POP DISPLAYS MANUFACTURING SITE

30-77 VERNON BOULEVARD AND 30-80 12TH STREET
QUEENS, NEW YORK

Site Management Plan

NYSDEC Site Number: C241181

Prepared for:

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New York, New York 10013

Prepared by:

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Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

JUNE 2023

CERTIFICATION STATEMENT

I Michelle Lapin certify that I am currently a NYS registered professional engineer and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Michelle Lapin
Name

073834-01
NYS PE License Number

Signature

10/19/2023
Date

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LIST OF ACRONYMS

Acronym	Definition
AS	Air Sparging
ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CAMP	Community Air Monitoring Plan
C/D	Construction and Demolition
CFR	Code of Federal Regulation
CLP	Contract Laboratory Program
COC	Certificate of Completion
CO2	Carbon Dioxide
CP	Commissioner Policy
DER	Division of Environmental Remediation
EC	Engineering Control
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Approval Program
ERP	Environmental Restoration Program
FMP	Foundation Management Plan
GHG	Green House Gas
GWE&T	Groundwater Extraction and Treatment
HASP	Health and Safety Plan
IC	Institutional Control
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
O&M	Operation and Maintenance
OM&M	Operation, Maintenance and Monitoring
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PID	Photoionization Detector
PRP	Potentially Responsible Party
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Remedial Party

Acronym	Definition
RSO	Remedial System Optimization
SAC	State Assistance Contract
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedures
SOW	Statement of Work
SPDES	State Pollutant Discharge Elimination System
SSD	Sub-slab Depressurization
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program

EXECUTIVE SUMMARY

The following provides a brief summary of the controls implemented for the Site, and the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan.

Site Identification:	POP Displays Manufacturing Site, 30-77 Vernon Boulevard and 30-80 12th Street, Queens, NY. BCP Site Number C241181
Institutional Controls	1. The Site may be used for restricted residential, commercial and industrial uses as indicated in the Environmental Easement and in the detailed sections below. 2. A Site-Specific Environmental Easement was recorded for the Site that requires the following: a. All ECs must be operated and maintained as specified in this SMP. b. All ECs must be inspected at a frequency and in a manner defined in this SMP. c. The use of groundwater underlying the property is prohibited without necessary water quality treatment, as determined by the NYSDOH to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department. d. Data and information pertinent to Site management must be reported at the frequency and in a manner defined in this SMP and as otherwise approved by the Department. e. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP. f. Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP. g. Access to the Site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.
Engineering Controls	1. Vapor Barrier System composed of a combination of 32-mil GCP Applied Technologies' Preprufe 200 membrane, 46-mil Preprufe 300R membrane, Bituthene 3000, and 30-mil Prepufe 250 membrane. Bituthene installed below the foundation slab and behind subgrade foundation walls. The vapor barrier system was installed in accordance with the manufacturer's specifications. Additionally, the vapor barrier system serves as the waterproofing membrane.

Inspections	Frequency
1. Vapor Barrier	Annually
2. Periodic Review Report	1st PRR 16 months after the COC, then annually afterwards until NYSDEC approves a reduced frequency
3. Vapor Intrusion Study	Once per building to test effectiveness of vapor barrier

Further descriptions of these requirements are provided in detail in subsequent sections of this SMP.

1.0 INTRODUCTION

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the POP Displays Manufacturing Site, composed of an approximately 2.75-acre property located at 30-77 Vernon Boulevard, 11-12 30th Drive and 30-80 12th Street in Queens, New York (hereinafter referred to as the "Site"). The Site is also identified as Block 504, Lots 3, 121, and 122 (former Lot 3) on the New York City Tax Map. Figure 1 shows the Site location. The Site is enrolled in the New York State (NYS) Brownfield Cleanup Program (BCP) as Site No. C241181, which is administered by New York State Department of Environmental Conservation (NYSDEC).

11-12 30th Drive LLC entered into a Brownfield Cleanup Agreement (BCA) (BCA Index No. C241181-02-16) as a Volunteer Applicant with the New York State Department of Environmental Conservation (NYSDEC) in February 2016 to investigate and remediate the Site. The BCA's pre-construction requirements [i.e., Remedial Investigation (RI), Remedial Action Work Plan (RAWP), etc.] were managed by H2M Architects + Engineers (H2M) of New York, NY, with the RAWP and Decision Document approved by the NYSDEC in August 2018. On April 25, 2018, the Site was sold to Astoria West, LLC, which was added to the BCA as a Volunteer Applicant in May 2018 and is the current Remedial Party (the current owner); an amendment was filed with NYSDEC in May 2018 to include the new owner in the BCA. A third amendment was filed on December 11, 2020 to reflect the subdivision of the tax lot, which comprised the Site at the time the Agreement was executed. The BCA was again amended on June 12, 2023 to update the Site eligibility for tangible property tax credits and to identify the project as an affordable housing development. Figure 2 shows the Site plan. The Site boundaries are more fully described in the metes and bounds site description that is part of the in the Environmental Easement provided in Appendix A of this SMP.

After completion of the remedial work, no "remaining contamination" is present at the Site. Nonetheless, Institutional Controls and Engineering Controls (ICs and ECs) have been incorporated into the Site remedy to control exposure to potential contaminated vapor migration to the Site from off-site sources and ensure the protection of public health and the environment. An Environmental Easement granted to the NYSDEC and recorded with the Queens Borough Register's Office requires compliance with this SMP and all associated ECs and ICs.

This SMP was prepared to provide ongoing management of the ECs and ICs for the Site, which will remain in effect unless the Environmental Easement is extinguished, in accordance with ECL Article 71, Title 36. This SMP has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may be revised only with the approval of the NYSDEC.

It is important to note that:

- This SMP details the Site-specific implementation procedures required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC); and
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6 NYCRR Part 375 and the BCA for the Site (Index # C241181-02-16; Site # C241181), and thereby subject to applicable penalties.

All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the Site is provided in Appendix B of this SMP.

This SMP was prepared by AKRF, Inc. on behalf Astoria West, LLC, in accordance with the requirements of the NYSDEC's DER-10 (Technical Guidance for Site Investigation and Remediation) and other guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs and ECs required by the Environmental Easement for the Site.

1.2 Revisions

Revisions to this SMP will be proposed in writing to the NYSDEC's project manager. Revisions will be necessary upon, but not limited to, the following occurring: a change in Site monitoring requirements; post-remedial activities that could affect the performance of the ECs; or other similar changes to Site conditions. In accordance with the Environmental Easement, the NYSDEC will provide a notice of any approved changes to the SMP and append these notices to the SMP retained in its files.

1.3 Notifications

Notifications will be submitted by the property owner to the NYSDEC, as needed, in accordance with NYSDEC's DER – 10 for the following reasons:

- 60-day advance notice of any proposed changes in Site use that are required under the terms of the BCA, 6 NYCRR Part 375 and/or Environmental Conservation Law.
- 7-day advance notice of any field activity associated with the remedial program.
- 15-day advance notice of any proposed ground-intrusive activity pursuant to the Foundation Management Plan. Notice within 48 hours of identifying any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the Brownfield Cleanup Agreement (BCA) and all approved work plans and reports, including this SMP.
- Within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

The following table includes contact information for the above notification. This will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix B.

Notifications*

Name	Contact Information
Jolene Lozewski (NYSDEC Project Manager)	(518) 402-8805; jolene.lozewski@dec.ny.gov
Wendy Kuehner (NYSDOH Project Manager)	(518) 402-7860; BEEI@health.ny.gov
NYSDEC Region 2 New York City Office	(718) 482-4900
Bob Corcoran, P.E. (NYSDEC PM Supervisor)	(518) 402-9658; bob.corcoran@dec.ny.gov
Kelly Lewandowski (NYSDEC Site Control)	(518) 402-9569; kelly.lewandowski@dec.ny.gov

* Note: Notifications are subject to change and will be updated as necessary.

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

2.1 Site Location and Description

The Site is located in Queens, Queens County, New York, and is an approximately 2.721-acre parcel consisting of Tax Block 504, Lots 3, 121, and 122 (former Lot 3) on the New York City Tax Map (see Figure 2). The approximately 2.75-acre Site is bound to the north by 30th Drive; to the east by 12th Street; to the south by 31st Avenue; and to the west by Vernon Boulevard followed by the East River (the Site boundaries are more fully described in the metes and bounds site description that is part of the Environmental Easement provided in Appendix A). Properties in the surrounding areas are predominantly residential, commercial, retail, and light industrial development. The Site also has an "E" Designation for hazardous materials in the New York City Department of City Planning (DCP) database (E-245).

The current zoning designation for the Site is R7a and R6, General Residence Districts, with a C1-3 local retail district overlay. The R7 and R6 districts are designed to provide for all types of residential buildings to permit a broad range of housing types. The C1 district is designed to provide for local shopping and include a wide range of retail stores and personal service establishments that cater to frequently recurring needs. The future use of the Site is consistent with existing zoning for the property.

The owner of the Site at the time of preparation of this SMP is Astoria West, LLC.

