlorobutadiene	ND		ug/m ³	1.8	1.8	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
100-41-4	Ethyl Benzene	ND		ug/m ³	0.72	0.72	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
141-78-6	Ethyl acetate	ND		ug/m ³	0.60	0.60	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
110-82-7	Cyclohexane	ND		ug/m ³	0.57	0.57	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.75	0.75	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m ³	0.66	0.66	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
74-87-3	Chloromethane	ND		ug/m ³	0.34	0.34	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
67-66-3	Chloroform	ND		ug/m ³	0.81	0.81	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
75-00-3	Chloroethane	ND		ug/m ³	0.44	0.44	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
56-23-5	Carbon tetrachloride	ND		ug/m ³	0.52	0.52	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
75-15-0	Carbon disulfide	3.0		ug/m ³	0.51	0.51	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
74-83-9	Bromomethane	ND		ug/m ³	0.64	0.64	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
75-25-2	Bromoform	ND		ug/m ³	1.7	1.7	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
75-27-4	Bromodichloromethane	ND		ug/m ³	1.0	1.0	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
100-44-7	Benzyl chloride	ND		ug/m ³	0.86	0.86	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD

Sample Information

Client Sample ID: SG-2

York Sample ID: 13A0633-02

York Project (SDG) No.
13A0633

Client Project ID
130030

Matrix
Soil Vapor

Collection Date/Time
January 22, 2013 3:00 pm

Date Received
01/23/2013

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-43-2	Benzene	1.3		ug/m ³	0.53	0.53	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
67-64-1	Acetone	3.6		ug/m ³	0.39	0.39	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
591-78-6	2-Hexanone	ND		ug/m ³	0.68	0.68	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
78-93-3	2-Butanone	ND		ug/m ³	0.49	0.49	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
123-91-1	1,4-Dioxane	ND		ug/m ³	0.60	0.60	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	0.99	0.99	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	0.99	0.99	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
106-99-0	1,3-Butadiene	ND		ug/m ³	0.72	0.72	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m ³	0.81	0.81	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	1.2	1.2	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.76	0.76	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.67	0.67	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	0.99	0.99	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m ³	0.81	0.81	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	1.2	1.2	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.66	0.66	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.67	0.67	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
75-69-4	Trichlorofluoromethane (Freon 11)	1.4		ug/m ³	0.93	0.93	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	0.90	0.90	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	1.3	1.3	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	1.1	1.1	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	0.90	0.90	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
75-71-8	Dichlorodifluoromethane	ND		ug/m ³	0.82	0.82	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
106-93-4	1,2-Dibromoethane	ND		ug/m ³	1.3	1.3	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
124-48-1	Dibromochloromethane	ND		ug/m ³	1.3	1.3	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
80-62-6	Methyl Methacrylate	ND		ug/m ³	0.68	0.68	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
108-90-7	Chlorobenzene	ND		ug/m ³	0.76	0.76	1.625	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 21:14	TD
Surrogate Recoveries		Result	Acceptance Range								
460-00-4	Surrogate: p-Bromofluorobenzene	98.2 %	70-130								

Sample Information

Client Sample ID: SG-3

York Sample ID: 13A0633-03

York Project (SDG) No.
13A0633

Client Project ID
130030

Matrix
Soil Vapor

Collection Date/Time
January 22, 2013 3:00 pm

Date Received
01/23/2013

Sample Information

Client Sample ID: SG-3

York Sample ID: 13A0633-03

York Project (SDG) No.
13A0633

Client Project ID
130030

Matrix
Soil Vapor

Collection Date/Time
January 22, 2013 3:00 pm

Date Received
01/23/2013

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/m ³	0.47	0.47	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
108-05-4	Vinyl acetate	ND		ug/m ³	0.65	0.65	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
79-01-6	Trichloroethylene	ND		ug/m ³	0.50	0.50	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	0.84	0.84	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	0.74	0.74	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
108-88-3	Toluene	7.4		ug/m ³	0.70	0.70	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
109-99-9	Tetrahydrofuran	ND		ug/m ³	0.55	0.55	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
127-18-4	Tetrachloroethylene	ND		ug/m ³	1.3	1.3	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
100-42-5	Styrene	ND		ug/m ³	0.79	0.79	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
115-07-01	Propylene	ND		ug/m ³	0.32	0.32	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
622-96-8	p-Ethyltoluene	ND		ug/m ³	4.6	4.6	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
1330-20-7P/M	p- & m- Xylenes	1.2		ug/m ³	0.81	0.81	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
95-47-6	o-Xylene	ND		ug/m ³	0.81	0.81	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
110-54-3	n-Hexane	ND		ug/m ³	0.65	0.65	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
142-82-5	n-Heptane	ND		ug/m ³	0.76	0.76	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
75-09-2	Methylene chloride	0.97		ug/m ³	0.65	0.65	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	0.67	0.67	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	0.76	0.76	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
67-63-0	Isopropanol	ND		ug/m ³	0.46	0.46	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
87-68-3	Hexachlorobutadiene	ND		ug/m ³	2.0	2.0	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
100-41-4	Ethyl Benzene	ND		ug/m ³	0.81	0.81	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
141-78-6	Ethyl acetate	ND		ug/m ³	0.67	0.67	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
110-82-7	Cyclohexane	ND		ug/m ³	0.64	0.64	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	0.84	0.84	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m ³	0.74	0.74	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
74-87-3	Chloromethane	ND		ug/m ³	0.38	0.38	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
67-66-3	Chloroform	ND		ug/m ³	0.91	0.91	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
75-00-3	Chloroethane	ND		ug/m ³	0.49	0.49	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
56-23-5	Carbon tetrachloride	ND		ug/m ³	0.58	0.58	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
75-15-0	Carbon disulfide	9.5		ug/m ³	0.58	0.58	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
74-83-9	Bromomethane	ND		ug/m ³	0.72	0.72	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
75-25-2	Bromoform	ND		ug/m ³	1.9	1.9	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
75-27-4	Bromodichloromethane	ND		ug/m ³	1.2	1.2	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
100-44-7	Benzyl chloride	ND		ug/m ³	0.96	0.96	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD

Sample Information

Client Sample ID: SG-3

York Sample ID: 13A0633-03

York Project (SDG) No.
13A0633

Client Project ID
130030

Matrix
Soil Vapor

Collection Date/Time
January 22, 2013 3:00 pm

Date Received
01/23/2013

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-43-2	Benzene	ND		ug/m ³	0.59	0.59	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
67-64-1	Acetone	4.0		ug/m ³	0.44	0.44	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
591-78-6	2-Hexanone	ND		ug/m ³	0.76	0.76	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
78-93-3	2-Butanone	ND		ug/m ³	0.55	0.55	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
123-91-1	1,4-Dioxane	ND		ug/m ³	0.67	0.67	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
106-46-7	1,4-Dichlorobenzene	ND		ug/m ³	1.1	1.1	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	1.1	1.1	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
106-99-0	1,3-Butadiene	ND		ug/m ³	0.81	0.81	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m ³	0.91	0.91	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	1.3	1.3	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
78-87-5	1,2-Dichloropropane	ND		ug/m ³	0.86	0.86	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
107-06-2	1,2-Dichloroethane	ND		ug/m ³	0.75	0.75	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	1.1	1.1	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m ³	0.91	0.91	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	1.4	1.4	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.74	0.74	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
75-34-3	1,1-Dichloroethane	ND		ug/m ³	0.75	0.75	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
75-69-4	Trichlorofluoromethane (Freon 11)	ND		ug/m ³	1.0	1.0	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	1.0	1.0	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	1.4	1.4	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	1.3	1.3	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	1.0	1.0	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
75-71-8	Dichlorodifluoromethane	ND		ug/m ³	0.92	0.92	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
106-93-4	1,2-Dibromoethane	ND		ug/m ³	1.4	1.4	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
124-48-1	Dibromochloromethane	ND		ug/m ³	1.5	1.5	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
80-62-6	Methyl Methacrylate	ND		ug/m ³	0.76	0.76	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
108-90-7	Chlorobenzene	ND		ug/m ³	0.85	0.85	1.826	EPA Compendium TO-15	01/25/2013 09:00	01/25/2013 22:03	TD
	Surrogate Recoveries	Result			Acceptance Range						
460-00-4	Surrogate: <i>p</i> -Bromofluorobenzene	104 %			70-130						

Analytical Batch Summary

Batch ID: BA30959

Preparation Method: EPA TO15 PREP

Prepared By: TD

YORK Sample ID	Client Sample ID	Preparation Date
13A0633-01	SG-1	01/25/13
13A0633-02	SG-2	01/25/13
13A0633-03	SG-3	01/25/13
BA30959-BLK1	Blank	01/25/13
BA30959-BS1	LCS	01/25/13
BA30959-DUP1	Duplicate	01/25/13

Volatile Organic Compounds by EPA Compendium TO14A/TO15 - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting	Units	Spike	Source*	%REC	Flag	RPD		
		Limit			Result	Limits		RPD	Limit	Flag

Batch BA30959 - EPA TO15 PREP

Blank (BA30959-BLK1)

Prepared & Analyzed: 01/25/2013

Vinyl Chloride	ND	0.26	ug/m ³
Vinyl acetate	ND	0.36	"
Trichloroethylene	ND	0.27	"
trans-1,3-Dichloropropylene	ND	0.46	"
trans-1,2-Dichloroethylene	ND	0.40	"
Toluene	ND	0.38	"
Tetrahydrofuran	ND	0.30	"
Tetrachloroethylene	ND	0.69	"
Styrene	ND	0.43	"
Propylene	ND	0.18	"
p-Ethyltoluene	ND	2.5	"
p- & m- Xylenes	ND	0.44	"
o-Xylene	ND	0.44	"
n-Hexane	ND	0.36	"
n-Heptane	ND	0.42	"
Methylene chloride	ND	0.35	"
Methyl tert-butyl ether (MTBE)	ND	0.37	"
4-Methyl-2-pentanone	ND	0.42	"
Isopropanol	ND	0.25	"
Hexachlorobutadiene	ND	1.1	"
Ethyl Benzene	ND	0.44	"
Ethyl acetate	ND	0.37	"
Cyclohexane	ND	0.35	"
cis-1,3-Dichloropropylene	ND	0.46	"
cis-1,2-Dichloroethylene	ND	0.40	"
Chloromethane	ND	0.21	"
Chloroform	ND	0.50	"
Chloroethane	ND	0.27	"
Carbon tetrachloride	ND	0.32	"
Carbon disulfide	ND	0.32	"
Bromomethane	ND	0.39	"
Bromoform	ND	1.1	"
Bromodichloromethane	ND	0.63	"
Benzyl chloride	ND	0.53	"
Benzene	ND	0.32	"
Acetone	ND	0.24	"
2-Hexanone	ND	0.42	"
2-Butanone	ND	0.30	"
1,4-Dioxane	ND	0.37	"
1,4-Dichlorobenzene	ND	0.61	"
1,3-Dichlorobenzene	ND	0.61	"
1,3-Butadiene	ND	0.44	"
1,3,5-Trimethylbenzene	ND	0.50	"
1,2-Dichlorotetrafluoroethane	ND	0.71	"
1,2-Dichloropropane	ND	0.47	"
1,2-Dichloroethane	ND	0.41	"
1,2-Dichlorobenzene	ND	0.61	"
1,2,4-Trimethylbenzene	ND	0.50	"
1,2,4-Trichlorobenzene	ND	0.75	"
1,1-Dichloroethylene	ND	0.40	"
1,1-Dichloroethane	ND	0.41	"
Trichlorofluoromethane (Freon 11)	ND	0.57	"
1,1,2-Trichloroethane	ND	0.55	"
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.78	"

Volatile Organic Compounds by EPA Compendium TO14A/TO15 - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BA30959 - EPA TO15 PREP										
Blank (BA30959-BLK1)										
Prepared & Analyzed: 01/25/2013										
1,1,2,2-Tetrachloroethane	ND	0.70	ug/m ³							
1,1,1-Trichloroethane	ND	0.55	"							
Dichlorodifluoromethane	ND	0.50	"							
1,2-Dibromoethane	ND	0.78	"							
Dibromochloromethane	ND	0.82	"							
Methyl Methacrylate	ND	0.42	"							
Chlorobenzene	ND	0.47	"							
<i>Surrogate: p-Bromofluorobenzene</i>	<i>11.5</i>		<i>ppbv</i>	<i>10.0</i>		<i>115</i>	<i>70-130</i>			
LCS (BA30959-BS1)										
Prepared & Analyzed: 01/25/2013										
Vinyl Chloride	10.9		ppbv	10.1		108	70-130			
Vinyl acetate	4.99		"	9.70		51.4	58.1-135	Low Bias		
Trichloroethylene	10.1		"	10.2		99.1	70-130			
trans-1,3-Dichloropropylene	8.70		"	9.90		87.9	62-135			
trans-1,2-Dichloroethylene	9.20		"	9.50		96.8	58.3-130			
Toluene	11.6		"	10.8		107	64.9-126			
Tetrahydrofuran	19.3		"	10.2		189	44.6-146	High Bias		
Tetrachloroethylene	10.3		"	10.5		98.4	70-130			
Styrene	14.2		"	10.7		133	66.4-132	High Bias		
Propylene	11.7		"	11.0		107	62.4-150			
p-Ethyltoluene	15.4		"	10.4		149	73.8-146	High Bias		
p- & m- Xylenes	24.7		"	21.0		118	56.6-136			
o-Xylene	13.5		"	10.8		125	67.8-133			
n-Hexane	10.4		"	10.3		101	59.7-130			
n-Heptane	10.9		"	10.4		105	62.3-134			
Methylene chloride	8.68		"	10.0		86.8	62.6-130			
Methyl tert-butyl ether (MTBE)	11.8		"	10.2		115	60.7-139			
4-Methyl-2-pentanone	25.2		"	10.0		252	64.5-158	High Bias		
Isopropanol	20.1		"	9.90		203	60-150	High Bias		
Hexachlorobutadiene	15.6		"	11.0		142	61.2-150			
Ethyl Benzene	12.3		"	10.7		115	68.4-125			
Ethyl acetate	17.7		"	10.0		177	40.6-150	High Bias		
Cyclohexane	10.1		"	10.2		99.3	60.4-127			
cis-1,3-Dichloropropylene	10.1		"	10.7		94.2	65.5-129			
cis-1,2-Dichloroethylene	9.66		"	10.5		92.0	51.3-118			
Chloromethane	10.4		"	10.1		103	64.9-130			
Chloroform	9.74		"	10.0		97.4	65.1-130			
Chloroethane	10.5		"	10.1		104	52.1-131			
Carbon tetrachloride	10.1		"	10.1		100	70-130			
Carbon disulfide	9.10		"	10.0		91.0	61.8-111			
Bromomethane	8.71		"	10.2		85.4	60.1-140			
Bromoform	12.6		"	10.5		120	58.7-150			
Bromodichloromethane	10.4		"	10.2		102	65.3-127			
Benzyl chloride	6.13		"	10.2		60.1	62.5-150	Low Bias		
Benzene	10.1		"	10.4		97.0	69.5-130			
Acetone	13.4		"	10.0		134	55.3-133	High Bias		
2-Hexanone	23.4		"	10.1		232	52-150	High Bias		
2-Butanone	15.3		"	10.0		153	28.5-154			
1,4-Dioxane	24.2		"	10.2		237	50-150	High Bias		
1,4-Dichlorobenzene	14.6		"	10.6		137	62.5-139			
1,3-Dichlorobenzene	13.4		"	10.2		131	71.9-153			
1,3-Butadiene	11.4		"	10.5		108	66.7-127			
1,3,5-Trimethylbenzene	14.4		"	10.6		136	65-152			
1,2-Dichlorotetrafluoroethane	11.1		"	10.1		110	63.3-129			

Volatile Organic Compounds by EPA Compendium TO14A/TO15 - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BA30959 - EPA TO15 PREP											
LCS (BA30959-BS1)											
Prepared & Analyzed: 01/25/2013											
1,2-Dichloropropane	10.1		ppbv	10.7		94.1	21.3-152				
1,2-Dichloroethane	11.2		"	10.4		108	51.2-124				
1,2-Dichlorobenzene	14.3		"	10.6		135	63.7-148				
1,2,4-Trimethylbenzene	17.4		"	10.7		163	67.9-152	High Bias			
1,2,4-Trichlorobenzene	18.2		"	11.0		165	58-147	High Bias			
1,1-Dichloroethylene	9.91		"	9.80		101	58.1-130				
1,1-Dichloroethane	9.61		"	10.2		94.2	63.3-130				
Trichlorofluoromethane (Freon 11)	10.7		"	10.5		102	56-132				
1,1,2-Trichloroethane	10.8		"	10.7		101	66-127				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.24		"	9.70		95.3	60.2-125				
1,1,2,2-Tetrachloroethane	12.1		"	10.8		112	63.7-132				
1,1,1-Trichloroethane	10.6		"	10.4		102	58.2-126				
Dichlorodifluoromethane	10.7		"	10.0		107	62.8-133				
1,2-Dibromoethane	10.5		"	10.6		99.3	70-130				
Dibromochloromethane	12.0		"	10.6		114	70-130				
Methyl Methacrylate	9.69		"	10.1		95.9	70-130				
Chlorobenzene	10.8		"	10.8		99.7	67.6-122				
<i>Surrogate: p-Bromofluorobenzene</i>	<i>11.2</i>		<i>"</i>	<i>10.0</i>		<i>112</i>	<i>70-130</i>				

Duplicate (BA30959-DUP1)											
*Source sample: 13A0633-01 (SG-1)											
Prepared & Analyzed: 01/25/2013											
Vinyl Chloride	ND	0.50	ug/m ³		ND						25
Vinyl acetate	ND	0.68	"		ND						25
Trichloroethylene	ND	0.52	"		ND						25
trans-1,3-Dichloropropylene	ND	0.88	"		ND						25
trans-1,2-Dichloroethylene	ND	0.77	"		ND						25
Toluene	27	0.73	"		22				20.8		25
Tetrahydrofuran	ND	0.57	"		ND						25
Tetrachloroethylene	2.1	1.3	"		2.2				6.06		25
Styrene	ND	0.83	"		ND						25
Propylene	ND	0.33	"		ND						25
p-Ethyltoluene	ND	4.8	"		ND						25
p- & m- Xylenes	ND	0.84	"		ND						25
o-Xylene	ND	0.84	"		ND						25
n-Hexane	5.7	0.68	"		ND						25
n-Heptane	ND	0.80	"		ND						25
Methylene chloride	1.1	0.67	"		ND						25
Methyl tert-butyl ether (MTBE)	ND	0.70	"		ND						25
4-Methyl-2-pentanone	ND	0.80	"		ND						25
Isopropanol	ND	0.48	"		ND						25
Hexachlorobutadiene	ND	2.1	"		ND						25
Ethyl Benzene	ND	0.84	"		ND						25
Ethyl acetate	ND	0.70	"		ND						25
Cyclohexane	ND	0.67	"		ND						25
cis-1,3-Dichloropropylene	ND	0.88	"		ND						25
cis-1,2-Dichloroethylene	ND	0.77	"		ND						25
Chloromethane	ND	0.40	"		ND						25
Chloroform	ND	0.95	"		ND						25
Chloroethane	ND	0.51	"		ND						25
Carbon tetrachloride	ND	0.61	"		ND						25
Carbon disulfide	ND	0.60	"		ND						25
Bromomethane	ND	0.75	"		ND						25
Bromoform	ND	2.0	"		ND						25
Bromodichloromethane	ND	1.2	"		ND						25
Benzyl chloride	ND	1.0	"		ND						25

Volatile Organic Compounds by EPA Compendium TO14A/TO15 - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BA30959 - EPA TO15 PREP										
Duplicate (BA30959-DUP1)	*Source sample: 13A0633-01 (SG-1)					Prepared & Analyzed: 01/25/2013				
Benzene	5.2	0.62	ug/m ³		6.7			25.0	25	
Acetone	12	0.46	"		20			55.1	25	Non-dir.
2-Hexanone	ND	0.80	"		ND				25	
2-Butanone	2.6	0.57	"		ND				25	
1,4-Dioxane	ND	0.70	"		ND				25	
1,4-Dichlorobenzene	ND	1.2	"		ND				25	
1,3-Dichlorobenzene	ND	1.2	"		ND				25	
1,3-Butadiene	ND	0.84	"		ND				25	
1,3,5-Trimethylbenzene	ND	0.95	"		ND				25	
1,2-Dichlorotetrafluoroethane	ND	1.4	"		ND				25	
1,2-Dichloropropane	ND	0.90	"		ND				25	
1,2-Dichloroethane	ND	0.79	"		ND				25	
1,2-Dichlorobenzene	ND	1.2	"		ND				25	
1,2,4-Trimethylbenzene	ND	0.95	"		ND				25	
1,2,4-Trichlorobenzene	ND	1.4	"		ND				25	
1,1-Dichloroethylene	ND	0.77	"		ND				25	
1,1-Dichloroethane	ND	0.79	"		ND				25	
Trichlorofluoromethane (Freon 11)	ND	1.1	"		ND				25	
1,1,2-Trichloroethane	ND	1.1	"		ND				25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.5	"		ND				25	
1,1,2,2-Tetrachloroethane	ND	1.3	"		ND				25	
1,1,1-Trichloroethane	ND	1.1	"		ND				25	
Dichlorodifluoromethane	ND	0.96	"		ND				25	
1,2-Dibromoethane	ND	1.5	"		ND				25	
Dibromochloromethane	ND	1.6	"		ND				25	
Methyl Methacrylate	ND	0.79	"		ND				25	
Chlorobenzene	ND	0.89	"		ND				25	
<i>Surrogate: p-Bromofluorobenzene</i>	<i>11.2</i>		<i>ppbv</i>	<i>10.0</i>		<i>112</i>	<i>70-130</i>			

Notes and Definitions

QL-02 This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.

ND Analyte NOT DETECTED at the stated Reporting Limit (RL) or above.

RL REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.

MDL METHOD DETECTION LIMIT - the minimum concentration that can be measured and reported with a 99% confidence that the concentration is greater than zero. If requested or required, a value reported below the RL and above the MDL is considered estimated and is noted with a "J" flag.

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 MDL, with values between the MDL and the RL being "J" flagged as estimated results.

120 RESEARCH DR. STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions unless superseded by written contract.

York Project No. 13A0633

YOUR Information		Report To:	Invoice To:	YOUR Project ID	Turn-Around Time	Report Type/Deliverables
Company: <u>GET Consultants</u>	Company: <u>Same</u>	Company: <u>Same</u>	Company: <u>Same</u>	<u>130030</u>	RUSH - Same Day <input type="checkbox"/>	Summary Report _____
Address: <u>110 Walt Whitman Rd. Huntington Station, NY</u>	Address: _____	Address: <u>400 Unicorn Park Drive, Woburn, MA</u>	Address: _____		RUSH - Next Day <input type="checkbox"/>	Summary w/ QA Summary <input checked="" type="checkbox"/>
Phone No: <u>631-759-2973</u>	Phone No: _____	Phone No: <u>01801</u>	Phone No: _____	Purchase Order No.	RUSH - Two Day <input type="checkbox"/>	NY ASP A Package _____
Contact Person: <u>Nick Recchia</u>	Attention: _____	Attention: _____	Attention: _____	Samples from: CT ___ NY <input checked="" type="checkbox"/> NJ ___	RUSH - Three Day <input type="checkbox"/>	NY ASP B/CLP Pkg _____
E-Mail Address: <u>Nrecchia@geiconsultants.com</u>	E-Mail Address: <u>send to</u>	E-Mail Address: <u>send to</u>	E-Mail Address: _____		RUSH - Four Day <input type="checkbox"/>	Electronic Deliverables:
				Standard(5-7 Days) <input checked="" type="checkbox"/>	EDD (Specify Type) _____	Standard Excel _____
					Regulatory Comparison Excel _____	

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.

