Final Engineering Report

for

266-270 West 96th Street

New York, New York

NYSDEC Site Number: C231133

Prepared for:

266 West 96th Street Associates LLC
AMP Property Owner L.P. and West 96th Street Venture LP
675 Third Avenue, Suite 2800
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Prepared by:

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Langan Project No.: 170432001
December 2022

LANGAN

CERTIFICATIONS

I, Jason J. Hayes, P.E., am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Remedial Action Work Plan (RAWP) was implemented and that all construction activities were completed in substantial conformance with the Department-approved RAWP.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the RAWP and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all documents generated in support of this report have been submitted in accordance with the Department of Environmental Remediation's (DER's) electronic submission protocols and have been accepted by the Department.

I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Jason J. Hayes, of Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C. am certifying as Owner's Designated Site Representative for the site.

089491-1

NYS Professional Engineer #

Date

Stamp/Signature

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LIST OF ACRONYMS

Acronym	Definition
ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
bgs	Below Grade Surface
BMP	Best Management Practices
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
C&D	Construction and Demolition
CAMP	Community Air Monitoring Plan
CFR	Code of Federal Regulations
CHASP	Construction Health and Safety Plan
Cis-1,2-DCE	Cis-1,2-dichloroethene
CQAP	Construction Quality Assurance Plan
CVOC	Chlorinated Volatile Organic Compounds
CY	Cubic Yards
DD	Decision Document
DER	Division of Environmental Remediation
DRO	Diesel Range Organics
DUSR	Data Usability Summary Report
EC	Engineering Control
El	Elevation
ELAP	Environmental Laboratory Approval Program
EPA	United States Environmental Protection Agency
EPH	Extractable Petroleum Hydrocarbons
eV	Electronvolt
FDNY	New York City Fire Department
FER	Final Engineering Report
GC/CM	General Contractor/Construction Manager
GRO	Gasoline Range Organics
HVAC	Heating, Ventilation, and Air Conditioning
IC	Institutional Control
$\mu g/m^3$	Micrograms per cubic meter
MSDS	Material Safety Data Sheet
MTA	New York City Metro Transit Authority
NAACP	National Association for the Advancement of Colored People
NAVD88	North American Vertical Datum of 1988
NJDEP	New Jersey Department of Environmental Protection
NYCDOB	New York City Department of Buildings

Acronym	Definition
NYCDOT	New York City Department of Transportation
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYCDEP	New York City Department of Environmental Protection
NYSDOH	New York State Department of Health
OSHA	United States Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethene
PFAS	Per- and Poly-fluoroalkyl Substances
PGW	Protection of Groundwater
PID	Photoionization Detector
PM10	Particulate matter 10 micrometers or less in diameter
PPE	Personal Protective Equipment
ppm	Parts per million
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QEP	Qualified Environmental Professional
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RE	Remediation Engineer
RI	Remedial Investigation
RIWP	Remedial Investigation Work Plan
RU	Residential Use
SCO	Soil Cleanup Objective
SGV	Standard or Guidance Value
SOE	Support of Excavation
SMMP	Soil/Materials Management Plan
SRI	Supplemental Remedial Investigation
SVOC	Semivolatile Organic Compound
SWPPP	Stormwater Pollution Prevention Plan
TAL	Target Analyte List
TCE	Trichloroethene
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TOGS	Technical and Operational Guidance Series
UU	Unrestricted Use
VOC	Volatile Organic Compound

1.0 BACKGROUND AND SITE DESCRIPTION

266 West 96th Street Associates LLC executed a Brownfield Cleanup Agreement (BCA) Index No. C231133-06-2019 with the New York State Department of Environmental Conservation (NYSDEC) on August 20, 2019 to investigate and remediate the approximately 10,700-square-foot (0.24 acre) property located at 266-270 West 96th Street (Manhattan Block 1243, Lots 1501, 1502, and 1503[1]) in the Upper West Side neighborhood of Manhattan, New York ("the site"). New York State Brownfield Cleanup Program (BCP) Site No. C231133 was assigned to the site by the NYSDEC. The following amendments were made to the BCA:

- On July 10, 2022, the BCA was amended to add AMP Property Owner L.P. and West 96th Street Venture LP as Volunteers, and to submit Affordable Housing Regulatory Agreements, dated December 16, 2021, executed by AMP Property Owner L.P. for the benefit of City of New York acting by and through its Department of Housing and Preservation (NYCHPD), for the purposes of granting tangible property tax credit based upon the site's proposed redevelopment for affordable housing.
- On December 23, 2022, the BCA was amended to reflect the merger of the site from Block 1243, former Lots 57, 59 and 60 to Block 1243, new Lot 57 (which includes condominium Lots 1501, 1502, and 1503); to reflect 270 West 96th Street Housing Development Fund Corporation (HDFC) as the new fee owner of Lot 1502 and AMP Property Owner L.P. as new beneficial owner of Lot 1502 and fee owner of Lots 1501 and 1503; and to make a minor correction to the total site acreage based upon more recent survey data.

Collectively, 266 West 96th Street Associates LLC, AMP Property Owner L.P., and West 96th Street Venture LP are referred to herein as the Volunteer. A Track 2 remedy was implemented for the site in accordance with the NYSDEC-approved August 2021

[1] The site was previously identified as Block 1243, former Lots 57, 59 and 60. The lots were then merged in April 2022 into Block 1243, Lot 57. As a part of recording the condominium declaration for the proposed redevelopment, the Block 1243, the Lot 57 was again reapportioned in August 2022 into Block 1243, Lots 1501, 1502, and 1503, which correspond with the proposed condominium units. Lot 1501 corresponds to the commercial unit located on the first floor, Lot 1502 corresponds to the affordable rate residential apartments on floors 3 to 15, 17, and 18, and Lot 1503 corresponds to market rate residential apartments on floors 2 to 23.

Remedial Action Work Plan (RAWP) and the August 31, 2021 Decision Document (DD). The RAWP approval and the DD are included in Appendix A.

The site is located at 266-270 West 96th Street in the Upper West Side neighborhood in Manhattan and is bound by West 96th Street, followed by a 13-story residential building and a 35-story mixed use commercial and residential building to the north, a two-story commercial building to the east, six-story and 15-story residential buildings to the south, and 16-story and 13-story residential buildings to the west. A site location map is included as Figure 1 and a site plan is included as Figure 2. The site survey and metes and bound are included in Appendix B.

Prior to redevelopment, the former Lot 57 was improved with a vacant three-story building with a full cellar level that most recently operated as a power substation for the New York City Metro Transit Authority (MTA). Former Lots 59 and 60 were improved with two-story commercial buildings with full cellars and rear courtyards (at sidewalk grade), which were occupied by the Salvation Army and National Association for the Advancement of Colored People (NAACP), respectively. Historical Sanborn Fire Insurance Maps indicate that the site was located in a densely developed urban area as early as 1902. Former Lot 57 was historically occupied by a power substation (1912 to 2005). Former Lot 59 contained an upholstery store (1951 to 1976) and was also historically used for public/institutional purposes (1979 to 2005). Former Lot 60 was occupied by a single-family dwelling (1902), a multi-family residence (1912 to 1928) and a dry-cleaning facility (1950 to 1968) and was also used for public/institutional purposes (1979 to 2005).

Site redevelopment includes construction of a 23-story, mixed-use residential and commercial building with one cellar that will occupy the entire site footprint. Excavation of soil from surface grade to depths ranging from about 7 to 19 feet below grade surface (bgs) (el. 33 to el. 43)[2] was required for remediation. Once soil was removed, bedrock was also removed to facilitate redevelopment. The cellar will contain community space, including a residential health club, utility rooms, a compactor room and a personnel locker room. The first floor will contain community space, residential lobby, mailroom and package room, and the second floor will contain a media room and party suite for residents. Floor 3 through 24 will contain residential units, of which about 30% are affordable residential units.

This Final Engineering Report (FER) summarizes the Track 2 remedy implemented in accordance with the RAWP and DD. Ground-intrusive activities associated with the

[2] Elevations herein are referenced in North American Vertical Datum of 1988 (NAVD88).

remedy were completed between May 9 and August 19, 2022.

2.0 SUMMARY OF SITE REMEDY

2.1 Remedial Action Objectives

Langan completed a Remedial Investigation (RI) between October 29 and December 4, 2020 in accordance with the December 26, 2019 NYSDEC-approved Remedial Investigation Work Plan (RIWP). Supplemental groundwater and soil vapor sampling was completed from May 11 through 18, 2021. The RI and supplemental investigation were completed to evaluate the nature and extent of contamination in soil, groundwater, and soil vapor and to assess risk to human health and the environment. Based on the results, the following Remedial Action Objectives (RAOs) were identified for the site:

2.1.1 Groundwater RAOs

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards

2.1.2 Soil RAOs

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination

2.1.3 Soil Vapor RAOs

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site

2.2 Description of Selected Remedy

The site was remediated in accordance with the NYSDEC-approved RAWP and DD, and a Track 2 Residential cleanup was achieved.

The factors considered during the selection of the remedy are those listed in 6 New York Codes, Rules and Regulations (NYCRR) 375-1.8.

The former on-site buildings underwent abatement of asbestos-containing materials (ACM) and were demolished in order to facilitate site remediation. Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, the future on-site building includes a minimum 20-mil vapor barrier/waterproofing membrane on the foundation as an element of construction.

The following activities were completed during implementation of the selected Track 2 Residential remedy:

- Development and implementation of a Construction Health and Safety Plan (CHASP) and Community Air Monitoring Plan (CAMP) for the protection of on-site workers, community/residents, and the environment during remediation
- During removal of surface cover in contact with site soil, observation of the separation of building demolition material and site soil to document that site soil was not comingled with the building demolition material
- Design and construction of a support of excavation (SOE) system to facilitate the remedial excavation
- Implementation of soil erosion, pollution and sediment control measures in compliance with applicable laws and regulations
- Excavation, stockpiling, off-site transport, and appropriate disposal of about 1,560 cubic yards (CY) of historic fill and native soil exceeding the Part 375 Residential Use Soil Cleanup Objectives (RUSCOs). With the exception of the northwest corner of the site, the entire site was excavated to bedrock.
- Screening for indications of contamination (by visual means, odor, and photoionization detector [PID] monitoring) of excavated soil/fill during intrusive site work
- Collection and analysis of two confirmation endpoint samples, in accordance with Division of Environmental Remediation (DER)-10, to confirm Track 2 Residential Use SCOs were achieved
- Dewatering and treatment, as necessary, to accommodate the removal of soil/fill
- Importation of approximately 214.13 CY of virgin stone for ramps or temporary backfilling during remediation

3.0 INTERIM REMEDIAL MEASURES

The remedy for this site was performed as a single project, and no interim remedial measures, operable units or separate construction contracts were performed.

4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remediation was completed in general accordance with the NYSDEC-approved RAWP and DD between May 9 and August 19, 2022. The following sections detail the policies and procedures that governed the remedy and the resulting remedial activities.

4.1 Governing Documents

4.1.1 Site Specific Construction Health & Safety Plan

Remedial work documented under this remedial action was performed in compliance with governmental requirements, including site and worker safety requirements mandated by the Federal Occupational Safety and Health Administration (OSHA). The CHASP provided a mechanism for establishing on-site safe working conditions, safety organization procedures, and personal protective equipment (PPE) requirements, and was followed during remedial and invasive work performed. The site-specific CHASP met the requirements of the Code of Federal Regulations Title 29 Part 1910 (29 CFR 1910) and 29 CFR 1926 (which includes 29 CFR 1910.120 and 29 CFR 1926.65). The site-specific CHASP included, but was not limited to, the following components:

- Organization and identification of key personnel
- Training requirements
- Medical surveillance requirements
- List of site hazards
- Excavation safety
- Work zone descriptions
- PPE requirements
- Decontamination requirements
- Standard operating procedures
- Protective measure plan
- CAMP
- Safety Data Sheets (MSDS)

4.1.2 Quality Assurance Project Plan

Remedial and invasive work complied with the provisions of the NYSDEC-approved Quality Assurance Project Plan (QAPP) that was included as Appendix G of the RAWP. The QAPP describes the specific policies, objectives, organization, functional activities

and quality assurance/quality control (QA/QC) activities designed to achieve the project data quality objectives.

4.1.3 Construction Quality Assurance Plan

The Construction Quality Assurance Plan (CQAP) included in the RAWP as Section 4.1.4 provided detailed observation and testing activities used to monitor construction quality and confirm that remedial construction conformed to the remediation goals, objectives, and specifications. The contractor and construction manager were responsible for construction quality as the remedy was completed. A list of personnel involved in implementation of the CQAP and a description of the procedures carried out by the remedial engineering team are provided below.

The following project personnel were involved with the RAWP implementation:

Remedial Engineer (RE):	Jason Hayes, P.E., LEED AP
Program Manager:	Mimi Raygorodetsky
Project Manager:	Kimberly Semon, P.E.
Langan Health & Safety Officer:	Tony Moffa, ASP, CHMM, COSS
Langan Site Safety Coordinator:	William Bohrer, P.G.
Qualified Environmental Professional (QEP):	Brian Gochenaur, QEP
Data Validator:	Marla Miller
Field Team Leader:	Meghan Aronica, E.I.T
Quality Assurance Officer:	Michael Burke, P.G., CHMM

The RE and QEP directly supervised field staff who were on-site during the remedial action, including, field screening of excavations, soil/fill excavation and removal, and CAMP implementation. The RE and QEP directly supervised field staff that met with the construction superintendent (affiliated with the Volunteer) on a daily basis to discuss the plans for that day and schedule upcoming activities. The RE and QEP reviewed site development activities to verify they did not interfere with, or otherwise impair or compromise, the remedial action. The field staff maintained a project field book and a photo log documenting remedial activities. Daily reports summarizing remedial activities, including CAMP results, were submitted to NYSDEC and the New York State Department of Health (NYSDOH).

4.1.4 Soil/Materials Management Plan

The Soil/Fill Management Plan (SFMP) included detailed plans for managing soil and fill that were disturbed during implementation of the remedy, including excavation, handling, storage, transport and disposal. It also included controls that, when implemented properly, provided for effective nuisance-free performance of these activities in compliance with applicable federal, state, and local laws and regulations.

4.1.4.1 Soil Screening Methods

Visual, olfactory, and PID soil screening and assessment was performed by field staff under the direct supervision of the RE or QEP during remedial excavations of known and potentially contaminated soil and fill. Soil screening was performed during all excavation and invasive work conducted during the remedy, including excavations for the SOE system and foundation. Instrumental soil screening was conducted with a MiniRAE® 3000 PID equipped with a 10.6 electron volt (eV) lamp.

4.1.4.2 Stockpile Methods

Soil stockpile areas were constructed for staging excavated site soil/fill, bedrock, and C&D debris to facilitate the loading of trucks. Separate stockpile areas were constructed to avoid comingling different waste types. Stockpile areas met the following minimum requirements:

- Stockpiles were covered at the end of each workday with minimum 8-mil plastic sheeting or tarps, which were securely anchored to the ground. Separate stockpiles were created for different types (e.g., soil/fill, bedrock, C&D). Stockpiles were routinely inspected, and broken sheeting covers promptly replaced.
- Stockpiles were covered upon reaching their capacity (i.e., approximately 1,000 CY) until ready for loading for off-site transport and disposal.
- Stockpiles were encircled with hay bales, as needed, to contain and filter particulates from rainwater and to mitigate the potential for surface water run-off.

4.1.4.3 Excavation and Load Out

Field staff under the direct supervision of the RE observed ground-intrusive work, and the excavation and load-out of excavated soil and fill. The Volunteer and its contractors were responsible for the safe execution of intrusive and other work performed during this remedial action, installation of SOE measures, and maintaining the structure of adjoining sidewalks and roads during excavations. The presence of utilities and easements were

also investigated and verified by the Volunteer and its contractors before excavation was performed.

To the extent possible, trucks were queued along West 96th Street to minimize off-site disturbance. Off-site queuing was minimized to limit the number of trucks stopping and idling in the surrounding neighborhood. Construction entrances were temporarily constructed and utilized during truck load-out along West 96th Street. Trucks were loaded on-site. Areas in the immediate vicinity of the truck loading lanes were inspected after trucking events for evidence of off-site sediment tracking. Soil and fill were transported to the appropriate disposal destination using trucking routes outlined in the approved RAWP.