2.2 Site History

The Sanborn maps indicated that the Property was developed with two small dwellings in 1898 and remained vacant between 1915 and 1936. The Property was developed with warehouse buildings sometime between 1936 and 1948. The larger warehouse building was demolished in 2017.

The surrounding blocks contained a piano manufacturer, a garment cleaner, woodworks, an auto repair shop, truck sales and service, and a plastic products manufacturer between circa 1898 and 2006.

2.3 Site Stratigraphy and Hydrogeology

The Property slopes up gently towards the east. Soil observed during the Remedial Investigation (RI) consisted of native soil comprising primarily sand and silt with varying amounts of gravel. Based on the August 2015 Geotechnical Report by JW Engineering Consulting, P.C., bedrock was encountered at 31 to 58 feet below grade (ftbg).

Based on the U.S. Geological Survey (USGS Topographic Map – Queens, New York quadrangle), the Property elevation ranges from approximately 10 to 20 feet (from west to east) above the National Geodetic Vertical Datum (NGVD) of 1988 (an approximation of mean sea level).

The depth to groundwater ranged from 14 to 19 ftbg and would be expected to flow to the west, toward the East River, located approximately 80 feet away. Groundwater flow may be tidally influenced. Groundwater in Queens is not used as a source of potable water.

2.4 Investigation and Remedial History

A Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the Site. The results of the RI are described in detail in AKRF's August 2017 Remedial Investigation Report (RIR). The Remedial Investigation included the following:

1. A Site inspection to identify visual areas of concerns (AOCs) and physical obstructions (i.e., structures, buildings, etc.).

2. A preliminary study to determine relative aquifer and stratigraphy characteristics and to log the relative concentration of volatile organic compounds (VOCs) in soil and groundwater with a membrane interface probe (MIP) attached to a direct push drill rig.
3. A geophysical survey in select portions of the Site.
4. An Interim Remedial Measure (IRM) to remove and administratively close two ASTs located on former Lot 21. The IRM included removal of the ASTs, installation of seven soil borings, and collection of seven soil samples for chemical analysis to evaluate soil quality.
5. Installation of 25 soil borings and one test pit across the entire project Site, and collection of 27 soil samples for chemical analysis from the soil borings and test pit to evaluate soil quality.
6. Installation of 16 groundwater monitoring wells throughout the Site to establish groundwater flow direction and collection of 16 groundwater samples for chemical analysis to evaluate groundwater quality.
7. Installation of six soil vapor probes around the Site perimeter, including two off-site and four on-site, and collection of six samples for chemical analysis. In addition, one indoor air sample was collected within the existing building on former Lot 3.

Summary of findings included:

1. The Site's average topographic elevation was approximately 10 feet NGVD.
2. The average depth to groundwater was 16.75 ftbg, with the range in depths from 14.07 to 17.98 ftbg.
3. Groundwater generally flows towards the East River located approximately 80 feet west of the Site's western property line.
4. Bedrock was encountered throughout the Site at varying depths ranging from 30 to 68 ftbg. In general, bedrock was encountered deeper in the eastern portion of the Site and shallower in the western portion of the Site.
5. The Site was underlain by sandy material intermixed with unconsolidated layers of cobbles and gravel. There were no obvious visual indications of historic fill material at the Site.
6. Soil samples at the Site detected one VOC, acetone, at concentrations above its Unrestricted Use Soil Cleanup Objective (UUSCO). However, the concentration was several orders of magnitude below its Residential Soil Cleanup Objective (RSCO) and is often a laboratory artifact. No other significant target compounds were detected by the RI in soil.
7. No VOCs were detected in groundwater samples at the Site at concentrations exceeding class GA water quality standards (GA WQS). Six VOCs were detected at low levels, including methyl tert-butyl ether (MTBE), toluene, trichlorethylene (TCE), cis-1,2-dichloroethylene (cis-1,2-DCE), 1,1-dichloroethylene (1,1-DCE), and chloroform.
8. Soil vapor samples collected during the RI detected several VOCs throughout the Site, including benzene, toluene, ethylbenzene, xylene (BTEX) and associated derivative compounds, naphthalene, and chlorinated hydrocarbons. Although the State of New York does not have standards, criteria or guidance values for concentrations of volatile chemicals in subsurface vapors (either soil vapor or sub-slab vapor), for general comparison, the vapor results were compared to their corresponding New York State Department of Health (NYSDOH) Air Guidance Values (AGVs), which are intended for vapor present in indoor air. Tetrachlorethylene (PCE) concentrations detected in four of the seven vapor samples at the Site were above the corresponding AGV of 30 micrograms per cubic meter ($\mu g/m^3$). Detected TCE

concentrations in three of the vapor samples exceeded the corresponding AGV of 2 µg/m^3. In addition to the AGVs, the vapor results were compared to concentrations that may require monitoring or mitigation, as presented in Matrix 1 and Matrix 2 in the NYSDOH guidance document. PCE and TCE detected in two soil vapor samples suggested that monitoring or mitigation may have been required based on the guidance.

2.5 Remedial Action Objectives

Based on the results of the Remedial Investigation dated August 2017, the following Remedial Action Objectives (RAOs) were identified.

2.5.1 Soil Vapor RAOs for Public Health Protection

Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at the Site.

2.6 Summary of Remedial Action

The remedial activities conducted at the Site included the following:

- Implementation of the Community Protection Statement described in the following section and performance of all required NYSDEC Citizen Participation activities per the approved Citizen Participation Plan (CPP).
- Site mobilization involving Site security setup, equipment mobilization, utility mark outs, and marking and staking excavation areas associated with the removal of the UST.
- Implementation of Site preparation activities including building demolition and underpinning of adjacent structures to remove the UST and install a vapor barrier.
- Excavation and removal of one UST identified at the southern portion of former Lot 3 in accordance with Section 5.5 of DER-10 and reporting of any petroleum spills associated with the UST and appropriate closure of these petroleum spills in compliance with applicable local, State and Federal laws and regulations. Approximately 118 tons of soil were removed as part of UST removal.
- Performance of a Community Air Monitoring Plan (CAMP) for particulates and VOCs during excavation and removal of the UST.
- Confirmatory endpoint samples were to be collected as directed by NYSDEC in the event that suspect unclassified soil was encountered during soil excavation as part of construction. Based on confirmation endpoint sample results, additional excavation may have been required to achieve the desired soil cleanup objectives.
- Import of materials for backfill and cover in compliance with this SMP and in accordance with applicable laws and regulations.
- An engineering control consisting of a vapor barrier system. The vapor barrier consists of a combination of 32-mil GCP Applied Technologies' Preprufe 200 membrane, 46-mil Preprufe 300R membrane, and 30-mil Prepufe 250 membrane. Bituthene 3000 waterproofing/vapor barrier membrane was installed behind the two-face subgrade perimeter foundation walls. The vapor barrier system was installed beneath the building foundation to mitigate potential soil vapor migration into the buildings.
- Dewatering in compliance with city, state, and federal laws and regulations to facilitate the installation of the required vapor barrier.

- Implementation of stormwater pollution prevention measures in compliance with applicable laws and regulations.
- Performance of all activities required for the remedial action, including acquisition of required permits and attainment of pretreatment requirements, in compliance with applicable laws and regulations.
- Institutional Controls in the form of an environmental easement requiring implementation of the Site Management Plan (SMP) by the property owner and property owner's successors and assigns.
- Submission of a Final Engineering Report (FER) that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, and lists any changes from the RAWP.

2.7 Contaminated Materials Removal

Based on the findings of the RI and as noted in the RAWP, soil remediation was not required at the Site unless contamination was encountered during excavation. However, the RAWP and NYSDEC Decision Document (DD) included a requirement for the excavation and off-site disposal of the known UST and any associated petroleum-contaminated soil/fill, which was conducted as described further in Section 2.6.2. RCRA hazardous lead-contaminated soil identified during soil disposal waste characterization testing was also remediated as described further in Section 2.7.1.

The Site was excavated to a depth ranging from 2 to 10 feet below grade. Support of Excavation (SOE) measures, including installation of perimeter piles and lagging, were required along the southern boundary for the excavation of the petroleum-contaminated soil. A total of 201.52 tons of soil were excavated and removed from the Site during the remedial action. The remedial excavation included removal of petroleum-contaminated soil/fill associated with the tank and hazardous lead-contaminated soil/fill. The material type, quantity, and disposal location of material removed and disposed off-site is presented as follows:

Contaminated Soil Disposal Details

Disposal Facility Name Location/Address	Type of Material	Quantity (tons)
Clean Earth of Carteret 24 Middlesex Avenue, Carteret, New Jersey	Non-Hazardous Petroleum Contaminated Soil/Fill (for Site remediation)	117.54
Cycle Chem, Inc. 217 South First Street, Elizabeth, New Jersey	Hazardous Lead Contaminated Soil/Fill (for Site remediation)	83.98
	Total:	**201.52**

The extent of remedial excavation is shown on Figure 3.