TO15 Volatiles and Other Gas Analyses		Detection Limits Required
EPA TO-15 List	EPA TO-14A List	≤ 1 ug/m ³ _____
NYSDEC VI list	Tentatively Identified Compounds	NYSDEC VI Limits _____
NYSDEC STARS List	Air VPH	(VI <small>VI</small> <small>VI</small>) _____
Project Specific List by TO-15	Helium	NJDEP low level _____
NJDEP Target List	Methane	Routine Survey _____
CTDEP RCP Target List (Field)	OTHER _____	Other _____

Special Instructions

Devin Byrne
Samples Collected/Authorized By (Signature)

Devin Byrne
Name (printed)

Air Matrix Codes

AI - INDOOR Ambient Air
AO - OUTDOOR Amb. Air
AE - Vapor Extraction Well/ Process Gas/Effluent
AS - SOIL Vapor/Sub-Slab

Sample Identification	Date Sampled	AIR Matrix	Canister Vacuum Before Sampling (in. Hg)	Canister Vacuum After Sampling (in. Hg)	Choose Analyses Needed from the Menu Above and Enter Below	Sampling Media
SG-1	1/22/13	AS	30	6	TO-15	6 Liter Summa canister <input checked="" type="checkbox"/> Tedlar Bag
SG-2	↓	↓	30	4	↓	6 Liter Summa canister <input checked="" type="checkbox"/> Tedlar Bag
SG-3	↓	↓	30	4	↓	6 Liter Summa canister <input checked="" type="checkbox"/> Tedlar Bag
						6 Liter Summa canister _____ Tedlar Bag
						6 Liter Summa canister _____ Tedlar Bag
						6 Liter Summa canister _____ Tedlar Bag
						6 Liter Summa canister _____ Tedlar Bag
						6 Liter Summa canister _____ Tedlar Bag
						6 Liter Summa canister _____ Tedlar Bag
						6 Liter Summa canister _____ Tedlar Bag

Comments: Also send data to cmorris@geiconsultants.com

[Signature] 1/23/13 1330
Samples Relinquished By Date/Time

Samples Relinquished By Date/Time

[Signature] 1/23/13 1330
Samples Received By Date/Time

[Signature] 1/23/13 - 1630
Samples Received in LAB by Date/Time

Appendix G

Geotechnical Boring Logs

BORING B-1				
DEPTH FT.	SPOON BLOWS PER 1/2 FT.	HOLLOW STEM AUGER		MATERIAL
GROUND SURFACE				
5.0	2 3	6 5		Miscellaneous fill material. (11-65)
10.0	3 1	3 2		Miscellaneous fill material. (11-65)
15.0	4 3	6 5		Fine brown sand with traces of silt. (8-65) SM MOIST
20.0	8 3	6 5		Fine brown sand with traces of silt. (8-65) SM MOIST
25.0	6 4	4 9		Fill Material. (11-65)
30.0				Refusal at 24'
35.0				

BORING B-2				
DEPTH FT.	SPOON BLOWS PER 1/2 FT.	HOLLOW STEM AUGER		MATERIAL
GROUND SURFACE				
5.0	2 3	1 3		Miscellaneous fill material. (11-65)
10.0	W O H	W O H		VOID
15.0	6 2	2 5		Miscellaneous fill material. (11-65)
20.0	6 4	8 7		Miscellaneous fill material. (11-65)
25.0	7 6	9 3		Miscellaneous fill material. (11-65)
30.0				Refusal at 25'
35.0				

BORING B-3				
DEPTH FT.	SPOON BLOWS PER 1/2 FT.	HOLLOW STEM AUGER		MATERIAL
GROUND SURFACE				
5.0	2 3	6 3		Fine brown sand with traces of silt. (8-65) SM MOIST
10.0	7 9	9 11		Fine brown sand with traces of silt. (8-65) SM MOIST Refusal at 7.5'
15.0				
20.0				Refusal at 15'
25.0				
30.0				
35.0				

BORING B-4				
DEPTH FT.	SPOON BLOWS PER 1/2 FT.	HOLLOW STEM AUGER		MATERIAL
GROUND SURFACE				
5.0	1 3	1 2		Topsail with fill material. (11-65)
10.0	3 2	1 4		Misc. fill material. (11-65)
15.0	9 16	11 12		Misc. fill material. (11-65)
20.0				Refusal at 15'
25.0				
30.0				
35.0				

BORING B-5				
DEPTH FT.	SPOON BLOWS PER 1/2 FT.	HOLLOW STEM AUGER		MATERIAL
GROUND SURFACE				
5.0	4 3	5 6		Fine brown sand with fill material. (11-65)
10.0	4 3	7 6		Misc. fill material. (11-65)
15.0	6 19	6 50/0		Misc. fill material. (11-65) Refusal at 11.5'
20.0				
25.0				
30.0				
35.0				

MAJOR DIVISIONS		GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN HALF MATERIAL IS LARGER THAN NO. 4 SIEVE AND TO THE UNKED EYE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.
		GP	POORLY GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURE.
		GC	CLAYEY GRAVELS, GRAVEL SAND-CLAY MIXTURES.
		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES.
		SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES.
FINE-GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE THE NO. 200 SIEVE SIZE IS ABOUT THE SMALLEST PARTICLE VISIBLE TO THE UNKED EYE	SILTS & CLAYS LIQUID LIMIT IS LESS THAN 50	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY.
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS.
	SILTS & CLAYS LIQUID LIMIT IS GREATER THAN 50	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS.
CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS.	
OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS.	
HIGHLY ORGANIC SOILS		Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS.

ALLOWABLE SOIL BEARING PRESSURES, N.Y.C. BLDG. CODE C26-1103

CLASS OF MATERIAL	DESCRIPTION	ALLOWABLE BEARING TONS/SQ. FT.
1-65	HARD SOUND ROCK	60
2-65	MEDIUM HARD ROCK	40
3-65	INTERMEDIATE ROCK	20
4-65	SOFT ROCK	8
5-65	HARD PAN	8-12
6-65	GRAVEL AND SOILS (SOIL GROUPS GW, GP, GM & GC AND GROUPS SW, SP & SM CONTAINING MORE THAN 10% GRAVEL) SANDS (OTHER THAN FINE SANDS) (SOIL GROUPS SW, SP & SM BUT CONTAINING NOT MORE THAN 10% GRAVEL)	4-10
7-65	FINE SAND	3-6
8-65	CLAYS AND CLAY SOILS (SOIL GROUPS SC, CL & CH)	2-4
9-65	HARD MEDIUM SOFT	(5 MAX) (2 MAX) BY TEST
10-65	SILTS AND SILT SOILS (SOIL GROUPS ML & MH)	3
	DENSE MEDIUM LOOSE	1.5
11-65	NOMINALLY UNSATISFACTORY BEARING MATERIALS.	BY TEST

COMPACTION RELATED TO SPOON BLOWS PER FOOT

SAND		SILT & CLAY	
LOOSE	15 OR LESS	SOFT	10 OR LESS
MEDIUM	16 TO 39	MEDIUM	11 TO 29
DENSE	40 OR MORE	HARD	30 OR MORE

SOIL DESCRIPTIONS ARE BY VISUAL EXAMINATION OF SOIL SAMPLES RECOVERED DURING DRILLING OPERATIONS.
 SOIL DESCRIPTIONS ARE IN ACCORD WITH THE UNIFIED SOILS CLASSIFICATION SYSTEM AND N.Y.C. BUILDING CODE C26-1103.
 GROUND WATER WAS MEASURED INSIDE THE DRILL CASING OR HOLLOW AUGER AT THE COMPLETION OF EACH BOREHOLE.
 ALL BORING ELEVATIONS ARE REFERENCED TO EXISTING GROUND LEVEL AS ZERO ELEVATION.

"N" STANDARD PENETRATION TEST (2" SPOON, 140 lb HAMMER, 30" FALL)
 N = 17 BLOWS PER FOOT
 SPOON BLOW COUNT IS GENERALLY SHOWN IN 6" INCREMENTS FOR 2' DRIVE
 TO OBTAIN BLOWS PER FOOT (N) USE THE 2ND & 3RD 6" INCREMENT

THIS REPORT IS SUBMITTED WITH THE SPECIFIC UNDERSTANDING THAT THE SOLE LIABILITY OF A-1 TESTING LABORATORIES, INC. ITS ENGINEERS AND EMPLOYEES FOR ERRORS AND OMISSIONS IS LIMITED TO THE AMOUNT OF THE FEE PAID FOR THIS REPORT. THE USE OF THIS REPORT WILL CONSTITUTE AN ACCEPTANCE BY THE CLIENT OF THIS DISCLAIMER. THE FEE CHARGED FOR THIS REPORT IS PREDICATED UPON THIS LIMITATION OF LIABILITY WHICH IS THE ESSENCE OF THIS AGREEMENT. IF THESE TERMS ARE NOT ACCEPTABLE, CLIENT MUST NOTIFY A-1 TESTING LABORATORIES, INC. IN WRITING BY CERTIFIED MAIL, RETURN RECEIPT REQUESTED, WITHIN FIVE (5) DAYS. A-1 TESTING LABORATORIES, INC. ITS ENGINEERS AND EMPLOYEES DO NOT ACCEPT ANY LIABILITY OR RESPONSIBILITY FOR PERSONS OTHER THAN THE CLIENT FOR WHOM THIS WORK WAS DIRECTLY PREPARED AND ANY SUCH PERSON, FIRM OR CORPORATION RELIES ON THIS REPORT AT HIS OWN RISK.
 NOTE: ALL THE FIELD SAMPLES WILL BE HELD 30 DAYS FROM THE DATE OF THIS REPORT IN OUR LABORATORY UNLESS OTHERWISE DIRECTED BY THE CLIENT IN WRITING.

TYPE OF CORE BARRELS AND DIAMOND BITS:

SIZE	O.D.	CORE DIAMETERS
<input type="checkbox"/> AX	1-7/8"	1-1/8"
<input type="checkbox"/> BX	2-3/8"	1-5/8"
<input type="checkbox"/> NX	2-15/16"	2-1/8"
<input type="checkbox"/> AXM	1-7/8"	1-1/8"
<input type="checkbox"/> NXM	2-15/16"	2-1/8"
<input type="checkbox"/> B	2"	1-3/8"

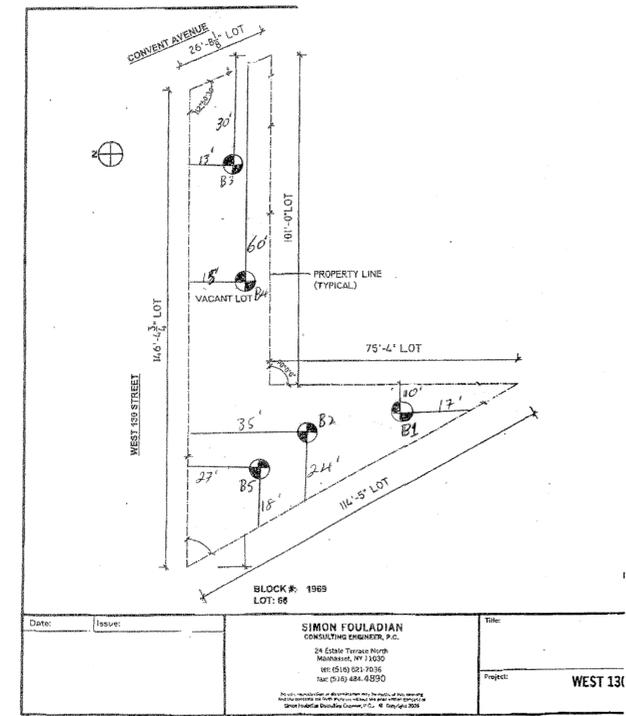
WEIGHT OF HAMMERS:
 300 LBS. ON 2 1/2" CASING - 18" DROP
 140 LBS. ON 2" SPOON - 30" DROP
 SPOON - SPLIT SAMPLER - 2" O.D. - 1 1/8" I.D. (24" LONG)

GROUND WATER TABLE (G.W.T.) AS NOTED ON BORING LOGS, IS ONLY THE FIRST INDICATION OF WATER ENCOUNTERED BY OUR DRILLERS.

A-1 TESTING LABORATORIES, INC.
 subsoil investigations
 107-16 JAMAICA AVE. • PHONE (718)-441-5009 • RICHMOND HILL, NY 11148

CLIENT: Big Apple Developers.
 PROJECT LOCATION: West 130th Street & Convent Avenue, NYC

DATES OF BORINGS:	DRAWING DATE:	DRAWING NUMBER:	SHEET
05-20-08	05-23-08	SB-2468	1 OF 1



Date: _____ Issue: _____ Title: WEST 130th
 SIMON FOULADIAN
 CONSULTING ENGINEER, P.C.
 24 Estate Terrace North
 Manhattan, NY 10020
 (917) 510-0210
 Fax: (212) 484-4990

Appendix 3

Citizen Participation Plan

The NYC Office of Environmental Remediation and Big Apple Developers have established this Citizen Participation Plan because the opportunity for citizen participation is an important component of the NYC Voluntary Cleanup Program. This Citizen Participation Plan describes how information about the project will be disseminated to the Community during the remedial process. As part of its obligations under the NYC VCP, Big Apple Developers will maintain a repository for project documents and provide public notice at specified times throughout the remedial program. This Plan also takes into account potential environmental justice concerns in the community that surrounds the project Site. Under this Citizen Participation Plan, project documents and work plans are made available to the public in a timely manner. Public comment on work plans is strongly encouraged during public comment periods. Work plans are not approved by the NYC Office of Environmental Remediation (OER) until public comment periods have expired and all comments are formally reviewed. An explanation of cleanup plans in the form of a public meeting or informational session is available upon request to OER's project manager assigned to this Site, Mr. William Wong, who can be contacted about these issues or any others questions, comments or concerns that arise during the remedial process at (212) 788-8841

Project Contact List. OER has established a Site Contact List for this project to provide public notices in the form of fact sheets to interested members of the Community. Communications will include updates on important information relating to the progress of the cleanup program at the Site as well as to request public comments on the cleanup plan. The Project Contact List includes owners and occupants of adjacent buildings and homes, principal administrators of nearby schools, hospitals and day care centers, the public water supplier that serves the area, established document repositories, the representative Community Board, City Council members, other elected representatives and any local Brownfield Opportunity Area (BOA) grantee organizations. Any member of the public or organization will be added to the Site Contact List on request. A copy of the Site Contact List is maintained by OER's project manager. If you would like to be added to the Project Contact List, contact NYC OER at (212) 788-8841 or by email at brownfields@cityhall.nyc.gov.

Repositories. A document repository is maintained in the nearest public library that maintains evening and weekend hours. This document repository is intended to house, for community review, all principal documents generated during the cleanup program including Remedial Investigation plans and reports, Remedial Action work plans and reports, and all public notices and fact sheets produced during the lifetime of the remedial project. Big Apple Developers will inspect the repositories to ensure that they are fully populated with project information. The repository for this project is:

New York Public Library
9 West 124th Street
New York, NY 10027
(212) 348-5620

Sunday: Closed
Monday and Wednesday: 11:00 AM to 6:00 PM
Tuesday and Thursday: 12:00 AM to 7:00 PM
Friday and Saturday: 10:00 AM to 7:00 PM

And at:
NYC Office of Environmental Remediation

www.nyc.gov/oer

Digital Documentation. NYC OER strongly encourages the use of digital documents in repositories as a means of minimizing paper use while also increasing convenience in access and ease of use.

Identify Issues of Public Concern. There are no issues of public concern.

Public Notice and Public Comment. Public notice to all members of the Project Contact List is required at three major steps during the performance of the cleanup program (listed below) and at other points that may be required by OER. Notices will include Fact Sheets with descriptive project summaries, updates on recent and upcoming project activities, repository information, and important phone and email contact information. All notices will be prepared by Big Apple Developers, reviewed and approved by OER prior to distribution and mailed by Big Apple Developers. Public comment is solicited in public notices for all work plans developed under the NYC Voluntary descriptive project summaries, updates on recent and upcoming project activities, repository information, and important phone and email contact information.

All notices will be prepared by Big Apple Developers, reviewed and approved by OER prior to distribution and mailed by Big Apple Developers. Public comment is solicited in public notices for all work plans developed under the NYC Voluntary Cleanup Program. Final review of all work plans by OER will consider all public comments. Approval will not be granted until the public comment period has been completed.

Citizen Participation Milestones. Public notice and public comment activities occur at several steps during a typical NYC VCP project. See flow chart on the following page, which identifies when during the NYC VCP public notices are issued. These steps include:

- **Public Notice of the availability of the Remedial Investigation Report and Remedial Action Work Plan and a 30-day public comment period on the Remedial Action Work Plan**

Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the availability of the Remedial Investigation Report and Remedial Action Work Plan and the initiation of a 30-day public comment period on the Remedial Action Work Plan. The Fact Sheet summarizes the findings of the RIR and provides details of the RAWP. The public comment period will be extended an additional 15 days upon public request. A public meeting or informational session will be conducted by OER upon request.

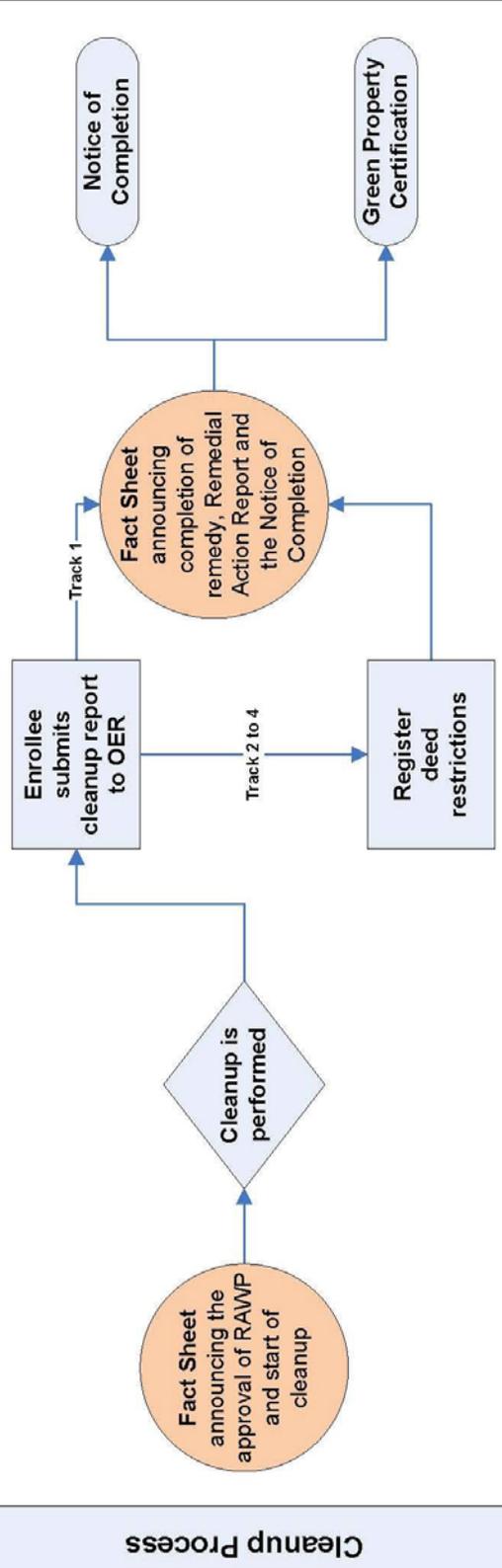
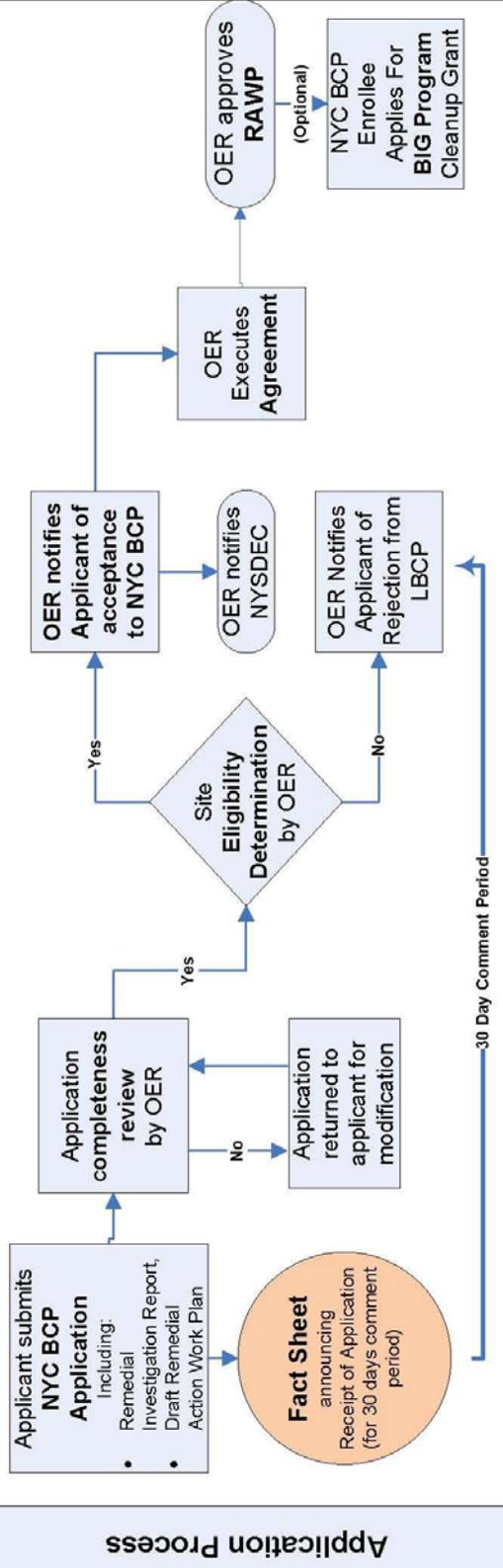
- **Public Notice announcing the approval of the RAWP and the start of remediation**

Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the approval of the RAWP and the start of remediation.

- **Public Notice announcing the completion of remediation, designation of Institutional and Engineering Controls and issuance of the Notice of Completion**

Public notice in the form of a fact sheet is sent to all parties listed on the site contact list announcing the completion of remediation, providing a list of all institutional and engineering controls implemented for to the site and announcing the issuance of the notice of completion.

Flow Chart For NYC Brownfield Cleanup Program (NYC BCP)



Appendix 4

SOIL/MATERIALS MANAGEMENT PLAN

1.1 Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed under the supervision of a Qualified Environmental Professional and will be reported in the RAR. Soil screening will be performed during invasive work performed during the remedy and development phases prior to issuance of the Notice of Completion.

1.2 Stockpile Methods

Although not anticipated, excavated soil from suspected areas of contamination (e.g., hot spots, USTs, drains, etc.) will be stockpiled separately and will be segregated from clean soil and construction materials. Stockpiles will be used only when necessary and will be removed as soon as practicable. While stockpiles are in place, they will be inspected daily, and before and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. Excavated soils will be stockpiled on, at minimum, double layers of 8-mil minimum sheeting, will be kept covered at all times with appropriately anchored plastic tarps, and will be routinely inspected. Broken or ripped tarps will be promptly replaced.

All stockpile activities will be compliant with applicable laws and regulations. Soil stockpile areas will be appropriately graded to control run-off in accordance with applicable laws and regulations. Stockpiles of excavated soils and other materials shall be located at least of 50 feet from the property boundaries, where possible. Hay bales or equivalent will surround soil stockpiles except for areas where access by equipment is required. Silt fencing and hay bales will be used as needed near catch basins, surface waters and other discharge points.

1.3 Characterization of Excavated Materials

Soil/fill or other excavated media that is transported off-Site for disposal will be sampled in a manner required by the receiving facility, and in compliance with applicable laws and regulations. No soils proposed for reuse on-Site.

1.4 Materials Excavation, Load-Out and Departure

The PE/QEP overseeing the remedial action will:

- oversee remedial work and the excavation and load-out of excavated material;
- ensure that there is a party responsible for the safe execution of invasive and other work performed under this work plan;
- ensure that Site development activities and development-related grading cuts will not interfere with, or otherwise impair or compromise the remedial activities proposed in this RAWP;
- ensure that the presence of utilities and easements on the Site has been investigated and that any identified risks from work proposed under this plan are properly addressed by appropriate parties;
- ensure that all loaded outbound trucks are inspected and cleaned if necessary before leaving the Site;
- ensure that all egress points for truck and equipment transport from the Site will be kept clean of Site-derived materials during Site remediation.

Locations where vehicles exit the Site shall be inspected daily for evidence of soil tracking off premises. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

Open and uncontrolled mechanical processing of historical fill and contaminated soil on-Site will not be performed without prior OER approval.

1.5 Off-Site Materials Transport

Loaded vehicles leaving the Site will comply with all applicable materials transportation requirements (including appropriate covering, manifests, and placards) in accordance with applicable laws and regulations, including use of licensed haulers in accordance with 6 New York Codes Rules and Regulations (NYCRR) Part 364. If loads contain wet material capable of causing leakage from trucks, truck liners will be used. Queuing of trucks will be performed on-

Site, when possible in order to minimize off-Site disturbance. Off-Site queuing will be minimized.

Outbound truck transport routes are described in Section 5.9 of the RAWP. This routing takes into account the following factors: (a) limiting transport through residential areas and past sensitive sites; (b) use of mapped truck routes; (c) minimizing off-Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and, (f) overall safety in transport. To the extent possible, all trucks loaded with Site materials will travel from the Site using these truck routes. Trucks will not stop or idle in the neighborhood after leaving the project Site.

1.6 Materials Disposal Off-Site

The following documentation will be established and reported by the PE/QEP for each disposal destination used in this project to document that the disposal of regulated material exported from the Site conforms with applicable laws and regulations: (1) a letter from the PE/QEP or Enrollee to each disposal facility describing the material to be disposed and requesting written acceptance of the material. This letter will state that material to be disposed is regulated material generated at an environmental remediation Site in Manhattan, New York under a governmental remediation program. The letter will provide the project identity and the name and phone number of the PE/QEP or Enrollee. The letter will include as an attachment a summary of all chemical data for the material being transported; and (2) a letter from each disposal facility stating it is in receipt of the correspondence (1, above) and is approved to accept the material. These documents will be included in the RAR.

The Remedial Action Report will include an itemized account of the destination of all material removed from the Site during this remedial action. Documentation associated with disposal of all material will include records and approvals for receipt of the material. This information will be presented in the RAR.

All impacted soil/fill or other waste excavated and removed from the Site will be managed as regulated material and will be disposed in accordance with applicable laws and regulations. Historic fill and contaminated soils taken off-Site will be handled as solid waste and will not be disposed at a Part 360-16 Registration Facility (also known as a Soil Recycling Facility).