Field staff under the direct supervision of the RE documented that egress points for truck and equipment transport were clean of debris and other soil and fill derived from the site during remediation and development. Cleaning of the adjacent streets was performed by the contractor as needed to maintain a clean condition with respect to site-derived soil and fill.

Loaded vehicles leaving the site were tight-fitting covered, manifested, and placarded in accordance with appropriate federal, state, and local requirements, and all other applicable transportation requirements. Trucks were not loaded with wet soil and fill capable of producing free liquid, thereby eliminating the need for truck liners.

4.1.4.4 Soil and Fill Disposal Off-Site

Soil/fill excavated and removed from the site was handled, transported and disposed of in accordance with local, state (including 6 NYCRR Part 360) and federal regulations. Non-hazardous soil and fill removed from the site was handled as a solid waste per 6 NYCRR Part 360.2(a).

The following documentation was obtained and reported by the RE for each soil/fill disposal location used in this project to demonstrate and document that the disposal of soil and fill derived from the site conforms to applicable laws:

- A letter from the RE to the receiving facility describing the soil/fill to be disposed and requesting formal written acceptance of the soil and fill. This letter stated that soil and fill to be disposed of is contaminated soil and fill generated at an environmental remediation site in New York State. The letter provided the project identity and the name and phone number of the RE. The letter included chemical data for the soil and fill being transported (including waste characterization data); and

- A letter from the receiving facility stating it is in receipt of the correspondence (above) and is approved to accept the soil/fill.

Waste disposal facility approvals and permit documentation are provided in Appendix C.

An account of the destination of soil/fill removed from the site during the remedial action was documented by the RE. Non-hazardous waste manifests were used for off-site movement of non-hazardous soil/fill, as discussed below in Section 4.3.2. A total of 2,183.54 tons of non-hazardous historic fill and soil were excavated and transported off-site for disposal.

Waste characterization investigations were performed to facilitate approval of excavated soil/fill at off-site disposal facilities. Sampling and analytical methods, sampling frequency, and analytical results are summarized in Section 4.3.1.

4.1.4.5 Fluids Management

About 2,000-gallons of dewatering fluids were handled, transported, and disposed of in accordance with applicable local, state, and federal regulations. Dewatering fluids were pumped from localized submersible pumps into a 1,800-gallon settling tank prior to discharge into the New York City Department of Environmental Protection (NYCDEP) catch basin on West End Avenue. Temporary dewatering, including use of a settling tank prior to discharge to a catch basin, was performed in accordance with the NYCDEP temporary discharge permit (Permit No. C001260707). The dewatering system layout, sample analytical results, and permit are included in Appendix D.

4.1.4.6 Backfill from Off-Site Sources

In total, 214.13 tons of 0.75–inch virgin quarry stone was imported to construct and stabilize construction entrances. The stone was subsequently removed from the site during RAWP implementation, as further discussed in Section 4.7.

4.1.5 Stormwater Pollution Prevention Plan

A Stormwater Pollution Prevention Plan (SWPPP) was not required because the site is less than one acre and was filed with NYCDOB prior to the new NYCDEP rule change effective February 2022. Best Management Practices (BMP) for soil erosion were selected and implemented, as needed, to minimize erosion and sedimentation to off-site areas. Silt fencing, straw wattles, and gravel bags were utilized around the perimeter of the site, where required. The remedial contractors maintained sections of the stabilized construction entrances for stabilized vehicle transport and to avoid tracking sediment throughout the remediation area or off-site.

4.1.6 Community Air Monitoring Plan

Community air monitoring was conducted in compliance with the NYSDOH Generic CAMP outlined in Section 5.4.11 and Appendix I of the RAWP and with special requirements for work conducted within 20 feet of potentially exposed individuals or structures. The CAMP was developed to protect off-site receptors, including occupants at residences and businesses, from potential airborne contaminant releases during ground-intrusive work. Monitoring for dust and volatile organic compounds (VOCs) was conducted during ground-intrusive activities by RE field staff. The CAMP included real-time monitoring for VOCs and particulate matter smaller than ten microns in diameter (PM10) at the upwind and downwind perimeters of the site when ground-intrusive remediation was underway. Continuous monitoring was implemented during soil/fill excavation and load-out, and earthwork associated with foundation construction. Air monitoring for particulates and VOCs was implemented during all ground-intrusive activities associated with the remedy.

Monitoring for VOCs was conducted with a MiniRAE® 3000 PID equipped with a 10.6 eV lamp, and monitoring for PM10 was conducted with a TSI DustTrak™ II Model 8530. A portable PID was used to monitor the work zone. Field staff monitored ambient air conditions at the site perimeter to check for visible dust emissions and odors. Odors were not documented during the remediation, and mitigation measures were implemented as necessary when visible dust was identified. Mitigation measures for dust generation implemented by the contractor included wetting surficial soil and the surrounding work areas.

Action levels used for the protection of the community and visitors were set forth in the CAMP. The particulate action level was set at 150 micrograms of dust per cubic meter ($\mu g/m^3$) of air above background for a 15-minute average, and the VOC action level was set at 25 parts per million (ppm) for instantaneous readings and above background or 5 ppm above background for a 15-minute average. DustTraks and PIDs were monitored each day during implementation of the RAWP. Fifteen-minute running averages were calculated from the data recorded and were compared to the action levels specified in the CAMP. CAMP results are discussed in further detail in Section 4.2.5.

4.1.7 Contractor's Site Operations Plans

The RE reviewed all Site Operations Plans (SOP) and submittals for the remediation (i.e., those listed above plus contractor and subcontractor submittals) and confirmed that they were in compliance with the NYSDEC-approved RAWP. All remedial documents were submitted to NYSDEC and NYSDOH in a timely manner and prior to the start of work.

4.1.8 Citizen Participation Plan

The NYSDEC-approved Citizen Participation Plan (CPP) for this project was included as RAWP Appendix F. A certification of mailing was sent by the Volunteer to the NYSDEC project manager following the distribution of the first fact sheet that included: (1) certification that the Fact Sheet was mailed; (2) the date it was mailed; (3) a copy of the Fact Sheet; (4) a list of recipients (contact list); and (5) a statement that the document repositories contained all of the applicable project documents. No changes were made to Fact Sheets authorized for release by the NYSDEC without written consent of the NYSDEC. Subsequent Fact Sheets were mailed to elected officials and were publicly noticed electronically by NYSDEC.

Two document repositories were established at the following locations, and each contain all applicable project documents:

Manhattan Community Board 7	St. Agnes Library
250 West 87th Street	444 Amsterdam Avenue
New York, New York, 10024	New York, New York, 10024
Phone: (212) 362-4008	Phone: (212) 621-0619

Applicable project documents can also be accessed online through the DECinfo Locator:

https://www.dec.ny.gov/data/DecDocs/C231133/

4.2 Remedial Program Elements

4.2.1 Contractors and Consultants

Contractor/Consultant	Company Name	Representative/Contact
RE	Langan	Jason Hayes, P.E. (212) 479-5400
General Contractor/Construction Manager (GC/CM)	Urban Atelier Group (UAG)	Stephen O'Neil (646) 892-6238
Remediation Contractor	Mayrich Construction Corp. (Mayrich)	James Furey (718) 378-2600
Waste Disposal Manager	EcoTerra Consulting LLC (EcoTerra)	Nipam Shah (732) 770-6344

UAG acted as the GC/CM on behalf of the Volunteer. Langan was retained as the RE and Mr. Jason Hayes, P.E. is the RE of Record and is certifying this Final Engineering Report (FER). The Waste Disposal Manager was EcoTerra for non-hazardous soil/fill. The remediation contractors each maintained staff and equipment to conduct remedial activities, and the Waste Disposal Manager was responsible for selecting soil disposal facilities based on waste characterization laboratory data and for providing transportation for off-site soil disposal through waste hauling subcontractors.

Mayrich and subcontractors maintained a full staff and complement of equipment to conduct the remedial activities outlined in the RAWP.

4.2.2 Site Preparation

The Volunteer and remediation contractors mobilized to the site on May, 9, 2022 and completed the following activities:

- Identified the location of the aboveground and underground utilities (e.g., power, gas, water, sewer, communications), equipment, and structures as necessary prior to implementation of the remedy
- Mobilized necessary remediation personnel, equipment, and materials to the site
- Constructed temporary, stabilized construction entrance on the northern part of the site, which included site-access ramps consisting of non-hazardous historic soil/fill from the site excavation and from imported stone
- Installed erosion and sediment control measures, including placing straw wattles,

gravel bags, and silt fencing around the site's perimeter and constructing stabilized construction entrances and placement of silt barriers/blankets installed around stormwater catch basins , as necessary.

- Installed temporary construction fencing around the perimeter of the site, including locked gates to limit unauthorized access to the site
- Stationed a water hose at the site access/loading ramps for truck cleaning/washing and dust suppression
- Obtained agency and city approvals and regulatory permits, including, but not limited to:
    - New York City Department of Buildings (NYCDOB) work permits
    - New York City Department of Transportation (NYCDOT) roadway and walkway closure permits
    - NYCDEP construction noise and dust mitigation permits
    - NYCDEP temporary discharge permit
    - New York City Fire Department (FDNY) new construction permits

A pre-construction meeting was held with the Volunteer, NYSDEC, RE, and GC/CM on April 24, 2022 to review the RAWP prior to implementation.

4.2.3 General Site Controls

4.2.3.1 Site Security

The site perimeter was secured with gated, signed, plywood fencing with points of entry in accordance with NYCDOB and NYCDOT permits and requirements. The purpose of the fencing was to limit site access to authorized personnel, protect pedestrians from site activities, and maintain site security.

4.2.3.2 Job Site Record Keeping

Field observations and measurements were recorded in a project field book, spreadsheets, sketches/maps, and field photographs. Daily, weekly, and monthly reports summarizing remediation activity and progress were submitted to the NYSDEC project manager. Daily, weekly, and monthly reports are further discussed in Section 4.2.6.

4.2.3.3 Equipment Decontamination and Residual Waste Management

The contractors were responsible for managing the disposal of residual waste, including scrap construction materials (wood, plastics, and metal), C&D debris, and general refuse/municipal solid waste. Machinery, equipment, and materials were decontaminated at the truck washing stations before removal from the site, as necessary.

Special decontamination areas were not required during the remedy based on the nature of on-site contamination.

4.2.3.4 Problems Encountered

There were no problems related to the remedy encountered during implementation of the RAWP.

4.2.4 Nuisance Controls

The contractor employed dust suppression techniques while excavating, drilling, cutting, grading, stockpiling, and during other construction activities. The contractor applied water to work zones and excavation areas and covered stockpiles with polyethylene sheeting, as needed, to minimize releases of airborne particulates.

4.2.4.1 Odor Control

Odor control was not required during implementation of the RAWP.

4.2.4.2 Responding to Complaints

The RE received notifications from the NYSDEC regarding community complaints related to dust generation from C&D removal and bedrock chopping. On these days, Langan notified Mayrich and UAG, and the issues were rectified by continually spraying water to mitigate dust and properly covering trucks prior to leaving the site. NYSDEC was notified of the response actions; further action to mitigate complaints was not required.

On July 13 and 14, 2022 and August 8, 2022, the RE received notification of complaints related to dewatering activities at the site. On these days, the hose directing groundwater from the settling tank to the West End Avenue catch basin was of an insufficient length. As a result, treated groundwater was discharged onto West 96th Street and the crosswalk at West 96th Street and West End Avenue. Mayrich was instructed to stop dewatering until an appropriate length hose was directly routed into the catch basin in compliance with the NYCDEP temporary discharge permit (Permit No. C001260707). Mayrich subsequently cleaned the street and the vicinity of water and residual sediment.

4.2.5 CAMP results

A summary of VOC and/or PM10 exceedances are provided in Table 1. Reasons for exceedances include C&D removal and disposal, chipping bedrock, truck or equipment idling, breaking concrete, rock dowel drilling, mixing cement, equipment use in close proximity of the downwind air monitoring stations, and off-site dust encroachment from an adjacent construction site. During periods of exceedances, Langan personnel under the supervision of the RE advised the contractor to pause work and mitigate dust until subsequent readings declined below action levels. Intermittent downwind VOC or PM10

concentrations were not recorded intermittently on 30 days due to equipment and/or telemetry system malfunction. In general, data gaps ranges from one to 20 minutes in length. Upon the field personnel receiving notice that the unit was down, the remediation contractor was instructed to pause ground intrusive work until the units were placed back in service. On these days, the units were recalibrated or, in some instances, replaced by the equipment subcontractor. Dusts and odors were not observed migrating off-site on these days.

Daily CAMP field data summary sheets and air monitoring data are provided as Appendix E.

4.2.6 Reporting

Langan field staff, under the supervision of the RE, documented remedial activities (e.g., excavation/earthwork, stockpile management, soil/fill and stone import and export); performed waste characterization, confirmation endpoint and sidewall sampling; reviewed community air monitoring results; and prepared daily field reports with photographs. The Project Manager or Field Team Leader submitted daily reports to the NYSDEC project manager for phases of earthwork and remediation activities.

The Project Manager or Field Team Leader submitted monthly reports to the NYSDEC Project Manager by the tenth day of the month following the previous reporting period between October 2020 and August 2022. Monthly reports included a summary of remedial activities during the reporting period and anticipated activities, field sampling results, and other information related to the remedy. Daily, weekly and monthly reports during RAWP implementation are included in electronic format in Appendix F.

A digital photograph log documenting key phases and activities accomplished during the remedial action is included in Appendix G.

4.3 Contaminated Soil and Fill Removal

Remedial excavation included the removal of non-hazardous historic fill and soil to depths between 7 and 19 feet bgs (corresponding to between el. 33 to el. 43) in accordance with the RAWP. Generally, historic fill and soil were removed down to bedrock across the site, with the exception of the northwestern portion of the site. Bedrock was observed deeper than anticipated in the northwestern part of the site; therefore, endpoint samples were collected from this area to demonstrate that RUSCOs, as defined by 6 NYCRR Part 375-6.8(b), were achieved.

The RUSCOs are listed in Table 2. A site excavation map is provided as Figure 3.

4.3.1 Waste Characterization Soil Sampling

In-situ waste characterization sampling was performed between October 29 and November 19, 2020. The waste characterization included collection of grab samples and composite samples. The grab samples were analyzed for:

- Part 375/Total Compound List (TCL)/New Jersey Department of Environmental Protection (NJDEP) VOCs by United States Environmental Protection Agency (EPA) Method 8260C
- Toxicity Characteristic Leaching Procedure (TCLP) VOCs via EPA method 1311
- NJDEP extractable petroleum hydrocarbons (EPH), diesel range organics (DRO), and gasoline range organics (GRO) by EPA method 3546

Composite samples were analyzed for:

- Semivolatile organic compounds (SVOCs) by EPA Method 8270D
- Part 375/TCL herbicides/pesticides by EPA Method 8151A/8081B
- Part 375/Total Analyte List (TAL) metals by EPA Method 6010D/7470A
- Total cyanide by EPA Method 9010C/9012B
- Polychlorinated biphenyls (PCBs) by EPA Method 8082A
- TCLP SVOCs, pesticides, herbicides, and metals by EPA method 1311
- Resource Conservation and Recovery Act (RCRA) Characteristics including pH, ignitability, cyanide and sulfide reactivity, and paint filter by EPA Method 9095/9095B

Samples were compared to the lower of the NYSDEC Part 375 RU and Protection of Groundwater (PGW) SCOs and USEPA hazardous waste criteria as appropriate.

Based on elevated concentrations of total lead identified during the RI, Langan collected one additional grab sample (SB23_0-2) for analysis of TCLP lead on May 10, 2022, at the request of the disposal facility. The grab sample results indicated that the fill was non-hazardous, and further sampling was not required.

Waste characterization figures and analytical data are included in Appendix H.