2.7.1 Excavation and Removal of Hazardous Lead-Contamination Soil

Soil waste classification samples were collected across a majority of the Site by others in 2017. Concentrations of lead above the United States Environmental Protection Agency's (USEPA's) Resource Conservation and Recovery Act (RCRA) hazardous threshold of 5 mg/kg, as analyzed by the toxicity characteristic and leaching procedure (TCLP), were detected in one sample [A4(5-10)COMP], collected from the north-central portion of the Site. In June 2019, AKRF performed additional soil sampling to delineate the hazardous

lead-contaminated soil around sample A4(5-10)COMP. AKRF collected composite and grab soil samples using a Geoprobe® Direct Push drill rig. Composite soil samples were collected from the 5 to 10-foot depth interval where the original sample was collected, and from five-foot lateral offsets in each direction (north, south, east and west). Additionally, confirmatory grab samples were collected from beneath and above the suspected contaminated zone. The samples were analyzed in a laboratory for total and TCLP lead.

Analytical results of the hazardous lead delineation sampling detected TCLP lead concentrations below the hazardous waste threshold, as noted in the following table:

Hazardous Lead Delineation Sample Results

Sample Name	Sample Type (Grab or Composite)	Sampling Depth (feet below grade)	TCLP Lead Concentration (parts per million)	Total Lead Concentration (parts per million)
A4(5-10)COMP; original sample	Composite	5 to 10	**20**	1,710
A4(5)C	Grab	5	0.0068J	2.56
A4(10)C	Grab	10	0.0065J	1.7
A4(5-10)C	Composite	5 to 10	0.0079J	2
A4(5-10)N1	Composite	5 to 10	Non-detect	1.44
A4(5-10)S1	Composite	5 to 10	0.0054J	1.48
A4(5-10)E1	Composite	5 to 10	Non-detect	1.89
A4(5-10)W1	Composite	5 to 10	Non-detect	2.06

Notes: Result in bold exceed the hazardous threshold level of 5 parts per million
J- estimated trace concentration

Based on these results, the extent of soil requiring management as hazardous waste was determined to be an approximately 10-foot by 10-foot area around the original sample location collected from 5 to 10 feet below Site grade. Support of excavation (SOE) measures were required prior to the excavation of this deeper contaminated material. Beyond those boundaries, there were no significant exceedances of UUSCOs.

The location of excavated hazardous lead-contaminated soil is shown on Figure 3.

2.7.2 Underground Storage Tank Removals

On October 10 and 11, 2018, an approximately 1,080-gallon No. 2 fuel oil UST was removed from the southern portion of the Site. The closure and sampling associated with the UST was completed in accordance with NYSDEC DER-10 procedures. The location of the tank and associated endpoint samples are shown on Figure 3. Endpoint sample laboratory analytical results are provided in Table 1.

PID readings ranging from 0.6 parts per million (ppm) to 3.7 ppm were detected on the excavation bottom and the sidewalls. Following the excavation, six endpoint soil samples (one from each sidewall and two from the bottom) were collected for laboratory analysis, specifically, EP-UST-1-S_8_20181011, EP-UST-1-E_8_20181011, EP-UST-1-N_8_20181011, EP-UST-1-W_8_20181011, EP-UST-1-B1_8_20181011, and EP-UST-1-B2. The samples were analyzed by Test America of Edison, New Jersey, a New York State Department of Health-certified laboratory, for the CP-51 listed VOCs by EPA Method 8260 and semi-volatile organic compounds (SVOCs) by EPA Method 8270. No VOCs were detected in the samples. SVOCs were detected in each of the samples at concentrations ranging from an estimate trace concentration of 0.0093 milligrams per

kilogram (mg/kg) to a maximum of 1.2 mg/kg in sample EP-UST-1-W_8_20181011. Indeno(1,2,3-cd)pyrene was detected at a concentration of 0.51 mg/kg in sample EP-UST-1-W_8_20181011, slightly above its UUSCO and RRSCO of 0.50 mg/kg. The remainder of the detections were well below their respective UUSCOs. The results were provided to NYSDEC for review; no further excavation was required. Data Usability Summary Reports (DUSRs) were prepared for all data generated in this remedial performance evaluation program.

2.7.3 Aboveground Storage Tank Removal

Two aboveground storage tanks were removed from the Site by the original BCP applicant (11-12 30th Drive LLC) prior to demolition of the former buildings and implementation of the RAWP under the new ownership. The work was conducted in accordance with the NYSDEC-approved Interim Remedial Measures (IRM) Work Plan (IRMWP) dated August 11, 2016 and prepared by H2M. The tanks were removed and the findings were noted in the H2M's IRM Construction Completion Report (IRMCCR) dated September 30, 2016.

2.7.4 Backfill Material

Gravel was imported to the Site for grading below the foundation slab across the entire project boundary. Prior to material import, information regarding the source material was provided to the NYSDEC PM for review and approval.

2.8 Remaining Contamination

Based on the findings of the RI and the remedial action, the remaining Site soil overwhelmingly meets the UUSCOs and no further soil remediation was subsequently required, which is consistent with the Decision Document. Therefore, no contamination remains at the Site. A vapor barrier system was installed (detailed in Section 3.0) to protect the building occupants from the potential for future vapor intrusion from off-site sources.

3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

3.1 General

Since a vapor barrier was installed at the Site due to the presence of off-site vapors migrating to the Site, Institutional Controls (ICs) and Engineering Controls (ECs) are required to protect human health and the environment. This IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the Site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC.

This plan provides:

- A description of all IC/ECs on the Site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the Foundation Management Plan (FMP) (as provided in Appendix C) for the proper protection and management of the vapor barrier should it be disturbed during maintenance or redevelopment work on the Site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the Site remedy, as determined by the NYSDEC.

3.2 Institutional Controls

A series of ICs is required by the RAWP to: (1) implement, maintain and monitor Engineering Control system; (2) prevent future exposure to the potential on-site migration of off-site vapor contamination via the subsurface; and (3) limit the use and development of the Site to restricted residential and commercial uses only, as further described below. Adherence to these ICs on the Site is required by the Environmental Easement and will be implemented under this SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The IC boundaries are shown on Figure 2. These ICs are:

- The property may be used for restricted residential, commercial or industrial uses;
- All ECs must be operated and maintained as specified in this SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the New York County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;
- Data and information pertinent to Site management must be reported at the frequency and in a manner as defined in this SMP or otherwise approved by the Department;
- All future activities that will disturb the EC must be conducted in accordance with this SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;

- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP; and
- Access to the Site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.

3.3 Engineering Controls

3.3.1 Vapor Barrier System

No soil-related ECs were required for the Site as part of the remedial action. However, to satisfy the RAO for soil vapor and to address the potential for soil vapor intrusion into buildings at the Site, a vapor barrier system beneath the foundation slab and behind the subgrade foundation walls was installed. This barrier along with the foundation slab and sidewalls constitutes the EC for the Site.

Exposure to soil vapor intrusion is prevented by a vapor barrier system built on the Site, which is composed of a combination of 32-mil GCP Applied Technologies' Preprufe 200 membrane, 46-mil Preprufe 300R membrane, 30-mil Prepufe 250 membrane, installed per manufacturer's specifications. Bituthene 3000 waterproofing/vapor barrier membrane was installed behind the perimeter foundation walls. The vapor barrier system was extended below the grade beam/footings and continued along the subgrade foundation walls, as required to prevent future vapor intrusion into the building. The vapor barrier system was installed in accordance with the manufacturer's specifications. Additionally, the barrier system serves as the waterproofing membrane.

Figure 4 shows the location and cross-sections of the Vapor Barrier System built at the Site. Photographs of the vapor barrier construction are provided in Appendix D.

3.3.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.4 of NYSDEC DER-10.

Vapor Barrier System

The Vapor Barrier System is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in accordance with this SMP in perpetuity.

3.3.3 Foundation Management Plan

The Site was remediated for restricted residential, commercial and/or industrial use. Any future intrusive work that will disturb the EC/vapor barrier will be performed in compliance with the Foundation Management Plan (FMP) included as Appendix C of this SMP. Any work conducted pursuant to the FMP must be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP). The HASP is in compliance with DER-10 and 29 CFR 1910, 29 CFR 1926, and all other applicable federal, state and local regulations. Based on future changes to state and federal health and safety requirements, and specific methods employed by future contractors, the HASP would be updated and re-submitted with the notification provided in Section A-1 of the FMP. Any intrusive construction work would be performed in compliance with the FMP, HASP, and

would be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

The Site owner and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of excavation dewatering, control of runoff from open excavations, and for structures that may be affected by excavations (such as building foundations and footings). The Site owner will ensure that Site development activities will not interfere with, or otherwise impair or compromise, the engineering controls described in this SMP. Any importation of soil/fill in the future will be conducted in accordance with the FMP in Appendix C, Section 1.3 - Backfill from Off-Site Sources.

4.0 SITE MONITORING PLAN

4.1 General

This Monitoring and Sampling Plan describes the measures for evaluating the overall performance and effectiveness of the remedy to reduce or mitigate contamination at the Site, the vapor barrier system, and all affected Site media identified below. This Monitoring Plan may be revised only with the approval of the NYSDEC. Details regarding the sampling procedures, data quality usability objectives, analytical methods, etc. for all samples collected as part of Site management are included in the Quality Assurance Project Plan (QAPP) provided in Appendix E.