Waste characterization will be performed for off-Site disposal in a manner required by the receiving facility and in conformance with its applicable permits. Waste characterization sampling and analytical methods, sampling frequency, analytical results and QA/QC will be reported in the RAR. A manifest system for off-Site transportation of exported materials will be employed. Manifest information will be reported in the RAR. Hazardous wastes derived from on-Site will be stored, transported, and disposed of in compliance with applicable laws and regulations.

1.7 Materials Reuse On-Site

Soil and fill that is derived from the property that meets the soil cleanup objectives established in this plan may be reused on-Site. The soil cleanup objectives for on-Site reuse are listed in Section 4.2. 'Reuse on-Site' means material that is excavated during the remedy or development, does not leave the property, and is relocated within the same property and on comparable soil/fill material, and addressed pursuant to the NYC VCP agreement subject to Engineering and Institutional Controls. The PE/QEP will ensure that reused materials are segregated from other materials to be exported from the Site and that procedures defined for material reuse in this RAWP are followed.

Excavated material to be reused onsite, which is estimated to be less than 200 cubic yards, will be sampled prior to reuse to ensure that the soil meets the site-specific soil cleanup objectives.

Organic matter (wood, roots, stumps, etc.) or other waste derived from clearing and grubbing of the Site will not be buried on-Site. Soil or fill excavated from the site for grading or other purposes will not be reused within a cover soil layer or within landscaping berms.

1.8 Demarcation

After completion of hotspot removal and any other invasive remedial activities, and prior to backfilling, the top of the residual soil/fill will be defined by one of three methods: (1) placement of a demarcation layer. The demarcation layer will consist of geosynthetic fencing or equivalent material to be placed on the surface of residual soil/fill to provide an observable reference layer. A description or map of the approximate depth of the demarcation layer will be provided in the SMP; or (2) a land survey of the top elevation of residual soil/fill before the placement of cover

soils, pavement and associated sub-soils, or other materials or structures or, (3) all materials beneath the approved cover will be considered impacted and subject to site management after the remedy is complete. Demarcation may be established by one or any combination of these three methods. As appropriate, a map showing the method of demarcation for the Site and all associated documentation will be presented in the RAR.

This demarcation will constitute the top of the site management horizon. Materials within this horizon require adherence to special conditions during future invasive activities as defined in the SMP.

1.9 Import of Backfill Soil from Off-Site Sources

No import of soil is planned as part of redevelopment.

1.10 Fluids Management

All liquids to be removed from the Site, including dewatering fluids (which are not anticipated), will be handled, transported and disposed in accordance with applicable laws and regulations. Liquids discharged into the New York City sewer system will receive prior approval by New York City Department of Environmental Protection (NYC DEP). The NYC DEP regulates discharges to the New York City sewers under Title 15, Rules of the City of New York Chapter 19. Discharge to the New York City sewer system will require an authorization and sampling data demonstrating that the groundwater meets the City's discharge criteria. The dewatering fluid will be pretreated as necessary to meet the NYC DEP discharge criteria. If discharge to the City sewer system is not appropriate, the dewatering fluids will be managed by transportation and disposal at an off-Site treatment facility.

Discharge of water generated during remedial construction to surface waters (i.e. a stream or river) is prohibited without a State Pollutant Discharge Elimination System (SPDES) permit issued by New York State Department of Environmental Conservation.

1.11 Storm-water Pollution Prevention

Applicable laws and regulations pertaining to storm-water pollution prevention will be addressed during the remedial program. Erosion and sediment control measures identified in this RAWP (silt fences and barriers, and hay bale checks) will be installed around the entire

perimeter of the remedial construction area and inspected once a week and after every storm event to ensure that they are operating appropriately. Discharge locations will be inspected to determine whether erosion control measures are effective in preventing significant impacts to receptors. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. Undercutting or erosion of the silt fence toe anchor will be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

1.12 Contingency Plan

This contingency plan is developed for the remedial construction to address the discovery of unknown structures or contaminated media during excavation. Identification of unknown contamination source areas during invasive Site work will be promptly communicated to OER's Project Manager. Petroleum spills will be reported to the NYSDEC Spill Hotline. These findings will be included in the daily report. If previously unidentified contaminant sources are found during on-Site remedial excavation or development-related excavation, sampling will be performed on contaminated source material and surrounding soils and reported to OER.

Chemical analytical testing will be performed for TAL metals, TCL volatiles and semi-volatiles, TCL pesticides and PCBs, as appropriate.

1.13 Odor, Dust and Nuisance Control

Odor Control

All necessary means will be employed to prevent on- and off-Site odor nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) use of foams to cover exposed odorous soils. If odors develop and cannot otherwise be controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-Site disposal; and (e) use of chemical odorants in spray or misting systems.

This odor control plan is capable of controlling emissions of nuisance odors. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected.

Work will not resume until all nuisance odors have been abated. OER will be notified of all odor complaint events. Implementation of all odor controls, including halt of work, will be the responsibility of the PE/QEP's certifying the Remedial Action Report.

Dust Control

Dust management during invasive on-Site work will include, at a minimum:

- Use of a dedicated water spray methodology for roads, excavation areas and stockpiles
- Use of properly anchored tarps to cover stockpiles
- Exercise extra care during dry and high-wind periods
- Use of gravel or recycled concrete aggregate on egress and other roadways to provide a clean and dust-free road surface

This dust control plan is capable of controlling emissions of dust. If nuisance dust emissions are identified, work will be halted and the source of dusts will be identified and corrected. Work will not resume until all nuisance dust emissions have been abated. OER will be notified of all dust complaint events. Implementation of all dust controls, including halt of work, will be the responsibility of the PE/QEP's responsible for certifying the Remedial Action Report.

Other Nuisances

Noise control will be exercised during the remedial program. All remedial work will conform, at a minimum, to NYC noise control standards.

Rodent control will be provided, during Site clearing and grubbing, and during the remedial program, as necessary, to prevent nuisances.

Appendix 5

Construction Health and Safety Plan



Geotechnical
Environmental
Water Resources
Ecological

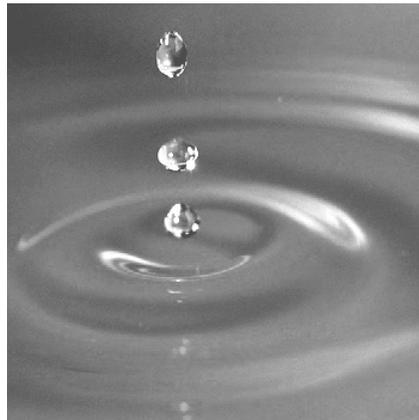
Construction Health and Safety Plan (CHASP)

464 West 130th Street

New York, New York 10027

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July 2013
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Appendices

- A. Site Specific Information
- B. Cold Stress Guidelines
- C. Heat Stress Guidelines
- D. Safety Data Sheets (SDS)
- E. Incident Reporting Form

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1. Background Information

1.1 General

Engineer	Big Apple Developers 770 Middle Neck Road, Suite 4P Great Neck, New York 11024 - 1905
Project Name	464 West 130 th Street New York, New York

This Construction Health and Safety Plan (CHASP) establishes policies and procedures to protect Big Apple Developers personnel from the potential hazards posed by the activities at the 464 West 130th Street site located in New York, New York (see **Appendix A – Site-Specific Information**).

Reading of and adherence to the CHASP is required of all onsite Big Apple Developers personnel. Subcontractors for this project will be required to develop their own CHASP for protection of their employees, but at a minimum must adhere to applicable requirements set forth in this CHASP. Additionally, federal, state, and local representatives, as well as Big Apple Developers representatives may be required to sign and adhere to this CHASP, depending on the nature of their presence onsite during activities conducted by Big Apple Developers.

The plan identifies measures to minimize accidents and injuries, which may result from project activities, emergencies, or during adverse weather conditions. Activities performed under this CHASP will comply with applicable parts of OSHA Regulations, primarily 29 Code of Federal Regulations (CFR) Parts 1910 and 1926.

Included in Appendix A is a route to the nearest medical facility to the site with directions and contact information. Appendix B and Appendix C detail the signs, symptoms, care and procedures to both cold and heat stress, respectively. Appendix D contains the Safety Data Sheets (SDS). Appendix E contains the incident reporting form to be filled out in the event of an injury, accident or near-miss onsite.

1.2 Property Description

The Site is located in the Manhattanville section of Manhattan, New York and is identified as Block 1969 and Lot 68 on the New York City Tax Map (see Figure 1). The Site is 3,900-square feet and is located on the south side of West 130th Street on the southwest corner of

Convent Avenue, and is adjoined by residential apartment buildings (some of which contain retail stores) to the south and east, and a two-story garage/warehouse building to the west. Currently, the Site is vacant, with the western portion of the property being used for parking and the eastern portion appearing to be used as a private garden.

1.3 Site Activities

The proposed project will include the construction of a six-story, 30-unit residential building including a basement, which will contain residential units, and a partial cellar for utilities only. The building footprint is approximately 3,500 square feet, and the total square footage of the building is approximately 24,000 square feet. A planting area is planned along Convent Avenue and additional open space will be present on the western edge of the property. The proposed construction would not cover the entire property footprint. Excavation at the site is necessary to complete the portions of the basement and cellar of the structure. The excavation depths vary slightly across the site with a maximum depth of approximately 11 feet for the cellar on the western portion of the property. The proposed excavation volume is 1,399 cubic yards. A vapor barrier will be installed at the base of the building's foundation and along the foundation sidewalls. Groundwater was not encountered within the planned depth of the excavation. No demolition is required to complete the construction of the proposed building. Site work will consist of:

- Foundation excavation, loading, and removal of site soils
- Site grading
- Building construction

1.4 Hazard/Risk Analysis

1.4.1 Physical Hazards

Physical hazards associated with heavy equipment operations may be present during site activities. These activities would require the use of heavy equipment by subcontractors such as a backhoe or a drill rig, which is associated with, but not limited to, the following hazards:

- bodily injuries
- slipping, tripping or falling
- heavy lifting
- caught in-between injuries
- struck by injuries
- cold/heat stress
- noise

1.4.2 Fire and Explosion

Fire extinguishers are located on heavy equipment operating onsite and within any work vehicles onsite. All fires should be reported to 911 emergency services. The Construction Manager (CM) Contractor and the Construction Health & Safety Officer (CHSO) will determine if it is necessary to shut down site work for the day due to fire related issues.

1.4.3 Cold Stress

During the winter months, workers may be exposed to the hazards of working in cold environments. Potential hazards in cold environments include frostbite, trench foot or immersion foot, hypothermia as well as slippery surfaces, brittle equipment, and poor judgment. The procedures to be followed regarding the avoidance of cold stress are provided in **Appendix B – Cold Stress Guidelines**.

1.4.4 Heat Stress

A heat stress prevention program will be implemented when ambient temperatures exceed 70°F. The procedures to be followed are provided in **Appendix C – Heat Stress Guidelines**.

1.4.5 Noise

Noise is a potential hazard associated with the operation of heavy equipment, power tools, pumps, generators, and other equipment associated with earthwork tasks. Site workers who will perform suspected or established high noise tasks and operations shall wear hearing protection. Other workers who do not need to be in proximity of the noise should distance themselves from the equipment generating the noise.

1.4.6 Hand and Power Tools

In order to complete the various tasks for the project, personnel will use hand and power tools. The use of hand and power tools can present a variety of hazards, including physical harm from being struck by flying objects, being cut or struck by the tool, fire, and electrocution. Work gloves, safety glasses, and hard hats will be worn by the operating personnel at all times when using hand and power tools. Ground Fault Circuit Interrupter (GFCI)-equipped circuits will be used for all power tools.

The CM Contractor is responsible for the safe condition of tools and equipment used by employees but the employees have the responsibility for properly using and maintaining tools.

Saw blades, knives, or other tools be directed away from aisle areas and other employees working in close proximity. Knives and scissors must be sharp. Dull tools can be more hazardous than sharp ones.

Appropriate personal protective equipment (PPE), e.g., safety goggles, gloves, etc., should be worn due to hazards that may be encountered while using portable power tools and hand tools. Floors must be kept as clean and dry as possible to prevent accidental slips with or around dangerous hand tools.

Around flammable substances, sparks produced by iron and steel hand tools can be a potential ignition source. Where this hazard exists, spark-resistant tools made from brass, plastic, aluminum, or wood will provide for safety.

The following general precautions should be observed by power tool users:

- Never carry a tool by the cord or hose.
- Never yank the cord or the hose to disconnect it from the receptacle.
- Keep cords and hoses away from heat, oil, and sharp edges.
- Disconnect tools when not in use, before servicing, and when changing accessories such as blades, bits and cutters.
- All observers should be kept at a safe distance away from the work area.
- Secure work with clamps or a vise, freeing both hands to operate the tool.
- Avoid accidental starting. The worker should not hold a finger on the switch button while carrying a plugged-in tool.
- Tools should be maintained with care. They should be kept sharp and clean for the best performance. Follow instructions in the user's manual for lubricating and changing accessories.
- Be sure to keep good footing and maintain good balance.
- The proper apparel should be worn. Loose clothing, ties, or jewelry can become caught in moving parts.
- All portable electric tools that are damaged shall be removed from use and tagged "Do Not Use."

Staff and subcontractors should follow all associated Occupational Safety and Health Administration (OSHA) standards (29 CFR 1926), the most updated of which can be found at <http://www.osha.gov>. OSHA standards supersede any guidelines stated within this CHASP.

1.4.7 Slips, Trips, and Falls

Working in and around the site will pose slip, trip, and fall hazards due to slippery surfaces. Excavation at the sites will cause uneven footing in the trenches and around the spoil piles.

Employees will wear proper footwear (i.e. steel toe/shank boots) and will employ good work practice and housekeeping procedures to minimize the potential for slips, trips, and falls.

1.4.8 Manual Lifting

Manual lifting of objects and equipment may be required. Failure to follow proper lifting technique can result in back injuries and strains. Site workers should use power equipment to lift heavy loads whenever possible and should evaluate loads before trying to lift them (i.e., they should be able to easily tip the load and then return it to its original position). Carrying heavy loads with a buddy and proper lifting techniques include:

- 1) make sure footing is solid
- 2) make back straight with no curving or slouching
- 3) center body over feet
- 4) grasp the object firmly and as close to your body as possible
- 5) lift with legs
- 6) turn with your feet, don't twist

1.4.9 Projectile Objects, Debris, and Overhead Dangers

Overhead dangers, including but not limited to falling debris and equipment, can occur while heavy machinery is in operation or work is taking place overhead. Staff will be instructed to maintain a minimum distance from large overhead operations. Staff must also maintain proper communication with heavy equipment operators and their handlers, especially if work necessitates their presence beyond the minimum safe distance. Additionally, employees should be cognizant of low-hanging overhead power lines, as these can snag on vehicles entering and exiting the site. Vehicles that are large enough to damage overhead power lines require spotters when entering and exiting the site. Proper PPE will be worn at all times during these types of activities including steel-toed or equivalent boots, safety vests and hard hats.

1.4.10 Heavy Equipment Operation

Heavy equipment may be present onsite. Staff should be cautious when working near or operating heavy equipment, and maintain a safe distance from the equipment. Personnel should maintain eye contact with the vehicle spotter or operator before traversing any paths that may cross that of the machinery. Safety vests are to be worn when working near operating heavy equipment.

1.4.11 Confined Spaces

If any work in confined spaces is required, it will be performed in accordance with 29 CFR 1910.146 (effective April 15, 1993), as applicable. Copies of the standards will be kept on file in the CM Contractor's main office, if work in confined spaces will be performed.

Confined space work will not be performed without first notifying and receiving approval from the CM, if applicable.

1.4.12 Illumination

Illumination requirements identified by OSHA are directed to work efforts inside buildings and/or during non daylight hours. OSHA illumination requirements will be followed when work is taking place inside the buildings. All exterior site activities at the site will occur during daylight hours. However, if yard areas are used after dark they will be equipped with illumination that meets or exceeds requirements specified in 29 CFR 1926.56, Illumination.

1.4.13 Lockout/Tagout

Site personnel will assume that all electrical equipment at surface and overhead locations is energized, until the equipment has been designated as de-energized by a representative from the utility company. If the equipment cannot be de-energized, work will stop and the CM and appropriate contacts will be consulted. The CM will notify the client prior to working adjacent to this equipment, and will verify that the equipment is energized or de-energized in the vicinity of the work being conducted.

All power lines which have been indicated to be de-energized must be locked out, such that the lines cannot be energized when personnel are working near them. The lines shall not be unlocked and re-energized until the CM notifies the client that they have completed work in the area and that all personnel are clear of the area. Client representatives will thoroughly familiarize personnel with site-specific lockout/tagout procedures during the site orientation, if applicable.

If power lines cannot be de-energized, the CM will consult with utility safety personnel to determine the safe working distance from the energized line. Work tasks will only commence after determination that a safe working distance can be maintained and all personnel working in the area have been informed of the limitation.

1.4.14 Fall Hazards

Fall hazards exist onsite in several areas. Workers must follow all safeguards for fall protection as defined in OSHA 29 CFR 1926, Subpart M-Fall Protection. In general, workers should use the following guidelines:

- Use at least one of the following whenever employees are exposed to a fall of 6 feet or more above a lower level:
 - [Guardrail Systems](#)
 - [Safety Net Systems](#)
 - [Personal Fall Arrest Systems](#)
- Cover or guard floor holes as soon as they are created during new construction.
- For existing structures, survey the site before working and continually audit as work continues. Guard or cover any openings or holes immediately.
- Construct all floor hole covers so they will effectively support two times the weight of employees, equipment, and materials that may be imposed on the cover at any one time. Floor hole covers are to be secured so they are not moved off of the hole and labeled so workers are aware what is under the cover.
- In general, it is better to use fall *prevention* systems, such as guardrails, than fall *protection* systems, such as safety nets or fall arrest devices, because they provide more positive safety means.
- Construct all scaffolds according to the manufacturer's instructions and 29 CFR 1926.451.
- Install guardrail systems along all open sides and ends of platforms.
- Use at least one of the following for scaffolds more than 10 feet above a lower level:
 - [Guardrail Systems](#)
 - [Personal Fall Arrest Systems](#)
- Provide safe access to scaffold platforms [*For additional information, see [Scaffold Access](#)*].
- Do not climb cross-bracing as a means of access.
- Guard all protruding ends of steel rebar with rebar caps or wooden troughs, *or*
- Bend rebar so exposed ends are no longer upright.
- When employees are working at any height above exposed rebar, fall protection/prevention is the first line of defense against impalement.

1.4.15 Ladder Safety

Portable ladders must be safely positioned each time they are used. Staff and subcontractors should follow all associated OSHA standards (CFR 1926.1053), the most updated of which can be found at <http://www.osha.gov>. OSHA standards supersede any guidelines stated within this CHASP.

1.4.16 Scaffolding Safety

Scaffolding presents significant fall hazards and various types of scaffolds may be present onsite. Staff and subcontractors should follow all associated OSHA standards (CFR 1926 Subpart L - Scaffolds), the most updated of which can be found at <http://www.osha.gov>.

1.4.17 Welding

The intense light associated with welding operations can cause serious and sometimes permanent eye damage if operators do not wear proper eye protection. Additionally, sparks from the welding process present a risk to the employee conducting welding and nearby employees. Any flammable or combustible materials that may be exposed to sparks or other heat sources must be protected or relocated to prevent fire hazards. Fire extinguishers will be located in areas where welding or hot work will be taking place. Staff must wear helmets that comply with ANSI Z49.1, with filter lenses that comply with ANSI Z87.1. Boots must comply with ASTM F2412 and ASTM F2413 for fire resistance. Welding operators must also wear flame-resistant welder's gloves.

Several chemicals may be used in the process of welding. Staff must be aware of the variety of chemicals used, and must possess appropriate welding training to perform welding activities. Additionally, compressed gas cylinders used in welding must be stored, placed and transported according to OSHA standards. Staff and subcontractors should follow all associated OSHA standards (CFR 1926), the most updated of which can be found at <http://www.osha.gov>.

1.4.18 Asbestos-Containing Material

Although the site does not contain asbestos-containing materials (ACM), workers should be aware of the risks associated with asbestos exposure. Chronic exposure to asbestos may cause asbestosis and mesothelioma. The primary route of exposure for asbestos is inhalation during the disturbance and/or removal of asbestos from pipe insulation and cement pipes.

Asbestos is strictly regulated under OSHA 29 CFR 1910.1001/1926.1101. Employees that may be potentially exposed to ACM must participate in a medical surveillance program, have specific training in the hazards and controls of exposure to asbestos and wear respirators with high efficiency particulate (HEPA) filters. All work must be conducted in demarcated

regulated areas to minimize the amount of people within the exposure area. Employers must conduct air sampling and provide signs and labels regarding the presence of asbestos. Staff and subcontractors should follow all associated OSHA standards (CFR 1926), the most updated of which can be found at <http://www.osha.gov>.

The potential hazards for this project are listed in the following Activity Hazard Analysis and Site Hazards sections.

SITE HAZARDS	
Potential Hazard	Control Measures
Construction Safety	<ul style="list-style-type: none">▪ Identify yourself and your work location to heavy equipment operators, so they may incorporate you into their operations. Coordinate hand signals with operators.▪ Stay Alert! Pay attention to equipment backup alarms and swing radii.▪ Wear a high visibility vest when working near equipment or motor vehicle traffic.▪ Position yourself in a safe location when filling out logs and talking with the contractor.▪ Notify the contractor immediately if any problems arise.▪ Do not stand or sit under suspended loads or near any pressurized equipment lines.▪ Do not use cellular telephones near operating equipment.▪ Follow general traffic safety guidelines

SITE HAZARDS	
Potential Hazard	Control Measures
Scaffolding Safety and Power Tools	<ul style="list-style-type: none"> ▪ Follow OSHA Construction Safety Requirements 29 CFR 1926 Subpart L - Scaffolds. ▪ Do not use impact tools (i.e. chisels, hammers) with mushroomed heads. ▪ Do not use wooden-handled tools if the handle is damaged, splintered, loose or cracked. ▪ Inspect, maintain, and replace tools as needed. ▪ Do not use wrenches if jaws are sprung. ▪ Tools should be directed away from aisles, other employees, and trafficked areas. ▪ Wear appropriate PPE when using tools. ▪ Floors must be kept clean and as dry as possible to prevent slips, trips, and falls around tools. ▪ Never carry a tool by the cord or hose. ▪ Never yank the cord or the hose to disconnect it from the receptacle. ▪ Keep cords and hoses away from heat, oil, and sharp edges. ▪ Disconnect tools when not in use, before servicing, and when changing accessories such as blades, bits, and cutters. ▪ All observers should be kept at a safe distance away from the work area. ▪ Secure work with clamps or a vise, freeing both hands to operate the tool. ▪ Avoid accidental starting. The worker should not hold a finger on the switch button while carrying a plugged-in tool. ▪ Tools should be maintained with care. They should be kept sharp and clean for the best performance. Follow instructions in the user's manual for lubricating and changing accessories. ▪ Be sure to keep good footing and maintain good balance. ▪ The proper apparel should be worn. Loose clothing, ties, or jewelry can become caught in moving parts. ▪ All portable electric tools that are damaged shall be removed from use and tagged "Do Not Use." ▪ Keep all tools in good condition with regular maintenance. ▪ Use the right tool for the job. ▪ Examine each tool for damage before use. ▪ Operate according to the manufacturer's instructions. ▪ Provide and use the proper protective equipment.
Heavy Equipment Operation	<ul style="list-style-type: none"> ▪ Maintain awareness of location of equipment. ▪ Subcontractor use of a spotter for equipment operation. ▪ Safety vest is to be worn around all operating equipment. ▪ Maintain eye contact with the operator. ▪ Stay out of the swing radii of the apparatus.
Slips, Trips, Falls	<ul style="list-style-type: none"> ▪ Keep trafficked areas clear of debris and tools. Keep work areas and traffic areas dry.
Lock Out/Tag Out	<ul style="list-style-type: none"> ▪ Maintain contact with utility to determine if energized lines or equipment has been de-energized. ▪ Follow OSHA Lock Out/Tag Out requirements in 29 CFR 1910.147.
Welding	<ul style="list-style-type: none"> ▪ Wear appropriate PPE (welding helmet, apron, fire-resistant gloves and boots, leggings) as needed. ▪ Follow OSHA Construction Safety Requirements 29 CFR 1926 Subpart J – Welding and Cutting.