4.3.2 Total Quantities Removed

The following table provides a summary of excavated soil and fill removed during implementation of the remedy:

Disposal Facility	Type	Disposal Timeframe	Number of Loads	Weight of Soil/Fill Excavated (tons)	Volume Excavated (CY)*
Bayshore Soil Management (BSM) 75 Crows Mill Road Keasbey, New Jersey	Non-Hazardous Petroleum Contaminated Soil/Urban Fill	May 24 to July 1, 2022	69	2,183.54	1,559.67

* = Volume estimated by dividing the weight (tons) by 1.4.

In total, approximately 1,559.67 CY were removed from the site. Table 3 provides a ledger of the exported non-hazardous fill/soil. Approval documentation from BSM and a copy of their facility permits are provided in Appendix C. Copies of facility-signed manifests and scale tickets and transporter 6 NYCRR Part 364 permits are included in Appendix I.

4.4 On-Site Soil Reuse

Historic fill or soil was not reused or repurposed at the site.

4.5 Confirmation Endpoint Sampling

With the exception of the northwestern corner, the site was excavated down to bedrock; therefore, confirmation endpoint samples were not required. Two excavation bottom samples (EP01 and EP02) were collected from the northwestern part of the site, at a frequency of one per approximately 900 square feet, in addition to two QA/QC samples, on June 7, and June 30, 2022, respectively. Samples were submitted to Alpha, located in Mahwah, New Jersey, and analyzed for NYSDEC Part 375 list VOCs, SVOCs, PCBs, pesticides, herbicides, metals including hexavalent and trivalent chromium, cyanide, per- and poly-fluoroalkyl substances (PFAS), and 1,4-dioxane in accordance with the RAWP and QAPP. The remainder of the site was excavated down to bedrock, and therefore additional endpoint samples were not collected. SOE installed around the perimeter of the site precluded the collection of sidewall samples by obstructing access to the excavation sidewalls.

Laboratory results and confirmation soil sample locations are presented in Table 4 and on Figure 4, respectively. Laboratory reports are provided in Appendix J.

4.6 Data Usability Summary Reports

Data Usability Summary Reports (DUSR) were prepared for confirmation soil samples and their related QA/QC samples. Table 5 summarizes soil QA/QC sample analytical results (i.e., field blanks, trip blanks). The data usability review confirmed that the data presented

in these reports is of an appropriate quality for its intended usage; the validation concluded the results to be valid with no major deficiencies. DUSRs are included as Appendix K.

4.7 Imported Backfill

The following table provides a summary of NYSDEC-approved stone imported to the site during RAWP implementation:

Type	Number of Loads	Quantity Imported (tons)	Import Timeframe	Facility
0.75-inch Stone	9	214.13	June 13 to July 7, 2022	Tilcon - Mount Hope Quarry 625 Mount Hope Road Wharton, New Jersey

The imported stone was used to construct a site access ramp and was subsequently removed as part of the RAWP implementation.

Due to issues with scheduling stone deliveries to the site, Mayrich requested to isolate a stockpile of approved stone in their yard located in the Bronx, New York on June 14, 2022. The stockpiled stone was placed on a tarp, and remained in an isolated, secured area of the yard. NYSDEC approved this plan on June 15, 2022. Correspondence regarding this matter is included in Appendix A.

Table 6 summarizes the quantities, dates of import, and sources of the imported stone. Copies of tickets for the imported stone, source facility information, product specifications, and approval documentation are included in Appendix L.

4.8 Contamination Remaining at the Site

4.8.1 Soil

Per the RAWP and DER-10, confirmation soil sample collection was completed in areas where native soil remains in place, and the confirmation soil samples indicate that Track 2 RUSCOs were achieved. The following constituents were detected in soil samples and remain in place:

- One pesticide, 4, 4'-DDT, exceeded the UUSCO in EP01 collected at about 11.5 feet bgs (el. 38) but was below the RUSCO.
- Metals including lead and mercury exceeded the UUSCOs in EP01 collected at about 11.5 feet bgs (el. 38) but was below the RUSCOs.

4.8.2 Groundwater

Six samples (including one QA/QC sample) were collected from five wells during the RI. The groundwater samples were compared to the NYSDEC 6 NYCRR Part 703 and Technical & Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (SGVs) for Part 375/TAL VOCs SVOCs, PCBs, pesticides, herbicides, total and dissolved metals including hexavalent chromium and trivalent chromium, and NYSDEC Guidance Values for 1,4-dioxane and PFAS (June 2021), and were analyzed by an NYSDOH ELAP-certified laboratory. The following constituents were detected in RI groundwater samples at concentrations exceeding the TOGS SGVs:

- Five VOCs (1,2-dichlorobenzene, benzene, cis-1,2-dichloroethene [cis-1,2-DCE], trichloroethylene [TCE], and vinyl chloride) exceeded the TOGS SGVs. The presence of petroleum-related VOCs in groundwater in former Lot 57 is attributed to its historical site use. The presence of chlorinated VOCs (CVOCs) in groundwater is attributed to the former on-site operations and historical and current operations on surrounding properties.
- One SVOC (chrysene) exceeded the TOGS SGVs in one groundwater sample collected from MW17. The presence of chrysene in groundwater is attributed to entrained sediments associated with the presence of historic fill.
- Three metals (iron, magnesium, and sodium) were present above their respective TOGS SGVs. The presence of these metals is attributed to regional groundwater quality and is not considered indicative of a release.

There is currently no access or exposure pathway to site groundwater as the building footprint covers the entire site and New York City does not permit the use of groundwater as a potable water source.

4.8.3 Soil Vapor

The foundation of the new development was constructed within the water table; therefore, a pathway for on-site vapor intrusion does not exist. Petroleum-related VOCs and CVOCs, including tetrachloroethene (PCE) and daughter products (TCE, cis-1,2-DCE, and vinyl chloride), were detected in soil vapor samples during the RI. The presence of site-wide CVOCs and benzene, toluene, ethylbenzene, and xylene (BTEX) were attributed to former on-site operations and historical and current operations on surrounding properties.

As part of the remedy, over 90 percent of the site was excavated to bedrock, with the exception of the northwestern corner, removing potential source material. Confirmation samples were collected from areas in the northwestern corner of the site where soil

remains in place (as described above in Section 4.5), and Track 2 RUSCOs were achieved. The site-wide 12- to 54-inch-thick concrete foundation slab, which is underlain by continuous waterproofing and vapor barrier membrane up the cellar sidewalls to grade, sits completely within the water table, which eliminates soil vapor pore space below the building. Additionally, subsurface cellar sidewalls of the new building about the adjoining structure cellars to the east and west, which nearly eliminates pore space in the abutted areas for potentially-impacted soil vapor accumulation.

4.9 Vapor Intrusion Evaluation

Upon completion of the new development, contaminated soil and bedrock were excavated into the water table to accommodate a cellar level. A concrete building foundation and waterproofing membrane, which sit beneath the water table, cover the entire site footprint directly above the bedrock. These barriers will prevent direct human exposure to residual impacted groundwater. Any potential indoor air quality issues would be addressed through the buildings heating, ventilation, and air conditioning (HVAC) system which will be installed in accordance with NYCDOB requirements. NYSDEC issued a letter on October 20, 2022 stating that indoor air sampling was not required as part of the soil vapor evaluation. The correspondence is included in Appendix A.

4.10 Engineering and Institutional Controls

Since Track 2 RUSCOs were achieved, ECs are not required for the site.

4.11 Institutional Controls

Since Track 2 RUSCOs were achieved, ICs are not required for the site.

4.12 Deviations from the RAWP

Site excavation was proposed to extend to bedrock across the entire site; therefore, confirmation soil sampling was not anticipated. During remediation, it was determined that bedrock on the northwestern part of the site was deeper than anticipated. As a result, two confirmation soil samples were collected, one per 900 square feet of excavation base, in accordance with NYSDEC DER-10 or at an alternative frequency approved by NYSDEC. The results indicate that the endpoint samples achieved the Track 2 Residual Use cleanup proposed for the site. Correspondence with NYSDEC regarding this deviation is included in Appendix A.

TABLES

Table 1
Final Engineering Report
CAMP Exceedance Summary

266-270 West 96th Street
New York, New York
NYSDEC BCP Site No.: C231133
Langan Project No.: 170432001

Date	Time	Type (VOC or PM)	Reason	Actions
5/11/2022	7:22 - 7:30, 8:04 - 8:44, 14:22 - 14:24, 14:30 - 14:33	PM	Construction and demolition (C&D) removal and disposal	Work was paused and subsequent readings declined below the action level.
5/16/2022	7:41 - 8:18, 8:25 - 8:26, 8:39 - 8:57, 9:53 - 10:11	PM	C&D removal	Work was paused and subsequent readings declined below the action level.
5/23/2022	8:35 - 8:46	PM	C&D removal	Work was paused and subsequent readings declined below the action level.
5/25/2022	11:47 - 12:10, 12:18 - 12:19	PM	C&D removal	Work was paused and subsequent readings declined below the action level.
6/7/2022	7:20 - 7:33	PM	Cutting rebar	None.
6/13/2022	8:38 - 8:51, 9:36 - 9:37	VOC	Truck idling in close proximity to the units	None.
6/13/2022	9:13 - 9:21, 10:29 - 10:43	PM	Chipping bedrock	Work was paused and area was continually sprayed with water to mitigate dust.
6/14/2022	8:48 - 9:07, 9:57 - 10:11	PM	Chipping bedrock and C&D removal	Work was paused and area was continually sprayed with water to mitigate dust.
6/15/2022	8:59	PM	Off-site dust encroachment from the adjacent construction site	None.
6/15/2022	13-01 - 13:07	VOC	Truck idling in close proximity to the unit	None
6/16/2022	14:10 - 14:34	PM	Air compressor used to clean bedrock in close proximity of the unit	None.
6/20/2022	8:34 - 8:49	PM	Chipping bedrock	Work was paused and area was continually sprayed with water to mitigate dust.
6/24/2022	8:58 - 9:12, 9:59 - 10:23	PM	Breaking concrete	Work was paused and area was continually sprayed with water to mitigate dust.
6/27/2022	11:15 - 11:31	PM	Drilling concrete to install support of excavation (SOE) directly next to the monitoring station	None.
6/30/2022	11:28 - 11:41, 15:07 - 15:09	PM	Removing C&D debris and chipping bedrock	Work was paused and area was continually sprayed with water to mitigate dust.
7/1/2022	12:34 - 12:36	PM	Chipping bedrock	Work was paused and area was continually sprayed with water to mitigate dust.
7/5/2022	8:11 - 8:22	PM	Chipping bedrock	Work was paused and area was continually sprayed with water to mitigate dust.
7/6/2022	13:28 - 13:42	PM	Chipping bedrock	Work was paused and area was continually sprayed with water to mitigate dust.
7/7/2022	11:04 - 11:08, 11:12 - 11:16	PM	Equipment idling adjacent to the monitoring station	None.
7/11/2022	11:48 - 11:52	PM	Rock dowel drilling	Water was applied to the work area and subsequent readings declined.
7/12/2022	10:40 - 10:43, 11:21 - 11:27, 12:44 - 12:45	PM	Rock dowel drilling	Water was applied to the work area.
7/15/2022	12:33 - 12:47	PM	Mixing cement	Work was paused to allow readings to declone below action levels.
7/19/2022	9:38 - 10:01, 11:37 - 11:38, 11:49 - 11:54	PM	Chipping bedrock	Work was paused and area was continually sprayed with water to mitigate dust.
7/20/2022	9:27 - 9:44	PM	Truck idling next to the air moitoring station	None.
7/26/2022	13:28 - 13:42, 13:59 - 14:08	PM	Chipping bedrock	Work was paused and area was sprayed with water to mitigate dust.
7/27/2022	8:38 - 8:56	PM	Chipping bedrock	Work was paused and area was sprayed with water to mitigate dust.
8/3/2022	10:18 - 10:22	PM	Air compressor in close proximity to the unit	None.
8/5/2022	12:05 - 12:18	VOC	Truck idling in close proximity of the unit	Truck's engine was turned off.
8/12/2022	10:37 - 10:51	PM	Truck idling in close proximity of the unit	Truck's engine was turned off.

Notes:
CAMP = Community Air Monitoring Program
VOC = Volatile organic compound
PM = Particulate matter less than 10 microns in diameter

Table 2
Final Engineering Report
Track 2 SCOs

266-270 West 96th Street
New York, New York
NYSDEC BCP Site No.: C231133
Langan Project No.: 170432001

VOCS (mg/kg)	
1,1,1-Trichloroethane	100
1,1-Dichloroethane	19
1,1-Dichloroethene	100
1,2,4-Trimethylbenzene	47
1,2-Dichlorobenzene	100
1,2-Dichloroethane	2.3
1,3,5-Trimethylbenzene (Mesitylene)	47
1,3-Dichlorobenzene	17
1,4-Dichlorobenzene	9.8
1,4-Dioxane (P-Dioxane)	9.8
Acetone	100
Benzene	2.9
Carbon Tetrachloride	1.4
Chlorobenzene	100
Chloroform	10
Cis-1,2-Dichloroethene	59
Ethylbenzene	30
Methyl Ethyl Ketone (2-Butanone)	100
Methylene Chloride	51
Naphthalene	100
n-Butylbenzene	12
n-Propylbenzene	100
Sec-Butylbenzene	100
T-Butylbenzene	100
Tert-Butyl Methyl Ether	62
Tetrachloroethene (PCE)	5.5
Toluene	100
Total Xylenes	100
Trans-1,2-Dichloroethene	100
Trichloroethene (TCE)	10
Vinyl Chloride	0.21
SVOCS (mg/kg)	
1,2-Dichlorobenzene	100
1,3-Dichlorobenzene	17
1,4-Dichlorobenzene	9.8
1,4-Dioxane (P-Dioxane)	9.8
2-Methylphenol (o-Cresol)	100
Acenaphthene	100
Acenaphthylene	100
Anthracene	100
Benzo(a)Anthracene	1
Benzo(a)Pyrene	1
Benzo(b)Fluoranthene	1
Benzo(g,h,i)Perylene	100
Benzo(k)Fluoranthene	1
Chrysene	1
Dibenz(a,h)Anthracene	0.33
Dibenzofuran	14
Fluoranthene	100
Fluorene	100
Hexachlorobenzene	0.33
Indeno(1,2,3-c,d)Pyrene	0.5
Naphthalene	100
Pentachlorophenol	2.4
Phenanthrene	100
Phenol	100
Pyrene	100

Pesticides (mg/kg)	
4,4'-DDD	2.6
4,4'-DDE	1.8
4,4'-DDT	1.7
Aldrin	0.019
Alpha BHC (Alpha Hexachlorocyclohexane)	0.097
Alpha Chlordane	0.91
Alpha Endosulfan	4.8
Beta Bhc (Beta Hexachlorocyclohexane)	0.072
Beta Endosulfan	4.8
Delta Bhc (Delta Hexachlorocyclohexane)	100
Dieldrin	0.039
Endosulfan Sulfate	4.8
Endrin	2.2
Gamma Bhc (Lindane)	0.28
Heptachlor	0.72
Herbicides (mg/kg)	
Silvex (2,4,5-Tp)	58
Polychlorinated Biphenyls (mg/kg)	
Total PCBs	1
Inorganics (mg/kg)	
Arsenic	16
Barium	350
Beryllium	14
Cadmium	2.5
Chromium, Hexavalent	22
Chromium, Trivalent	36
Copper	270
Cyanide	27
Lead	400
Manganese	2,000
Mercury	0.81
Nickel	140
Selenium	36
Silver	36
Zinc	2,200

Notes:
1. SCO = Soil Cleanup Objective
2. SVOC = semivolatile organic compound
3. VOC = volatile organic compound
4. PCB = polychlorinated biphenyl
5. mg/kg = milligram per kilogram
6. SCO values are Restricted Use - Residential Soil Cleanup Objectives

Table 3
Final Engineering Report
Soil Disposal Summary

266-270 West 96th Street
New York, New York
NYSDEC BCP Site No.: C231133
Langan Project No.: 170432001