This Monitoring and Sampling Plan describes the methods to be used for:

- Assessing compliance with applicable NYSDEC standards, criteria and guidance (SCGs), particularly for the future import of soil for landscaping purposes; and
- Evaluating Site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment.

To adequately address these issues, this Monitoring Plan provides information on:

- Annual inspection and periodic certification.

Reporting requirements are provided in Section 5.0 of this SMP.

4.2 Site-wide Inspection

Site-wide inspections will be performed on a regular schedule at a minimum of once per year. Modification to the frequency or duration of the inspections will require approval from the NYSDEC. During these inspections, an inspection form will be completed, as provided in Appendix F. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including Site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General Site conditions at the time of the inspection;
- The Site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that Site records are up to date.

Inspections of all remedial components installed at the Site will be conducted. A comprehensive Site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and
- If Site records are complete and up to date.

Reporting requirements are outlined in Section 5.0 of this SMP.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, verbal notice to the NYSDEC must be given by noon of the following day. In addition, an inspection of the Site will be conducted within five days of the event to verify the effectiveness of the IC/ECs implemented at the Site by a qualified environmental professional, as determined by the NYSDEC. Written confirmation must be provided to the NYSDEC within seven days of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

5.0 REPORTING REQUIREMENTS

5.1 Site Management Reports

The Site remedy does not rely on any mechanical systems, such as groundwater treatment systems, sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP. All Site inspection, maintenance and monitoring events will be recorded on the appropriate Site-Wide Inspection form provided in Appendix F. These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the Site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements listed in the following table and summarized in the Periodic Review Report.

Schedule of Interim Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
Vapor Intrusion Study	Once, for each building, upon completion of construction to test the effectiveness of the vapor barrier
Site-Wide Inspection	Annually
Periodic Review Report	1st PRR: 16 months after COC 2nd and later PRRs: Every five years

* The frequency of events will be conducted as specified until otherwise approved by the NYSDEC.

All interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting monitoring/inspection activities;
- Description of the activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);
- Copies of all field forms completed (e.g., inspection logs, chain-of-custody documentation,);
- Any analytical data, observations, conclusions, or recommendations; and
- A determination as to whether contaminant conditions have changed since the last reporting event.

Data will be reported in digital format as determined by the NYSDEC. Currently, data is to be supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link http://www.dec.ny.gov/chemical/62440.html.

5.2 Periodic Review Report

A Periodic Review Report (PRR) will be submitted to the Department beginning 16 months after the Certificate of Completion document is issued. After submittal of the initial Periodic Review Report, the subsequent PRRs shall be submitted every year to the Department or at another frequency as may be required by the Department. In the event that the Site is subdivided into

separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the Site described in Appendix A (Environmental Easement). The report will be prepared in accordance with NYSDEC's DER-10 and submitted within 45 days of the end of each certification period. Media sampling results will be incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the Site.
- Results of the required annual Site inspections and severe condition inspections, if applicable.
- All applicable Site management forms and other records generated for the Site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.
- Results of all analyses of imported fill material, copies of all laboratory data sheets, and the required laboratory data deliverables for any samples collected during the reporting period will be submitted in digital format as determined by the NYSDEC. Currently, data is supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link: http://www.dec.ny.gov/chemical/62440.html.
- A Site evaluation, which includes the following:
  - The compliance of the remedy with the requirements of the Site-specific RAWP;
  - Any new conclusions or observations regarding Site contamination based on inspections;
  - Recommendations regarding any necessary changes to the remedy; and
  - The overall performance and effectiveness of the remedy.

5.2.1 Certification of Institutional and Engineering Controls

Certification of Institutional and Engineering Controls will be included in the Periodic Review Report.

Following the last inspection of the reporting period, a Professional Engineer licensed to practice in New York State will prepare, and include in the Periodic Review Report, the following certification as per the requirements of NYSDEC DER-10:

"For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- *The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;*
- *Based on the visual inspection of the composite cover system performed by a QEP, the institutional controls and engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*
- *Access to the Site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- *Use of the Site is compliant with the environmental easement;*

- *The engineering control system is performing as designed and is effective;*
- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices; and*
- *The information* presented in this report is accurate and complete.

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, Michelle Lapin, of AKRF, Inc., am certifying as Owner's Designated Site Representative for the Site."

Every five years the following certification will be added:

- *The assumptions made in the qualitative exposure assessment remain valid.*

The signed certification will be included in the Periodic Review Report.

The Periodic Review Report will be submitted, in electronic format, to the NYSDEC Central Office, Regional Office in which the site is located and the NYSDOH Bureau of Environmental Exposure Investigation. The Periodic Review Report may need to be submitted in hard-copy format, as requested by the NYSDEC project manager.

5.3 Corrective Measures Work Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a Corrective Measures Work Plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC.

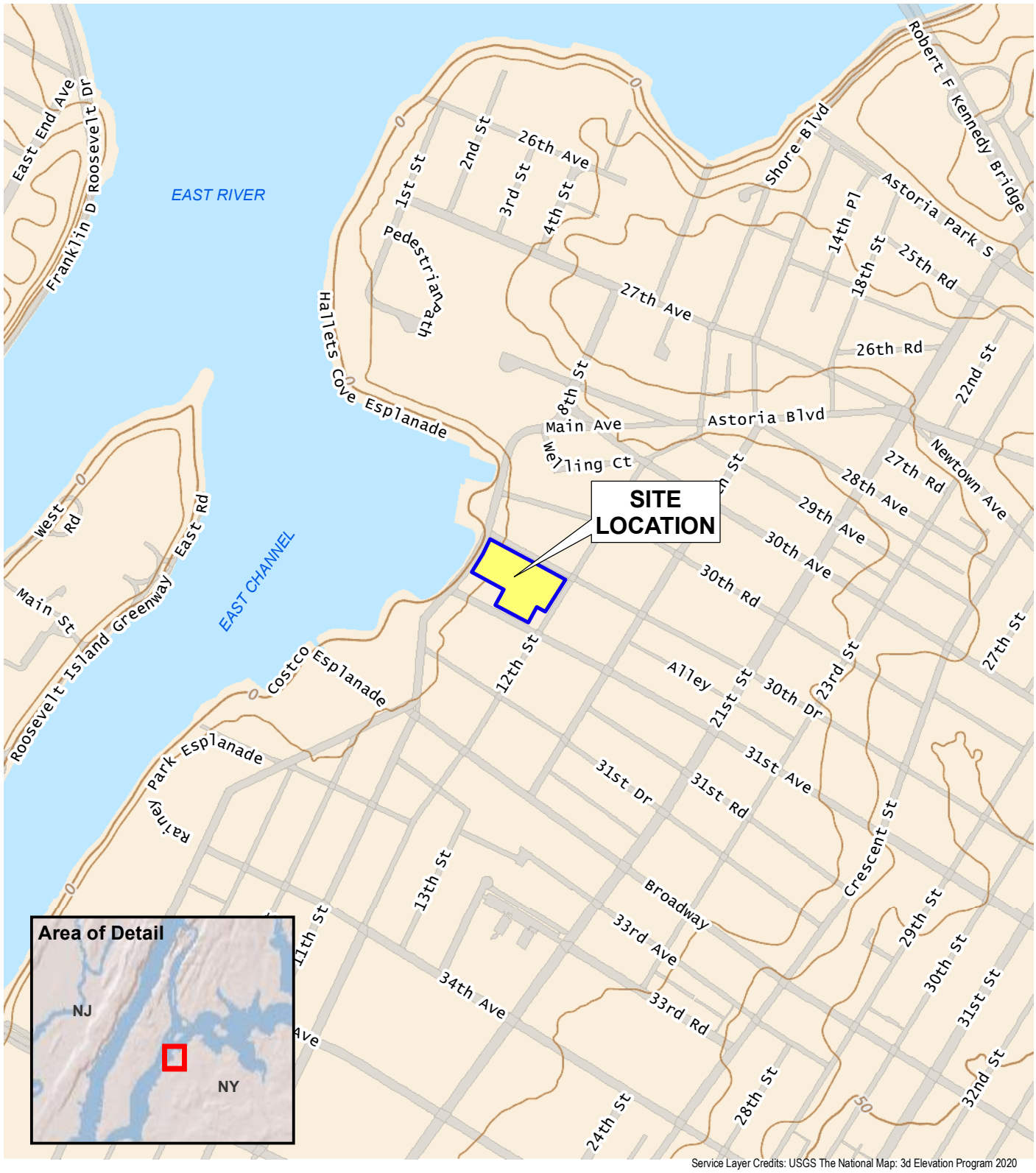
5.4 Operation and Maintenance Plan

The site remedy does not rely on any mechanical systems, such as groundwater treatment systems, sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