SITE HAZARDS	
Potential Hazard	Control Measures
Fire	<ul style="list-style-type: none"> ▪ Keep fire extinguishers in working order by inspecting on a regular basis. ▪ Keep the appropriately rated and sized fire extinguishers on site as specified by 29 CFR 1926.150. ▪ Keep flammable materials away from ignition sources. ▪ Follow OSHA Construction Safety Requirements 29 CFR 1926 Subpart F – Fire Protection and Prevention and NPFA standards. ▪ Wear appropriate PPE when working around flammable materials.
Ladder Safety	<ul style="list-style-type: none"> ▪ Follow safety guidelines for safe ladder use. ▪ Follow OSHA Construction Safety Requirements 29 CFR 1926.1053.
Fall Hazards	<ul style="list-style-type: none"> ▪ Use appropriate fall protection at heights of 6 feet or greater. ▪ Avoid working in areas with a drop off of more than 2 feet. ▪ Erect appropriate barriers and guard rails. ▪ Wear appropriate fall protection PPE. ▪ Mark fall hazards so they are visible to employees. ▪ Follow OSHA Construction Safety Requirements 29 CFR 1926 Subpart M – Fall Protection.
Physical Injury	<ul style="list-style-type: none"> ▪ Wear work boots in good condition with non-slip soles. ▪ Maintain good visibility of the work area. ▪ Avoid walking on uneven or debris ridden ground surfaces. ▪ Use proper lifting techniques. Ask fellow worker for help.
Noise	<ul style="list-style-type: none"> ▪ Wear hearing protection when near loud noises. ▪ Wear hearing protection whenever you need to raise your voice above normal conversational speech due to a loud noise source; this much noise indicates the need for protection.
Vehicular Traffic	<ul style="list-style-type: none"> ▪ Wear traffic safety vest at all times. ▪ Use cones, flags, barricades, and caution tape to define work area. ▪ Use a "spotter" to locate oncoming vehicles. ▪ Use vehicle to block work area. ▪ Engage police detail if needed.
Utilities	<ul style="list-style-type: none"> ▪ Check that contractor has cleared underground utilities before any intrusive activities, and that contractor has coordinate with utility locating services, property owner(s) or utility companies. ▪ Utilities are to be considered live or active until documented otherwise. ▪ For overhead utilities within 50 feet, have contractor determine with the utility company the appropriate safe distance. Minimum distance for clearance is based on voltage of the line. ▪ An observer will be established when operating drilling rigs near overhead utilities.

ACTIVITY HAZARDS		
Activity	Potential Hazards	Protective Equipment
Entering Construction Site	Heavy equipment, dust, noise.	Hardhat, reflective safety vest, steel-toed, steel-shank boots, safety glasses, protective leather work gloves, and earplugs. Follow general traffic safety guidelines. Employ dust suppression controls (i.e. watering) to keep dust levels down to prevent inhalation of excavated materials.
General Construction (Foundation Work, Earthwork, Soil Vapor Barrier System Installation)	Heavy equipment, dust, noise. Contact with excavated soils.	Hardhat, reflective safety vest, steel-toed, steel-shank boots, safety glasses, protective leather work gloves, and earplugs. Follow general traffic safety guidelines. Employ dust suppression controls (i.e. watering) to keep dust levels down to prevent inhalation of excavated materials.
Personal Protective Equipment (PPE) is the <i>initial level of protection</i> based on the activity hazards and Site conditions which have been identified.		

1.5 Evaluation of Potential Chemical Hazards

The characteristics of potential compounds at the Site are discussed below for information purposes. Adherence to the safety and health guidelines in this CHASP should reduce the potential for exposure to the compounds discussed below.

Potential exposure to contaminants was limited to soil and soil vapor. Groundwater was not encountered at the Site.

1.5.1 Volatile Organic Compounds (VOCs)

No VOCs or Polychlorinated Biphenyls (PCBs) were detected in any of the soil samples collected during the remedial investigation (RI). Soil vapor samples collected during the RI showed very low concentrations of benzene, carbon disulfide, methylene chloride and m&p-xylenes, n-hexane, tetrachloroethane and trichlorofluoromethane (Freon 11). None of these compounds were observed in concentrations governed under the New York State Department of Health (NYSDOH) Soil Vapor Guidance.

VOCs may cause contact dermatitis. Direct contact can be irritating to the skin and produce itching, burning, swelling and redness. Direct contact or exposure to vapors may be irritating to the eyes. Conjunctivitis may result from prolonged exposure. High levels of exposure to Semi-Volatile Organic Compounds (SVOCs), though not anticipated during work activities

conducted during this project, may increase the risk of cancer including lung, kidney, and skin cancer. Poisoning may occur by ingestion of large doses, inhalation, or skin absorption.

The major route of entry for the work activities to be conducted at this site is through direct contact. Exposure is most likely when handling soil samples. Inhalation may occur when the soil is disturbed causing respirable and nuisance dust particles to become airborne. Details for monitoring procedures can be found in Section 2.

1.5.2 Semi-volatile Organic Compounds

SVOC exceedances of the Residential Use Soil Clean-up Objectives (SCOs) were limited to one of the 14 analytical samples collected. All of the SVOCs identified above the Residential Use SCOs were Polycyclic Aromatic Hydrocarbons (PAHs). Concentrations ranged from 0.92 mg/kg of dibenzo(a,h)anthracene to 4.74 mg/kg of chrysene. The exceedances of the SCOs were relatively low, all being within at least one order of magnitude of the respective Residential Use SCO. PAHs are generally produced as byproducts of fuel burning and are commonly found in urban fill-type material, including ash, which was identified in this sampling interval.

1.5.3 Metals

All soil samples contained metals as part of the soil structure. Metals exceedances of the Residential Use SCOs were limited to barium in one sample, SB-4 (0 to 2-feet) with a concentration of 691 mg/kg. The barium detection above the Residential Use SCO (350 mg/kg) is possibly attributable to typical background conditions which can vary greatly in the region.

Exposure to high concentrations of copper through inhalation can cause irritation of the eyes, nose, pharynx, and nasal septum. Ingestion may cause a metallic taste. Skin irritation may result from direct contact with skin. Damage to the liver and kidneys may occur.

Exposure to high concentrations of selenium may cause eye, skin, nose and throat irritation, headache, chills, fever, bronchitis, a metallic taste in the mouth, garlic breath, gastrointestinal disturbance, dermatitis, and eye and skin burns.

The primary route of exposure is through inhalation of dust particles when soil is disturbed and becomes airborne.

1.5.4 Asbestos-Containing Materials

As asbestos containing materials (ACM) have not been identified onsite, they are not currently monitored for at the site. However, in the course of earthwork, staff should be

cognizant of potential ACM and report any suspected ACM to the CM Contractor and the CHSO, who will then determine the appropriate course of action.

1.5.5 Polychlorinated Biphenyls

As polychlorinated Biphenyls (PCBs) have not been identified onsite, they are not considered a potential concern at the site.

1.6 Biological Hazards

During the course of the project, there is a potential for workers to come into contact with biological hazards such as animals, insects, and plants. Workers will be instructed in hazard recognition, health hazards, and control measures during site-specific training.

1.6.1 Animals

During the conduct of site operations, wild animals such as stray dogs or cats, raccoons, and mice may be encountered. Workers will use discretion and avoid all contact with wild animals. If these animals present a problem, efforts will be made to remove these animals from the site by contacting a licensed animal control technician.

1.6.2 Insects

Insects, including bees, wasps, hornets, and spiders, may be present at the site making the chance of a bite possible. Some individuals may have a severe allergic reaction to an insect bite or sting that can result in a life threatening condition. Any individuals who have been bitten or stung by an insect should notify the Site Safety Officer (SSO). The following is a list of preventive measures:

- Apply insect repellent prior to performing any field work and as often as needed throughout the work shift.
- Wear proper protective clothing (work boots, socks, and light colored pants).
- Field personnel who may have insect allergies should have bee sting allergy medication onsite and should provide this information to the SSO prior to commencing work.

1.6.2.1 Tick Borne Illnesses

Lyme disease is caused by infection from a deer tick that carries a spirochete. During the painless tick bite, the spirochete may be transmitted into the bloodstream that could lead to the worker contracting Lyme disease.

Lyme disease may cause a variety of medical conditions including arthritis, which can be treated successfully if the symptoms are recognized early and medical attention is received. Treatment with antibiotics has been successful in preventing more serious symptoms from developing. Early signs may include a flu-like illness, an expanding skin rash, and joint pain. If left untreated, Lyme disease can cause serious nerve or heart problems, as well as a disabling type of arthritis.

Symptoms can include a stiff neck, chills, fever, sore throat, headache, fatigue and joint pain. This flu-like illness is out of season, commonly happening between May and October when ticks are most active. A large expanding skin rash may develop around the area of the bite. More than one rash may occur. The rash may feel hot to the touch and may be painful. Rashes vary in size, shape, and color, but often look like a red ring with a clear center. The outer edges expand in size. It's easy to miss the rash and the connection between the rash and a tick bite. The rash develops from three days to as long as a month after the tick bite. Almost one third of those with Lyme disease never get the rash.

Joint or muscle pain may be an early sign of Lyme disease. These aches and pains may be easy to confuse with the pain that comes with other types of arthritis. However, unlike many other types of arthritis, this pain seems to move or travel from joint to joint.

Lyme disease can affect the nervous system. Symptoms include stiff neck, severe headache, and fatigue usually linked to meningitis. Symptoms may also include pain and drooping of the muscles on the face, called Bell's Palsy. Lyme disease may also mimic symptoms of multiple sclerosis or other types of paralysis.

The disease can also cause serious, but reversible heart problems, such as irregular heartbeat. Finally, Lyme disease can result in a disabling, chronic type of arthritis that most often affects the knees. Treatment is more difficult and less successful in later stages. Often, the effects of Lyme disease may be confused with other medical problems.

It is recommended that personnel check themselves when in areas that could harbor deer ticks, wear light color clothing and visually check themselves and their buddy when coming from wooded or vegetated areas. If a tick is found biting an individual, the Project Manager (PM) should be contacted immediately. The tick can be removed by pulling gently at the head with tweezers. The affected area should then be disinfected with an antiseptic wipe. The employee will be offered the option for medical treatment by a physician, which typically involves prophylactic antibiotics. If personnel feel sick or have signs similar to those above, they should notify the PM immediately.

The deer tick can also cause Babesiosis, an infection of the parasite *Babesia Microti*. Symptoms of Babesiosis may not be evident, but may also include fever, fatigue and hemolytic anemia lasting from several days to several months. Babesiosis is most commonly diagnosed in the elderly or in individuals whose immune systems are compromised.

Ehrlichiosis is a tick-borne disease which can be caused by either of two different organisms. Human monocytic ehrlichiosis (HME) is caused by *Ehrlichia chaffeensis*, which is transmitted by the lone star tick (*Amblyomma americanum*). Human granulocytic anaplasmosis (HGA), previously known as human granulocytic ehrlichiosis (HGE), is caused by *Anaplasma phagocytophilia*, which is transmitted by the deer tick (*Ixodes scapularis*).

In New York State, most cases of ehrlichiosis have been reported on Long Island and in the Hudson Valley. Ehrlichiosis is transmitted by the bite of infected ticks, including the deer tick and the lone star tick. The symptoms of HME and HGE are the same and usually include fever, muscle aches, weakness and headache. Patients may also experience confusion, nausea, vomiting and joint pain. Unlike Lyme disease or Rocky Mountain spotted fever, a rash is not common. Infection usually produces mild to moderately severe illness, with high fever and headache, but may occasionally be life-threatening or even fatal. Symptoms appear one to three weeks after the bite of an infected tick. However, not every exposure results in infection.

Rocky Mountain spotted fever (RMSF) is a tick-borne disease caused by a rickettsia (a microbe that differs somewhat from bacteria and virus). Fewer than 50 cases are reported annually in New York State. In the eastern United States, children are infected most frequently, while in the western United States, disease incidence is highest among adult males. Disease incidence is directly related to exposure to tick-infested habitats or to infested pets. Most of the cases in New York State have occurred on Long Island. RMSF is characterized by a sudden onset of moderate to high fever (which can last for two or three weeks), severe headache, fatigue, deep muscle pain, chills and rash. The rash begins on the legs or arms, may include the soles of the feet or palms of the hands, and may spread rapidly to the trunk or rest of the body. Symptoms usually appear within two weeks of the bite of an infected tick.

*(Information on Ehrlichiosis, Babesiosis, and Rocky Mountain Spotted Fever was derived from the New York State Department of Health).

1.6.2.2 Wasps and Bees

Wasps (hornets and yellow-jackets) and bees (honeybees and bumblebees) are common insects that may pose a potential hazard to the field team if work is performed during spring, summer or fall. Bees normally build their nests in the soil. However, they use other natural holes such as abandoned rodent nests or tree hollows. Wasps make a football-shaped, paper-like nest either below or above the ground. Yellow-jackets tend to build their nests in the ground but hornets tend to build their nests in trees and shrubbery. Bees are generally more mild-mannered than wasps and are less likely to sting. Bees can only sting once while wasps are capable of stinging multiple times because of a barbed stinger. Wasps sting when they feel threatened. By remaining calm and not annoying wasps by swatting, you lessen the chance of being stung.

Wasps and bees inject a venomous fluid under the skin when they sting. The venom causes a painful swelling that may last for several days. If the stinger is still present, carefully remove it with tweezers. Some people may develop an allergic reaction (i.e. anaphylactic shock) to a wasp or bee sting. If such a reaction develops, seek medical attention at once. Employees should inform the SSO if they are allergic to bees or wasps, and inform the SSO if an epi-pen is required treatment and the location of the pen.

1.6.3 Plants

The potential for contact with poisonous plants exists when performing field work in undeveloped and wooded areas. Poison ivy, sumac, and oak may be present onsite. Poison ivy can be found as vines on tree trunks or as upright bushes. Poison ivy consists of three leaflets with notched edges. Two leaflets form a pair on opposite sides of the stalk, and the third leaflet stands by itself at the tip. Poison ivy is red in the early spring and turns shiny green later in the spring. Poison sumac can be present in the form of a flat-topped shrub or tree. It has fern-like leaves, which are velvety dark green on top and pale underneath. The branches of immature trees have a velvety "down." Poison sumac has white, "hairy" berry clusters. Poison oak can be present as a sparingly branched shrub. Poison oak is similar to poison ivy in that it has the same leaflet configuration; however, the leaves have slightly deeper notches. Prophylactic application of Tecnu may prevent the occurrence of exposure symptoms. Post exposure over the counter products are available and should be identified at the local pharmacist. Susceptible individuals should be identified to the PM.

Contact with poison ivy, sumac, or oak may lead to a skin rash, characterized by reddened, itchy, blistering skin which needs first aid treatment. If a field worker believes they have contacted one of these plants, immediately wash skin thoroughly with soap and water, taking care not to touch your face or other body parts.

1.7 Sun Exposure

Employees are encouraged to liberally apply sunscreen, with a minimum sun protection factor (SPF) of 15, when working outdoors to avoid sunburn and potential skin cancer, which is associated with excessive sun exposure to unprotected skin. Additionally, employees should wear safety glasses that offer protection from UVA/UVB rays.

1.8 Personal Safety

Field activities have the potential to take site workers into areas which may pose a risk to personal safety. The following website (source) has been researched to identify potential crime activity in the area of the project:

http://www.nyc.gov/html/nypd/html/crime_prevention/crime_statistics.shtml

Type of Crime	Subject Property and Vicinity	New York City Total*
Murder	3	376
Rape	9	1330
Robbery	125	18,362
Felony Assault	107	17,871
Burglary	54	17,475
Grand Larceny	296	38,543

*New York City Total includes values from the 26th Precinct

2012 crime statistics from this website report that the 26th Precinct, which is closest to the subject property, is shown above in comparison to the current New York City total.

To protect yourself, take the following precautions:

- If deemed necessary, use the buddy system (teams of a minimum of two persons present);
- Let the SSO know when you begin work in these areas and when you leave;
- Call in regularly;
- Pay attention to what is going on around you; and
- If you arrive in an area and it does not look safe to get out of your vehicle, lock the doors and drive off quickly, but safely.

Site workers must not knowingly enter into a situation where there is the potential for physical and violent behaviors to occur. If site workers encounter hostile individuals or a confrontation develops in the work area, suspend work activities, immediately leave the area of concern, and contact local 911 for assistance. Notify the SSO and CHSO of any incidents once you are out of potential danger.

In the event of an emergency, prompt communications with local emergency responders is essential. At least one charged and otherwise functioning cell phone to facilitate emergency communications will be on site.

2. Community Air Monitoring Plan

Big Apple will implement a Community Air Monitoring Plan (CAMP) in compliance with New York City Department of Environmental Protection (NYCDEP) requirements. Big Apple will contract with GEI Consultants, Inc. P.C. to implement the plan.

The CM Contractor will provide the following equipment to implement the CAMP, if deemed necessary:

- Photoionization Meter (PID)
- Dust Meter
- Sound Level Meter by the CHSO, type to be appropriate to the activities performed

All monitoring equipment will be calibrated and maintained in accordance with manufacturer's requirements. All calibrations will be recorded in the project notes daily or on a daily calibration form.

3. Project Personnel/Responsibilities and Lines of Authority

GEI Personnel		
Joseph Rastegar	Project Manager	Office: 516-482-4820 Cell: 516-984-4680
David Kimia	Site Safety Officer (SSO), Field Representative(FR)	Office: 516-482-4820

Lines of Authority will be as follows:

Onsite – The CM Contractor will have responsibility for safety of its employees during the work performed at the site. The Field Representative (FR) will have a cell phone available to contact the appropriate local authorities, in the event of an emergency. The FR will be available for communication with the SSO and CM and with the client representative. The FR and/or SSO may change due to the nature of work being conducted onsite.

3.1 Construction Manager (CM)

Responsibilities of the CM include the following:

- Verifies implementation of the CHASP
- Conducts periodic inspections and documents these in the field book
- Participates in incident investigations
- Verifies the HASP has all of the required approvals before any site work is conducted
- Verifies that the client and/or CM site manager is informed of project changes, which require modifications of the CHASP
- Has overall responsibility for project health and safety
- Acts as the primary point of contact with the client for site related activities and coordination with non-project related site operations
- Overseeing of performance of project tasks as outlined in the scope of work
- Plans field work using appropriate safe procedures and equipment
- Verifies and documents current OSHA Construction training compliance for all construction trades

- Verifies that subcontractors acknowledge and sign the projects CHASP

3.2 Construction Health and Safety Officer (CHSO)

The CHSO is a qualified health and safety professional with experience in construction activities. Responsibilities of the CHSO include the following:

- Serves as the primary contact to review health and safety matters that may arise
- Approves revised or new safety protocols for field operations
- Coordinates revisions of this CHASP with field personnel
- Coordinates upgrading or downgrading of PPE with the site manager
- Leads the investigation of all accidents/incidents
- Provide the necessary training of subcontractor trade field crews in accordance with OSHA regulations and provides proof of training to the SSO prior to subcontractor trade personnel entering the site

3.3 Site Safety Officer (SSO)

Responsibilities of the SSO include the following:

- Verifies that the CHASP is implemented and that all health and safety activities identified in the CHASP are conducted and/or implemented
- Verifies that field work is scheduled with adequate personnel and equipment resources to complete the job safely and enforces site health and safety rules
- Verifies that adequate communications between trade crews and emergency response personnel is maintained during emergency situations
- Verifies that field site personnel are adequately trained and qualified to work at the site and that proper PPE is utilized
- Report all accidents/incidents to the CHSO and CM
- Stop work if necessary
- Identifies operational changes which require modifications to the CHASP and ensures that the procedure modifications are implemented and documented through changes to the CHASP, with CHSO approval
- Determines upgrades or downgrades of PPE based on site conditions and/or real-time monitoring results with CHSO approval
- Reports to the CHSO and provides summaries of field operations and progress

3.4 Field Representative (FR)

The FR is responsible for carrying out field work on a monthly, quarterly, or as-needed basis. Responsibilities of the FR include:

- Conducts routine safety inspection of the work area
- Documenting occurrences of unsafe activity and what actions were taken to rectify the situation
- Reports any unsafe or potentially hazardous conditions to the SSO and CM
- Maintains familiarity of the information, instructions, and emergency response actions contained in the CHASP
- Complies with rules, regulations and procedures set forth in the CHASP
- Prevents admittance to work site by unauthorized personnel
- Inspects all tools and equipment, including PPE, prior to use and documents inspection on the daily safety meeting form or in the appropriate field book
- Verifies that monitoring instruments are calibrated
- Stops work if necessary

4. Subcontractors

The CM Contractor may subcontract with various companies to conduct various work onsite on an as-needed basis. Contact information for these subcontractors will be available when such work is being conducted.

The CM Contractor requires its subcontractors to work in a responsible and safe manner. Subcontractors for this project may be required to develop their own CHASP for protection of their employees and must adhere to applicable requirements set forth in this CHASP.

5. Emergency Contact List

EMERGENCY INFORMATION		
Important Phone Numbers		Directions to: Harlem Hospital Center 506 Lenox Avenue New York, NY 10037
Police	911	Head northwest on W 130 th Street toward Convent Avenue for 256 feet. Take the 1 st left onto Convent Avenue and go 0.2 miles. Continue onto Morningside Avenue for 0.1 miles. Turn left onto W 125 th St/Dr. Martin Luther King Jr. Boulevard and go 0.2 miles. Take the 2 nd left onto 8 th Ave/Frederick Douglass Blvd and go 0.5 miles. Turn right onto W 135 th St and go 0.3 miles. Take the 2 nd left onto Lenox Ave and go 285 feet. The hospital will be on the right. Refer to Hospital Route Map in Appendix A .
Fire Department	911	
Ambulance	911	
Occupational Health Clinic Plainview Medical Group	(516) 822-2541	
Local Hospital Harlem Hospital Center	(212) 939-1000	
Project Manager	Joseph Rastegar	Office: 516-482-4820 Cell: 516-984-4680

6. Training Program

6.1 Hazard Communication

In accordance with 29 CFR 1926, site workers shall, at the time of job assignment, have received hazard communication training. All hazardous materials used on the site will be properly labeled, stored, and handled. SDSs will be available to onsite staff.

6.2 Onsite Safety Briefings

Other onsite personnel will be given health and safety briefings by a FR to assist personnel in safely conducting work activities. The briefings will include information on new operations to be conducted, changes in work practices or changes in the site's conditions, as well as periodic reinforcement of previously discussed topics. The briefings will also provide a forum to facilitate conformance with safety requirements and to identify performance deficiencies related to safety during daily activities or as a result of safety inspections. These safety briefing will be documented on a daily safety briefing form or other appropriate media.

7. Medical Support

In case of minor injuries, onsite care shall be administered with the Site first aid kit. For serious injuries, call 911 and request emergency medical assistance. Seriously injured persons should not be moved, unless they are in immediate danger.

Section 5 and **Appendix A** contain detailed emergency information, including directions to the nearest hospital, and a list of emergency services and their telephone numbers. Field personnel will carry a cellular telephone.

8. Personal Protective Equipment

PPE required for each level of protection is as follows.

Safety Equipment	Level A	Level B	Level C	Level D
Hard hats with splash shields or safety glasses			•	•
Steel-toe boots with overboots as appropriate for work being performed and materials handled			•	•
Protective Leather Work Gloves or Chemical-resistant gloves as needed			•	•
Reflective Vest			•	•
Half- or full-face respirators with HEPA cartridges as approved by the CHSO as needed			•	
Long Pants	•	•	•	•
Welding Helmet				•
Welding Gloves, apron, leggings (as needed)				•
Flame-resistant boots for welding				•

PPE can include hardhats, safety glasses or face shields, steel toe/steel shank boots, hearing protection, nitrile gloves, and leather gloves as necessary.

OSHA Requirements for PPE

All PPE used during the course of this field investigation must meet the following OSHA standards:

Type of Protection	Regulation	Source
Eye and Face	29 CFR 1910.133	ANSI Z87.1 1968
Respiratory	29 CFR 1910.134	ANSI Z88.1 1980
Head	29 CFR 1910.135	ANSI Z89.1 1969
Foot	29 CFR 1910.136	ANSI Z41.1 1999 or ASTM F-2412-2005, and ASTM F-2413-2005

CFR = Code of Federal Regulations

ANSI = American National Standards Institute

ASTM = American Society For Testing and Materials

Any onsite personnel who have the potential to don a respirator must have a valid fit test certification and documentation of medical clearance. The CHSO will maintain such information on file for onsite personnel. The CM will obtain such information from the subcontractor's site supervisor prior to the initiation of any such work. Both the respirator and cartridges specified for use in Level C protection must be fit-tested prior to use in accordance with OSHA regulations (29 CFR 1910.134). Air purifying respirators cannot be worn under the following conditions:

- Oxygen deficiency;
- IDLH concentrations; and
- If contaminant levels exceed designated use concentrations.

For most work conducted at the site, Level D PPE will include long pants, hard hats, safety glasses with side shields, and steel toe safety boots with steel shanks. The CHSO will determine if site works deems an upgrade in PPE. The use of respirators is not anticipated.

Use of Level A or Level B PPE is not anticipated. If conditions indicating the need for Level A or Level B PPE are encountered, personnel will leave the work zone and this CHASP will be revised with oversight of the CHSO, personnel will not re-enter the work zone until conditions allow.

9. Supplemental Contingency Plan Procedures

9.1 Fire

In the event of a fire, all personnel will evacuate the area. The FR will contact the local fire department and report the fire. Notification of evacuation will be made to the client, the CM and the CHSO. The FR or appropriate staff member will account for subcontractor personnel and report their status to the CM.

9.2 Severe Weather

The contingency plan for severe weather includes reviewing the expected weather to determine if severe weather is in the forecast. Severe weather includes high winds over 30 mph, heavy rains or snow squalls, thunderstorms, hurricanes, and lightning storms. If severe weather is approaching, the decision to evacuate staff and subcontractor personnel from the site is the responsibility of the FR. Notification of evacuation will be made to the Project Manager, the Construction Project Manager and the CHSO. The FR will account for onsite staff and report their status to the CM. If safe, work can resume 30 minutes after the last flash of lightening or clap of thunder.