Disposal Facility	69 Loads	1,380 cubic yards (CY)	Waste Type	Loads	Tons	Contractor:
Bayshore Soil Management	69 Loads	1,380 CY	NON HAZ PC SOIL	69	2183.54	**Soil Broker:** EcoTerra Consulting, LLC **Job #:** 170432001

Transporter Info							Waste Tracking						Disposal Facility Info	
Total Load Count	Daily Load Count	Date	State	License	Truck Company	Truck #	Manifest #	Grid Location	Waste Type	Disposal Facility	Quantity (cy)	Estimated Weight (tons)	Confirmed Weight (tons)	Counter-signed?
Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column8	Column9	Column10	Column11	Column12	Column13	Column14	Column15
1	1	5/24/2022	NJ	AT383N	Cuenca Coronel	38	E0609322	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	32.43	Yes
2	2	5/24/2022	NJ	AU623C	Cuenca Coronel	14	E0609319	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	32.74	Yes
3	3	5/24/2022	NJ	AU760A	Cuenca Coronel	74	E0609320	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.65	Yes
4	4	5/24/2022	NJ	AT257J	Cuenca Coronel	28	E0609323	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	34.03	Yes
5	5	5/24/2022	NJ	AW357N	Cuenca Coronel	3	E0609321	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.17	Yes
6	6	5/24/2022	NJ	AU623C	Cuenca Coronel	14	E0609324	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.13	Yes
7	7	5/24/2022	NJ	AU760A	Cuenca Coronel	74	E0609325	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.38	Yes
8	8	5/24/2022	NJ	AT383N	Cuenca Coronel	38	E0609326	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	29.86	Yes
9	9	5/24/2022	NJ	AT257J	Cuenca Coronel	28	E0609328	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	32.80	Yes
10	10	5/24/2022	NJ	AT399F	Cuenca Coronel	71	E0609327	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	29.92	Yes
11	11	5/24/2022	NJ	AU623C	Cuenca Coronel	14	E0609329	WC01_COMP_0-6, WC02_COMP_0-7.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.99	Yes
12	12	5/24/2022	NJ	AT383N	Cuenca Coronel	38	E0609330	WC01_COMP_0-6, WC02_COMP_0-7.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.68	Yes
13	13	5/24/2022	NJ	AU760A	Cuenca Coronel	74	E0609333	WC01_COMP_0-6, WC02_COMP_0-7.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.86	Yes
14	14	5/24/2022	NJ	AT257J	Cuenca Coronel	28	E0609331	WC01_COMP_0-6, WC02_COMP_0-7.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	34.00	Yes
15	15	5/24/2022	NJ	AT339F	Cuenca Coronel	71	E0609332	WC01_COMP_0-6, WC02_COMP_0-7.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.27	Yes
16	1	6/7/2022	NJ	AU665P	Cuenca Coronel	11	E0609318	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	32.37	Yes
17	2	6/7/2022	NJ	AS208J	Cuenca Coronel	54	E0609316	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.55	Yes
18	3	6/7/2022	NJ	AU489M	Cuenca Coronel	12	E0609317	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	34.09	Yes
19	4	6/7/2022	NJ	AS213L	Cuenca Coronel	58	E0609315	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.88	Yes
20	5	6/7/2022	NJ	AU665P	Cuenca Coronel	11	E0609311	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.89	Yes
21	6	6/7/2022	NJ	AU489M	Cuenca Coronel	12	E0609314	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.74	Yes
22	7	6/7/2022	NJ	AS208J	Cuenca Coronel	54	E0609312	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	32.84	Yes
23	8	6/7/2022	NJ	AS213L	Cuenca Coronel	58	E0609313	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.47	Yes
24	9	6/7/2022	NJ	AU665P	Cuenca Coronel	11	E0609308	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.96	Yes
25	10	6/7/2022	NJ	AU489M	Cuenca Coronel	12	E0609310	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	32.53	Yes
26	11	6/7/2022	NJ	AS208J	Cuenca Coronel	54	E0609307	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.00	Yes
27	1	6/8/2022	NJ	AU111V	Cuenca Coronel	4	E0609309	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.64	Yes
28	2	6/8/2022	NJ	AU665P	Cuenca Coronel	11	E0609306	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.48	Yes
29	3	6/8/2022	NJ	AT398F	Cuenca Coronel	41	E0609303	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.40	Yes
30	4	6/8/2022	NJ	AS752X	Cuenca Coronel	66	E0609302	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.71	Yes
31	5	6/8/2022	NJ	AT280E	Cuenca Coronel	40	E0609301	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	34.64	Yes
32	6	6/8/2022	NJ	AT106E	Cuenca Coronel	32	E0609305	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.88	Yes
33	7	6/8/2022	NJ	AS213L	Cuenca Coronel	58	E0609304	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	32.19	Yes
34	8	6/8/2022	NJ	AS725D	Cuenca Coronel	48	E0609299	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.01	Yes
35	9	6/8/2022	NJ	AT915D	Cuenca Coronel	70	E0609300	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	32.78	Yes
36	10	6/8/2022	NJ	AS551R	Cuenca Coronel	61	E0609298	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.86	Yes
37	11	6/8/2022	NJ	AU665P	Cuenca Coronel	11	E0609296	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.15	Yes
38	12	6/8/2022	NJ	AU111V	Cuenca Coronel	4	E0609288	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.64	Yes
39	13	6/8/2022	NJ	AT398F	Cuenca Coronel	41	E0609297	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.44	Yes
40	14	6/8/2022	NJ	AT106E	Cuenca Coronel	32	E0609295	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.31	Yes
41	15	6/8/2022	NJ	AT280E	Cuenca Coronel	40	E0609294	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.62	Yes
42	16	6/8/2022	NJ	AS752X	Cuenca Coronel	66	E0609293	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.71	Yes
43	17	6/8/2022	NJ	AS725D	Cuenca Coronel	48	E0609292	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.45	Yes
44	18	6/8/2022	NJ	AS213L	Cuenca Coronel	58	E0609291	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.85	Yes
45	19	6/8/2022	NJ	AS551R	Cuenca Coronel	61	E0609290	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.07	Yes
46	20	6/8/2022	NJ	AT915D	Cuenca Coronel	70	E0609289	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.19	Yes
47	21	6/8/2022	NJ	AU665P	Cuenca Coronel	11	E0609244	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.18	Yes
48	22	6/8/2022	NJ	AU111V	Cuenca Coronel	4	E0609239	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	32.83	Yes
49	23	6/8/2022	NJ	AT398F	Cuenca Coronel	41	E0609240	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.33	Yes
50	24	6/8/2022	NJ	AS725D	Cuenca Coronel	48	E0609238	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.22	Yes
51	25	6/8/2022	NJ	AT106E	Cuenca Coronel	32	E0609237	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.28	Yes
52	1	6/30/2022	NJ	AW357N	Cuenca Coronel	3	E0609242	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	33.63	Yes
53	2	6/30/2022	NJ	AU759H	Cuenca Coronel	72	E0609234	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.25	Yes
54	3	6/30/2022	NJ	AS998D	Cuenca Coronel	49	E0609243	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.56	Yes
55	4	6/30/2022	NJ	AS725X	Cuenca Coronel	66	E0609235	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	29.8	Yes
56	5	6/30/2022	NJ	AT324N	Cuenca Coronel	21	E0609246	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.92	Yes
57	6	6/30/2022	NJ	AT398F	Cuenca Coronel	41	E0609247	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.35	Yes
58	7	6/30/2022	NJ	AT398F	Cuenca Coronel	41	E0609250	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	28.69	Yes
59	8	6/30/2022	NJ	AU498M	Cuenca Coronel	12	E0609245	WC01_COMP_0-6, WC02_COMP_0-7.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.27	Yes
60	1	7/1/2022	NJ	AU623C	Cuenca Coronel	14	E0609251	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	29.27	Yes
61	2	7/1/2022	NJ	AW400R	Cuenca Coronel	64	E0629172	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.45	Yes
62	3	7/1/2022	NJ	AT399F	Cuenca Coronel	71	E0629171	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.24	Yes
63	4	7/1/2022	NJ	AS382K	Cuenca Coronel	36	E0629170	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.64	Yes
64	5	7/1/2022	NJ	AT398F	Cuenca Coronel	41	E0629169	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	26.73	Yes
65	6	7/1/2022	NJ	AW354N	Cuenca Coronel	2	E0609260	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	30.01	Yes
66	7	7/1/2022	NJ	AS752X	Cuenca Coronel	66	E0609255	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	27.33	Yes
67	8	7/1/2022	NJ	AW357N	Cuenca Coronel	3	E0609249	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	31.10	Yes
68	9	7/1/2022	NJ	AW354N	Cuenca Coronel	2	E0609252	WC01_COMP_0-6, WC02_COMP_0-7.5, WC04_COMP_5-12.5, WC03_COMP_0-4.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	32.33	Yes
69	1	8/15/2022	NJ	AS8340P	Cuenca Coronel	59	E0609263	WC04_COMP_5-12.5	NON HAZ PC SOIL	Bayshore Soil Management	20	30	27.88	Yes

Table 4
Final Engineering Report
Confirmation Soil Sample Results

266-270 West 96th Street
New York, New York
NYSDEC BCP Site No.: C231133
Langan Project No.: 170432001

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Residential Use SCOs	Location	EP01	EP01	EP02
				Sample Name	EP01_38	DUP01_06072022	EP02_38
				Sample Date	06/07/2022	06/07/2022	06/07/2022
				Sample Elevation	38	38	38
				Sample Depth (bgs)	11.5	11.5	14
				Unit	Result	Result	Result
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	630-20-6	NS	NS	mg/kg	<0.00049 U	<0.00046 U	<0.00046 U
1,1,1-Trichloroethane	71-55-6	0.68	100	mg/kg	<0.00049 U	<0.00046 U	<0.00046 U
1,1,2,2-Tetrachloroethane	79-34-5	NS	NS	mg/kg	<0.00049 U	<0.00046 U	<0.00046 U
1,1,2-Trichloroethane	79-00-5	NS	NS	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
1,1-Dichloroethane	75-34-3	0.27	19	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
1,1-Dichloroethene	75-35-4	0.33	100	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
1,1-Dichloropropene	563-58-6	NS	NS	mg/kg	<0.00049 U	<0.00046 U	<0.00046 U
1,2,3-Trichlorobenzene	87-61-6	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
1,2,3-Trichloropropane	96-18-4	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
1,2,4,5-Tetramethylbenzene	95-93-2	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
1,2,4-Trichlorobenzene	120-82-1	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
1,2,4-Trimethylbenzene	95-63-6	3.6	47	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
1,2-Dibromo-3-Chloropropane	96-12-8	NS	NS	mg/kg	<0.0029 U	<0.0028 U	<0.0028 U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	NS	NS	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
1,2-Dichlorobenzene	95-50-1	1.1	100	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
1,2-Dichloroethane	107-06-2	0.02	2.3	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
1,2-Dichloropropane	78-87-5	NS	NS	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8.4	47	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
1,3-Dichlorobenzene	541-73-1	2.4	17	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
1,3-Dichloropropane	142-28-9	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
1,4-Dichlorobenzene	106-46-7	1.8	9.8	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
1,4-Diethyl Benzene	105-05-5	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
1,4-Dioxane (P-Dioxane)	123-91-1	0.1	9.8	mg/kg	<0.078 U	<0.074 U	<0.074 U
2,2-Dichloropropane	594-20-7	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
2-Chlorotoluene	95-49-8	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
2-Hexanone (MBK)	591-78-6	NS	NS	mg/kg	<0.0097 U	<0.0093 U	<0.0093 U
4-Chlorotoluene	106-43-4	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
4-Ethyltoluene	622-96-8	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
Acetone	67-64-1	0.05	100	mg/kg	<0.0097 U	<0.0093 U	<0.0093 U
Acrylonitrile	107-13-1	NS	NS	mg/kg	<0.0039 U	<0.0037 U	<0.0037 U
Benzene	71-43-2	0.06	2.9	mg/kg	<0.00049 U	<0.00046 U	<0.00046 U
Bromobenzene	108-86-1	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
Bromochloromethane	74-97-5	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
Bromodichloromethane	75-27-4	NS	NS	mg/kg	<0.00049 U	<0.00046 U	<0.00046 U
Bromoform	75-25-2	NS	NS	mg/kg	<0.0039 U	<0.0037 U	<0.0037 U
Bromomethane	74-83-9	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
Carbon Disulfide	75-15-0	NS	NS	mg/kg	<0.0097 U	<0.0093 U	<0.0093 U
Carbon Tetrachloride	56-23-5	0.76	1.4	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
Chlorobenzene	108-90-7	1.1	100	mg/kg	<0.00049 U	<0.00046 U	<0.00046 U
Chloroethane	75-00-3	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
Chloroform	67-66-3	0.37	10	mg/kg	0.00024 J	<0.0014 U	<0.0014 U
Chloromethane	74-87-3	NS	NS	mg/kg	<0.0039 U	<0.0037 U	<0.0037 U
Cis-1,2-Dichloroethene	156-59-2	0.25	59	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
Cis-1,3-Dichloropropene	10061-01-5	NS	NS	mg/kg	<0.00049 U	<0.00046 U	<0.00046 U
Cymene	99-87-6	NS	NS	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
Dibromochloromethane	124-48-1	NS	NS	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
Dibromomethane	74-95-3	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
Dichlorodifluoromethane	75-71-8	NS	NS	mg/kg	<0.0097 U	<0.0093 U	<0.0093 U
Diethyl Ether (Ethyl Ether)	60-29-7	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
Ethylbenzene	100-41-4	1	30	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
Hexachlorobutadiene	87-68-3	NS	NS	mg/kg	<0.0039 U	<0.0037 U	<0.0037 U
Isopropylbenzene (Cumene)	98-82-8	NS	NS	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
M,P-Xylene	179601-23-1	NS	NS	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	0.12	100	mg/kg	<0.0097 U	<0.0093 U	<0.0093 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1	NS	NS	mg/kg	<0.0097 U	<0.0093 U	<0.0093 U
Methylene Chloride	75-09-2	0.05	51	mg/kg	<0.0049 U	<0.0046 U	<0.0046 U
Naphthalene	91-20-3	12	100	mg/kg	<0.0039 U	<0.0037 U	<0.0037 U
n-Butylbenzene	104-51-8	12	100	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
n-Propylbenzene	103-65-1	3.9	100	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
o-Xylene (1,2-Dimethylbenzene)	95-47-6	NS	NS	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
Sec-Butylbenzene	135-98-8	11	100	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
Styrene	100-42-5	NS	NS	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
T-Butylbenzene	98-06-6	5.9	100	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
Tert-Butyl Methyl Ether	1634-04-4	0.93	62	mg/kg	<0.0019 U	<0.0018 U	<0.0018 U
Tetrachloroethene (PCE)	127-18-4	1.3	5.5	mg/kg	0.00092	0.00045 J	0.00033 J
Toluene	108-88-3	0.7	100	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
Total 1,2-Dichloroethene (Cis and Trans)	540-59-0	NS	NS	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
Total Xylenes	1330-20-7	0.26	100	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
Total, 1,3-Dichloropropene (Cis And Trans)	542-75-6	NS	NS	mg/kg	<0.00049 U	<0.00046 U	<0.00046 U
Trans-1,2-Dichloroethene	156-60-5	0.19	100	mg/kg	<0.0015 U	<0.0014 U	<0.0014 U
Trans-1,3-Dichloropropene	10061-02-6	NS	NS	mg/kg	<0.00097 U	<0.00093 U	<0.00093 U
Trans-1,4-Dichloro-2-Butene	110-57-6	NS	NS	mg/kg	<0.0049 U	<0.0046 U	<0.0046 U
Trichloroethene (TCE)	79-01-6	0.47	10	mg/kg	<0.00049 U	<0.00046 U	<0.00046 U
Trichlorofluoromethane	75-69-4	NS	NS	mg/kg	<0.0039 UJ	<0.0037 UJ	<0.0037 UJ
Vinyl Acetate	108-05-4	NS	NS	mg/kg	<0.0097 U	<0.0093 U	<0.0093 U
Vinyl Chloride	75-01-4	0.02	0.21	mg/kg	<0.00097 UJ	<0.00093 UJ	<0.00093 UJ