6.0 REFERENCES

1. 6NYCRR Part 375, Environmental Remediation Programs. December 14, 2006.
2. NYSDEC DER-10 – "Technical Guidance for Site Investigation and Remediation".
3. NYSDEC, 1998. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. June 1998 (April 2000 addendum).
4. Phase I Environmental Site Assessment, prepared by IVI Assessment Services, Inc., dated February 4, 2014.
5. Limited Phase II Environmental Site Assessment, 11-31 31st Avenue & 11-12 30th Drive, Astoria, New York 11106, prepared by IVI Environmental Inc., dated March 17, 2014.
6. Investigation Report, prepared by SESI Consulting Engineers, PC, dated September 14, 2015.
7. Phase I Environmental Site Assessment Report, for 30-18 12th Street and 30-77 Vernon Boulevard (Formerly known as 11-12 30th Drive & 11-31 31st Avenue) Block 504; Lot 3, Borough of Queens, Queens County, New York, prepared by SESI Consulting Engineers, PC, dated October 2015.
8. Geotechnical Report, 11-12 30th Drive, Astoria, New York 11102, prepared by JW Engineering Consulting, P.C., dated July 28, 2015.
9. New York State Department of Environmental Conservation Remedial Investigation Report, POP Displays Manufacturing Site, 30-80 12th Street and 30-77 Vernon Boulevard, Queens, NY 11102, prepared by H2M, dated March 15, 2017, NYSDEC Site No. C241181.
10. New York State Department of Environmental Conservation Interim Remedial Measure Aboveground Storage Tank Closure Work Plan, POP Displays Manufacturing Site, 30-80 12th Street and 30-77 Vernon Boulevard, Queens, NY 11102, prepared by H2M, dated August 11, 2016 (revision 3), NYSDEC Site No. C241181.
11. Interim Remedial Measure Construction Completion Report, Aboveground Storage Tank Closure Work Plan, POP Displays Manufacturing Site, 30-80 12th Street and 30-77 Vernon Boulevard, Queens, NY 11102, prepared by H2M Architects and Engineers, dated September 30, 2016.
12. New York State Department of Environmental Conservation Remedial Action Work Plan, prepared by H2M, dated May 9 22, 2018, NYSDEC Site No. C241181.
13. Phase I Environmental Site Assessment, 30-77 Vernon Boulevard, Queens, NY, prepared by AKRF, Inc., dated March 22, 2018.
14. Waste Characterization Soil Sampling Report, 30-77 Vernon Boulevard, Queens, New York, prepared by AKRF, Inc., dated June 18, 2019.

FIGURES



AKRF
440 Park Avenue South, New York, NY 10016

POP Displays Manufacturing Site

30-77 Vernon Boulevard and 30-80 12th Street
Astoria, New York

SITE LOCATION

DATE
7/20/2020

PROJECT NO.
180066

FIGURE
1

Map Source:
NYCDCP (NYC Dept. of City Planning) GIS database

AKRF
440 Park Avenue South, New York, NY 10016

POP Displays Manufacturing Site
30-77 Vernon Boulevard and 30-80 12th Street
Astoria, New York

SITE PLAN

DATE
8/13/2020

PROJECT NO.
180066

FIGURE
2

Vernon Blvd

30th Dr

12th St

31st Ave

Building A

Building B

Building C

Courtyard to be Completed at a Later Date

Courtyard to be Completed at a Later Date

499

505

504

503

517

0 25 50 100

SCALE IN FEET

Original Sample Location (Collected by Others)

A4 (5-10)-N1

A4 (5-10)-W1

A4 (5-10)-COMP

A4 (5-10)-E1

A4 (5-10)-S1

EP-UST-1-W_8_20181011

EP-UST-1-N_8_20181011

EP-UST-1-B2_8_20181011

EP-UST-1-B1_8_20181011

EP-UST-1-S_8_20181011

EP-UST-1-E_8_20181011

Former 1,080-Gallon Fuel-Oil UST-1

LEGEND

- PROJECT SITE BOUNDARY
- BUILDING FOOTPRINTS
- EXTENT OF REMEDIAL EXCAVATION TO REMOVE LEAD-CONTAMINATED SOIL FROM 5 TO 10 FEET BELOW GRADE
- EXTENT OF REMEDIAL EXCAVATION TO REMOVE PETROLEUM CONTAMINATED SOIL 9 FEET BELOW GRADE
- 3 LOT BOUNDARY AND TAX LOT NUMBER
- ENDPOINT SAMPLE LOCATION
- HAZARDOUS LEAD DELINEATION SAMPLE
- A4 (5-10)COMP ORIGINAL SAMPLE LOCATION COLLECTED BY OTHERS (TCLP LEAD> 5MG/L)
- A4 (5-10)C AKRF (TCLP LEAD< 5MG/L)
  A4 (5)C AKRF (TCLP LEAD< 5MG/L)
  A4 (10)C AKRF (TCLP LEAD< 5MG/L)
- UST UNDERGROUND STORAGE TANK

AKRF
440 Park Avenue South, New York, NY 10016

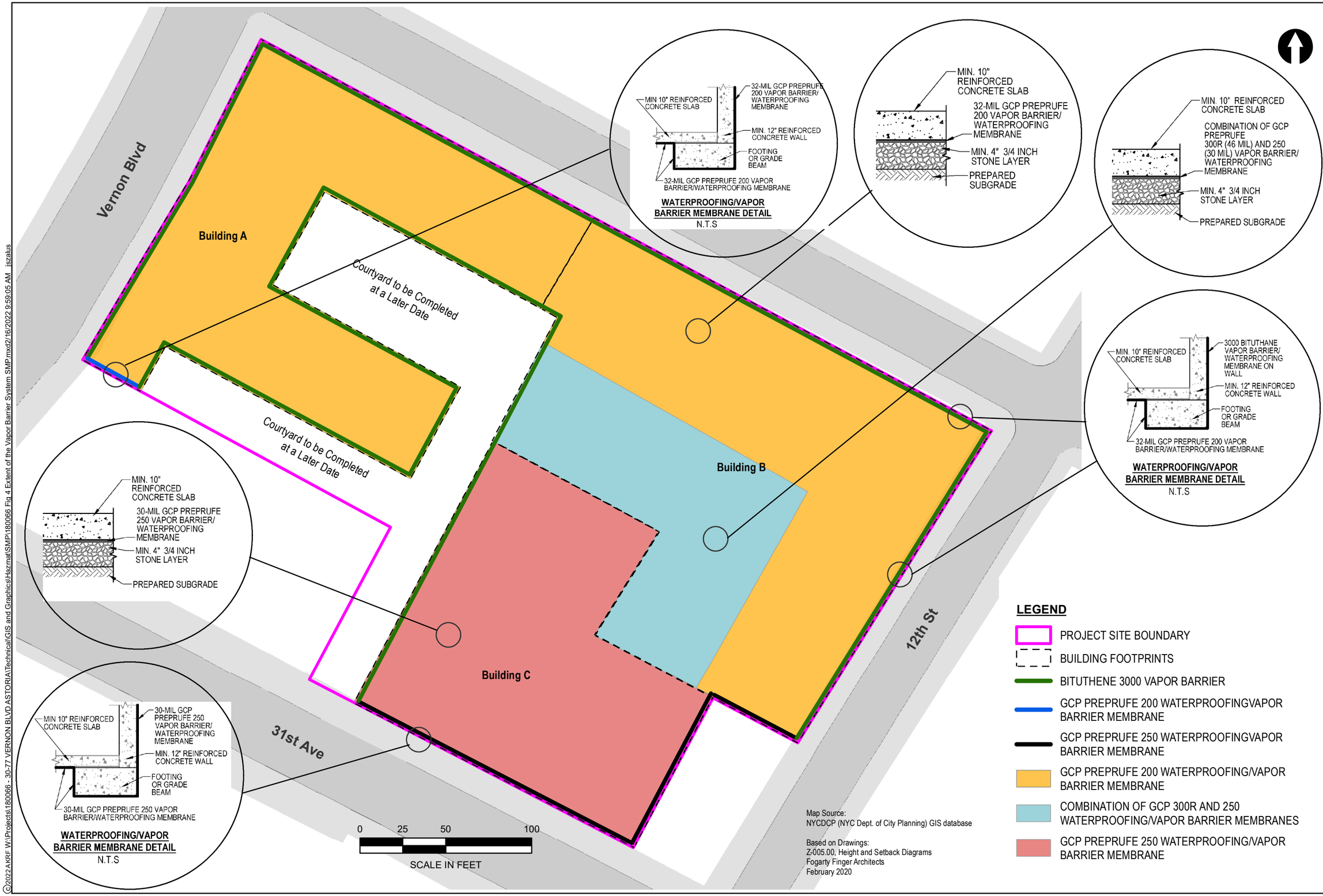
POP Displays Manufacturing Site
30-77 Vernon Boulevard and 30-80 12th Street
Astoria, New York

EXTENT OF REMEDIAL EXCAVATION AND FORMER UNDERGROUND STORAGE TANK LOCATION

DATE
8/13/2020

PROJECT NO.
180066

FIGURE
3



AKRF
440 Park Avenue South, New York, NY 10016

POP Displays Manufacturing Site
30-77 Vernon Boulevard and 30-80 12th Street
Astoria, New York