9.3 Spills or Material Release

If a hazardous waste spill or material release occurs, the SSO or their representative, if safe, will immediately assess the magnitude and potential seriousness of the spill or release based on the following:

- Safety Data Sheets (SDS), if applicable, for the material spilled or released
- Source of the release or spillage of hazardous material
- An estimate of the quantity released and the rate at which it is being released
- The direction in which the spill or air release is moving
- Personnel who may be or may have been in contact with the material, or air release, and possible injury or sickness as a result
- Potential for fire and/or explosion resulting from the situation
- Estimates of area under influence of release

If the spill or release is determined to be within the onsite emergency response capabilities, the SSO will ensure implementation of the necessary remedial action. If the release is beyond the capabilities of the site personnel, all personnel will be evacuated from the

immediate area and the local fire department will be contacted. The SSO will notify the CM and the CHSO.

9.4 Alcohol and Drug Abuse Prevention

Alcohol and drugs will not be allowed on the work site. Project personnel under the influence of alcohol or drugs will not be allowed to enter the site.

10. Decontamination Procedures

10.1 Personnel Decontamination Station

As needed, a personnel decontamination station where workers can drop equipment and remove PPE will be set up as needed by the Contractor. The PPE area will be equipped with basins for water and detergent, and trash bag(s) or cans for containing disposable PPE and discarded materials. Once personnel have decontaminated at this station and taken off their PPE, they will proceed to a portable sink where they will wash themselves wherever they have potentially been exposed to any contaminants (e.g., hands, face, etc.).

Contaminated PPE (gloves, suits, etc.) will be decontaminated and stored for reuse or placed in plastic bags (or other appropriate container) and disposed of in an approved facility.

Decontamination wastewater and used cleaning fluids will be collected and disposed of in accordance with all applicable state and federal regulations.

10.2 Decontamination Equipment Requirements

If heavily contaminated soils are encountered during intrusive work, the following equipment, as needed, will be in sufficient supply to implement decontamination procedures for equipment.

- Buckets
- Alconox™ detergent concentrate
- Hand pump sprayers
- Long handle soft bristle brushes
- Large sponges
- Cleaning wipes for respirators
- Bench or stool(s)
- Methanol
- Liquid detergent and paper towels
- Plastic trash bags

Construction Health and Safety Plan Sign-Off

All personnel conducting site activities must read this Construction Health and Safety Plan, be familiar with its requirements, and agree to its implementation.

All other personnel onsite for regulatory, observational and other activities not directly associated with site activities must read this Health and Safety Plan for hazard communication purposes.

Once the Construction Health and Safety Plan has been read, complete this sign-off sheet, and return it to the Project Manager.

Site Name:

Woodrow Plaza

Activity:

- Foundation excavation, loading and removal of site soils
- Site grading
- Building construction

I have received and read the Health and Safety Plan, been briefed on it, and agree to its implementation.

Name	Signature	Date	Company

Appendix A

Site-Specific Information

 464 W 130th St, New York, NY 10027

-
1. Head **northwest** on **W 130th St** toward **Convent Ave** go 256 ft
total 256 ft
 -  2. Take the 1st left onto **Convent Ave** go 0.2 mi
total 0.2 mi
About 45 secs
 3. Continue onto **Morningside Ave** go 0.1 mi
total 0.3 mi
 -  4. Turn left onto **W 125th St/Dr Martin Luther King Jr Blvd** go 0.3 mi
total 0.7 mi
About 2 mins
 -  5. Take the 3rd left onto **Adam Clayton Powell Jr Blvd** go 0.5 mi
total 1.2 mi
About 2 mins
 -  6. Turn right onto **W 135th St** go 0.2 mi
total 1.3 mi
 -  7. Take the 1st left onto **Lenox Ave** go 141 ft
total 1.4 mi
Destination will be on the right

 506 Lenox Ave, New York, NY 10039

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Map data ©2013 Google

Directions weren't right? Please find your route on maps.google.com and click "Report a problem" at the bottom left.

Appendix B

Cold Stress Guidelines

Cold Stress Guidelines

	Symptoms	What to do
<ul style="list-style-type: none"> ▪ Mild Hypothermia 	<ul style="list-style-type: none"> ▪ Body Temp 98-90°F ▪ Shivering ▪ Lack of coordination, stumbling, fumbling hands ▪ Slurred speech ▪ Memory loss ▪ Pale, cold skin 	<ul style="list-style-type: none"> ▪ Move to warm area ▪ Stay active ▪ Remove wet clothes and replace with dry clothes or blankets ▪ Cover the head ▪ Drink warm (not hot) sugary drink
<ul style="list-style-type: none"> ▪ Moderate Hypothermia 	<ul style="list-style-type: none"> ▪ Body temp 90-86°F ▪ Shivering stops ▪ Unable to walk or stand ▪ Confused irrational 	<ul style="list-style-type: none"> ▪ All of the above, plus: ▪ Call 911 ▪ Cover all extremities completely ▪ Place very warm objects, such as hot packs on the victim's head, neck, chest and groin
<ul style="list-style-type: none"> ▪ Severe Hypothermia 	<ul style="list-style-type: none"> ▪ Body temp 86-78°F ▪ Severe muscle stiffness ▪ Very sleepy or unconscious ▪ Ice cold skin ▪ Death 	<ul style="list-style-type: none"> ▪ Call 911 ▪ Treat victim very gently ▪ Do not attempt to re-warm
<ul style="list-style-type: none"> ▪ Frostbite 	<ul style="list-style-type: none"> ▪ Cold, tingling, stinging or aching feeling in the frostbitten area, followed by numbness ▪ Skin color turns red, then purple, then white or very pale skin ▪ Cold to the touch ▪ Blisters in severe cases 	<ul style="list-style-type: none"> ▪ Call 911 ▪ Do not rub the area ▪ Wrap in soft cloth ▪ If help is delayed, immerse in warm, not hot, water
<ul style="list-style-type: none"> ▪ Trench Foot 	<ul style="list-style-type: none"> ▪ Tingling, itching or burning sensation ▪ Blisters 	<ul style="list-style-type: none"> ▪ Soak feet in warm water, then wrap with dry cloth bandages ▪ Drink a warm sugary drink

Appendix C

Heat Stress Guidelines

HEAT STRESS GUIDELINES			
Form	Signs & Symptoms	Care	Prevention³
Heat Rash	Tiny red vesicles in affected skin area. If the area is extensive, sweating can be impaired.	Apply mild lotions and cleanse the affected area.	Cool resting and sleeping areas to permit skin to dry between heat exposures
Heat Cramps	Spasm, muscular pain (cramps) in stomach area and extremities (arms and legs).	Provide replacement fluids with minerals (salt) such as Gatorade.	Adequate salt intake with meals ¹ ACCLIMATIZATION ²
Heat Exhaustion	Profuse sweating, cool (clammy) moist skin, dizziness, confusion, pale skin color, faint, rapid shallow breathing, headache, weakness, muscle cramps.	Remove from heat, sit or lie down, rest, replace lost water with electrolyte replacement fluids (water, Gatorade) take frequent sips of liquids in amounts greater than required to satisfy thirst.	ACCLIMATIZATION ² Adequate salt intake with meals ¹ only during early part of heat season. Ample water intake, frequently during the day
Heat Stroke	HOT Dry Skin. Sweating has stopped. Mental confusion, dizziness, nausea, severe headache, collapse, delirium, coma.	HEAT STROKE IS A MEDICAL EMERGENCY - Remove from heat. - COOL THE BODY AS RAPIDLY AS POSSIBLE by immersing in cold (or cool) water, or splash with water and fan. Call for Emergency Assistance. Observe for signs of shock.	ACCLIMATIZATION ² Initially moderate workload in heat (8 to 14 days). Monitor worker's activities.

Appendix D

Safety Data Sheets (SDS)

Appendix

Material Data Sheets

**VOLATILE ORGANIC COMPOUNDS
(VOCs)**

Volatile Organic Compounds - VOCs

What are VOCs?

Volatile Organic Compounds (VOCs) are chemicals that evaporate easily at room temperature. The term "organic" indicates that the compounds contain carbon. VOC exposures are often associated with an odor while other times there is no odor. Both can be harmful. There are thousands of different VOCs produced and used in our daily lives. Some examples are:

- Benzene
- Toluene
- Methylene Chloride
- Formaldehyde
- Xylene
- Ethylene glycol
- Texanol
- 1,3-butadiene

Where do VOCs come from?

Many products emit or "off-gas" VOCs. Some examples of VOC emission sources are:

- Paints
- Varnishes
- Moth balls
- Solvents
- Gasoline
- Newspaper
- Cooking
- Cleaning Chemicals
- Vinyl floors
- Carpets
- Photocopying
- Upholstery Fabrics
- Adhesives
- Sealing Caulks
- Cosmetics
- Air Fresheners
- Fuel Oil
- Vehicle Exhaust
- Pressed wood furniture
- Environmental Tobacco Smoke (Secondhand smoke)

What levels of VOC are typical in the home?

As of July, 2003 neither Minnesota nor the federal government have set standards for VOC levels in non-occupational settings. However, some guidelines are available. MDH has established Health Risk Values (HRVs) for some contaminants in air for several different exposure situations. For more information on these HRVs go to MDH Health Risk Values Website.

Many studies have shown VOC levels are higher in indoor air than outdoor air. The U.S. Environmental Protection Agency (EPA) Total Exposure Assessment Methodology (TEAM) studies have found indoor VOC levels that were 2 to 5 times higher than outdoors.

Levels of VOC exposure in indoor air vary widely depending on:

- the volume of air in the room/building
- the rate at which the VOC is off-gassed
- the building ventilation rate
- outdoor concentrations

Along with the concentration of VOCs in a given environment, the time an individual spends in that environment is important in determining exposure.

What are the health effects of VOC exposure?

Acute

- Eye irritation / watering
- Nose irritation
- Throat irritation
- Headaches
- Nausea / Vomiting
- Dizziness
- Asthma exacerbation

Chronic

- Cancer
- Liver damage
- Kidney damage
- Central Nervous System damage.



Indoor Air Unit
 P.O. Box 64975
 St. Paul, MN, 55164-0975
 651-201-4601 or 800-798-9050
www.health.state.mn.us/dhrs/eh/air

Volatile Organic Compounds - VOCs - page 2

Most studies to date have been conducted on single chemicals. Less is known about the health effects of combined chemical exposure. The best health protection measure is to limit your exposure to products and materials that contain VOCs when possible. If you think you may be having health problems caused by VOC exposure consult an occupational/environmental health physician who specializes in this area

Are some people at greater risk from VOC exposure than others?

Persons with respiratory problems such as asthma, young children, elderly, and persons with heightened sensitivity to chemicals may be more susceptible to illness from VOC exposure.

How can I tell what levels of VOC are in my home?

Some home screening kits are available to measure total volatile organic compound (TVOC) levels, and some individual VOCs. These home sampling kits should be viewed as providing "ballpark" amount of VOCs in the indoor air. Conditions such as ventilation, temperature and humidity can cause VOC concentrations to fluctuate daily

Prior to testing conduct an inspection of your home for some common sources of VOCs such as:

- New carpeting
- New furniture
- Idling automobile in attached garage
- Recent painting
- Chemicals stored in the home
- Recently applied adhesives
- New plastic or electronic devices

Once you determine the probable source of VOCs, steps can be taken to reduce your exposure. If you are unable to determine the source, a professional indoor air quality investigator / industrial hygienist can be consulted. MDEH has a service provider list along with recommendations on selection. MDH also has a guidance document that can be used for investigating possible VOC contamination entitled "Indoor Air Sampling at VOC contaminated sites"

How do I reduce the levels of VOCs in my home?

Most products containing VOCs will off-gas within a short period of time although some will continue to give off trace amounts of VOCs for a long period of time. The best means of reducing VOC exposure is to eliminate products containing VOCs or use low emitting VOC products.

Some steps you can take to reduce your exposure to VOC in the home are:

- Source control
 - eliminate products from home that have high levels of VOCs
 - purchase new products that contain low or no VOCs (environmentally preferable purchasing)
- Ventilation - open doors and windows, use fans.
- Control climate - as temperature and humidity increase some chemicals will off gas more.
- Treat the source - airtight sealers can be used to coat over some products. However, caution is advised in choosing the coating product as this could introduce new VOCs into the air while controlling for others.
- Air cleaners - look for ones with activated charcoal filtration designed to remove chemicals from the air.
- Remove unused chemicals from the home. Check with city or county for household hazardous waste collection sites.
- Perform renovations when home is unoccupied.

For more information on VOCs or other Indoor Air Quality Issues Contact:

**The Minnesota Department of Health
Indoor Air Unit**

625 Robert Street North, PO Box 64975

St. Paul, MN 55164-0975

651/201-4601 or 800/798-9050

View the Air Quality web page at:

www.health.state.mn.us/divs/eh/air

To require this document in another form contact:

Call 651/201-4601. TTY: 651/201-5797 or Minnesota Relay
Service TTY: 1-800/627-3529.

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Printed on recycled paper.

**SEMI-VOLATILE ORGANIC COMPOUNDS
(SVOCs)**



U.S. Environmental Protection Agency

Mid-Atlantic Brownfields

Serving: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia

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This Fact Sheet is presented by the U. S. Environmental Protection Agency, Region III (EPA) to assist in the selection of analytical parameters and the associated Quality Assurance and Quality Control (QA/QC) procedures to be utilized in Phase II Environmental Assessments under the U.S. Environmental Protection Agency (EPA) Brownfields initiative. This fact sheet is presented for informational purposes only, and should not be construed as a federal policy or directive. The Brownfields Coordinator for this region may be reached at 215-814-5000.

A semivolatile organic compound is an organic compound which has a boiling point higher than water and which may vaporize when exposed to temperatures above room temperature. Semivolatile organic compounds include phenols and polynuclear aromatic hydrocarbons (PAH).

LIST OF SEMIVOLATILE ORGANIC COMPOUNDS *

- Phenol
- Bis(2-chloroethyl)ether
- 2-Chlorophenol
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- 1,2-Dichlorobenzene
- 2-Methylphenol
- Bis(2-chloroisopropyl)ether
- 4-Methylphenol
- n-Nitroso-di-n-propylamine
- Hexachloroethane
- Nitrobenzene
- Isophorone
- 2-Nitrophenol
- 2,4-Dimethylphenol
- Bis(2-chloroethoxy)methane
- 2,4-Dichlorophenol
- 1,2,4-Trichlorobenzene
- Naphthalene
- 4-Chloroaniline
- Hexachlorobutadiene
- 4-Chloro-3-methylphenol
- 2-Methylnaphthalene
- Hexachlorocyclopentadiene
- 2,4,6-Trichlorophenol
- 2,4,5-Trichlorophenol
- 2-Chloronaphthalene
- 2-Nitroaniline
- Dimethylphthalate
- Acenaphthylene
- 2,6-Dinitrotoluene

- 3-Nitroaniline
- Acenaphthene
- 2,4-Dinitrophenol
- 4-Nitrophenol
- 4-Bromophenyl-phenylether
- Hexachlorobenzene
- Pentachlorophenol
- Phenanthrene
- Anthracene
- Carbazole
- Di-n-butylphthalate
- Fluoranthene
- Pyrene
- Butylbenzylphthalate
- 3,3'-Dichlorobenzidine
- Benzo(a)anthracene
- Chrysene
- Bis(2-ethylhexyl)phthalate
- Di-n-octylphthalate
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(a)pyrene
- Indeno(1,2,3-cd)pyrene
- Dibenz(a,h)anthracene
- Benzo(g,h,i)perylene

* Please note: The list above corresponds to the EPA Contract Laboratory Program (CLP) semivolatile organic list, and is not a complete list of all toxic semivolatile organic compounds. If the site history suggests a semivolatile organic compound may be present which is not on this list, the compound should be included in the requested analysis.

ANALYSIS METHODS

Please note that the methods listed below are EPA approved and the most commonly used by EPA and their contractors. However, they are not the only methods for the analysis of semivolatile organic compounds. In addition, these are not drinking water test methods.

METHOD	APPLICABLE MATRICES
EPA 625 or 1625 (1)	Aqueous
EPA SW-846 3010 or 3020/8250 or 8270 (2)	Aqueous
EPA SW-846 3500 or 3550/8250 or 8270 (2)	Soil/Sediment & Waste
EPA CLP Statement of Work 3/90	Aqueous & Soil/Sediment
EPA SW-846 8100 or 8310 (2) 610 (1)	Water and Soil/Sediment for PAH
EPA SW-846 8040 (2) or 604 (1)	Water and Soil/Sediment for Phenols

1. U.S. Environmental Protection Agency (EPA). 1992. *Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater*. Washington, D.C. July.
2. EPA. 1986. *Test Methods for Evaluating Solid Waste*. SW-846. Washington, D.C. September.

COLLECTION MEDIA/VOLUME

Listed below are the EPA-recommended preservation and holding times as well as suggested glassware.

MATRIX	GLASSWARE	VOLUME	PRESERVATIVE	HOLDING TIME
Soil/Sediment	8-oz wide mouthed jar	1 8-oz jar	ice to 4° C	14 days
Aqueous	32-oz amber bottle	2 amber bottles	ice to 4° C	7 days
Waste	8-oz wide mouth jar	1 8-oz jar	none required (ice preferred)	none (try not to exceed 14 days)

MINIMUM LABORATORY QUALITY CONTROL MEASURES

The laboratory should have Standard Operating Procedures available for review for the semivolatile organic compound analyses and for all associated methods needed to complete the semivolatile analysis, such as total solids, instrument maintenance, sample handling, and sample documentation procedures. In addition, the laboratory should have a Laboratory Quality Assurance/Quality Control Statement available for review which includes all key personnel qualifications.

QC TYPE	FREQUENCY OF ANALYSIS	ACCEPTABLE LIMITS
Gas Chromatograph/Mass Spectrometer (GC/MS) Tuning	Once per day or more frequently if required by method	See method criteria for acceptable limits
Initial Calibration	Prior to analysis of samples (minimum three concentration levels for every compound and an instrument blank)	% Relative Standard Deviation of Response Factors of ≤ 30 (see method for any allowable variations), and a minimum Response Factor of ≥ 0.05 (see method for calculation)
Continuing Calibration	Once per day (mid-level standard containing all compounds) or more frequently if required by method	% Difference for Response Factor of ≤ 25 (see method for any allowable variations), and a minimum Response Factor of ≥ 0.05 (see method for calculation)
Method Blank	Once per extraction batch	See method for allowable limits
Internal Standards	Six per sample (see method for suggested internal standard compounds)	-50% to + 100% of Daily standard area and retention time shift (limits depend if packed or capillary column, see method)

Matrix Spike/Matrix Spike Duplicate	One set of MS/MSD per 20 samples or analysis set	See method for allowable limits
Surrogate Spikes	Added to each sample (see method for suggested surrogate compounds)	Report recovery

MINIMUM DATA PACKAGE REQUIREMENTS

- Sample results in a tabular form (if soil or sediment) reported on a dry weight basis.
- Report % moisture or % solids for all soil and sediment samples.
- Report sample volumes or weights, as well as any dilution factors, for each sample analysis.
- Return copy of the chain of custody form sent with the samples with laboratory receipt acknowledgment, and the internal or laboratory chain of custody forms.
- Method blank results.
- GC/MS tuning data summary.
- GC/MS initial and continuing calibration data summary forms.
- GC/MS internal standard data for samples and associated daily standard.
- Surrogate spike recoveries, either on a separate table or with the results, including laboratory QC limits.
- Matrix spike recovery tables, including laboratory recovery and relative percent difference QC limits.
- Date samples were analyzed, on a separate sheet, tune sheet, or results page.
- Optional: sample, standard and blank chromatograms, quantitation sheets, mass spectra, instrument run logs, and total solids logs.

Note: The optional QC must be maintained by laboratory for at least one year for possible future QC audits.

[[Region 3 HSCD](#) | [Region 3](#) | [EPA Superfund](#)]

United States Environmental Protection Agency, 1650 Arch Street, Philadelphia, PA 19103-2029
Phone: (800) 438-2474

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Last updated on Wednesday, September 28th, 2005
URL: <http://www.epa.gov/reg3hwmd/bfs/regional/analytical/semi-volatile.htm>

This fact sheet answers the most frequently asked health questions (FAQs) about polycyclic aromatic hydrocarbons (PAHs). For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

What are polycyclic aromatic hydrocarbons?

(Pronounced pōlī-sī/kōlīk ār'e-mātīk hī'dre-kar/benz)

Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.

What happens to PAHs when they enter the environment?

- PAHs enter the air mostly as releases from volcanoes, forest fires, burning coal, and automobile exhaust.
- PAHs can occur in air attached to dust particles.
- Some PAH particles can readily evaporate into the air from soil or surface waters.
- PAHs can break down by reacting with sunlight and other chemicals in the air, over a period of days to weeks.

- PAHs enter water through discharges from industrial and wastewater treatment plants.
- Most PAHs do not dissolve easily in water. They stick to solid particles and settle to the bottoms of lakes or rivers.
- Microorganisms can break down PAHs in soil or water after a period of weeks to months.
- In soils, PAHs are most likely to stick tightly to particles; certain PAHs move through soil to contaminate underground water.
- PAH contents of plants and animals may be much higher than PAH contents of soil or water in which they live.

How might I be exposed to PAHs?

- Breathing air containing PAHs in the workplace of coking, coal-tar, and asphalt production plants; smokehouses; and municipal trash incineration facilities.
- Breathing air containing PAHs from cigarette smoke, wood smoke, vehicle exhausts, asphalt roads, or agricultural burn smoke.
- Coming in contact with air, water, or soil near hazardous waste sites.
- Eating grilled or charred meats; contaminated cereals, flour, bread, vegetables, fruits, meats; and processed or pickled foods.
- Drinking contaminated water or cow's milk.

unconscious person. Get medical attention.

Skin Contact:

Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists.

Eye Contact:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician if irritation persists.

5. Fire Fighting Measures

Fire:

Flash point: 121C (250F) CC

Low fire hazard when exposed to heat or flames.

Explosion:

Above the flash point, explosive vapor-air mixtures may be formed. Will burst into flame on contact with chromic acid.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

Material Safety Data Sheet

Pyrene, 98+%(gc)

ACC# 27452

Section 1 - Chemical Product and Company Identification

MSDS Name: Pyrene, 98+%(gc)

Catalog Numbers: AC180830000, AC180830250, AC180831000, AC180832500

Synonyms: Benzo[def]phenanthrene

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
129-00-0	Pyrene, ca	96.0	204-927-3

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: yellow powder.

Danger! Cancer hazard. May be fatal if inhaled. Causes respiratory tract irritation. May be harmful if swallowed. Causes skin irritation. May cause eye irritation. May cause cancer based on animal studies. The toxicological properties of this material have not been fully investigated.

Target Organs: None known.

Potential Health Effects

Eye: May cause eye irritation.

Skin: Causes skin irritation. Prolonged and/or repeated contact may cause irritation and/or dermatitis. Dermal applications may cause hyperemia (an excess of blood in a part), weight loss, and hematopoietic changes.

Ingestion: May cause digestive tract disturbances. The toxicological properties of this substance have not been fully investigated. May be harmful if swallowed.

Inhalation: May be fatal if inhaled. Causes respiratory tract irritation. Inhalation of dust may cause respiratory tract irritation.

Chronic: May cause cancer according to animal studies. Chronic effects may include leukocytosis and lengthened chronaxy of the leg muscle flexors.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Pyrene, ca	0.2 mg/m ³ TWA (as benzene soluble aerosol) (listed under Coal tar pitches).	0.1 mg/m ³ TWA (cyclohexane-extractable fraction) (listed under Coal tar pitches). 80 mg/m ³ IDLH (listed under Coal tar pitches).	0.2 mg/m ³ TWA (as benzene soluble fraction) (listed under Coal tar pitches).

OSHA Vacated PELs: Pyrene, ca: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Powder

Appearance: yellow

Odor: None reported.

pH: Not available.

Vapor Pressure: < 1 mm Hg @20C

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 404 deg C @ 760.00mmHg

Freezing/Melting Point: 156 deg C

Decomposition Temperature: Not available.

Solubility: 1.271

Specific Gravity/Density: Not available.

Molecular Formula: C₁₆H₁₀

Molecular Weight: 202.25

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Physical: No information available.

Other: Reported BCF: rainbow trout, 72); goldfish, 457; fathead minnow, 600-970. Based on these values, minimal to moderate bioconcentration of pyrene in aquatic organisms would be expected.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	DOT regulated - small quantity provisions apply (see 49CFR173.4)	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 129-00-0 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 129-00-0: Effective 6/1/87, Sunset 6/1/97

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 129-00-0: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 129-00-0: 1000 lb TPQ (lower threshold); 10000 lb TPQ (upper threshold)

SARA Codes

CAS # 129-00-0: acute, chronic.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

International Chemical Safety Cards

BENZ(a)ANTHRACENE

ICSC: 0385

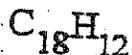
BENZ(a)ANTHRACENE

1,2-Benzoanthracene

Benzo(a)anthracene

2,3-Benzphenanthrene

Naphthanthracene



Molecular mass: 228.3

CAS # 56-55-3

RTECS # CV9275000

ICSC # 0385

EC # 601-033-00-9

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.		Water spray, powder. In case of fire in the surroundings: all extinguishing agents allowed.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE		AVOID ALL CONTACT!	
• INHALATION		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		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 take to a doctor.
• INGESTION		Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth.
SPILLAGE DISPOSAL		STORAGE	PACKAGING & LABELLING

**ENVIRONMENTAL
DATA**

In the food chain important to humans, bioaccumulation takes place, specifically in seafood.