Table 4
Final Engineering Report
Confirmation Soil Sample Results

266-270 West 96th Street
New York, New York
NYSDEC BCP Site No.: C231133
Langan Project No.: 170432001

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Residential Use SCOs	Location	EP01	EP01	EP02
				Sample Name	EP01_38	DUP01_06072022	EP02_38
				Sample Date	06/07/2022	06/07/2022	06/07/2022
				Sample Elevation	38	38	38
				Sample Depth (bgs)	11.5	11.5	14
				Unit	Result	Result	Result
Semi-Volatile Organic Compounds							
1,2,4,5-Tetrachlorobenzene	95-94-3	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
1,2,4-Trichlorobenzene	120-82-1	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
1,2-Dichlorobenzene	95-50-1	1.1	100	mg/kg	<0.19 U	<0.19 U	<0.19 U
1,3-Dichlorobenzene	541-73-1	2.4	17	mg/kg	<0.19 U	<0.19 U	<0.19 U
1,4-Dichlorobenzene	106-46-7	1.8	9.8	mg/kg	<0.19 U	<0.19 U	<0.19 U
1,4-Dioxane (P-Dioxane)	123-91-1	0.1	9.8	mg/kg	<0.029 U	<0.028 U	<0.029 U
2,4,5-Trichlorophenol	95-95-4	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
2,4,6-Trichlorophenol	88-06-2	NS	NS	mg/kg	<0.12 U	<0.11 U	<0.12 U
2,4-Dichlorophenol	120-83-2	NS	NS	mg/kg	<0.18 U	<0.17 U	<0.17 U
2,4-Dimethylphenol	105-67-9	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
2,4-Dinitrophenol	51-28-5	NS	NS	mg/kg	<0.93 U	<0.9 U	<0.93 U
2,4-Dinitrotoluene	121-14-2	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
2,6-Dinitrotoluene	606-20-2	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
2-Chloronaphthalene	91-58-7	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
2-Chlorophenol	95-57-8	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
2-Methylnaphthalene	91-57-6	NS	NS	mg/kg	0.042 J	0.049 J	0.051 J
2-Methylphenol (o-Cresol)	95-48-7	0.33	100	mg/kg	<0.19 U	<0.19 U	<0.19 U
2-Nitroaniline	88-74-4	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
2-Nitrophenol	88-75-5	NS	NS	mg/kg	<0.42 U	<0.41 U	<0.42 U
3 & 4 Methylphenol (m&p Cresol)	65794-96-9	0.33	34	mg/kg	<0.28 U	<0.27 U	<0.28 U
3,3'-Dichlorobenzidine	91-94-1	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
3-Nitroaniline	99-09-2	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
4,6-Dinitro-2-Methylphenol	534-52-1	NS	NS	mg/kg	<0.5 U	<0.49 U	<0.5 U
4-Bromophenyl Phenyl Ether	101-55-3	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
4-Chloro-3-Methylphenol	59-50-7	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
4-Chloroaniline	106-47-8	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
4-Chlorophenyl Phenyl Ether	7005-72-3	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
4-Nitroaniline	100-01-6	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
4-Nitrophenol	100-02-7	NS	NS	mg/kg	<0.27 U	<0.26 U	<0.27 U
Acenaphthene	83-32-9	20	100	mg/kg	0.13 J	0.14 J	0.2
Acenaphthylene	208-96-8	100	100	mg/kg	<0.16 U	<0.15 U	<0.15 U
Acetophenone	98-86-2	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
Anthracene	120-12-7	100	100	mg/kg	0.27	0.31	0.44
Benzo(a)anthracene	56-55-3	1	1	mg/kg	0.66	0.68	0.74
Benzo(a)pyrene	50-32-8	1	1	mg/kg	0.51	0.53	0.56
Benzo(b)fluoranthene	205-99-2	1	1	mg/kg	0.56	0.59	0.66
Benzo(g,h,i)Perylene	191-24-2	100	100	mg/kg	0.3	0.31	0.32
Benzo(k)fluoranthene	207-08-9	0.8	1	mg/kg	0.16	0.16	0.18
Benzoic Acid	65-85-0	NS	NS	mg/kg	<0.63 U	<0.61 U	<0.62 U
Benzyl Alcohol	100-51-6	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
Benzyl Butyl Phthalate	85-68-7	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
Biphenyl (Diphenyl)	92-52-4	NS	NS	mg/kg	<0.44 U	<0.43 U	<0.44 U
Bis(2-chloroethoxy) methane	111-91-1	NS	NS	mg/kg	<0.21 U	<0.2 U	<0.21 U
Bis(2-chloroethyl) ether (2-chloroethyl ether)	111-44-4	NS	NS	mg/kg	<0.18 U	<0.17 U	<0.17 U
Bis(2-chloroisopropyl) ether	108-60-1	NS	NS	mg/kg	<0.23 U	<0.23 U	<0.23 U
Bis(2-ethylhexyl) phthalate	117-81-7	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
Carbazole	86-74-8	NS	NS	mg/kg	0.055 J	0.082 J	0.14 J
Chrysene	218-01-9	1	1	mg/kg	0.62	0.62	0.65
Dibenz(a,h)anthracene	53-70-3	0.33	0.33	mg/kg	0.054 J	0.061 J	0.067 J
Dibenzofuran	132-64-9	7	14	mg/kg	0.043 J	0.061 J	0.12 J
Dibutyl phthalate	84-74-2	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
Diethyl phthalate	84-66-2	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
Dimethyl phthalate	131-11-3	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
Dioctyl phthalate	117-84-0	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
Fluoranthene	206-44-0	100	100	mg/kg	1.4	1.5	1.8
Fluorene	86-73-7	30	100	mg/kg	0.096 J	0.12 J	0.18 J
Hexachlorobenzene	118-74-1	0.33	0.33	mg/kg	<0.12 U	<0.11 U	<0.12 U
Hexachlorobutadiene	87-68-3	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
Hexachlorocyclopentadiene	77-47-4	NS	NS	mg/kg	<0.56 U	<0.54 U	<0.55 U
Hexachloroethane	67-72-1	NS	NS	mg/kg	<0.16 U	<0.15 U	<0.15 U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	mg/kg	0.3	0.31	0.34
Isophorone	78-59-1	NS	NS	mg/kg	<0.18 U	<0.17 U	<0.17 U
Naphthalene	91-20-3	12	100	mg/kg	0.057 J	0.092 J	0.068 J
Nitrobenzene	98-95-3	NS	NS	mg/kg	<0.18 U	<0.17 U	<0.17 U
n-Nitrosodi-N-Propylamine	621-64-7	NS	NS	mg/kg	<0.19 U	<0.19 U	<0.19 U
n-Nitrosodiphenylamine	86-30-6	NS	NS	mg/kg	<0.16 U	<0.15 U	<0.15 U
Pentachlorophenol	87-86-5	0.8	2.4	mg/kg	<0.16 U	<0.15 U	<0.15 U
Phenanthrene	85-01-8	100	100	mg/kg	1.6	1.7	2.1
Phenol	108-95-2	0.33	100	mg/kg	<0.19 U	<0.19 U	<0.19 U
Pyrene	129-00-0	100	100	mg/kg	1.7	1.7	1.7
Pesticides							
4,4'-DDD	72-54-8	0.0033	2.6	mg/kg	<0.0018 U	<0.00182 U	<0.00179 U
4,4'-DDE	72-55-9	0.0033	1.8	mg/kg	0.00126 J	0.0015 J	0.00108 J
4,4'-DDT	50-29-3	**0.0033**	1.7	mg/kg	**0.0044**	**0.00572**	0.00318 J
Aldrin	309-00-2	0.005	0.019	mg/kg	<0.0018 U	<0.00182 U	<0.00179 U
Alpha BHC (Alpha Hexachlorocyclohexane)	319-84-6	0.02	0.097	mg/kg	<0.000752 U	<0.000759 U	<0.000747 U
Alpha Chlordane	5103-71-9	0.094	0.91	mg/kg	<0.00226 U	<0.00228 U	<0.00224 U
Alpha Endosulfan	959-98-8	2.4	4.8	mg/kg	<0.0018 U	<0.00182 U	<0.00179 U
Beta Bhc (Beta Hexachlorocyclohexane)	319-85-7	0.036	0.072	mg/kg	<0.0018 U	<0.00182 U	<0.00179 U
Beta Endosulfan	33213-65-9	2.4	4.8	mg/kg	<0.0018 U	<0.00182 U	<0.00179 U
Chlordane (alpha and gamma)	57-74-9	NS	NS	mg/kg	<0.015 U	<0.0152 U	<0.0149 U
Delta Bhc (Delta Hexachlorocyclohexane)	319-86-8	0.04	100	mg/kg	<0.0018 U	<0.00182 U	<0.00179 U
Dieldrin	60-57-1	0.005	0.039	mg/kg	<0.00113 U	<0.00114 U	<0.00112 U
Endosulfan Sulfate	1031-07-8	2.4	4.8	mg/kg	<0.000752 U	<0.000759 U	<0.000747 U
Endrin	72-20-8	0.014	2.2	mg/kg	<0.000752 U	<0.000759 U	<0.000747 U
Endrin Aldehyde	7421-93-4	NS	NS	mg/kg	<0.00226 U	<0.00228 U	<0.00224 U
Endrin Ketone	53494-70-5	NS	NS	mg/kg	<0.0018 U	<0.00182 U	<0.00179 U
Gamma Bhc (Lindane)	58-89-9	0.1	0.28	mg/kg	<0.000752 U	<0.000759 U	<0.000747 U
Gamma Chlordane (Trans-)	5103-74-2	NS	NS	mg/kg	<0.00226 U	<0.00228 U	<0.00224 U
Heptachlor	76-44-8	0.042	0.42	mg/kg	<0.000902 U	<0.00091 U	<0.000897 U
Heptachlor Epoxide	1024-57-3	NS	NS	mg/kg	<0.00338 U	<0.00341 U	<0.00336 U
Methoxychlor	72-43-5	NS	NS	mg/kg	<0.00338 U	<0.00341 U	<0.00336 U
Toxaphene	8001-35-2	NS	NS	mg/kg	<0.0338 U	<0.0341 U	<0.0336 U

Table 4
Final Engineering Report
Confirmation Soil Sample Results

266-270 West 96th Street
New York, New York
NYSDEC BCP Site No.: C231133
Langan Project No.: 170432001

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Residential Use SCOs	Location	EP01	EP01	EP02
				Sample Name	EP01_38	DUP01_06072022	EP02_38
				Sample Date	06/07/2022	06/07/2022	06/07/2022
				Sample Elevation	38	38	38
				Sample Depth (bgs)	11.5	11.5	14
				Unit	Result	Result	Result
Herbicides							
2,4,5-T (Trichlorophenoxyacetic Acid)	93-76-5	NS	NS	mg/kg	<0.193 U	<0.193 U	<0.193 U
2,4-D (Dichlorophenoxyacetic Acid)	94-75-7	NS	NS	mg/kg	<0.193 U	<0.193 U	<0.193 U
Silvex (2,4,5-Tp)	93-72-1	3.8	58	mg/kg	<0.193 U	<0.193 U	<0.193 U
Polychlorinated Biphenyl							
PCB-1016 (Aroclor 1016)	12674-11-2	NS	NS	mg/kg	<0.0386 U	<0.0372 U	<0.0377 U
PCB-1221 (Aroclor 1221)	11104-28-2	NS	NS	mg/kg	<0.0386 U	<0.0372 U	<0.0377 U
PCB-1232 (Aroclor 1232)	11141-16-5	NS	NS	mg/kg	<0.0386 U	<0.0372 U	<0.0377 U
PCB-1242 (Aroclor 1242)	53469-21-9	NS	NS	mg/kg	<0.0386 U	<0.0372 U	<0.0377 U
PCB-1248 (Aroclor 1248)	12672-29-6	NS	NS	mg/kg	<0.0386 U	<0.0372 U	<0.0377 U
PCB-1254 (Aroclor 1254)	11097-69-1	NS	NS	mg/kg	<0.0386 U	<0.0372 U	<0.0377 U
PCB-1260 (Aroclor 1260)	11096-82-5	NS	NS	mg/kg	<0.0386 U	<0.0372 U	<0.0377 U
PCB-1262 (Aroclor 1262)	37324-23-5	NS	NS	mg/kg	<0.0386 U	<0.0372 U	<0.0377 U
PCB-1268 (Aroclor 1268)	11100-14-4	NS	NS	mg/kg	<0.0386 U	<0.0372 U	<0.0377 U
Total PCBs	1336-36-3	0.1	1	mg/kg	<0.0386 U	<0.0372 U	<0.0377 U
Metals							
Aluminum	7429-90-5	NS	NS	mg/kg	10,200	9,890	11,500
Antimony	7440-36-0	NS	NS	mg/kg	<4.7 U	<4.49 U	<4.41 U
Arsenic	7440-38-2	13	16	mg/kg	3.68	3.74	3.31
Barium	7440-39-3	350	350	mg/kg	64.8	61.3	78.3
Beryllium	7440-41-7	7.2	14	mg/kg	0.423 J	0.404 J	0.467
Cadmium	7440-43-9	2.5	2.5	mg/kg	0.386 J	0.377 J	0.397 J
Calcium	7440-70-2	NS	NS	mg/kg	6,660 J	4,960	3,810
Chromium, Hexavalent	18540-29-9	1	22	mg/kg	<0.957 UJ	<0.932 UJ	<0.93 UJ
Chromium, Total	7440-47-3	NS	NS	mg/kg	20.1	20.6	25.5
Chromium, Trivalent	16065-83-1	30	36	mg/kg	20	20 J	26
Cobalt	7440-48-4	NS	NS	mg/kg	10.4	9.05	10.1
Copper	7440-50-8	50	270	mg/kg	24.1	23.3	26.8
Cyanide	57-12-5	27	27	mg/kg	<1.1 UJ	<1.1 UJ	<1.1 UJ
Iron	7439-89-6	NS	NS	mg/kg	19,500	18,800	20,900
Lead	7439-92-1	**63**	400	mg/kg	**88.2 J**	**81.5**	58.1
Magnesium	7439-95-4	NS	NS	mg/kg	4,460	4,300	5,240
Manganese	7439-96-5	1600	2000	mg/kg	382	325	355
Mercury	7439-97-6	**0.18**	0.81	mg/kg	**0.182**	0.089	0.115
Nickel	7440-02-0	30	140	mg/kg	17.9	17.1	19
Potassium	7440-09-7	NS	NS	mg/kg	1,920 J	1,970	3,320
Selenium	7782-49-2	3.9	36	mg/kg	0.423 J	0.323 J	0.335 J
Silver	7440-22-4	2	36	mg/kg	<0.94 U	<0.898 U	<0.882 U
Sodium	7440-23-5	NS	NS	mg/kg	<188 U	<180 U	<176 U
Thallium	7440-28-0	NS	NS	mg/kg	<1.88 U	<1.8 U	<1.76 U
Vanadium	7440-62-2	NS	NS	mg/kg	25.1	26.2	32.8
Zinc	7440-66-6	109	2200	mg/kg	73.9	71.4	73.4
General Chemistry							
Total Solids	TSOLID	NS	NS	Percent	83.6	85.8	86
Perfluorooctanoic acids							
N-ethyl perfluorooctane- sulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	NS	NS	mg/kg	<0.000562 U	<0.00055 U	0.000138 J
N-methyl perfluorooctane- sulfonamidoacetic Acid (NMeFOSAA)	2355-31-9	NS	NS	mg/kg	<0.000562 U	<0.00055 U	<0.000537 U
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	NS	NS	mg/kg	<0.000281 U	<0.000275 U	<0.000268 U
Perfluorobutanoic acid (PFBA)	375-22-4	NS	NS	mg/kg	0.000055 J	0.00005 J	0.000031 J
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	NS	NS	mg/kg	<0.000562 U	<0.00055 U	<0.000537 U
Perfluorodecanoic Acid (PFDA)	335-76-2	NS	NS	mg/kg	<0.000281 U	<0.000275 U	<0.000268 U
Perfluorododecanoic Acid (PFDoA)	307-55-1	NS	NS	mg/kg	<0.000562 U	<0.00055 U	<0.000537 U
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	NS	NS	mg/kg	<0.000562 U	<0.00055 U	<0.000537 U
Perfluoroheptanoic acid (PFHpA)	375-85-9	NS	NS	mg/kg	<0.000281 U	<0.000275 U	<0.000268 U
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	NS	NS	mg/kg	<0.000281 U	<0.000275 U	<0.000268 U
Perfluorohexanoic Acid (PFHxA)	307-24-4	NS	NS	mg/kg	<0.000562 U	<0.00055 U	<0.000537 U
Perfluorononanoic Acid (PFNA)	375-95-1	NS	NS	mg/kg	<0.000281 U	<0.000275 U	<0.000268 U
Perfluorooctanesulfonamide (FOSA)	754-91-6	NS	NS	mg/kg	<0.000562 U	<0.00055 U	<0.000537 U
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.00088	0.0088	mg/kg	0.000616	0.000596	0.000539
Perfluorooctanoic Acid (PFOA)	335-67-1	0.00066	0.0066	mg/kg	0.000209 J	0.000184 J	0.000183 J
Perfluoropentanoic Acid (PFPeA)	2706-90-3	NS	NS	mg/kg	0.000065 J	0.000062 J	<0.000537 U
Perfluorotetradecanoic Acid (PFTA)	376-06-7	NS	NS	mg/kg	<0.000562 U	<0.00055 U	<0.000537 U
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	NS	NS	mg/kg	<0.000562 U	<0.00055 U	<0.000537 U
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	NS	NS	mg/kg	<0.000562 U	<0.00055 U	<0.000537 U
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2) (8:2FTS)	39108-34-4	NS	NS	mg/kg	<0.000562 U	<0.00055 U	<0.000537 U
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2) (6:2FTS)	27619-97-2	NS	NS	mg/kg	<0.000562 U	<0.00055 U	<0.000537 U
Total PFOA and PFOS	TOTPFOAPFOS	NS	NS	mg/kg	0.000825 J	0.00078 J	0.000722 J