EXTENT OF VAPOR BARRIER SYSTEM

DATE
2/16/2022

PROJECT NO.
180066

FIGURE
4

TABLES

Table 1A
POP Displays Manufacturing Site
Queens, NY
Underground Storage Tank Endpoint Samples
Soil Analytical Results of Volatile Organic Compounds (VOCs)

			AKRF Sample ID	EP-UST-1-B1_8_20181011	EP-UST-1-B2_8_20181011	EP-UST-1-E_8_20181011
			Laboratory Sample ID	460-166636-5	460-166636-6	460-166636-3
			Date Sampled	10/11/2018	10/11/2018	10/11/2018
			Unit	mg/kg	mg/kg	mg/kg
			Dilution Factor	1	1	1
Compound	**NYSDEC UUSCO**	**NYSDEC RRSCO**	**NYSDEC CP-51 SCO**	CONC Q	CONC Q	CONC Q
1,2,4-Trimethylbenzene	3.6	52	3.6	0.0012 U	0.001 U	0.001 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	8.4	0.0012 U	0.001 U	0.001 U
Benzene	0.06	4.8	0.06	0.0012 U	0.001 U	0.001 U
Cymene	NS	NS	10	0.0012 U	0.001 U	0.001 U
Ethylbenzene	1	41	1	0.0012 U	0.001 U	0.001 U
Isopropylbenzene (Cumene)	NS	NS	2.3	0.0012 U	0.001 U	0.001 U
N-Butylbenzene	12	100	12	0.0012 U	0.001 U	0.001 U
N-Propylbenzene	3.9	100	3.9	0.0012 U	0.001 U	0.001 U
Sec-Butylbenzene	11	100	11	0.0012 U	0.001 U	0.001 U
T-Butylbenzene	5.9	100	5.9	0.0012 U	0.001 U	0.001 U
Tert-Butyl Methyl Ether	0.93	100	0.93	0.0012 U	0.001 U	0.001 U
Toluene	0.7	100	0.7	0.0012 U	0.001 U	0.001 U
Xylenes, Total	0.26	100	0.26	0.0024 U	0.002 U	0.002 U

Table 1A
POP Displays Manufacturing Site
Queens, NY
Underground Storage Tank Endpoint Samples
Soil Analytical Results of Volatile Organic Compounds (VOCs)

			AKRF Sample ID	EP-UST-1-N_8_20181011	EP-UST-1-S_8_20181011	EP-UST-1-W_8_20181011
			Laboratory Sample ID	460-166636-1	460-166636-2	460-166636-4
			Date Sampled	10/11/2018	10/11/2018	10/11/2018
			Unit	mg/kg	mg/kg	mg/kg
			Dilution Factor	1	1	1
Compound	**NYSDEC UUSCO**	**NYSDEC RRSCO**	**NYSDEC CP-51 SCO**	CONC Q	CONC Q	CONC Q
1,2,4-Trimethylbenzene	3.6	52	3.6	0.001 U	0.0011 U	0.0011 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	8.4	0.001 U	0.0011 U	0.0011 U
Benzene	0.06	4.8	0.06	0.001 U	0.0011 U	0.0011 U
Cymene	NS	NS	10	0.001 U	0.0011 U	0.0011 U
Ethylbenzene	1	41	1	0.001 U	0.0011 U	0.0011 U
Isopropylbenzene (Cumene)	NS	NS	2.3	0.001 U	0.0011 U	0.0011 U
N-Butylbenzene	12	100	12	0.001 U	0.0011 U	0.0011 U
N-Propylbenzene	3.9	100	3.9	0.001 U	0.0011 U	0.0011 U
Sec-Butylbenzene	11	100	11	0.001 U	0.0011 U	0.0011 U
T-Butylbenzene	5.9	100	5.9	0.001 U	0.0011 U	0.0011 U
Tert-Butyl Methyl Ether	0.93	100	0.93	0.001 U	0.0011 U	0.0011 U
Toluene	0.7	100	0.7	0.001 U	0.0011 U	0.0011 U
Xylenes, Total	0.26	100	0.26	0.002 U	0.0022 U	0.0022 U

Table 1B
POP Displays Manufacturing Site
Queens, NY
Underground Storage Tank Endpoint Samples
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

			AKRF Sample ID	EP-UST-1-B1_8_20181011	EP-UST-1-B2_8_20181011	EP-UST-1-E_8_20181011
			Laboratory Sample ID	460-166636-5	460-166636-6	460-166636-3
			Date Sampled	10/11/2018	10/11/2018	10/11/2018
			Unit	mg/kg	mg/kg	mg/kg
			Dilution Factor	1	1	1
Compound	**NYSDEC UUSCO**	**NYSDEC RRSCO**	**NYSDEC CP-51 SCO**	CONC Q	CONC Q	CONC Q
Acenaphthene	20	100	20	0.38 U	0.39 UJ	0.36 U
Acenaphthylene	100	100	100	0.38 U	0.39 U	0.36 U
Anthracene	100	100	100	0.38 U	0.0058 J	0.36 U
Benzo(a)Anthracene	1	1	1	0.026 J	0.045	0.077
Benzo(a)Pyrene	1	1	1	0.019 J	0.035 J	0.059
Benzo(b)Fluoranthene	1	1	1	0.028 J	0.046	0.08
Benzo(g,h,i)Perylene	100	100	100	0.38 U	0.39 U	0.036 J
Benzo(k)Fluoranthene	0.8	3.9	0.8	0.01 J	0.02 J	0.023 J
Chrysene	1	3.9	1	0.017 J	0.042 J	0.064 J
Dibenz(a,h)Anthracene	0.33	0.33	0.33	0.038 U	0.039 U	0.036 U
Fluoranthene	100	100	100	0.027 J	0.073 J	0.094 J
Fluorene	30	100	30	0.38 U	0.39 U	0.36 U
Indeno(1,2,3-c,d)Pyrene	**0.5**	0.5	*0.5*	0.038 U	0.023 J	0.039
Naphthalene	12	100	12	0.38 U	0.39 UJ	0.36 U
Phenanthrene	100	100	100	0.38 U	0.023 J	0.022 J
Pyrene	100	100	100	0.034 J	0.078 J	0.12 J

Table 1B
POP Displays Manufacturing Site
Queens, NY
Underground Storage Tank Endpoint Samples
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

			AKRF Sample ID	EP-UST-1-N_8_20181011	EP-UST-1-S_8_20181011	EP-UST-1-W_8_20181011
			Laboratory Sample ID	460-166636-1	460-166636-2	460-166636-4
			Date Sampled	10/11/2018	10/11/2018	10/11/2018
			Unit	mg/kg	mg/kg	mg/kg
			Dilution Factor	1	1	1
Compound	**NYSDEC UUSCO**	**NYSDEC RRSCO**	**NYSDEC CP-51 SCO**	CONC Q	CONC Q	CONC Q
Acenaphthene	20	100	20	0.34 U	0.34 U	0.026 J
Acenaphthylene	100	100	100	0.34 U	0.34 U	0.058 J
Anthracene	100	100	100	0.34 U	0.34 U	0.13 J
Benzo(a)Anthracene	1	1	1	0.03 J	0.03 J	0.71
Benzo(a)Pyrene	1	1	1	0.025 J	0.021 J	0.74
Benzo(b)Fluoranthene	1	1	1	0.036	0.033 J	0.98
Benzo(g,h,i)Perylene	100	100	100	0.018 J	0.015 J	0.46
Benzo(k)Fluoranthene	0.8	3.9	0.8	0.0093 J	0.016 J	0.28
Chrysene	1	3.9	1	0.026 J	0.025 J	0.75
Dibenz(a,h)Anthracene	0.33	0.33	0.33	0.034 U	0.034 U	0.12
Fluoranthene	100	100	100	0.039 J	0.035 J	1.2
Fluorene	30	100	30	0.34 U	0.34 U	0.03 J
Indeno(1,2,3-c,d)Pyrene	**0.5**	0.5	*0.5*	0.021 J	0.016 J	***0.51***
Naphthalene	12	100	12	0.34 U	0.34 U	0.015 J
Phenanthrene	100	100	100	0.026 J	0.022 J	0.53
Pyrene	100	100	100	0.045 J	0.044 J	1.2

Tables 1A-1B
POP Displays Manufacturing Site
Queens, NY
Underground Storage Tank Endpoint Samples
Notes

DEFINITIONS

J : The concentration given is an estimated value.

NS : No standard.

U : The analyte was not detected at the indicated concentration.

mg/kg : milligrams per kilogram

STANDARDS

Part 375 Soil Cleanup Objectives : Soil Cleanup Objectives listed in New York State Department of Environmental Conservation (NYSDEC) "Part 375" Regulations [6 New York Codes, Rules and Regulations (NYCRR) Part 375].

Exceedances of Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs) are highlighted in bold font.
Exceedances of Part 375 Restricted Residential Soil Cleanup Objectives (RRSCOs) are highlighted in gray shading.