NOTES

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.

ADDITIONAL INFORMATION

ICSC: 0385

© IPCS, CEC, 1993

BENZ(a)ANTHRACENE

**IMPORTANT
LEGAL
NOTICE:**

Neither the CEC or the IPCS nor any person acting on behalf of the CEC or the IPCS is responsible for the use which might be made of this information. This card contains the collective views of the IPCS Peer Review Committee and may not reflect in all cases all the detailed requirements included in national legislation on the subject. The user should verify compliance of the cards with the relevant legislation in the country of use.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Flash Point: Not applicable.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: ; Flammability: 1; Instability:

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Avoid breathing dust.

Storage: Store in a tightly closed container. Store in a cool, dry area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Conditions to Avoid: Dust generation.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 218-01-9: GC0700000

LD50/LC50:

Not available.

Carcinogenicity:

CAS# 218-01-9:

- **ACGIH:** A3 - Confirmed animal carcinogen with unknown relevance to humans
- **California:** carcinogen, initial date 1/1/90
- **NTP:** Suspect carcinogen (listed as Polycyclic aromatic hydrocarbons).
- **IARC:** Group 1 carcinogen (listed as Coal tar pitches).

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Neurotoxicity: No information available.

Mutagenicity: Chrysene was mutagenic to *S. Typhimurium* in the presence of an exogenous metabolic system.

Other Studies: Genotoxicity : *Salmonella typhimurium* TA97,TA98,TA100 with metabolic activation positive (Sakai.M.et al Mutat.Res1985); *Saccharomyces cerevisiae* (Miotic recombination) D3 strain 330mg/kg negative.

Section 12 - Ecological Information

Ecotoxicity: Water flea LC50 = 1.9 mg/L; 2 Hr.; Unspecified Fish toxicity : LC50 (96hr) *Neaethes arenacedentata* >1ppm.(Rossi,S.S. et al Marine Pollut. Bull. 1978)
Invertebrate toxicity : lethal treshold concentration (24hr) *Daphnia Magna* 0,7æg/l.(* Newsted,J.L. et al Environ. Toxicol. Chem. 1987) Bioaccumulation : 24hr *Daphnia Magna* log bioconcentration factor 3.7845 (*)

Environmental: Degradation studies : biodegradated by white rot fungus (Proc.Annu.Meet.Am.Wood-Preserv.Assoc.1989) May be utilised by axenic cultures of microorganisms e.g. *Pseudomonas pancimobilis* EPA505, which may have novel degradative systems(Mueller,J.G. et al ppl.Environ.Microbiol.1990; Mueller, J.G. et al Environ.Sci.Technol.1991).

Physical: Not found.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. CAS# 218-01-9 is listed as a Priority Pollutant under the Clean Water Act. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 218-01-9 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains Chrysene, a chemical known to the state of California to cause cancer.

California No Significant Risk Level: CAS# 218-01-9: 0.35 μ g/day NSRL (oral)

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T

Risk Phrases:

R 45 May cause cancer.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 53 Avoid exposure - obtain special instructions before use.

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 218-01-9: No information available.

Canada - DSL/NDSL

CAS# 218-01-9 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2A.

Canadian Ingredient Disclosure List

CAS# 218-01-9 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/30/1999

Material Safety Data Sheet

Benzo[a]pyrene, 98%

ACC# 37175

Section 1 - Chemical Product and Company Identification

MSDS Name: Benzo[a]pyrene, 98%

Catalog Numbers: AC105600000, AC105600010, AC105601000, AC377200000, AC377200010, AC377201000 AC377201000

Synonyms: 3,4-Benzopyrene; 3,4-Benzpyrene; Benzo[def]chrysene.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	ETNECS/ELINCS
50-32-8	Benzo[a]pyrene	>96	200-028-5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: yellow to brown powder.

Danger! May cause heritable genetic damage. Cancer hazard. May cause harm to the unborn child. May impair fertility. May cause eye, skin, and respiratory tract irritation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Target Organs: Reproductive system.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation. May be harmful if absorbed through the skin.

Ingestion: May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated. May be harmful if swallowed.

Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. May be harmful if inhaled.

Chronic: May cause cancer in humans. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Benzo[a]pyrene	0.2 mg/m ³ TWA (as benzene soluble aerosol) (listed under Coal tar pitches).	0.1 mg/m ³ TWA (cyclohexane-extractable fraction) (listed under Coal tar pitches). 80 mg/m ³ IDLH (listed under Coal tar pitches).	0.2 mg/m ³ TWA (as benzene soluble fraction) (listed under Coal tar pitches).

OSHA Vacated PELs: Benzo[a]pyrene: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9 - Physical and Chemical Properties

Physical State: Powder

Appearance: yellow to brown

Odor: faint aromatic odor

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 495 deg C @ 760 mm Hg

Freezing/Melting Point: 175 - 179 deg C

Decomposition Temperature: Not available.

Solubility: 1.60x10⁻³ mg/l @25°C

Specific Gravity/Density: Not available.

Molecular Formula: C₂₀H₁₂

Molecular Weight: 252.31

RCRA U-Series:

CAS# 50-32-8: waste number U022.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOL (Benzo{a} pyrene)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOL (Benzo{a} pyrene)
Hazard Class:	9	9
UN Number:	UN3077	UN3077
Packing Group:	III	III

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 50-32-8 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 50-32-8: 1 lb final RQ; 0.454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 50-32-8: acute, chronic.

Section 313

This material contains Benzo[a]pyrene (CAS# 50-32-8, >96%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

CAS# 50-32-8 is listed as a Priority Pollutant under the Clean Water Act.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 50-32-8 can be found on the following state right to know lists: California,

shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC SKIN REACTION. MAY AFFECT LIVER, KIDNEY, BLOOD AND CENTRAL NERVOUS SYSTEM. COMBUSTIBLE.

J.T. Baker SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate
Flammability Rating: 2 - Moderate
Reactivity Rating: 0 - None
Contact Rating: 2 - Moderate
Lab Protective Equip: GOGGLES; LAB COAT
Storage Color Code: Red (Flammable)

Potential Health Effects

Inhalation:

Inhalation of dust or vapors can cause headache, nausea, vomiting, extensive sweating, and disorientation. The predominant reaction is delayed intravascular hemolysis with symptoms of anemia, fever, jaundice, and kidney or liver damage.

Ingestion:

Toxic. Can cause headache, profuse perspiration, listlessness, dark urine, nausea, vomiting and disorientation. Intravascular hemolysis may also occur with symptoms similar to those noted for inhalation. Severe cases may produce coma with or without convulsions. Death may result from renal failure.

Skin Contact:

Can irritate the skin and, on prolonged contact, may cause rashes and allergy. "Sensitized" individuals may suffer a severe dermatitis.

Eye Contact:

Vapors and solid causes irritation, redness and pain. Very high exposures can damage the nerves of the eye.

Chronic Exposure:

Has led to cataract formation in eyes. May cause skin allergy.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin, blood or vascular disorders or impaired respiratory function may be more susceptible to the effects of the substance. Particularly susceptible individuals are found in the general population, most commonly in dark skinned races.

manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from any source of heat or ignition. Keep away from moisture and oxidizers. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

- OSHA Permissible Exposure Limit (PEL):
10 ppm, 50 mg/m³.

- ACGIH Threshold Limit Value (TLV):

TWA= 10 ppm, 52 mg/m³

STEL= 15 ppm, 79 mg/m³.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a half-face respirator with an organic vapor cartridge and particulate filter (NIOSH type P95 or R95 filter) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece respirator with an organic vapor cartridge and particulate filter (NIOSH P100 or R100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. Please note that N series filters are not recommended for this material. For emergencies or instances where the exposure levels are not known, use

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Strong oxidizers, strong alkalis and strong mineral acids, mixtures of aluminum trichloride and benzoyl chloride. Reacts violently with chromic anhydride. Melted naphthalene will attack some forms of plastics, rubber, and coatings.

Conditions to Avoid:

Avoid heat, sparks, flames and other ignition sources and incompatibles.

11. Toxicological Information

Oral rat LD50: 490 mg/kg;

Inhalation rat LC50: 340 mg/m³, 1 hour;

Skin rabbit LD50: > 20 g/kg;

Irritation data: skin (open Draize) rabbit 495 mg, mild; eye (standard Draize) rabbit 100 mg, mild;

Investigated as a tumorigen, mutagen and reproductive effector.

----- \Cancer Lists\ -----

Ingredient

---NTP Carcinogen---

Known

Anticipated

IARC Categ

Naphthalene (91-20-3)

No

No

None

12. Ecological Information

Environmental Fate:

When released into the soil, this material may biodegrade to a moderate extent.

When released into the soil, this material is expected to leach into groundwater.

When released into the soil, this material is expected to quickly evaporate. When released into water, this material is expected to quickly evaporate. When released into the

water, this material may biodegrade to a moderate extent. When released into the water, this material is expected to have a half-life between 1 and 10 days. This

material may bioaccumulate to some extent. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced

hydroxyl radicals. When released into the air, this material is expected to have a half-life of less than 1 day.

Environmental Toxicity:

No information found.

Ingredient

Naphthalene (91-20-3)

	--Canada--		
Korea	DSL	NDSL	Phil.
Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1 \

Ingredient

Naphthalene (91-20-3)

-SARA 302-		-SARA 313-	
RO	TPQ	List	Chemical C
No	No	Yes	No

-----\Federal, State & International Regulations - Part 2 \

Ingredient

Naphthalene (91-20-3)

CERCLA	-RCRA-	-TSCA-
100	261.33	8(d)
	U165	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
 SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
 Reactivity: No (Pure / Solid)

Australian Hazchem Code: 2Z

Poison Schedule: S6

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 2 Flammability: 2 Reactivity: 0

Label Hazard Warning:

WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC SKIN REACTION. MAY AFFECT LIVER, KIDNEY, BLOOD AND CENTRAL NERVOUS SYSTEM. COMBUSTIBLE.

Label Precautions:

- Avoid contact with eyes, skin and clothing.
- Avoid prolonged or repeated contact with skin.
- Avoid breathing dust.
- Avoid breathing vapor.
- Keep container closed.
- Use only with adequate ventilation.
- Wash thoroughly after handling.

This information was last updated on July 15, 2004. We have tried to make it as accurate and useful as possible, but can take no responsibility for its use, misuse, or accuracy. We have not verified this information, and cannot guarantee that it is up-to-date.

given here.)

ORL-RAT LDLO 1500 mg kg⁻¹

IPR-RAT LDLO 250 mg kg⁻¹

ITR-RAT LDLO 25 mg kg⁻¹

IPR-MUS LDLO 100 mg kg⁻¹

Transport information

(The meaning of any UN hazard codes which appear in this section is given here.)

Hazard class 4.1. Packing group III. UN No 1325.

Personal protection

Safety glasses and gloves. Good ventilation and an inert atmosphere if working with powdered material.

[Return to [Physical & Theoretical Chemistry Lab. Safety home page.](#)]

This information was last updated on September 17, 2003. We have tried to make it as accurate and useful as possible, but can take no responsibility for its use, misuse, or accuracy. We have not verified this information, and cannot guarantee that it is up-to-date.

given here.)

IPR-MUS LD50 3.5 mg kg⁻¹

Risk phrases

(The meaning of any risk phrases which appear in this section is given here.)

R11 R36 R37 R38 (all for the powdered material only).

Transport information

(The meaning of any UN hazard codes which appear in this section is given here.)

UN Nos: 3089 (very fine powder), 3077 (fine powder); otherwise considered non-hazardous for air, sea and road freight.

Personal protection

Suitable ventilation if handling powder.

[Return to [Physical & Theoretical Chemistry Lab. Safety home page.](#)]

This information was last updated on November 16, 2004. Although we have tried to make it as accurate and useful as possible, we can take no responsibility for its use or misuse.

spontaneously. May react violently with titanium, ammonium nitrate, potassium perchlorate, hydrazoic acid. Incompatible with acids, oxidizing agents, sulfur.

Toxicology

Carcinogen. Toxic by all routes of entry. May cause sensitization by skin contact. Typical TLV 0.05 mg/m³

Toxicity data

(The meaning of any toxicological abbreviations which appear in this section is given here.)

IPR-RAT LD50 250 mg kg⁻¹

Risk phrases

(The meaning of any risk phrases which appear in this section is given here.)

R10 R17 R36 R37 R38 R40 R42 R43.

Transport information

(The meaning of any UN hazard codes which appear in this section is given here.)

UN No 3089. Packing group II. Hazard class 4.1.

Personal protection

Good ventilation. Wear gloves and safety glasses when handling the powder.

Safety phrases

(The meaning of any safety phrases which appear in this section is given here.)

S16 S22 S26 S36.

PESTICIDES AND PCBs



Health & Safety
Specific Chemicals
Regulatory Actions

U.S. Environmental Protection Agency

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Assessing Health Risks from Pesticides

January 1999
735-F-99-002

The Federal Government, in cooperation with the States, carefully regulates pesticides to ensure that they do not pose unreasonable risks to human health or the environment. As part of that effort, the Environmental Protection Agency (EPA) requires extensive test data from pesticide producers that demonstrate pesticide products can be used without posing harm to human health and the environment. EPA scientists and analysts carefully review these data to determine whether to register (license) a pesticide product or a use and whether specific restrictions are necessary. This fact sheet is a brief overview of EPA's process for assessing potential risks to human health when evaluating pesticide products.

Background

There are more than 865 active ingredients registered as pesticides, which are formulated into thousands of pesticide products that are available in the marketplace. About 350 pesticides are used on the foods we eat, and to protect our homes and pets.

EPA plays a critical role in evaluating these chemicals prior to registration, and in reevaluating older pesticides already on the market, to ensure that they can be used with a reasonable certainty of no harm. The process EPA uses for evaluating the health impacts of a pesticide is called risk assessment.

EPA uses the National Research Council's four-step process for human health risk assessment:

- Step One:** Hazard Identification
- Step Two:** Dose-Response Assessment
- Step Three:** Exposure Assessment
- Step Four:** Risk Characterization

Step One: Hazard Identification (Toxicology)

The first step in the risk assessment process is to identify potential health effects that may occur from different types of pesticide exposure. EPA considers the full spectrum of a pesticide's potential health effects.

Generally, for human health risk assessments, many toxicity studies are conducted on animals by pesticide companies in independent laboratories and evaluated for acceptability by EPA scientists. EPA evaluates pesticides for a wide range of adverse effects, from eye and skin irritation to cancer and birth defects in laboratory animals. EPA may also consult the public literature or other sources of supporting information on any aspect of the chemical.

Step Two: Dose-Response Assessment

Paracelsus, the Swiss physician and alchemist, the "father" of modern toxicology (1493-1541) said,

"The dose makes the poison."

In other words, the amount of a substance a person is exposed to is as important as how toxic the chemical might be. For example, small doses of aspirin can be beneficial to people, but at very high doses, this common medicine can be deadly. In some individuals, even at very low doses, aspirin may be deadly.

Dose-response assessment involves considering the dose levels at which adverse effects were observed in test animals, and using these dose levels to calculate an equal dose in humans.

Step Three: Exposure Assessment

People can be exposed to pesticides in three ways:

1. Inhaling pesticides (inhalation exposure),
2. Absorbing pesticides through the skin (dermal exposure), and
3. Getting pesticides in their mouth or digestive tract (oral exposure).

Depending on the situation, pesticides could enter the body by any one or all of these routes. Typical sources of pesticide exposure include:

- **Food**
Most of the foods we eat have been grown with the use of pesticides. Therefore, pesticide residues may be present inside or on the surfaces of these foods.

- **Home and Personal Use Pesticides**
You might use pesticides in and around your home to control insects.

EPA: Pesticides - Assessing Health Risks from Pesticides

Page 2 of 5

Step Two: Dose-Response Assessment

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Dose-response assessment involves considering the dose levels at which adverse effects were observed in test animals, and using these dose levels to calculate an equal dose in humans.

Step Three: Exposure Assessment

People can be exposed to pesticides in three ways:

considered, and broad conclusions are made. EPA's role is to evaluate both toxicity and exposure and to determine the risk associated with use of the pesticide.

Simply put,

$$\text{RISK} = \text{TOXICITY} \times \text{EXPOSURE.}$$

This means that the risk to human health from pesticide exposure depends on both the toxicity of the pesticide and the likelihood of people coming into contact with it. At least *some* exposure and *some* toxicity are required to result in a risk. For example, if the pesticide is very poisonous, but no people are exposed, there is no risk. Likewise, if there is ample exposure but the chemical is non-toxic, there is no risk. However, usually when pesticides are used, there is some toxicity and exposure, which results in a potential risk.

EPA recognizes that effects vary between animals of different species and from person to person. To account for this variability, *uncertainty factors* are built into the risk assessment. These uncertainty factors create an additional margin of safety for protecting people who may be exposed to the pesticides. FQPA requires EPA to use an extra 10-fold safety factor, if necessary, to protect infants and children from effects of the pesticide.

Types of Toxicity Tests EPA Requires for Human Health Risk Assessments

EPA evaluates studies conducted over different periods of time and that measure specific types of effects. These tests are evaluated to screen for potential health effects in infants, children and adults.

Acute Testing: Short-term exposure; a single exposure (dose).

- Oral, dermal (skin), and inhalation exposure
- Eye irritation
- Skin irritation
- Skin sensitization
- Neurotoxicity

Sub-chronic Testing: Intermediate exposure; repeated exposure over a longer period of time (i.e., 30-90 days).

- Oral, dermal (skin), and inhalation
- Neurotoxicity (nerve system damage)

Chronic Toxicity Testing: Long-term exposure; repeated exposure lasting for most of the test animal's life span. Intended to determine the effects of a pesticide after prolonged and repeated exposures.

- Chronic effects (non-cancer)
- Carcinogenicity (cancer)

Developmental and Reproductive Testing: Identify effects in the fetus of an exposed pregnant female (birth defects) and how pesticide exposure affects the ability of a test animal to successfully reproduce.

Mutagenicity Testing: Assess a pesticide's potential to affect the cell's genetic components.

Hormone Disruption: Measure effects for their potential to disrupt the endocrine system. The endocrine system consists of a set of glands and the hormones they produce that help guide the development, growth, reproduction, and behavior of animals including humans.

Risk Management

Once EPA completes the risk assessment process for a pesticide, we use this information to determine if (when used according to label directions), there is a reasonable certainty that the pesticide will not harm a person's health.

Using the conclusions of a risk assessment, EPA can then make a more informed decision regarding whether to approve a pesticide chemical or use, as proposed, or whether additional protective measures are necessary to limit occupational or non-occupational exposure to a pesticide. For example, EPA may prohibit a pesticide from being used on certain crops because consuming too much food treated with the pesticide may result in an unacceptable risk to consumers. Another example of protective measures is requiring workers to wear personal protective equipment (PPE) such as a respirator or chemical resistant gloves, or not allowing workers to enter treated crop fields until a specific period of time has passed.

If, after considering all appropriate risk reduction measures, the pesticide still does not meet EPA's safety standard, the Agency will not allow the proposed chemical or use. Regardless of the specific measures enforced, EPA's primary goal is to ensure that legal uses of the pesticide are protective of human health, especially the health of children, and the environment.

Human Health Risk Assessment and the Law

Federal law requires detailed evaluation of pesticides to protect human health and the environment. In 1996, Congress made significant changes to strengthen pesticide laws through the Food Quality Protection Act (FQPA). Many of these changes are key elements of the current risk assessment process. FQPA required that EPA consider:

- **A New Safety Standard:** FQPA strengthened the safety standard that pesticides must meet before being approved for use. EPA must ensure with a reasonable certainty that no harm will result from the legal uses of the pesticide.
- **Exposure from All Sources:** In evaluating a pesticide, EPA must estimate the combined risk from that pesticide from all non-occupational sources, such as:
 - Food Sources
 - Drinking Water Sources
 - Residential Sources
- **Cumulative Risk:** EPA is required to evaluate pesticides in light of similar toxic effects that different pesticides may share, or "a common mechanism of toxicity." At this time, EPA is developing a methodology for this type of assessment.
- **Special Sensitivity of Children to Pesticides:** EPA must ascertain whether there is an increased susceptibility from exposure to the pesticide to infants and children. EPA must build an additional 10-fold safety factor into risk assessments to ensure the protection of infants and children, unless it is determined that a lesser margin of safety will be safe for infants and children.

For More Information

<http://www.epa.gov/pesticides/factsheets/riskassess.htm>

1/30/2006

If you would like more information about EPA's pesticide programs, contact the Communication Service Branch at (703) 305-5017 or visit the [Pesticides Web site](#).

For more information on specific pesticides, or to inquire about the symptoms of pesticide poisoning, call the National Pesticide Information Center (NPIC), a toll-free hotline information at: 1-800-858-7378, or visit their [Web site](#) [\[EPA Disclaimer\]](#)

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Last updated on Monday, May 19th, 2003
URL: <http://www.epa.gov/pesticides/factsheets/riskassess.htm>

What is a Pesticide?

A pesticide is any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. Pests can be insects, mice and other animals, unwanted plants (weeds), fungi, or microorganisms like bacteria and viruses. Though often misunderstood to refer only to *insecticides*, the term pesticide also applies to herbicides, fungicides, and various other substances used to control pests. Under United States law, a pesticide is also any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

Many household products are pesticides. Did you know that all of these common products are considered pesticides?

- Cockroach sprays and baits
- Insect repellents for personal use.
- Rat and other rodent poisons.
- Flea and tick sprays, powders, and pet collars.
- Kitchen, laundry, and bath disinfectants and sanitizers.
- Products that kill mold and mildew.
- Some lawn and garden products, such as weed killers.
- Some swimming pool chemicals.

By their very nature, most pesticides create some risk of harm to humans, animals, or the environment because they are designed to kill or otherwise adversely affect living organisms. At the same time, pesticides are useful to society because of their ability to kill potential disease-causing organisms and control insects, weeds, and other pests. In the United States, the Office of Pesticide Programs of the Environmental Protection Agency is chiefly responsible for regulating pesticides. Biologically-based pesticides, such as pheromones and microbial pesticides, are becoming increasingly popular and often are safer than traditional chemical pesticides.

Here are some common kinds of pesticides and their function:

Algicides

Control algae in lakes, canals, swimming pools, water tanks, and other sites.

Antifouling agents

Kill or repel organisms that attach to underwater surfaces, such as boat bottoms.

Antimicrobials

Kill microorganisms (such as bacteria and viruses).

Attractants

Attract pests (for example, to lure an insect or rodent to a trap). (However, food is not considered a pesticide when used as an attractant.)

Biocides

Kill microorganisms.

Disinfectants and sanitizers

Kill or inactivate disease-producing microorganisms on inanimate objects.

Fungicides

Kill fungi (including blights, mildews, molds, and rusts).

Fumigants

Produce gas or vapor intended to destroy pests in buildings or soil.

This fact sheet answers the most frequently asked health questions (FAQs) about polychlorinated biphenyls. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

What are polychlorinated biphenyls?

Polychlorinated biphenyls are mixtures of up to 209 individual chlorinated compounds (known as congeners). There are no known natural sources of PCBs. PCBs are either oily liquids or solids that are colorless to light yellow. Some PCBs can exist as a vapor in air. PCBs have no known smell or taste. Many commercial PCB mixtures are known in the U.S. by the trade name Aroclor.

PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they don't burn easily and are good insulators. The manufacture of PCBs was stopped in the U.S. in 1977 because of evidence they build up in the environment and can cause harmful health effects. Products made before 1977 that may contain PCBs include old fluorescent lighting fixtures and electrical devices containing PCB capacitors, and old microscope and hydraulic oils.

What happens to PCBs when they enter the environment?

- PCBs entered the air, water, and soil during their manufacture, use, and disposal; from accidental spills and leaks during their transport; and from leaks or fires in products containing PCBs.
- PCBs can still be released to the environment from hazardous waste sites; illegal or improper disposal of industrial wastes and consumer products; leaks from old electrical transformers containing PCBs; and burning of some wastes in incinerators.
- PCBs do not readily break down in the environment and thus may remain there for very long periods of time. PCBs can travel long distances in the air and be deposited in areas far away from where they were released. In water, a small amount of PCBs may remain dissolved, but most stick to organic particles and bottom sediments. PCBs also bind strongly to soil.
- PCBs are taken up by small organisms and fish in water. They are also taken up by other animals that eat these

aquatic animals as food. PCBs accumulate in fish and marine mammals, reaching levels that may be many thousands of times higher than in water.

How might I be exposed to PCBs?

- Using old fluorescent lighting fixtures and electrical devices and appliances, such as television sets and refrigerators, that were made 30 or more years ago. These items may leak small amounts of PCBs into the air when they get hot during operation, and could be a source of skin exposure.
- Eating contaminated food. The main dietary sources of PCBs are fish (especially sportfish caught in contaminated lakes or rivers), meat, and dairy products.
- Breathing air near hazardous waste sites and drinking contaminated well water.
- In the workplace during repair and maintenance of PCB transformers; accidents, fires or spills involving transformers, fluorescent lights, and other old electrical devices; and disposal of PCB materials.