Table 4
Final Engineering Report
Confirmation Soil Sample Results

266-270 West 96th Street
New York, New York
NYSDEC BCP Site No.: C231133
Langan Project No.: 170432001

Notes:

CAS - Chemical Abstract Service
NS - No standard
mg/kg - milligram per kilogram
NA - Not analyzed
RL - Reporting limit
<RL - Not detected

Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use and Residential Use Soil Cleanup Objectives (SCO).

Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Part 375 Remedial Programs Guidelines for Sampling and Analysis of Per- and Polyfluoroalkyl Substances (PFAS) Unrestricted Use, Restricted Use Restricted-Residential, and Protection of Groundwater Guidance Values (June 2021).

Criterion comparisons for 3- & 4-methylphenol (m&p cresol) are provided for reference. Promulgated SCOs are for 3-methylphenol (m-cresol) and 4-methylphenol (p-cresol).

Qualifiers:

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ - The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.
U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

Exceedance Summary:

10 - Result exceeds Unrestricted Use SCOs
10 - Result exceeds Restricted Use Residential SCOs

Table 5
Final Engineering Report
QA/QC Analytical Results

266-270 West 96th Street
New York, New York
NYSDEC BCP Site No.: C231133
Langan Project No.: 170432001

Analyte	CAS Number	Sample Type	TB	FB	FB
		Sample Name	TB01_06072022	FB01_06072022	FB01_PFAS_06072022
		Sample Date	06/07/2022	06/07/2022	06/07/2022
		Unit	Result	Result	Result
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	630-20-6	ug/l	<2.5 U	<2.5 U	NA
1,1,1-Trichloroethane	71-55-6	ug/l	<2.5 U	<2.5 U	NA
1,1,2,2-Tetrachloroethane	79-34-5	ug/l	<0.5 U	<0.5 U	NA
1,1,2-Trichloroethane	79-00-5	ug/l	<1.5 U	<1.5 U	NA
1,1-Dichloroethane	75-34-3	ug/l	<2.5 U	<2.5 U	NA
1,1-Dichloroethene	75-35-4	ug/l	<0.5 U	<0.5 U	NA
1,1-Dichloropropene	563-58-6	ug/l	<2.5 U	<2.5 U	NA
1,2,3-Trichlorobenzene	87-61-6	ug/l	<2.5 U	<2.5 U	NA
1,2,3-Trichloropropane	96-18-4	ug/l	<2.5 U	<2.5 U	NA
1,2,4,5-Tetramethylbenzene	95-93-2	ug/l	<2 U	<2 U	NA
1,2,4-Trichlorobenzene	120-82-1	ug/l	<2.5 U	<2.5 U	NA
1,2,4-Trimethylbenzene	95-63-6	ug/l	<2.5 U	<2.5 U	NA
1,2-Dibromo-3-Chloropropane	96-12-8	ug/l	<2.5 U	<2.5 U	NA
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	ug/l	<2 U	<2 U	NA
1,2-Dichlorobenzene	95-50-1	ug/l	<2.5 U	<2.5 U	NA
1,2-Dichloroethane	107-06-2	ug/l	<0.5 U	<0.5 U	NA
1,2-Dichloropropane	78-87-5	ug/l	<1 U	<1 U	NA
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	ug/l	<2.5 U	<2.5 U	NA
1,3-Dichlorobenzene	541-73-1	ug/l	<2.5 U	<2.5 U	NA
1,3-Dichloropropane	142-28-9	ug/l	<2.5 U	<2.5 U	NA
1,4-Dichlorobenzene	106-46-7	ug/l	<2.5 U	<2.5 U	NA
1,4-Diethyl Benzene	105-05-5	ug/l	<2 U	<2 U	NA
1,4-Dioxane (P-Dioxane)	123-91-1	ug/l	<250 U	<250 U	NA
2,2-Dichloropropane	594-20-7	ug/l	<2.5 U	<2.5 U	NA
2-Chlorotoluene	95-49-8	ug/l	<2.5 U	<2.5 U	NA
2-Hexanone (MBK)	591-78-6	ug/l	<5 U	<5 U	NA
4-Chlorotoluene	106-43-4	ug/l	<2.5 U	<2.5 U	NA
4-Ethyltoluene	622-96-8	ug/l	<2 U	<2 U	NA
Acetone	67-64-1	ug/l	<5 U	<5 U	NA
Acrylonitrile	107-13-1	ug/l	<5 U	<5 U	NA
Benzene	71-43-2	ug/l	<0.5 U	<0.5 U	NA
Bromobenzene	108-86-1	ug/l	<2.5 U	<2.5 U	NA
Bromochloromethane	74-97-5	ug/l	<2.5 U	<2.5 U	NA
Bromodichloromethane	75-27-4	ug/l	<0.5 U	<0.5 U	NA
Bromoform	75-25-2	ug/l	<2 U	<2 U	NA
Bromomethane	74-83-9	ug/l	<2.5 U	<2.5 U	NA
Carbon Disulfide	75-15-0	ug/l	<5 U	<5 U	NA
Carbon Tetrachloride	56-23-5	ug/l	<0.5 U	<0.5 U	NA
Chlorobenzene	108-90-7	ug/l	<2.5 U	<2.5 U	NA
Chloroethane	75-00-3	ug/l	<2.5 U	<2.5 U	NA
Chloroform	67-66-3	ug/l	<2.5 U	<2.5 U	NA
Chloromethane	74-87-3	ug/l	<2.5 U	<2.5 U	NA
Cis-1,2-Dichloroethene	156-59-2	ug/l	<2.5 U	<2.5 U	NA
Cis-1,3-Dichloropropene	10061-01-5	ug/l	<0.5 U	<0.5 U	NA
Cymene	99-87-6	ug/l	<2.5 U	<2.5 U	NA
Dibromochloromethane	124-48-1	ug/l	<0.5 U	<0.5 U	NA
Dibromomethane	74-95-3	ug/l	<5 U	<5 U	NA
Dichlorodifluoromethane	75-71-8	ug/l	<5 U	<5 U	NA
Diethyl Ether (Ethyl Ether)	60-29-7	ug/l	<2.5 U	<2.5 U	NA
Ethylbenzene	100-41-4	ug/l	<2.5 U	<2.5 U	NA
Hexachlorobutadiene	87-68-3	ug/l	<2.5 U	<2.5 U	NA
Isopropylbenzene (Cumene)	98-82-8	ug/l	<2.5 U	<2.5 U	NA
M,P-Xylene	179601-23-1	ug/l	<2.5 U	<2.5 U	NA
Methyl Ethyl Ketone (2-Butanone)	78-93-3	ug/l	<5 U	<5 U	NA
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1	ug/l	<5 U	<5 U	NA
Methylene Chloride	75-09-2	ug/l	<2.5 U	<2.5 U	NA
Naphthalene	91-20-3	ug/l	<2.5 U	<2.5 U	NA
n-Butylbenzene	104-51-8	ug/l	<2.5 U	<2.5 U	NA
n-Propylbenzene	103-65-1	ug/l	<2.5 U	<2.5 U	NA
o-Xylene (1,2-Dimethylbenzene)	95-47-6	ug/l	<2.5 U	<2.5 U	NA
Sec-Butylbenzene	135-98-8	ug/l	<2.5 U	<2.5 U	NA
Styrene	100-42-5	ug/l	<2.5 U	<2.5 U	NA
T-Butylbenzene	98-06-6	ug/l	<2.5 U	<2.5 U	NA
Tert-Butyl Methyl Ether	1634-04-4	ug/l	<2.5 U	<2.5 U	NA
Tetrachloroethene (PCE)	127-18-4	ug/l	<0.5 U	<0.5 U	NA
Toluene	108-88-3	ug/l	<2.5 U	<2.5 U	NA
Total 1,2-Dichloroethene (Cis and Trans)	540-59-0	ug/l	<2.5 U	<2.5 U	NA
Total Xylenes	1330-20-7	ug/l	<2.5 U	<2.5 U	NA
Total, 1,3-Dichloropropene (Cis And Trans)	542-75-6	ug/l	<0.5 U	<0.5 U	NA
Trans-1,2-Dichloroethene	156-60-5	ug/l	<2.5 U	<2.5 U	NA
Trans-1,3-Dichloropropene	10061-02-6	ug/l	<0.5 U	<0.5 U	NA
Trans-1,4-Dichloro-2-Butene	110-57-6	ug/l	<2.5 U	<2.5 U	NA
Trichloroethene (TCE)	79-01-6	ug/l	<0.5 U	<0.5 U	NA
Trichlorofluoromethane	75-69-4	ug/l	<2.5 U	<2.5 U	NA
Vinyl Acetate	108-05-4	ug/l	<5 U	<5 U	NA
Vinyl Chloride	75-01-4	ug/l	<1 U	<1 U	NA

Table 5
Final Engineering Report
QA/QC Analytical Results

266-270 West 96th Street
New York, New York
NYSDEC BCP Site No.: C231133
Langan Project No.: 170432001

Analyte	CAS Number	Sample Type	TB	FB	FB
		Sample Name	TB01_06072022	FB01_06072022	FB01_PFAS_06072022
		Sample Date	06/07/2022	06/07/2022	06/07/2022
		Unit	Result	Result	Result
Semi-Volatile Organic Compounds					
1,2,4,5-Tetrachlorobenzene	95-94-3	ug/l	NA	<10 U	NA
1,2,4-Trichlorobenzene	120-82-1	ug/l	NA	<5 U	NA
1,2-Dichlorobenzene	95-50-1	ug/l	NA	<2 U	NA
1,3-Dichlorobenzene	541-73-1	ug/l	NA	<2 U	NA
1,4-Dichlorobenzene	106-46-7	ug/l	NA	<2 U	NA
1,4-Dioxane (P-Dioxane)	123-91-1	ug/l	NA	<0.144 U	NA
2,4,5-Trichlorophenol	95-95-4	ug/l	NA	<5 U	NA
2,4,6-Trichlorophenol	88-06-2	ug/l	NA	<5 U	NA
2,4-Dichlorophenol	120-83-2	ug/l	NA	<5 U	NA
2,4-Dimethylphenol	105-67-9	ug/l	NA	<5 U	NA
2,4-Dinitrophenol	51-28-5	ug/l	NA	<20 U	NA
2,4-Dinitrotoluene	121-14-2	ug/l	NA	<5 U	NA
2,6-Dinitrotoluene	606-20-2	ug/l	NA	<5 U	NA
2-Chloronaphthalene	91-58-7	ug/l	NA	<0.2 U	NA
2-Chlorophenol	95-57-8	ug/l	NA	<2 U	NA
2-Methylnaphthalene	91-57-6	ug/l	NA	<0.1 U	NA
2-Methylphenol (o-Cresol)	95-48-7	ug/l	NA	<5 U	NA
2-Nitroaniline	88-74-4	ug/l	NA	<5 U	NA
2-Nitrophenol	88-75-5	ug/l	NA	<10 U	NA
3 & 4 Methylphenol (m&p Cresol)	65794-96-9	ug/l	NA	<5 U	NA
3,3'-Dichlorobenzidine	91-94-1	ug/l	NA	<5 U	NA
3-Nitroaniline	99-09-2	ug/l	NA	<5 U	NA
4,6-Dinitro-2-Methylphenol	534-52-1	ug/l	NA	<10 U	NA
4-Bromophenyl Phenyl Ether	101-55-3	ug/l	NA	<2 U	NA
4-Chloro-3-Methylphenol	59-50-7	ug/l	NA	<2 U	NA
4-Chloroaniline	106-47-8	ug/l	NA	<5 U	NA
4-Chlorophenyl Phenyl Ether	7005-72-3	ug/l	NA	<2 U	NA
4-Nitroaniline	100-01-6	ug/l	NA	<5 U	NA
4-Nitrophenol	100-02-7	ug/l	NA	<10 U	NA
Acenaphthene	83-32-9	ug/l	NA	<0.1 U	NA
Acenaphthylene	208-96-8	ug/l	NA	<0.1 U	NA
Acetophenone	98-86-2	ug/l	NA	<5 U	NA
Anthracene	120-12-7	ug/l	NA	<0.1 U	NA
Benzo(a)anthracene	56-55-3	ug/l	NA	<0.1 U	NA
Benzo(a)pyrene	50-32-8	ug/l	NA	<0.1 U	NA
Benzo(b)fluoranthene	205-99-2	ug/l	NA	<0.1 U	NA
Benzo(g,h,i)Perylene	191-24-2	ug/l	NA	<0.1 U	NA
Benzo(k)fluoranthene	207-08-9	ug/l	NA	<0.1 U	NA
Benzoic Acid	65-85-0	ug/l	NA	<50 U	NA
Benzyl Alcohol	100-51-6	ug/l	NA	<2 U	NA
Benzyl Butyl Phthalate	85-68-7	ug/l	NA	<5 U	NA
Biphenyl (Diphenyl)	92-52-4	ug/l	NA	<2 U	NA
Bis(2-chloroethoxy) methane	111-91-1	ug/l	NA	<5 U	NA
Bis(2-chloroethyl) ether (2-chloroethyl ether)	111-44-4	ug/l	NA	<2 U	NA
Bis(2-chloroisopropyl) ether	108-60-1	ug/l	NA	<2 U	NA
Bis(2-ethylhexyl) phthalate	117-81-7	ug/l	NA	<3 U	NA
Carbazole	86-74-8	ug/l	NA	<2 U	NA
Chrysene	218-01-9	ug/l	NA	<0.1 U	NA
Dibenz(a,h)anthracene	53-70-3	ug/l	NA	<0.1 U	NA
Dibenzofuran	132-64-9	ug/l	NA	<2 U	NA
Dibutyl phthalate	84-74-2	ug/l	NA	<5 U	NA
Diethyl phthalate	84-66-2	ug/l	NA	<5 U	NA
Dimethyl phthalate	131-11-3	ug/l	NA	<5 U	NA
Dioctyl phthalate	117-84-0	ug/l	NA	<5 U	NA
Fluoranthene	206-44-0	ug/l	NA	<0.1 U	NA
Fluorene	86-73-7	ug/l	NA	<0.1 U	NA
Hexachlorobenzene	118-74-1	ug/l	NA	<0.8 U	NA
Hexachlorobutadiene	87-68-3	ug/l	NA	<0.5 U	NA
Hexachlorocyclopentadiene	77-47-4	ug/l	NA	<20 U	NA
Hexachloroethane	67-72-1	ug/l	NA	<0.8 U	NA
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	NA	<0.1 U	NA
Isophorone	78-59-1	ug/l	NA	<5 U	NA
Naphthalene	91-20-3	ug/l	NA	<0.1 U	NA
Nitrobenzene	98-95-3	ug/l	NA	<2 U	NA
n-Nitrosodi-N-Propylamine	621-64-7	ug/l	NA	<5 U	NA
n-Nitrosodiphenylamine	86-30-6	ug/l	NA	<2 U	NA
Pentachlorophenol	87-86-5	ug/l	NA	<0.8 U	NA
Phenanthrene	85-01-8	ug/l	NA	<0.1 U	NA
Phenol	108-95-2	ug/l	NA	<5 U	NA
Pyrene	129-00-0	ug/l	NA	<0.1 U	NA
Pesticides					
4,4'-DDD	72-54-8	ug/l	NA	<0.029 U	NA
4,4'-DDE	72-55-9	ug/l	NA	<0.029 U	NA
4,4'-DDT	50-29-3	ug/l	NA	<0.029 U	NA
Aldrin	309-00-2	ug/l	NA	<0.014 U	NA
Alpha BHC (Alpha Hexachlorocyclohexane)	319-84-6	ug/l	NA	<0.014 U	NA
Alpha Chlordane	5103-71-9	ug/l	NA	<0.014 U	NA
Alpha Endosulfan	959-98-8	ug/l	NA	<0.014 U	NA
Beta Bhc (Beta Hexachlorocyclohexane)	319-85-7	ug/l	NA	<0.014 U	NA
Beta Endosulfan	33213-65-9	ug/l	NA	<0.029 U	NA
Chlordane (alpha and gamma)	57-74-9	ug/l	NA	<0.143 U	NA
Delta Bhc (Delta Hexachlorocyclohexane)	319-86-8	ug/l	NA	<0.014 U	NA
Dieldrin	60-57-1	ug/l	NA	<0.029 U	NA
Endosulfan Sulfate	1031-07-8	ug/l	NA	<0.029 U	NA
Endrin	72-20-8	ug/l	NA	<0.029 U	NA
Endrin Aldehyde	7421-93-4	ug/l	NA	<0.029 U	NA
Endrin Ketone	53494-70-5	ug/l	NA	<0.029 U	NA
Gamma Bhc (Lindane)	58-89-9	ug/l	NA	<0.014 U	NA
Gamma Chlordane (Trans-)	5103-74-2	ug/l	NA	<0.014 U	NA
Heptachlor	76-44-8	ug/l	NA	<0.014 U	NA
Heptachlor Epoxide	1024-57-3	ug/l	NA	<0.014 U	NA
Methoxychlor	72-43-5	ug/l	NA	<0.143 U	NA
Toxaphene	8001-35-2	ug/l	NA	<0.143 U	NA