CP-51 Soil Cleanup Objectives : Supplemental Soil Cleanup Objectives listed in Table 1 of the New York State Department of Environmental Conservation (NYSDEC) "CP-51/Soil Cleanup Guidance."

Exceedances of CP-51 Soil Cleanup Objectives (SCOs) are highlighted in italic font.

APPENDIX A

ENVIRONMENTAL EASEMENT

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

This page is part of the instrument. The City Register will rely on the information provided by you on this page for purposes of indexing this instrument.The information on this page will control for indexing purposes in the event of any conflict with the rest of the document.

2020092901190002001EFF4B

RECORDING AND ENDORSEMENT COVER PAGE **PAGE 1 OF 12**

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125 PARK AVENUE, SUITE 1610
NEW YORK, NY 10017
212-376-0900
MBASALATAN@ROYALABSTRACT.COM

PROPERTY DATA

Borough	Block	Lot	Unit	Address
QUEENS	504	3	Entire Lot	11-37 31ST AVENUE

Property Type: RESIDENTIAL VACANT LAND Easement

Borough	Block	Lot	Unit	Address
QUEENS	504	121	Entire Lot	11-28 31ST AVENUE

Property Type: RESIDENTIAL VACANT LAND Easement

☒ Additional Properties on Continuation Page

CROSS REFERENCE DATA

CRFN_____ *or* DocumentID_____ *or* _____ Year____ Reel____ Page_____ *or* File Number_____

PARTIES

GRANTOR/SELLER:
ASTORIA WEST, LLC
375 GREENWICH STREET, 3RD FLOOR
NEW YORK, NY 10013

GRANTEE/BUYER:
THE PEOPLE OF THE STATE OF NEW YORK
NYSDEC, 625 BROADWAY
ALBANY, NY 12233

FEES AND TAXES

Mortgage :		
Mortgage Amount:	$	0.00
Taxable Mortgage Amount:	$	0.00
Exemption:		
TAXES: County (Basic):	$	0.00
City (Additional):	$	0.00
Spec (Additional):	$	0.00
TASF:	$	0.00
MTA:	$	0.00
NYCTA:	$	0.00
Additional MRT:	$	0.00
TOTAL:	$	0.00
Recording Fee:	$	93.00
Affidavit Fee:	$	0.00

Filing Fee: $ 0.00

NYC Real Property Transfer Tax: $ 0.00

NYS Real Estate Transfer Tax: $ 0.00

RECORDED OR FILED IN THE OFFICE OF THE CITY REGISTER OF THE CITY OF NEW YORK
Recorded/Filed 10-15-2020 09:28
City Register File No.(CRFN): **2020000283091**

City Register Official Signature

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

2020092901190002001CFDCB

RECORDING AND ENDORSEMENT COVER PAGE (CONTINUATION)

Document ID: 2020092901190002 Document Date: 09-13-2020 Preparation Date: 09-29-2020
Document Type: EASEMENT

PROPERTY DATA

Borough	Block	Lot		Unit	Address
QUEENS	504	122	Entire Lot		11-12 31ST AVENUE

Property Type: RESIDENTIAL VACANT LAND

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 15th day of September, 2020, between Owner, Astoria West, LLC, having an office at 375 Greenwich Street, 3rd Floor, New York, New York 10013 (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 11-12 30th Drive in the City of New York, County of Queens and State of New York, known and designated on the tax map of the New York City Department of Finance as tax map parcel number: Block 504 Lot 122, being a portion of the property conveyed to Grantor by deed dated April 25, 2018 and recorded in the City Register of the City of New York as CRFN # 2018000146586. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.966 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 3, 2020 prepared by Patrick Benedict Jones, L.L.S. of New York City Land Surveyors, PC, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, Grantor, is the owner of real property located at the address of 11-28 30th Drive in the City of New York, County of Queens and State of New York, known and designated on the tax map of the New York City Department of Finance as tax map parcel number: Block 504 Lot 121, being a portion of the property conveyed to Grantor by deed dated April 25, 2018 and

recorded in the City Register of the City of New York as CRFN # 2018000146586. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 1.063 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 3, 2020 prepared by Patrick Benedict Jones, L.L.S. of New York City Land Surveyors, PC, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, Grantor, is the owner of real property located at the address of 11-37 31st Avenue in the City of New York, County of Queens and State of New York, known and designated on the tax map of the New York City Department of Finance as tax map parcel number: Block 504 Lot 3, being a portion of the property conveyed to Grantor by deed dated April 25, 2018 and recorded in the City Register of the City of New York as CRFN # 2018000146586. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.692 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 3, 2020 prepared by Patrick Benedict Jones, L.L.S. of New York City Land Surveyors, PC, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C241181-02-16 as amended July 1, 2018, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the New York City Department of Health and Mental Hygiene to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall

identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C241181
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

11. Consistency with the SMP. To the extent there is any conflict or inconsistency between the terms of this Environmental Easement and the SMP, regarding matters specifically addressed by the SMP, the terms of the SMP will control.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Astoria West, ~~LLC~~:

By: _____

Print Name: Eric Ward

Title: _____ Date: 9/1/20

Grantor's Acknowledgment

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

On the 1ST day of Sept, in the year 2020, before me, the undersigned, personally appeared Craig Wood, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Margaret Crowell
Notary Public - State of New York

MARGARET CROWELL
NOTARY PUBLIC-STATE OF NEW YORK
No. 01CR6065125
Qualified in New York County
My Commission Expires OCT 9, 2021

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting by and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
George W. Heitzman, Assistant Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 15th day of September in the year 2020 before me, the undersigned, personally appeared George W. Heitzman, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

JENNIFER ANDALORO
Notary Public, State of New York
No. 02AN6098246
Qualified in Albany County
Commission Expires January 14, 2024

SCHEDULE "A" PROPERTY DESCRIPTION

Description of Environmental Easement

All that certain plot, piece or parcel of land with the buildings and improvements thereon erected, situate, lying and being in the Borough and County of Queens, City and State of New York, bounded and described as follows:

As to Block 504, Lot 3

BEGINNING at a point on the northerly side of 31st Avenue (f/k/a Jamaica Avenue) distant 45 feet westerly from the corner formed by the intersection of the northerly side of 31st Avenue and the westerly side of 12th Street (f/k/a Sherman Street);

RUNNING THENCE northerly at right angles to 31st Avenue, a distance of 100 feet;

THENCE westerly and at right angles to the preceding course, a distance of 79.34 feet to a point;

THENCE northerly at right angles to the preceding course, a distance of 70.60 feet to a point;

THENCE westerly at right angles to the preceding course, a distance of 123.53 feet to a point;

THENCE southerly forming an interior angle on its easterly side of 90 degrees 49 minutes 25 seconds, a distance of 40.61 feet to a point;

THENCE westerly forming an exterior angle on its northerly side of 90 degrees 49 minutes 25 seconds, a distance of 8.22 feet to a point;

THENCE southerly and at right angles to the preceding course, a distance of 129.99 feet to the northerly side of 31st Avenue;

THENCE easterly along said northerly side of 31st Avenue, a distance of 211.67 feet to the point or place of BEGINNING.

Containing 0.692 acres more or less.

As to Block 504, Lot 121

BEGINNING at a point formed by the intersection of the westerly side of 12th Street (f/k/a Sherman Street) and the southerly side of 30th Drive (f/k/a Elm Street);

RUNNING THENCE southerly along said westerly side of 12th Street, a distance of 208.17 feet to a point;

THENCE westerly forming an interior angle on its northerly side of 94 degrees 18 minutes 00 seconds a distance of 131.86 feet to a point;

THENCE northerly and at right angles to the preceding course, a distance of 70.60 feet to a point;

THENCE westerly and at right angles to the preceding course, a distance of 123.53 feet to a point;

THENCE northerly forming an interior angle on its easterly side of 89 degrees 10 minutes 35 seconds, a distance of 140.87 feet to the southerly side of 30th Drive;

THENCE easterly along said southerly side of 30th Drive, a distance of 269.00 feet to the point or place of BEGINNING.

Containing 1.063 acres more or less.

As to Block 504, Lot 122

BEGINNING at a point formed by the intersection of the easterly side of Vernon Boulevard (f/k/a the Boulevard) and the southerly side of 30th Drive (f/k/a Elm Street);

RUNNING THENCE easterly along said southerly side of 30th Drive, a distance of 205.25 feet to a point;

THENCE southerly at right angles to 30th Drive, a distance of 181.48 feet to a point;

THENCE westerly forming an interior angle on its northerly side of 90 degrees 49 minutes 25 seconds, a distance of 8.22 feet to a point;

THENCE southerly and at right angles to the preceding course, a distance of 29.99 feet to a point;

THENCE westerly and at right angles to the preceding course, a distance of 200 feet to the easterly side of Vernon Boulevard;

THENCE northerly along said easterly side of Vernon Boulevard forming an interior angle on its easterly side of 75 degrees 58 minutes 00 seconds, a distance of 1.94 feet to an angle point;

THENCE northerly and still along said easterly side of Vernon Boulevard forming an interior angle on its easterly side of 191 degrees 18 minutes 41 seconds, a distance of 117.26 feet to an angle point;

THENCE northerly and still along said easterly side of Vernon Boulevard forming an interior angle on its easterly side of 182 degrees 59 minutes 14 seconds, a distance of 95.39 feet to the point or place of BEGINNING.