How can PCBs affect my health?

The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects. Most of the studies of health effects of PCBs in the general population examined children of mothers who were exposed to PCBs.

Animals that ate food containing large amounts of PCBs for short periods of time had mild liver damage and some died. Animals that ate smaller amounts of PCBs in food over several weeks or months developed various kinds of health effects, including anemia; acne-like skin conditions; and liver, stomach, and thyroid gland injuries. Other effects

POLYCHLORINATED BIPHENYLS

ToxFAQs™ Internet address is <http://www.atsdr.cdc.gov/toxfaq.html>

of PCBs in animals include changes in the immune system, behavioral alterations, and impaired reproduction. PCBs are not known to cause birth defects.

How likely are PCBs to cause cancer?

Few studies of workers indicate that PCBs were associated with certain kinds of cancer in humans, such as cancer of the liver and biliary tract. Rats that ate food containing high levels of PCBs for two years developed liver cancer. The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. The EPA and the International Agency for Research on Cancer (IARC) have determined that PCBs are probably carcinogenic to humans.

How can PCBs affect children?

Women who were exposed to relatively high levels of PCBs in the workplace or ate large amounts of fish contaminated with PCBs had babies that weighed slightly less than babies from women who did not have these exposures. Babies born to women who ate PCB-contaminated fish also showed abnormal responses in tests of infant behavior. Some of these behaviors, such as problems with motor skills and a decrease in short-term memory, lasted for several years. Other studies suggest that the immune system was affected in children born to and nursed by mothers exposed to increased levels of PCBs. There are no reports of structural birth defects caused by exposure to PCBs or of health effects of PCBs in older children. The most likely way infants will be exposed to PCBs is from breast milk. Transplacental transfers of PCBs were also reported. In most cases, the benefits of breast-feeding outweigh any risks from exposure to PCBs in mother's milk.

How can families reduce the risk of exposure to PCBs?

- You and your children may be exposed to PCBs by eating fish or wildlife caught from contaminated locations. Certain states, Native American tribes, and U.S. territories have issued advisories to warn people about PCB-contaminated fish and fish-eating wildlife. You can reduce your family's exposure to PCBs by obeying these advisories.
- Children should be told not play with old appliances,

electrical equipment, or transformers, since they may contain PCBs.

- Children should be discouraged from playing in the dirt near hazardous waste sites and in areas where there was a transformer fire. Children should also be discouraged from eating dirt and putting dirty hands, toys or other objects in their mouths, and should wash hands frequently.
- If you are exposed to PCBs in the workplace it is possible to carry them home on your clothes, body, or tools. If this is the case, you should shower and change clothing before leaving work, and your work clothes should be kept separate from other clothes and laundered separately.

Is there a medical test to show whether I've been exposed to PCBs?

Tests exist to measure levels of PCBs in your blood, body fat, and breast milk, but these are not routinely conducted. Most people normally have low levels of PCBs in their body because nearly everyone has been environmentally exposed to PCBs. The tests can show if your PCB levels are elevated, which would indicate past exposure to above-normal levels of PCBs, but cannot determine when or how long you were exposed or whether you will develop health effects.

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 0.0005 milligrams of PCBs per liter of drinking water (0.0005 mg/L). Discharges, spills or accidental releases of 1 pound or more of PCBs into the environment must be reported to the EPA. The Food and Drug Administration (FDA) requires that infant foods, eggs, milk and other dairy products, fish and shellfish, poultry and red meat contain no more than 0.2-3 parts of PCBs per million parts (0.2-3 ppm) of food. Many states have established fish and wildlife consumption advisories for PCBs.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological profile for polychlorinated biphenyls (PCBs). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop E-29, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 404-498-0093. ToxFAQs™ Internet address is <http://www.atsdr.cdc.gov/toxfaq.html>. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



METALS

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Contact**Heavy Metals**Ads by GoogleHeavy Metals AnalysisArsenic PoisoningSoil ContaminationEnvironmentEnvironment Health and Safety**Introduction**

The **term heavy metal** refers to any metallic chemical element that is toxic or poisonous at low concentrations. Examples of heavy metals are mercury (Hg), cadmium (Cd), arsenic (As), chromium (Cr), thallium (Tl), and lead (Pb).

Heavy metals are natural components of the Earth's crust. They cannot be degraded or destroyed, and they enter our bodies via food, drinking water and air. As trace elements, some heavy metals (e.g. copper) are essential to maintain the metabolism of the human body. However, at higher concentrations they can cause metal poisoning could result, for instance, from drinking-water contamination (e.g. lead pipes), high concentrations near emission sources, or intake via the food chain.

Heavy metals are dangerous because they tend to **bioaccumulate**. Bioaccumulation means an increase of a chemical in a biological organism over time, compared to the chemical's concentration in the environment. Heavy metals accumulate in living things any time they are taken up and stored faster than they are broken down and excreted.

Heavy metals can enter a water supply by industrial and consumer waste, or even from acidic rain that releases heavy metals into streams, lakes, rivers, and groundwater.

Environmental and health risks.

Now we are going to describe the effects of the heavy metals in the environment. The three most prominent are Lead, Cadmium, and Mercury.

Effects of Antimony on the environment

Antimony is a metal used in the compound antimony trioxide, a flame retardant. It can also be found in pigments, dyes, and ceramics and glass. Exposure to high levels of antimony for short periods of time causes nausea and vomiting. There is little information on the effects of long-term antimony exposure, but it is a suspected human carcinogen. Antimony compounds do not bioaccumulate in aquatic life.

Effects of Cadmium on the environment

Cadmium derives its toxicological properties from its chemical similarity to zinc an essential micronutrient for humans. Cadmium is biopersistent and, once absorbed by an organism, remains resident for months (for humans) although it is eventually excreted.

In humans, long-term exposure is associated with renal dysfunction. High exposure can lead to obstructive pulmonary disease, which has been linked to lung cancer, although data concerning the latter are difficult to interpret due to confounding factors. Cadmium may also produce bone defects (*osteomalacia*, *osteoporosis*) in humans and animals. In animals, it is linked to increased blood pressure and effects on the myocardium in animals, although most human findings are inconclusive.

The average daily intake for humans is estimated as 0.15µg from air and 1µg from water. Smoking can lead to the inhalation of around 2-4µg of cadmium, but levels may vary widely.

In what form is emitted Cadmium?

Cadmium is produced as an inevitable by-product of zinc (or occasionally lead) refining, since these within the raw ore. However, once collected the cadmium is relatively easy to recycle.

The most significant use of cadmium is in nickel/cadmium batteries, as rechargeable or secondary p high output, long life, low maintenance and high tolerance to physical and electrical stress. Cadmium corrosion resistance, particularly in high stress environments such as marine and aerospace applications, reliability is required; the coating is preferentially corroded if damaged. Other uses of cadmium are PVC, in alloys and electronic compounds. Cadmium is also present as an impurity in several product fertilisers, detergents and refined petroleum products.

In the general, non-smoking population the major exposure pathway is through food, via the addition of agricultural soil from various sources (atmospheric deposition and fertiliser application) and uptake. Additional exposure to humans arises through cadmium in ambient air and drinking water.

Effects of Chromium on the environment

Chromium is used in metal alloys and pigments for paints, cement, paper, rubber, and other materials. Chromium can irritate the skin and cause ulceration. Long-term exposure can cause kidney and liver damage, circulatory and nerve tissue. Chromium often accumulates in aquatic life, adding to the danger of exposure. People who have been exposed to high levels of chromium.

Effects of Copper on the environment

Copper is an essential substance to human life, but in high doses it can cause anemia, liver and kidney and intestinal irritation. People with Wilson's disease are at greater risk for health effects from overexposure. Copper normally occurs in drinking water from copper pipes, as well as from additives designed to control corrosion.

Effects of Lead on the environment

In humans exposure to lead can result in a wide range of biological effects depending on the level and duration. Various effects occur over a broad range of doses, with the developing foetus and infant being more susceptible. High levels of exposure may result in toxic biochemical effects in humans which include decreased haemoglobin, effects on the kidneys, gastrointestinal tract, joints and reproductive system, and acute effects on the nervous system.

Lead poisoning, which is so severe as to cause evident illness, is now very rare indeed. At intermediate levels, however, there is persuasive evidence that lead can have small, subtle, subclinical effects, particularly on the development of children. Some studies suggest that there may be a loss of up to 2 IQ points for a child with a blood lead level of 10 to 20µg/dl in young children.

Average daily lead intake for adults in the UK is estimated at 1.6µg from air, 20µg from drinking water. Although most people receive the bulk of their lead intake from food, in specific populations other sources are important, such as water in areas with lead piping and plumbers' solvent water, air near point of source, paint flakes in old houses or contaminated land. Lead in the air contributes to lead levels in food through deposition and rain containing the metal, on crops and the soil. For the majority of people in the UK, however, the intake is well below the provisional tolerable weekly intake recommended by the UN Food and Agriculture Organisation.

In what form is emitted lead?

Lead in the environment arises from both natural and anthropogenic sources. Exposure can occur through food, air, soil and dust from old paint containing lead. In the general non-smoking, adult population the major pathway is from food and water. Food, air, water and dust/soil are the major potential exposure pathways for young children. For infants up to 4 or 5 months of age, air, milk formulae and water are the significant exposure pathways.

Lead is among the most recycled non-ferrous metals and its secondary production has therefore grown despite declining lead prices. Its physical and chemical properties are applied in the manufacturing, construction and other industries. It is easily shaped and is malleable and ductile. There are eight broad categories of use: (no longer allowed in the EU), rolled and extruded products, alloys, pigments and compounds, cable and ammunition.

Effects of Mercury on the environment

Mercury is a toxic substance which has no known function in human biochemistry or physiology and is highly toxic in living organisms. Inorganic mercury poisoning is associated with tremors, gingivitis and/or minor neurological effects together with spontaneous abortion and congenital malformation.

Monomethylmercury causes damage to the brain and the central nervous system, while foetal and foetal loss given rise to abortion, congenital malformation and development changes in young children.

In what form is emitted Mercury?

Mercury is a global pollutant with complex and unusual chemical and physical properties. The major source is the degassing of the Earth's crust, emissions from volcanoes and evaporation from natural bodies of water.

World-wide mining of the metal leads to indirect discharges into the atmosphere. The usage of mercury in industrial processes and in various products (e.g. batteries, lamps and thermometers). It is also used in dental amalgam for fillings and by the pharmaceutical industry. Concern over mercury in the environment has led to the development of toxic forms in which mercury can occur.

Mercury is mostly present in the atmosphere in a relatively unreactive form as a gaseous element. The short lifetime (of the order of 1 year) of its gaseous form means the emission, transport and deposition of mercury is a global phenomenon.

Natural biological processes can cause methylated forms of mercury to form which bioaccumulate and concentrate in living organisms, especially fish. These forms of mercury: monomethylmercury and dimethylmercury are highly toxic, causing neurotoxicological disorders. The main pathway for mercury to humans is through the inhalation of gaseous mercury and the consumption of fish.

The main sources of mercury emissions in the UK are from the manufacture of chlorine in mercury cells, production, coal combustion and crematoria. UK emissions of mercury are uncertain and it is estimated to be between 13 to 36 tonnes per year (DERA). Emissions are estimated to have declined by around ¾'s between 1990 and 2000 due to improved controls on mercury cells and their replacement, and the fall in coal use.

Whilst there has been a decline in the level of European emissions of mercury, emissions from outside the EU are increasing - increasing the level of ambient concentrations in the continent.

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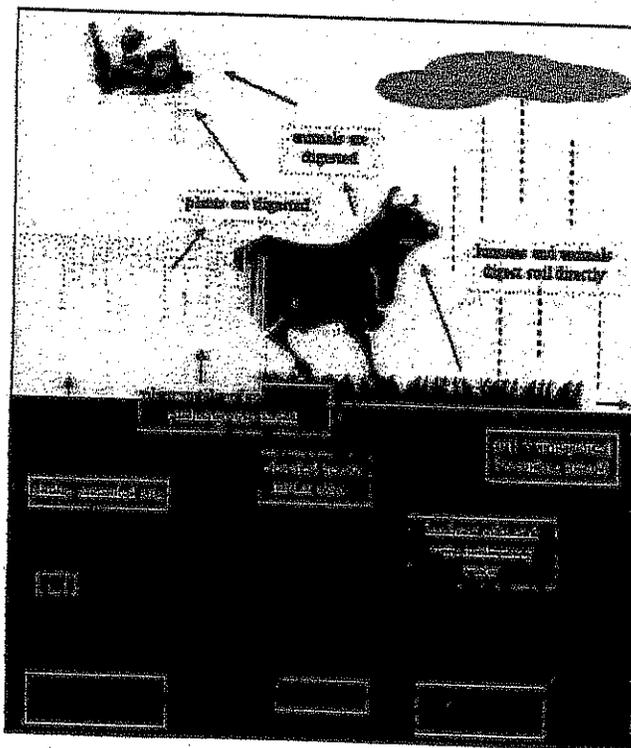
effects of Nickel on the environment

Small amounts of Nickel are needed by the human body to produce red blood cells, however, in excess become mildly toxic. Short-term overexposure to nickel is not known to cause any health problems, can cause decreased body weight, heart and liver damage, and skin irritation. The EPA does not cur levels in drinking water. Nickel can accumulate in aquatic life, but its presence is not magnified along

Effects of Selenium on the environment

Selenium is needed by humans and other animals in small amounts, but in larger amounts can cause system, fatigue, and irritability. Selenium accumulates in living tissue, causing high selenium content organisms, and causing greater health problems in human over a lifetime of overexposure. These include and fingernail loss, damage to kidney and liver tissue, damage to circulatory tissue, and more severe system.

Heavy Metals adsorption process:



In the picture we can observe the way that follows the heavy metals from the first step of the pollution human body by means the food.

The most important disasters with heavy metals:

1932

Minamata
Sewage containing mercury is released by Chisso's chemicals works into Minimata Bay in Japan. The mercury accumulates in sea creatures, leading eventually to mercury poisoning in the population.
1952
Minamata Syndrome
In 1952, the first incidents of mercury poisoning appear in the population of Minimata Bay in Japan, caused by consumption of fish polluted with mercury, bringing over 500 fatalities. Since then, Japan has had the strictest environmental laws in the industrialised world.
1986-11-01
Sandoz
Water used to extinguish a major fire carries c. 30 t fungicide containing mercury into the Upper Rhine. Fish are killed over a stretch of 100 km. The shock drives many FEA projects forwards. See also "Pollution of the Rhine at Basel / Sandoz".
1998-04
Spanish nature reserve contaminated after environmental disaster
Toxic chemicals in water from a burst dam belonging to a mine contaminate the Coto de Donana nature reserve in southern Spain. C. 5 million m ³ of mud containing sulphur, lead, copper, zinc and cadmium flow down the Rio Guadimar. Experts estimate that Europe's largest bird sanctuary, as well as Spain's agriculture and fisheries, will suffer permanent damage from the pollution.

Suggested reading for Heavy Metals

Heavy Metal Analysis Test
 Hair Analysis Reveals Toxic Metals Full
 Equipped Med. Lab Order Today
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 Real-time, In-Situ Characterization No
 sampling, no waiting for results
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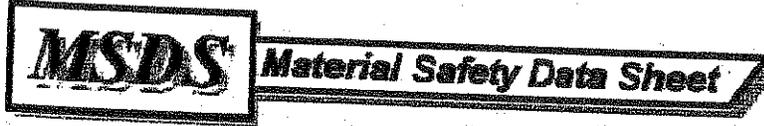
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222 Red School Lane
Phillipsburg, NJ 08855



24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300
National Response in Canada
CANUTEC: 613-996-8866
Outside U.S. And Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC, and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, explosion or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-900-582-2537) for assistance.

ARSENIC, 1,000 UG/ML OR 10,000 UG/ML

1. Product Identification

Synonyms: None
CAS No.: Not applicable to mixtures.
Molecular Weight: Not applicable to mixtures.
Chemical Formula: Not applicable to mixtures.
Product Codes: 5704, 5718, 6442

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Arsenic	7440-38-2	0.1 - 1%	Yes
Nitric Acid	7697-37-2	< 4%	Yes
Water	7732-18-5	> 95%	No

3. Hazards Identification

Emergency Overview

DANGER! CORROSIVE. LIQUID AND MIST CAUSE SEVERE BURNS TO ALL BODY TISSUE. MAY BE FATAL IF SWALLOWED OR INHALED. AFFECTS LIVER, KIDNEYS, LUNGS AND TEETH. CANCER HAZARD. CONTAINS INORGANIC ARSENIC WHICH CAN CAUSE CANCER. Risk of cancer depends on duration and level of exposure.

J.T. Baker SAF-T-DATA^(SM) Ratings (Provided here for your convenience)

Health Rating: 4 - Extreme (Cancer Causing)

Flammability Rating: 0 - None

Reactivity Rating: 1 - Slight

Contact Rating: 3 - Severe (Corrosive)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: White (Corrosive)

Potential Health Effects

Nitric acid is extremely hazardous; it is corrosive, reactive, an oxidizer, and a poison. The health effects from exposure to diluted forms of this chemical are not well documented. They are expected to be less severe than those for concentrated forms which are referenced in the descriptions below.

Inhalation:

Corrosive! Inhalation of vapors can cause breathing difficulties and lead to pneumonia and pulmonary edema, which may be fatal. Other symptoms may include coughing, choking, and irritation of the nose, throat, and respiratory tract. Arsenic may cause inflammation of the mucous membranes with cough and foamy sputum, restlessness, dyspnea, cyanosis, and rales. Symptoms like those from ingestion exposure may follow. May cause pulmonary edema.

Ingestion:

Corrosive! Swallowing nitric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract. Arsenic is highly toxic! May cause burning in esophagus, vomiting, and bloody diarrhea. Symptoms of cold and clammy skin, low blood pressure, weakness, headache, cramps, convulsions, and coma may follow. May cause damage to liver and kidneys. A suspected fetal toxin. Death may occur from circulatory failure. Estimated lethal dose 120 milligrams.

Skin Contact:

Corrosive! Can cause redness, pain, and severe skin burns. Concentrated solutions cause deep ulcers and stain skin a yellow or yellow-brown color.

Eye Contact:

Corrosive! Vapors are irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.

Chronic Exposure:

Long-term exposure to concentrated vapors may cause erosion of teeth and lung damage. Long-term exposures seldom occur due to the corrosive properties of the acid. Arsenic on repeated or prolonged skin contact may cause bronzing of the skin, edema, dermatitis, and lesions. Repeated or prolonged inhalation of dust may cause damage to the nasal septum. Chronic exposure from inhalation or ingestion may cause hair and weight loss, a garlic odor

to the breath and perspiration, excessive salivation and perspiration, central nervous system damage, hepatitis, gastrointestinal disturbances, cardiovascular damage, and kidney and liver damage. Arsenic compounds are known human carcinogens and may be teratogenic based on effects in laboratory animals.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders, eye disease, or cardiopulmonary diseases may be more susceptible to the effects of this substance.

4. First Aid Measures

Immediate first aid treatment reduces the health effects of this substance. First aid procedures given apply to concentrated solutions. Exposures to dilute solutions may not require these extensive first aid procedures.

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

If swallowed, give large quantities of water to drink and get medical attention immediately. Never give anything by mouth to an unconscious person.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately. Contaminated work clothes should be laundered by individuals who have been informed of the hazards of exposure to this substance.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician:

If emesis is unsuccessful after two doses of Ipecac, consider gastric lavage. Monitor urine arsenic level. Alkalinization of urine may help prevent disposition of red cell breakdown products in renal tubular cells. If acute exposure is significant, maintain high urine output and monitor volume status, preferably with central venous pressure line. Abdominal X-rays should be done routinely for all ingestions. Chelation therapy with BAL, followed by n-penicillamine is recommended, but specific dosing guidelines are not clearly established.

5. Fire Fighting Measures

Fire:

Not combustible, but concentrated material is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Explosion:

Concentrated material reacts explosively with combustible organic or readily oxidizable materials such as: alcohols, turpentine, charcoal, organic refuse, metal powder, hydrogen sulfide, etc. Reacts with most metals to release hydrogen gas which can form explosive

mixtures with air.

Fire Extinguishing Media:

If involved in a fire, use water spray.

Special Information:

Increases the flammability of combustible, organic and readily oxidizable materials. In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime), then absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

J. T. Baker NEUTRASORB® or TEAM® 'Low Na+' acid neutralizers are recommended for spills of this product.

7. Handling and Storage

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Protect from physical damage. Keep out of direct sunlight and away from heat, water, and incompatible materials. Do not wash out container and use it for other purposes. When diluting, the acid should always be added slowly to water and in small amounts. Never use hot water and never add water to the acid. Water added to acid can cause uncontrolled boiling and splashing. Wear special protective equipment (Sec. 8) for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower, dispose of outer clothing, change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

For Nitric Acid:

OSHA Permissible Exposure Limit (PEL):

2 ppm (TWA)

ACGIH Threshold Limit Value (TLV):

2 ppm (TWA); 4 ppm (STEL)

For Inorganic Arsenic compounds (as As):

- OSHA Permissible Exposure Limit (PEL):

10 ug/m³ (TWA), 5 ug/m³ (Action Level), cancer hazard.

- ACGIH Threshold Limit Value (TLV):

0.01 mg/m³ (TWA), A1, confirmed human carcinogen.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, wear a supplied air, full-facepiece respirator, airlined hood, or full-facepiece self-contained breathing apparatus. Canister-type respirators using sorbents are ineffective.

Skin Protection:

Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Other Control Measures:

Any area where inorganic arsenic is stored, handled, used, etc., must be established as a 'Regulated Area' with controlled access, limited to authorized persons. Containers of inorganic arsenic and Regulated Areas must be labeled to show a **CANCER SUSPECT AGENT** is present. Eating, drinking, and smoking should not be permitted in areas where solids or liquids containing arsenic or lead compounds are handled, processed, or stored. See OSHA substance-specific standard for more information on personal protective equipment, engineering and work practice controls, medical surveillance, record keeping, and reporting requirements. (arsenic: 29 CFR 1910.1018; lead: 29 CFR 1910.1025).

9. Physical and Chemical Properties

Appearance:

Clear, colorless liquid.

Odor:

Odorless.

Solubility:

Infinitely soluble.

Specific Gravity:

No information found.

pH:

No information found.

% Volatiles by volume @ 21C (70F):

> 99

Boiling Point:

No information found.

Melting Point:

No information found.

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage. Containers may burst when heated.

Hazardous Decomposition Products:

When heated to decomposition, emits toxic nitrogen oxides fumes and hydrogen nitrate. Emits toxic fumes of arsenic when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

A dangerously powerful oxidizing agent, concentrated nitric acid is incompatible with most substances, especially strong bases, metallic powders, carbides, hydrogen sulfide, turpentine, and combustible organics.

Conditions to Avoid:

Heat, incompatibles.

11. Toxicological Information

Toxicological Data:

For arsenic: oral rat LD50: 763 mg/kg. Investigated as a tumorigen, mutagen, reproductive effector. For Nitric Acid: Investigated as a mutagen and reproductive effector.

Carcinogenicity:

For arsenic and inorganic arsenic compounds:

Regulated by OSHA as a carcinogen.

EPA / IRIS classification: Group A - Known human carcinogen.

-----\Cancer Lists\-----

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Arsenic (7440-38-2)	Yes	No	1
Nitric Acid (7697-37-2)	No	No	None
Water (7732-18-5)	No	No	None

12. Ecological Information

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(NITRIC ACID)

Hazard Class: 8

UN/NA: UN3264

Packing Group: III

Information reported for product/size: 500ML

International (Water, I.M.O.)

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(NITRIC ACID)

Hazard Class: 8

UN/NA: UN3264

Packing Group: III

Information reported for product/size: 500ML

International (Air, I.C.A.O.)

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(NITRIC ACID)

Hazard Class: 8

UN/NA: UN3264

Packing Group: III

Information reported for product/size: 500ML

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
Arsenic (7440-38-2)	Yes	Yes	No	Yes
Nitric Acid (7697-37-2)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----

Ingredient	Korea	--Canada--		Phil.
		DSL	NDSL	
Arsenic (7440-38-2)	Yes	Yes	No	Yes
Nitric Acid (7697-37-2)	Yes	Yes	No	Yes
Water (7732-18-5)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----

Ingredient	-SARA 302-		-SARA 313-	
	RQ	TPQ	List	Chemical Catg.
Arsenic (7440-38-2)	No	No	Yes	Arsenic comp
Nitric Acid (7697-37-2)	1000	1000	Yes	No
Water (7732-18-5)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----

Ingredient	CERCLA	-RCRA-	-TSCA-
		261.33	8 (d)
Arsenic (7440-38-2)	1	No	No
Nitric Acid (7697-37-2)	1000	No	No
Water (7732-18-5)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
 SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No
 Reactivity: No (Mixture / Liquid)

WARNING:

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

Australian Hazchem Code: None allocated.