Table 5
Final Engineering Report
QA/QC Analytical Results

266-270 West 96th Street
New York, New York
NYSDEC BCP Site No.: C231133
Langan Project No.: 170432001

Analyte	CAS Number	Sample Type	TB	FB	FB
		Sample Name	TB01_06072022	FB01_06072022	FB01_PFAS_06072022
		Sample Date	06/07/2022	06/07/2022	06/07/2022
		Unit	Result	Result	Result
Herbicides					
2,4,5-T (Trichlorophenoxyacetic Acid)	93-76-5	ug/l	NA	<2 U	NA
2,4-D (Dichlorophenoxyacetic Acid)	94-75-7	ug/l	NA	<10 U	NA
Silvex (2,4,5-Tp)	93-72-1	ug/l	NA	<2 U	NA
Polychlorinated Biphenyl					
PCB-1016 (Aroclor 1016)	12674-11-2	ug/l	NA	<0.071 U	NA
PCB-1221 (Aroclor 1221)	11104-28-2	ug/l	NA	<0.071 U	NA
PCB-1232 (Aroclor 1232)	11141-16-5	ug/l	NA	<0.071 U	NA
PCB-1242 (Aroclor 1242)	53469-21-9	ug/l	NA	<0.071 U	NA
PCB-1248 (Aroclor 1248)	12672-29-6	ug/l	NA	<0.071 U	NA
PCB-1254 (Aroclor 1254)	11097-69-1	ug/l	NA	<0.071 U	NA
PCB-1260 (Aroclor 1260)	11096-82-5	ug/l	NA	<0.071 U	NA
PCB-1262 (Aroclor 1262)	37324-23-5	ug/l	NA	<0.071 U	NA
PCB-1268 (Aroclor 1268)	11100-14-4	ug/l	NA	<0.071 U	NA
Total PCBs	1336-36-3	ug/l	NA	<0.071 U	NA
Metals					
Aluminum	7429-90-5	ug/l	NA	<10 U	NA
Antimony	7440-36-0	ug/l	NA	<4 U	NA
Arsenic	7440-38-2	ug/l	NA	<0.5 U	NA
Barium	7440-39-3	ug/l	NA	<0.5 U	NA
Beryllium	7440-41-7	ug/l	NA	<0.5 U	NA
Cadmium	7440-43-9	ug/l	NA	<0.2 U	NA
Calcium	7440-70-2	ug/l	NA	<100 U	NA
Chromium, Hexavalent	18540-29-9	ug/l	NA	<10 U	NA
Chromium, Total	7440-47-3	ug/l	NA	0.22 J	NA
Chromium, Trivalent	16065-83-1	ug/l	NA	<10 U	NA
Cobalt	7440-48-4	ug/l	NA	<0.5 U	NA
Copper	7440-50-8	ug/l	NA	<1 U	NA
Cyanide	57-12-5	ug/l	NA	<5 U	NA
Iron	7439-89-6	ug/l	NA	<50 U	NA
Lead	7439-92-1	ug/l	NA	<1 U	NA
Magnesium	7439-95-4	ug/l	NA	<70 U	NA
Manganese	7439-96-5	ug/l	NA	<1 U	NA
Mercury	7439-97-6	ug/l	NA	<0.2 U	NA
Nickel	7440-02-0	ug/l	NA	<2 U	NA
Potassium	7440-09-7	ug/l	NA	<100 U	NA
Selenium	7782-49-2	ug/l	NA	<5 U	NA
Silver	7440-22-4	ug/l	NA	<0.4 U	NA
Sodium	7440-23-5	ug/l	NA	<100 U	NA
Thallium	7440-28-0	ug/l	NA	<1 U	NA
Vanadium	7440-62-2	ug/l	NA	<5 U	NA
Zinc	7440-66-6	ug/l	NA	<10 U	NA
Perfluorooctanoic acids					
N-ethyl perfluorooctane- sulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	ug/l	NA	NA	<0.00178 U
N-methyl perfluorooctane- sulfonamidoacetic Acid (NMeFOSAA)	2355-31-9	ug/l	NA	NA	<0.00178 U
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	ug/l	NA	NA	<0.00178 U
Perfluorobutanoic acid (PFBA)	375-22-4	ug/l	NA	NA	<0.00178 U
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	ug/l	NA	NA	<0.00178 U
Perfluorodecanoic Acid (PFDA)	335-76-2	ug/l	NA	NA	<0.00178 U
Perfluorododecanoic Acid (PFDoA)	307-55-1	ug/l	NA	NA	<0.00178 U
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	ug/l	NA	NA	<0.00178 U
Perfluoroheptanoic acid (PFHpA)	375-85-9	ug/l	NA	NA	<0.00178 U
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	ug/l	NA	NA	<0.00178 U
Perfluorohexanoic Acid (PFHxA)	307-24-4	ug/l	NA	NA	<0.00178 U
Perfluorononanoic Acid (PFNA)	375-95-1	ug/l	NA	NA	<0.00178 U
Perfluorooctanesulfonamide (FOSA)	754-91-6	ug/l	NA	NA	<0.00178 U
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	ug/l	NA	NA	<0.00178 U
Perfluorooctanoic Acid (PFOA)	335-67-1	ug/l	NA	NA	<0.00178 U
Perfluoropentanoic Acid (PFPeA)	2706-90-3	ug/l	NA	NA	<0.00178 U
Perfluorotetradecanoic Acid (PFTA)	376-06-7	ug/l	NA	NA	<0.00178 U
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	ug/l	NA	NA	<0.00178 U
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	ug/l	NA	NA	<0.00178 U
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2) (8:2FTS)	39108-34-4	ug/l	NA	NA	<0.00178 U
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2) (6:2FTS)	27619-97-2	ug/l	NA	NA	<0.00178 U
Total PFOA and PFOS	TOTPFOAPFOS	ug/l	NA	NA	<0.00178 U

Table 5
Final Engineering Report
QA/QC Analytical Results

266-270 West 96th Street
New York, New York
NYSDEC BCP Site No.: C231133
Langan Project No.: 170432001

Notes:

FB - Field Blank
TB - Trip Blank
CAS - Chemical Abstract Service
NS - No standard
ug/l - microgram per liter
NA - Not analyzed
RL - Reporting limit
<RL - Not detected
QA/QC - Quality Assurance/Quality Control

Qualifiers:

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

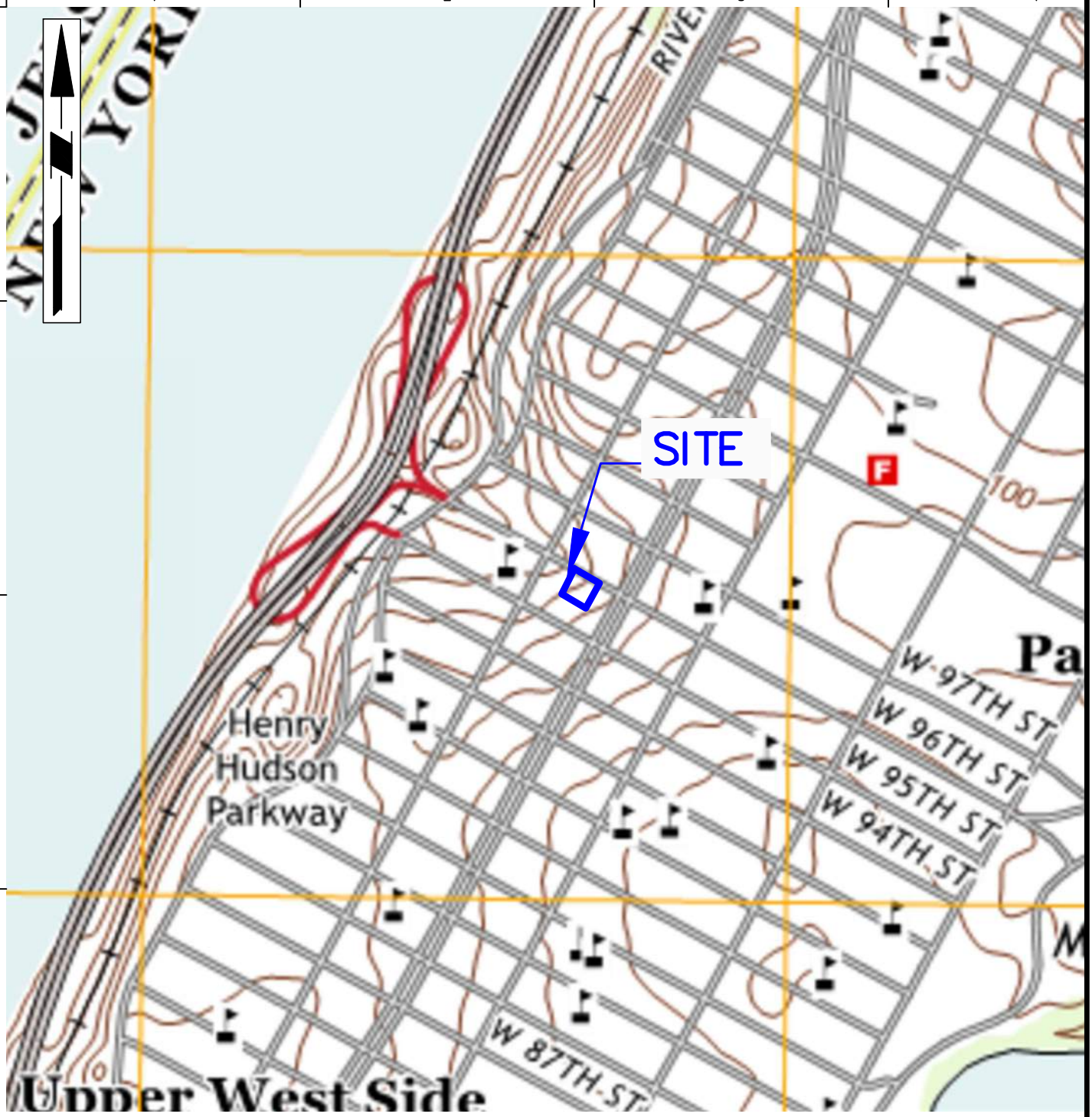
Table 6
Final Engineering Report
Import Stone Summary

266-270 West 96th Street
New York, New York
NYSDEC BCP Site No.: C231133
Langan Project No.: 170432001

Facility	Material Type	Loads	Tons	Job #: 170432001
Tilcon Mount Hope Quarry	0.75-inch stone	9	214.13	

Load No. & Date		Material Info		Origin	Volume/Weight
Load No.	Date	Material Type	Ticket No.	Origin	Quantity (tons)
1	6/9/2022	0.75-inch stone	41880459	Tilcon Mount Hope Quarry	69.14
2	6/14/2022	0.75-inch stone	41882703	Tilcon Mount Hope Quarry	17.79
3	6/14/2022	0.75-inch stone	41882705	Tilcon Mount Hope Quarry	17.61
4	6/14/2022	0.75-inch stone	41882630	Tilcon Mount Hope Quarry	18.27
5	6/14/2022	0.75-inch stone	41882718	Tilcon Mount Hope Quarry	17.84
6	6/15/2022	0.75-inch stone	41883416	Tilcon Mount Hope Quarry	17.55
7	6/15/2022	0.75-inch stone	41883441	Tilcon Mount Hope Quarry	17.31
8	6/16/2022	0.75-inch stone	41883832	Tilcon Mount Hope Quarry	19.16
9	6/16/2022	0.75-inch stone	41883818	Tilcon Mount Hope Quarry	19.46

FIGURES



BASEMAP SOURCE: UNITED STATES GEOLOGICAL SURVEY 7.5 MINUTE TOPOGRAPHIC MAPS FOR THE CENTRAL PARK QUADRANGLE, DATED 2016.

APPROXIMATE SITE BOUNDARY

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

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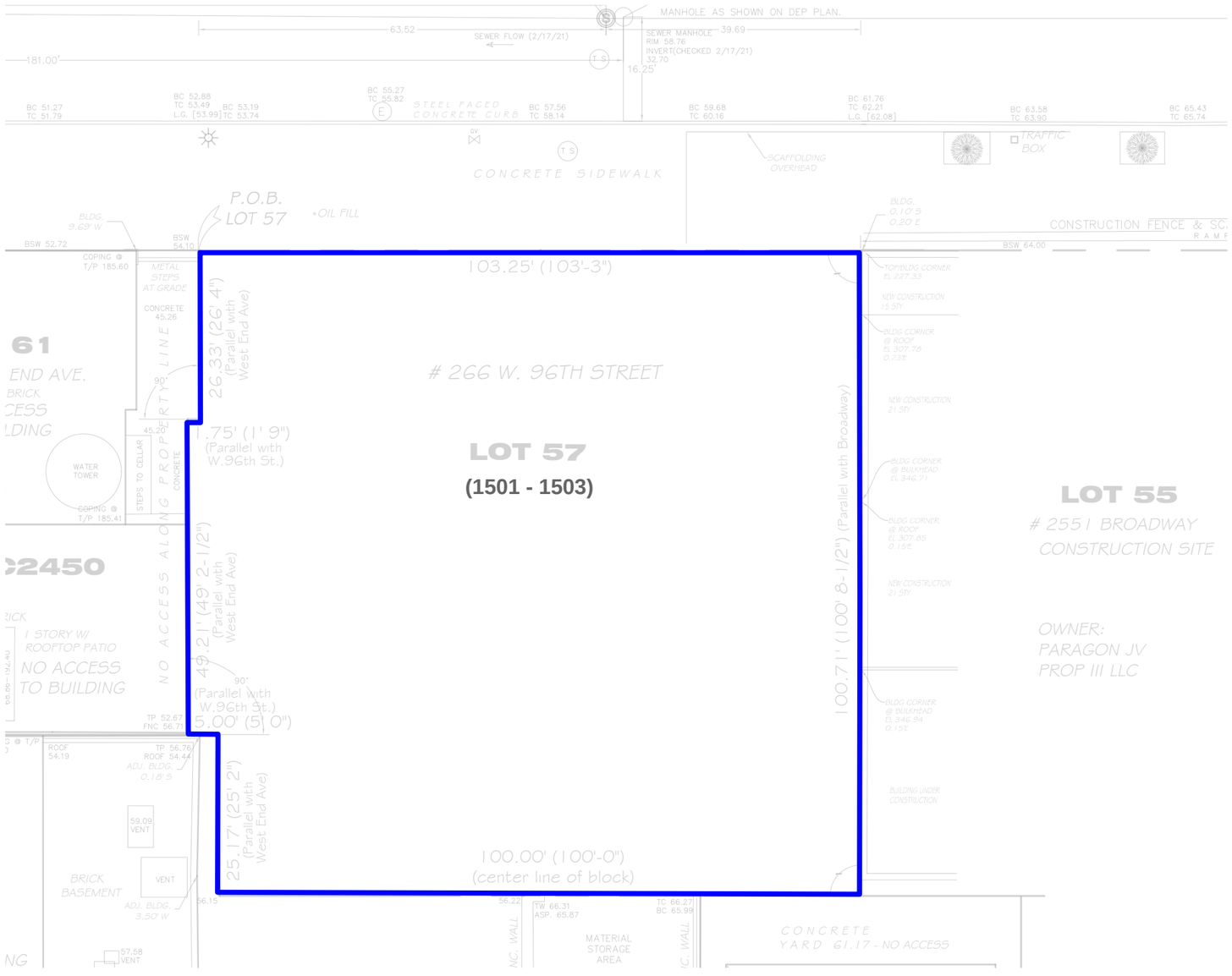
Project
266-270 WEST 96TH STREET
BLOCK No. 1243, LOT Nos. 57, 59, & 60
NEW YORK NEW YORK

Figure Title
SITE LOCATION MAP

Project No. 170432001
Date 02/02/2021
Drawn By LH
Checked By JFY

Figure No. 1

Filename: \\langan.com\data\NYC\data0\170432001\Cadd Data - 170432001\SheetFiles\Environmental\BCP FER\Figure 1 - Site Location Map.dwg Date: 8/16/2022 Time: 17:11 User: maronica Style Table: Langan.stb Layout: ANSIA-BP



LEGEND:

APPROXIMATE SITE BOUNDARY

NOTES:

1. BASEMAP WAS TAKEN FROM THE ENVIRONMENTAL EASEMENT SURVEY, PREPARED BY TRUE NORTH SURVEYORS, INC., DATED MAY 19, 2022.
2. BLOCK 1243, LOT 57 CONSISTS OF CONDOMINIUM TAX LOTS 1501, 1502, AND 1503.
   CONDOMINIUM TAX LOT 1501 = COMMERCIAL UNIT ON THE FIRST FLOOR.
   CONDOMINIUM TAX LOT 1502 = RESIDENTIAL APARTMENTS ON FLOORS 3 TO 15, 17, AND 18.
   CONDOMINIUM TAX LOT 1503 = RESIDENTIAL APARTMENTS ON FLOORS 2 TO 23.
3. DATUM REFERS TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), WHICH IS APPROXIMATELY 1.1 FEET ABOVE MEAN SEA LEVEL DATUM OF SANDY HOOK, NEW JERSEY AS DEFINED BY THE UNITED STATES GEOLOGICAL SURVEY (USGS NGVD 1929).

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

20 0 10 20
SCALE IN FEET

LANGAN
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor
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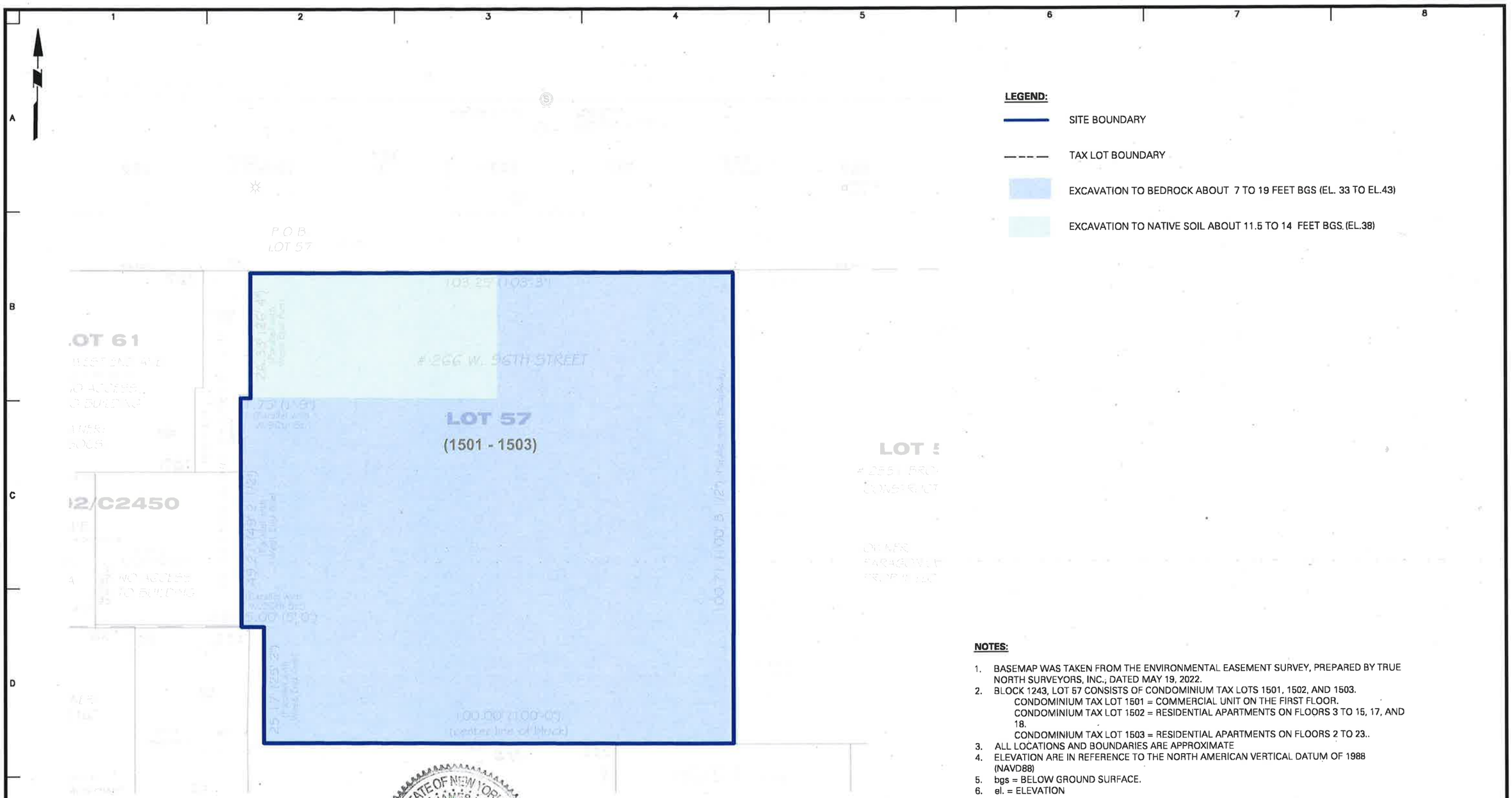
Project	Figure Title	Project No.	Figure No.
266-270 WEST 96TH STREET BLOCK No. 1243, LOT Nos. 57, 59 & 60 NEW YORK NEW YORK	SITE PLAN	170432001 Date 12/06/2022 Drawn By MA Checked By JFY	2

Filename: \\langan.com\data\NYC\data0\170432001\Cadd Data - 170432001\SheetFiles\Environmental\BCP FER\Figure 2 – Site Plan.dwg Date: 12/6/2022 Time: 17:32 User: maronica Style Table: Langan.stb Layout: Figure 2 - Site Plan



NOTES:

1. BASEMAP WAS TAKEN FROM THE ENVIRONMENTAL EASEMENT SURVEY, PREPARED BY TRUE NORTH SURVEYORS, INC., DATED MAY 19, 2022.
2. BLOCK 1243, LOT 57 CONSISTS OF CONDOMINIUM TAX LOTS 1501, 1502, AND 1503.
   CONDOMINIUM TAX LOT 1501 = COMMERCIAL UNIT ON THE FIRST FLOOR.
   CONDOMINIUM TAX LOT 1502 = RESIDENTIAL APARTMENTS ON FLOORS 3 TO 15, 17, AND 18.
   CONDOMINIUM TAX LOT 1503 = RESIDENTIAL APARTMENTS ON FLOORS 2 TO 23..
3. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE
4. ELEVATION ARE IN REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
5. bgs = BELOW GROUND SURFACE.
6. el. = ELEVATION

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

STATE OF NEW YORK
JASON JAMES HAYES
069491
LICENSED PROFESSIONAL ENGINEER
12/27/2022

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SCALE: 1 INCH = 20 FEET

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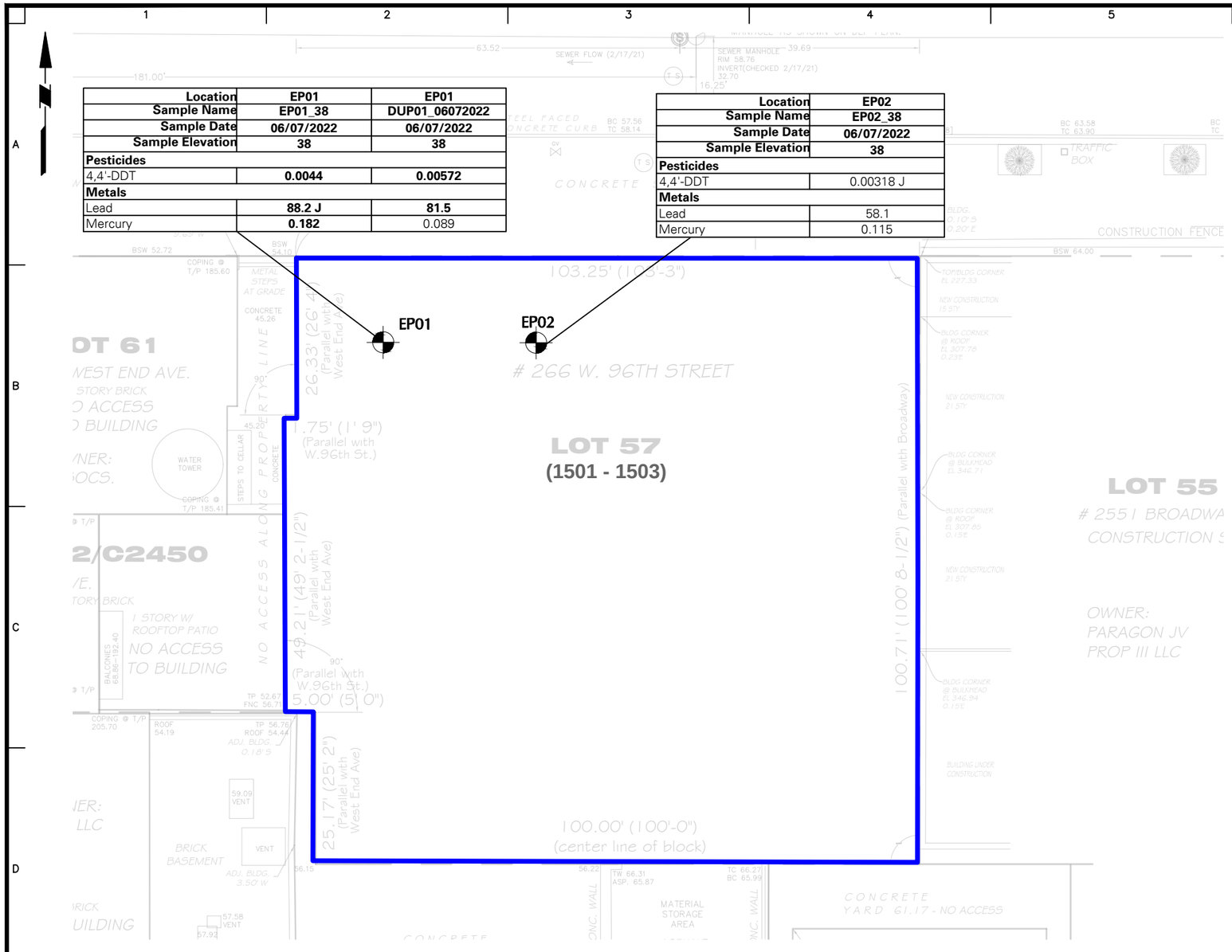
Project	266-270 WEST 96TH STREET
	BLOCK No. 1243, LOT Nos. 57, 59 & 60
	NEW YORK NEW YORK
Figure Title	EXCAVATION PLAN
Project No.	170432001
Date	12/06/2022
Drawn By	MA
Checked By	JFY
Figure No.	3

Filename: \\langan.com\data\NYC\data0\170432001\Cadd Data - 170432001\SheetFiles\Environmental\BCP FER\Figure 3 - Excavation Plan.dwg Date: 12/6/2022 Time: 17:42 User: maronica Style Table: Langan.stb Layout: ANSIB-BL



Location	EP01	EP01
Sample Name	EP01_38	DUP01_06072022
Sample Date	06/07/2022	06/07/2022
Sample Elevation	38	38
Pesticides		
4,4'-DDT	**0.0044**	**0.00572**
Metals		
Lead	**88.2 J**	**81.5**
Mercury	**0.182**	0.089

Location	EP02
Sample Name	EP02_38
Sample Date	06/07/2022
Sample Elevation	38
Pesticides	
4,4'-DDT	0.00318 J
Metals	
Lead	58.1
Mercury	0.115

LEGEND:

APPROXIMATE SITE BOUNDARY

Analyte	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Residential Use SCOs
Pesticides		
4,4'-DDT	0.0033	1.7
Metals		
Lead	63	400
Mercury	0.18	0.81

Exceedance Summary:

10 - Result exceeds Unrestricted Use SCOs

NOTES:

1. BASEMAP WAS TAKEN FROM THE ENVIRONMENTAL EASEMENT SURVEY, PREPARED BY TRUE NORTH SURVEYORS, INC., DATED MAY 19, 2022.
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   CONDOMINIUM TAX LOT 1501 = COMMERCIAL UNIT ON THE FIRST FLOOR.
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4. SAMPLES WERE NOT COLLECTED FROM THE REMAINDER OF THE SITE BECAUSE THE EXCAVATION EXTENDED TO THE TOP OF BEDROCK.
5. NYSDEC - NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
6. SCO - SOIL CLEANUP OBJECTIVE

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Project	Figure Title	Project No.	Figure No.
266-270 WEST 96TH STREET BLOCK No. 1243, LOT Nos. 57, 59 & 60 NEW YORK NEW YORK	CONFIRMATION SOIL SAMPLE LOCATION MAP AND ANALYTICAL RESULTS	170432001 Date 12/06/2022 Drawn By MA Checked By JFY	4

Filename: \\langan.com\data\NYC\data0\170432001\Cadd Data - 170432001\SheetFiles\Environmental\BCP FER\Figure 4 – Confirmation Soil Sample Location Map.dwg Date: 12/6/2022 Time: 18:03 User: maronica Style Table: Langan.stb Layout: Figure 2 - Site Plan