Poison Schedule: S6

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 3 Flammability: 0 Reactivity: 0

Label Hazard Warning:

DANGER! CORROSIVE. LIQUID AND MIST CAUSE SEVERE BURNS TO ALL

BODY TISSUE. MAY BE FATAL IF SWALLOWED OR INHALED. AFFECTS LIVER, KIDNEYS, LUNGS AND TEETH. CANCER HAZARD. CONTAINS INORGANIC ARSENIC WHICH CAN CAUSE CANCER. Risk of cancer depends on duration and level of exposure.

Label Precautions:

- Do not get in eyes, on skin, or on clothing.
- Do not breathe vapor or mist.
- Use only with adequate ventilation.
- Wash thoroughly after handling.
- Keep container closed.

Label First Aid:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If swallowed, give large amounts of water to drink. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In all cases get medical attention immediately.

Product Use:

Laboratory Reagent.

Revision Information:

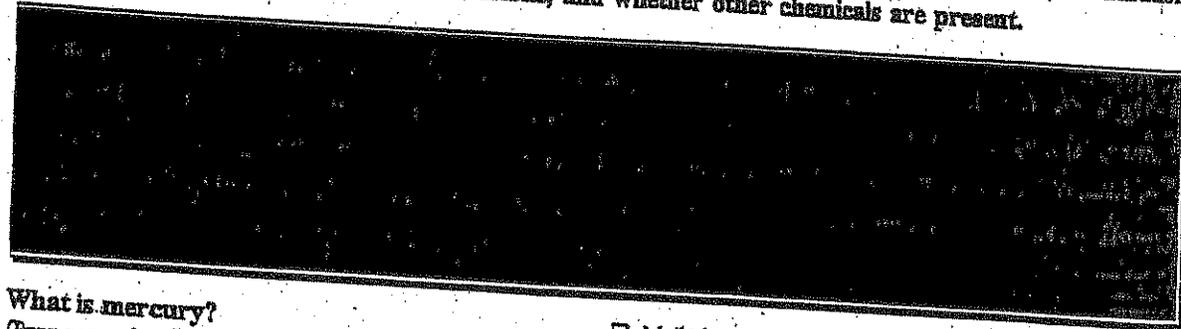
No Changes.

Disclaimer:

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Prepared by: Environmental Health & Safety
Phone Number: (314) 654-1600 (U.S.A.)

This fact sheet answers the most frequently asked health questions (FAQs) about mercury. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.



What is mercury?

(Pronounced *mfr/kya-rs*)

Mercury is a naturally occurring metal which has several forms. The metallic mercury is a shiny, silver-white, odorless liquid. If heated, it is a colorless, odorless gas.

Mercury combines with other elements, such as chlorine, sulfur, or oxygen, to form inorganic mercury compounds or "salts," which are usually white powders or crystals. Mercury also combines with carbon to make organic mercury compounds. The most common one, methylmercury, is produced mainly by microscopic organisms in the water and soil. More mercury in the environment can increase the amounts of methylmercury that these small organisms make.

Metallic mercury is used to produce chlorine gas and caustic soda, and is also used in thermometers, dental fillings, and batteries. Mercury salts are sometimes used in skin lightening creams and as antiseptic creams and ointments.

What happens to mercury when it enters the environment?

- Inorganic mercury (metallic mercury and inorganic mercury compounds) enters the air from mining ore deposits, burning coal and waste, and from manufacturing plants.
- It enters the water or soil from natural deposits, disposal of wastes, and volcanic activity.

- Methylmercury may be formed in water and soil by small organisms called bacteria.
- Methylmercury builds up in the tissues of fish. Larger and older fish tend to have the highest levels of mercury.

How might I be exposed to mercury?

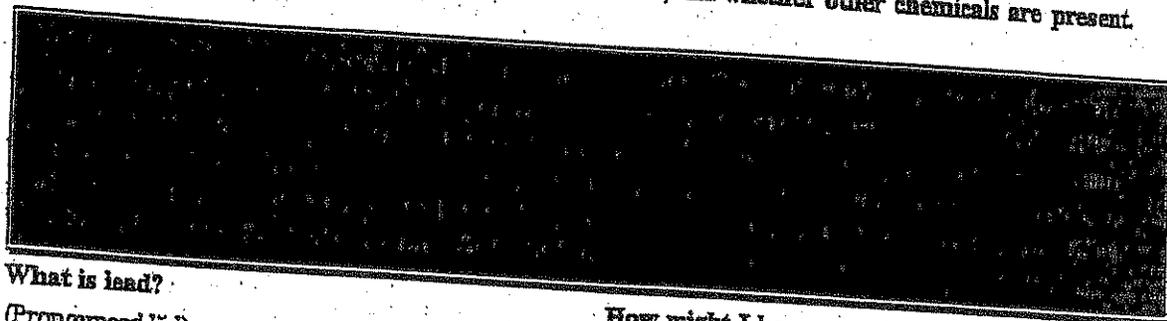
- Eating fish or shellfish contaminated with methylmercury.
- Breathing vapors in air from spills, incinerators, and industries that burn mercury-containing fuels.
- Release of mercury from dental work and medical treatments.
- Breathing contaminated workplace air or skin contact during use in the workplace (dental, health services, chemical, and other industries that use mercury).
- Practicing rituals that include mercury.

How can mercury affect my health?

The nervous system is very sensitive to all forms of mercury. Methylmercury and metallic mercury vapors are more harmful than other forms, because more mercury in these forms reaches the brain. Exposure to high levels of metallic, inorganic, or organic mercury can permanently damage the brain, kidneys, and developing fetus. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems.

Short-term exposure to high levels of metallic mercury vapors may cause effects including lung damage, nausea,

This fact sheet answers the most frequently asked health questions (FAQs) about lead. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.



What is lead?

(Pronounced lēd)

Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment. Much of it comes from human activities including burning fossil fuels, mining, and manufacturing.

Lead has many different uses. It is used in the production of batteries, ammunition, metal products (solder and pipes), and devices to shield X-rays.

Because of health concerns, lead from gasoline, paints and ceramic products, caulking, and pipe solder has been dramatically reduced in recent years.

What happens to lead when it enters the environment?

- Lead itself does not break down, but lead compounds are changed by sunlight, air, and water.
- When lead is released to the air, it may travel long distances before settling to the ground.
- Once lead falls onto soil, it usually sticks to soil particles.
- Movement of lead from soil into groundwater will depend on the type of lead compound and the characteristics of the soil.
- Much of the lead in inner-city soils comes from old houses painted with lead-based paint.

How might I be exposed to lead?

- Eating food or drinking water that contains lead.
- Spending time in areas where lead-based paints have been used and are deteriorating.
- Working in a job where lead is used.
- Using health-care products or folk remedies that contain lead.
- Engaging in certain hobbies in which lead is used (for example, stained glass).

How can lead affect my health?

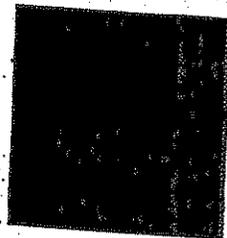
Lead can affect almost every organ and system in your body. The most sensitive is the central nervous system, particularly in children. Lead also damages kidneys and the reproductive system. The effects are the same whether it is breathed or swallowed.

At high levels, lead may decrease reaction time, cause weakness in fingers, wrists, or ankles, and possibly affect the memory. Lead may cause anemia, a disorder of the blood. It can also damage the male reproductive system. The connection between these effects and exposure to low levels of lead is uncertain.

How likely is lead to cause cancer?

The Department of Health and Human Services has determined that lead acetate and lead phosphate may reasonably

Safety (MSDS) data for beryllium



General

Synonyms: glucinium

Molecular formula: Be

CAS No: 7440-41-7

EINECS No: 231-150-7

EU No: 004-001-00-7

Physical data

Appearance: silvery solid or grey foil

Melting point: 1278 C

Boiling point: 2970 C

Vapour density:

Vapour pressure:

Density (g cm^{-3}): 1.85

Flash point:

Explosion limits:

Autoignition temperature:

Water solubility: insoluble

Stability

Stable. Incompatible with acids, bases, oxidizing agents, halogen

pH:

No information found.

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

340C (644F)

Melting Point:

217C (423F)

Vapor Density (Air=1):

6.15

Vapor Pressure (mm Hg):

1 @ 145C (293F) (sublimes)

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage. Darkens on exposure to light.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Fluorine, chromic acid, oxidizing agents.

Conditions to Avoid:

No information found.

11. Toxicological Information

Oral mouse LD: > 17,000 mg/kg. Irritation skin, Draize mouse: 118 ug mild.
Investigated as a tumorigen and mutagen. IARC 3.

-----\Cancer Lists\-----

Ingredient	---NTP Carcinogen---		IARC Categ
	Known	Anticipated	
Anthracene (120-12-7)	No	No	3

12. Ecological Information

Anthracene (120-12-7)

No No Yes No

----- \Federal, State & International Regulations - Part 2 \

Ingredient	CERCLA	-RCRA-	-TSCA-
Anthracene (120-12-7)	5000	261.33	8(d)
		No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
 SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No
 Reactivity: No (Pure / Solid)

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 1 Flammability: 1 Reactivity: 0

Label Hazard Warning:

WARNING! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC SKIN REACTION.

Label Precautions:

- Keep container closed.
- Use with adequate ventilation.
- Avoid breathing dust.
- Wash thoroughly after handling.
- Avoid contact with eyes, skin and clothing.

Label First Aid:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. Call a physician if irritation develops or persists.

Product Use:

Laboratory Reagent

Revision Information:

No Changes.

Disclaimer:

Safety (MSDS) data for zinc

Click here for data on zinc in student-friendly format from the HSci project

General

Synonyms: zinc dust, zinc powder, blue powder, granular zinc, zinc foil, LS 2, LS 6, merrillite, zinc metal

Molecular formula: Zn

CAS No: 7440-66-6

EINECS No: 231-175-3

EC number: 030-001-00-1

Physical data

Appearance: silver or blueish-white foil or powder

Melting point: 420 C

Boiling point: 908 C

Vapour density:

Vapour pressure:

Density (g cm^{-3}): 7.14

Flash point:

Explosion limits:

Autoignition temperature:

Water solubility:

Stability

Stable. Incompatible with amines, cadmium, sulfur, chlorinated solvents, strong acids, strong bases. Air and moisture sensitive. **Powder or dust is very flammable.**

Abbreviations used in Toxicity data

The table below gives the main abbreviations which will be found in the toxicity data for chemicals listed on these (and many other) web pages.

asn	Aspergillus nidulans
ast	Ascites tumor
bcs	Bacillus subtilis
bfa	body fluid assay
bmr	bone marrow
brd	bird (domestic or lab)
bwd	wild bird species
chd	child
ckn	chicken
CL	ceiling concentration
clr	Chlamydomonas reinhardi
ctl	cattle
cyt	cytogenetic analysis
D	day
dck	duck
dlt	cominant lethal test
dmg	Drosophila melanogaster
dnd	DNA damage
dni	DNA inhibition
dnr	nNA repair
dns	unscheduled DNA synthesis
dom	domestic animal (goat, sheep)
dpo	Drosophila pseudo-obscura
emb	embryo
esc	Escherichia cold
eug	Euglena gracilis

itt	intratesticular
iu	international unit
iut	intrauterine
ivg	intravaginal
ivn	intravenous
kdy	kidney
kg	kilogram
kfp	Klebsiella pneumoniae
L	liter
LC50	lethal concentration 50 percent kill
LCLo	lowest published lethal concentration
LD50	lethal dose 50 percent kill
LDlo	lowest published lethal dose
leu	leukocyte
Liq	liquid
lng	lung
lvr	liver
lym	lymphocyte
M	minute
m3	cubic meter
mam	mammal (species unspecified)
man	man
ug	microgram
umol	micromole
mg	milligram
mky	monkey
mL	milliliter
MLD	mild irritation effects
mma	microsomal mutagenicity assay
mno	mutation in microorganisms
mmol	millimole
mmr	mammary gland
mnt	miconucleus test
MOD	moderate irritation effects

ppt	parts per trillion (v/v)
preg	pregnant
qal	quail
rat	rat
rbt	rabbit
rec	rectal
rns	rinsed with water
S	second
sal	salmon
sat	Salmonella typhimurium
sce	sister chromatic exchange
scu	subcutaneous
SEV	severe irritation effects
skn	administration onto skin
sln	sex chromosome loss and nondisjunction
slt	specific locus test
slw	silkworm
smc	Saccharomyces cerevisiae
spm	sperm morphology
spr	sperm
sql	squirrel
smm	Serratia marcescens
ssp	Schizosaccharomyces pombe
STEL	short term exposure limit
TC	toxic concentration (other than lowest concentration)
TCLo	lowest published toxic concentration
TD	toxic dose (other than lowest toxic dose)
TDLo	lowest published toxic dose
tes	testis
TLV	Threshold Limit Value
tod	toad
trk	turkey
tn	heritable translocation test
TWA	time weighted average

Risk Phrases

Chemical data sheets available in many countries now contain codes for certain "risk phrases", shown as R23, R45 etc. These risk phrase codes have the following meanings:

- R1 Explosive when dry.
- R2 Risk of explosion by shock, friction, fire or other source of ignition.
- R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.
- R4 Forms very sensitive explosive metallic compounds.
- R5 Heating may cause an explosion.
- R6 Explosive with or without contact with air.
- R7 May cause fire.
- R8 Contact with combustible material may cause fire.
- R9 Explosive when mixed with combustible material.
- R10 Flammable.
- R11 Highly flammable.
- R12 Extremely flammable.
- R13 Extremely flammable liquefied gas
- R14 Reacts violently with water.
- R15 Contact with water liberates extremely flammable gases.
- R16 Explosive when mixed with oxidizing substances.
- R17 Spontaneously flammable in air.
- R18 In use, may form inflammable/explosive vapour-air mixture.
- R19 May form explosive peroxides.
- R20 Harmful by inhalation.
- R21 Harmful in contact with skin.
- R22 Harmful if swallowed.
- R23 Toxic by inhalation.
- R24 Toxic in contact with skin.
- R25 Toxic if swallowed.

- R61 May cause harm to the unborn child.
 - R62 Risk of impaired fertility.
 - R63 Possible risk of harm to the unborn child.
 - R64 May cause harm to breastfed babies.
 - R65 Harmful: may cause lung damage if swallowed.
 - R66 Repeated exposure may cause skin dryness or cracking.
 - R67 Vapours may cause drowsiness and dizziness.
 - R68 Possible risk of irreversible effects.
-

It is current safety policy at Oxford University that a written COSHH assessment **must** be provided when a substance to be used has been assigned any of the risk phrases R42, R43, R45, R46, R48, R49, R60 or R61. Other hazards may also dictate the preparation of a suitable COSHH assessment.

[Return to [Physical & Theoretical Chemistry Lab. Safety home page.](#)]

This information was last updated on October 28, 2003. We have tried to make it as accurate and useful as possible, but can take no responsibility for its use, misuse, or accuracy. We have not verified this information, and cannot guarantee that it is up-to-date.

- [Class 8 Corrosive substances](#)
- [Class 9 Miscellaneous dangerous substances](#)

See also [Packing Group](#).

For further details on the transport of dangerous goods, see the [OECD Directorate web site](#).

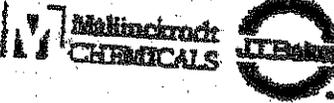
Return to the [Safety Glossary](#).

Return to the [Safety home page](#) of the Physical and Theoretical Chemistry Laboratory, Oxford University.

- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S27 Take off immediately all contaminated clothing.
- S28 After contact with skin, wash immediately with plenty of soap-suds.
- S29 Do not empty into drains.
- S30 Never add water to this product.
- S33 Take precautionary measures against static discharges.
- S35 This material and its container must be disposed of in a safe way.
- S36 Wear suitable protective clothing.
- S37 Wear suitable gloves.
- S38 In case of insufficient ventilation, wear suitable respiratory equipment.
- S39 Wear eye / face protection.
- S40 To clean the floor and all objects contaminated by this material, use (there follows suitable cleaning material).
- S41 In case of fire and / or explosion do not breathe fumes.
- S42 During fumigation / spraying wear suitable respiratory equipment.
- S43 In case of fire use ... (there follows the type of fire-fighting equipment to be used.)
- S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.)
- S46 If swallowed, seek medical advice immediately and show this container or label.
- S47 Keep at temperature not exceeding...
- S48 To be kept wet with (there follows a material name).
- S49 Keep only in the original container.
- S50 Do not mix with ...
- S51 Use only in well ventilated areas.
- S52 Not recommended for interior use on large surface areas

MSDS Material Safety Data Sheet

From: Mallinckrodt Baker, Inc.
228 First School Lane
Phillipsburg, NJ 08865



24 Hour Emergency Telephone: 908-490-0104
DANGERED: 1-800-424-9900

National Response to Chemical
DANGERED: 800-424-9900

Outside U.S. and Canada
Telephone: 908-490-0007

NOTE: CHEMICAL, DANGERED and National
Response Center emergency numbers to be
used only in the event of chemical emergency:
leaking spill, fire, exposure or accident
involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-520-0527) for assistance.

COPPER METAL

MSDS Number: C5170 — Effective Date: 05/17/01

1. Product Identification

Synonyms: C.I. 77400; Arwood Copper
CAS No.: 7440-50-8
Molecular Weight: 63.546
Chemical Formula: Cu
Product Codes:
J.T. Baker: 1714, 1720, 1732, 1736
Mallinckrodt: 1733, 4649

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Copper	7440-50-8	90 - 100%	Yes

3. Hazards Identification

Emergency Overview

WARNING: HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS THE LIVER AND KIDNEYS. CHRONIC EXPOSURE MAY CAUSE TISSUE DAMAGE.

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire:

Not considered to be a fire hazard since the bulk solid does not burn, but very finely divided particles (ultra-fine powder) may burn in air.

Explosion:

Not considered to be an explosion hazard. Reactions with incompatibles may pose an explosion hazard. Liquid copper explodes on contact with water. High concentrations of finely divided copper particles in the air may present an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. US Regulations

(CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Avoid exposure to air and moisture. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

Copper Dust and Mists, as Cu:

- OSHA Permissible Exposure Limit (PEL) -

1 mg/m³ (TWA)

- ACGIH Threshold Limit Value (TLV) -

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage. Copper becomes dull when exposed to air; on exposure to moist air it gradually converts to the carbonate. On long standing, a white, highly explosive peroxide deposit may form.

Hazardous Decomposition Products:

No information found.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Copper is incompatible with oxidizers, alkalis, acetylene, chlorine plus oxygen difluoride, phosphorus, nitric acid, potassium peroxide, 1-bromo-2-propyne, sulfur plus chlorates. Reacts violently with ammonium nitrate, bromates, iodates, chlorates, ethylene oxide, hydrozoic acid, potassium oxide, dimethyl sulfoxide plus trichloroacetic acid, hydrogen peroxide, sodium peroxide, sodium azide, sulfuric acid, hydrogen sulfide plus air, and lead azide. A potentially explosive reaction occurs with acetylenic compounds. Copper ignites on contact with chlorine, fluorine (above 121C), chlorine trifluoride, and hydrazinum nitrate (above 70C). An incandescent reaction occurs with potassium dioxide.

Conditions to Avoid:

Incompatibles and prolonged exposure to air and moisture.

11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure. Investigated as a tumorigen and a reproductive effector.

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Copper (7440-50-8)	No	No	None

12. Ecological Information

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

or use of this information to any person or for use in any situation.

Section 1 - Product and Company Identification
CHROMIUM

Product Identification: CHROMIUM
Date of MSDS: 11/01/1993 **Technical Review Date:** 11/10/1995
FSC: 6810 **NEIN:** LIIN: 00N066370
Submitter: N EN
Status Code: C
MFN: 01
Article: N
Kit Part: N

Manufacturer's Information

Manufacturer's Name: HIGH-PURITY STANDARDS
Post Office Box: 30188
Manufacturer's Address1:
Manufacturer's Address2: CHARLESTON, SC 29417
Manufacturer's Country: US
General Information Telephone: 803-556-3411
Emergency Telephone: 803-556-3411
Emergency Telephone: 803-556-3411
MSDS Preparer's Name: N/P
Proprietary: N
Reviewed: N
Published: Y
CAGE: 0YZE5
Special Project Code: N

Contractor Information

Contractor's Name: HIGH-PURITY STANDARDS INC
Post Office Box: 30180
Contractor's Address1: 2040 SAVAGE RD
Contractor's Address2: CHARLESTON, SC 29417
Contractor's Telephone: 803-556-3411
Contractor's CAGE: 0YZE5

Section 2 - Composition/Information on Ingredients
CHROMIUM

METALS, HYDROXIDES, CARBONATES, CYANIDES.

Hazardous Decomposition Products:

NO, NO*2.

Hazardous Polymerization Indicator: NO

Conditions to Avoid Polymerization:

NOT RELEVANT

Section 11 - Toxicological Information
CHROMIUM

Toxicological Information:

N/P

Section 12 - Ecological Information
CHROMIUM

Ecological Information:

N/P

Section 13 - Disposal Considerations
CHROMIUM

Waste Disposal Methods:

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS FOR ACID WASTE.

Section 14 - MSDS Transport Information
CHROMIUM

Transport Information:

N/P

Section 15 - Regulatory Information
CHROMIUM

SARA Title III Information:

N/P

Federal Regulatory Information:

N/P

State Regulatory Information:

N/P

Section 16 - Other Information
CHROMIUM

Other Information:

N/P

HAZCOM Label Information

Product Identification: CHROMIUM

CAGE: 0YZE5

Assigned Individual: N

Company Name: HIGH-PURITY STANDARDS INC

Company PO Box: 30180

Company Street Address1: 2040 SAVAGE RD

Company Street Address2: CHARLESTON, SC 29417 US

Health Emergency Telephone: 803-556-3411

Label Required Indicator: Y

Date Label Reviewed: 11/10/1995

Status Code: C

Manufacturer's Label Number:

Date of Label: 11/10/1995

Year Procured: N/K

Organization Code: G

Chronic Hazard Indicator: N

Eye Protection Indicator: YES

Skin Protection Indicator: YES

Respiratory Protection Indicator: YES

Signal Word: CAUTION

Health Hazard: Slight

Contact Hazard: Slight

Fire Hazard: None

Reactivity Hazard: None

8/9/2002 9:23:55 AM

Appendix E

Incident Reporting Form



Accident/Incident Report Form

Please complete this form and send it to your Branch Manager, HR and CHSO **within 24 hours** of the incident.

SECTION A ACCIDENT/INCIDENT DETAILS

EMPLOYEE INFORMATION:		OTHER INJURED (IF APPLICABLE):	
Name: _____		Name: _____	
Home Address: _____ Street Address City State Zip Code		Home Address: _____ Street Address City State Zip Code	
Contact Information: () () Primary Secondary		Contact Information: () () Primary Secondary	
Date of Birth: _____		Date of Birth: _____	
Date of Hire: _____		Date of Hire: _____	
Branch: _____		Branch: _____	
Supervisor: _____		Supervisor: _____	

Date and Time Accident/Incident	Date and Time Reported	LOCATION OF INCIDENT/ACCIDENT
____ / ____ / ____ Month Day Year ____ A.M. ____ P.M.	____ / ____ / ____ Month Day Year ____ A.M. ____ P.M.	Project Name: _____ Client and Location: _____ or _____ Office Location: _____

INCIDENT TYPE: (Check All That Applies)	WITNESS INFORMATION
<input type="checkbox"/> Personal Injury/Illness <input type="checkbox"/> Vehicle Accident <input type="checkbox"/> Property Damage <input type="checkbox"/> Environmental Spill <input type="checkbox"/> Other	Name: _____ Contact Number: _____ Company: _____

WHAT HAPPENED TO THE INJURED PARTY: First Aid Administered Refused Treatment/Transport Transported to Hospital
 Returned to Work Went Home Went to Physician Unknown

Clinic/Hospital or Treating Physician: _____ Phone: _____
 Name Street Address City State Zip Code

SECTION B PERSONAL INJURY

Cause of Injury: _____

Part of Body Injured: _____ Multiple Injuries: Y N

Was PPE worn when injured? : Y N What PPE was worn? _____

WAS INJURY A RESULT OF THE USE A MOTOR VEHICLE: YES NO (If yes, complete Section C)

NEAR MISS REPORT

A near miss is a potential hazard or incident that has not resulted in any personal injury. Unsafe working conditions, unsafe employee work habits, improper use of equipment, or use of malfunctioning equipment have the potential to cause work related injuries. It is everyone's responsibility to report and/or correct these potential accidents/incidents immediately. Please complete this form as a means to report these near-miss situations. Send a copy of the completed form to the Project Manager, Regional Health and Safety Officer and the Corporate Health and Safety Officer.

Location: _____

Site Name: _____

Date: _____

Time: _____ a.m. p.m.

Weather conditions, site operations taking place during near miss. _____

Please check all appropriate conditions:

Unsafe Act

Unsafe equipment

Unsafe Condition

Unsafe use of equipment

Description of incident or potential hazard: _____

Employees or sub-contractors involved if applicable. _____

Employee Signature _____ Date _____

Print Name _____

NEAR MISS INVESTIGATION

Description of the near-miss condition: _____

Causes (primary & contributing) _____

Corrective action taken (Remove the hazard, replace, repair, or retrain in the proper procedures for the task) _____

Actions not yet taken _____

Signed: _____ Date Completed: _____

Print Name

Not completed for the following reason: _____ Date: _____