Containing 0.966 acres more or less.

B. 504
Ls. 3, 121 & 122
County of Queens

183229

APPENDIX B

SITE CONTACTS

APPENDIX B – LIST OF SITE CONTACTS

Name	Phone/Email Address
Astoria West, LLC (Volunteer/Owner) % Cape Advisors 375 Greenwich St, 3rd Floor, New York, NY 10013	(212) 343 1700 / davidk@capeadvisors.com
Axel Schwendt, AKRF (QEP) AKRF, Inc. 440 Park Avenue South, New York, NY 10016	(646) 388-9529 / aschwendt@akrf.com
Christine Leas (Client Attorney) SIVE PAGET & RIESEL 560 Lexington Avenue, New York, NY 10022	(212) 421-2150 / cleas@sprlaw.com
Jolene Lozewski (NYSDEC Project Manager) New York State Department of Environmental Conservation 625 Broadway, Albany, NY 12233-7014	(518) 402-8805 / jolene.lozewski@dec.ny.gov
Robert Corcoran, P.E. (NYSDEC PM Supervisor) Chief, Remedial Section A, Bureau A New York State Department of Environmental Conservation Division of Environmental Remediation 625 Broadway, Albany, NY 12233-7015	(518) 402-9658 / bob.corcoran@dec.ny.gov
Wendy Kuehner (NYSDOH Project Manager) New York State Department of Health Empire State Plaza, Corning Tower, Room 1787, Albany, NY 12237	(518) 402-7860 / BEEI@health.ny.gov
Kelly Lewandowski (NYSDEC Site Control Section) Division of Environmental Remediation 625 Broadway Albany, NY 12233	(518) 402-9569 / kelly.lewandowski@dec.ny.gov

APPENDIX C

FOUNDATION MANAGEMENT PLAN

APPENDIX C – FOUNDATION MANAGEMENT PLAN (FMP)

1.1 Notification

At least 15 days prior to the start of any activity that is anticipated to disturb the EC/vapor barrier system (which includes the foundation) of the on-site buildings, the Site owner or their representative will notify the NYSDEC. No contaminated soil is known to remain at the Site. The following table includes contact information for notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of Site-related contact information is provided in Appendix B.

Notifications*

Jolene Lozewski NYSDEC Representative	(518) 402-8805 jolene.lozewski@dec.ny.gov

* Note: Notifications are subject to change and will be updated as necessary.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for Site re-grading, intrusive elements or utilities to be installed below the vapor barrier, estimated volumes of contaminated soil (if encountered) to be excavated and any work that may impact an engineering control;
- If warranted, a summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly-contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work;
- A summary of the applicable components of this FMP;
- A statement that the work will be performed in compliance with this FMP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan (HASP), in electronic format;
- Identification of disposal facilities for potential waste streams (if applicable); and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

1.2 Vapor Barrier System Restoration

After the completion of soil removal and any other invasive activities that disturb the EC/vapor barrier system, this system will be restored in a manner that complies with the RAWP. The existing vapor barrier system is composed of a combination of 32-mil GCP Applied Technologies' Preprufe 200 membrane, 46-mil Preprufe 300R membrane, and 30-mil Prepufe 250 membrane, installed per manufacturer's specifications. Bituthene 3000 waterproofing/vapor barrier membrane was installed behind the perimeter foundation walls. The vapor barrier system was extended below the grade beam/footings and continued along the subgrade foundation walls, as required to prevent future vapor intrusion into the building.If the type of vapor barrier system changes from that which exists prior to the excavation, this will constitute a modification of the EC. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP.

1.3 Backfill from Off-Site Sources

All materials proposed for import onto the Site will be approved by the QEP and will be in compliance with provisions in this SMP prior to receipt at the Site. Any fill imported to the Site would meet the criteria outlined in 6 NYCRR Part 375. Non-virgin imported material that does not have an approved NYSDEC Beneficial Use Determination will be tested from a segregated stockpile at the originating facility for full list VOCs, SVOCs, pesticides, PCBs, and Target Analyte List (TAL) metals by a New York State-certified laboratory. The sampling should be conducted by an environmental professional in accordance with DER-10 Section 5.4(e). The results will be compared to the appropriate Part 375 SCOs and submitted to the NYSDEC for review and approval prior to importing of the material from a segregated stockpile. No construction and demolition (C&D) debris will be imported to the Site for use as fill.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site. All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards will be the Part 375 SCOs for Restricted Commercial Use. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Solid waste will not be imported onto the Site.

Trucks entering the Site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

1.4 Stormwater Pollution Prevention

Based on the size of the Site, a Storm Water Pollution Prevention Plan (SWPPP) will be required for construction at this Site. The SWPPP will incorporate erosion and sediment control measures as per the NYS requirements. Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

APPENDIX D
PHOTOGRAPHIC LOG

Photograph 1 – The underground storage tank (UST-1) was exposed for cleanup and removal (October 2018).

Photograph 2 – The tank was removed following removal of the oil-water mixture (October 2018).

Photograph 3 – The tank interior was cleaned by the tank contractor (October 2018).

Photograph 4 – Petroleum-contaminated soil was excavated and removed following the tank removal (October 2018).

Photograph 5 – Cleaned tank interior (October 2018).

Photograph 6 – The hazardous lead-contaminated soil area was marked prior to excavation and removal (Feb 2020).

Photograph 7 – Excavating and loading the hazardous lead-contaminated soil (February 2020).

Photograph 8 – Installed GCP Preprufe 200 vapor barrier/waterproofing membrane below the foundation slab and behind subgrade foundation walls (March 2020).

AKRF, Inc.

POP Displays Manufacturing SMP

Photograph 9 – Installed GCP Preprufe 200 vapor barrier/waterproofing membrane below the foundation slab and behind subgrade foundation walls (April 2020).

Photograph 10 – Installed GCP Preprufe 200 vapor barrier/waterproofing membrane below the foundation slab and behind subgrade foundation walls (April 2020).

Photograph 11 – Installing the vapor barrier below the slab (August 2020)

Photograph 12 – Installing the vapor barrier below the slab (December 2020)

APPENDIX E

QUALITY ASSURANCE PROJECT PLAN

POP DISPLAYS MANUFACTURING SITE

30-77 VERNON BOULEVARD AND 30-80 12TH STREET

QUEENS, NEW YORK

Quality Assurance Project Plan

NYSDEC Site Number: C241181

AKRF Project Number: 180066

Prepared for:

Astoria West, LLC
375 Greenwich, 3rd Floor
New York, New York 10013

Prepared by:

AKRF, Inc
440 Park Avenue South
New York, New York 10016
(212) 696-0670

JUNE 2023

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ATTACHMENTS

1.0 INTRODUCTION

This Quality Assurance Project Plan (QAPP) describes the protocols and procedures that will be followed by 11-12 30th Drive LLC (the "Volunteer") during implementation of the Site Management Plan (SMP) and associated appendices at the POP Displays Manufacturing project site, located at 30-77 Vernon Boulevard, 11-12 30th Drive, and 30-80 12th Street in Queens, New York. The approximately 2.75-acre site is also identified as Block 504, Lots 3, 121, and 122 (former Lot 3) on the New York City Tax Map (hereafter referred to as the "Site"). The Site was remediated under the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) (POPS Displays Manufacturing Site; Site No. C241181).

The objective of the QAPP is to provide for Quality Assurance (QA) and maintain Quality Control (QC) during sampling performed to evaluate the performance and effectiveness of the remedy to reduce or mitigate contamination at the Site. Adherence to the QAPP will ensure that defensible data will be obtained confirm the successful operation and/or maintenance of the implemented remedial actions.

2.0 PROJECT TEAM

The project team will be drawn from AKRF professional and technical personnel and AKRF's subcontractors. All field personnel and subcontractors will have completed a 40-hour training course and updated 8-hour refresher course that meet the Occupational Safety and Health Administration (OSHA) requirements of 29 Code of Federal Regulation (CFR) Part 1910. The following sections describe the key project personnel and their responsibilities.

2.1 Project Director

The project director will be responsible for the general oversight of all aspects of the project, including scheduling, budgeting, data management, and decision-making regarding the field program. The project director will communicate regularly with all members of the AKRF project team and the NYSDEC to ensure a smooth flow of information between involved parties. Mr. Axel Schwendt will serve as the project director for the SMP. Mr. Schwendt's resume is included in Attachment A.

2.2 Project Manager

The project manager will be responsible for directing and coordinating all elements of the SMP. The project manager will prepare reports and participate in meetings with the Site owner and/or the NYSDEC. Mr. Ashutosh Sharma will serve as the project manager for the SMP. Mr. Sharma's resume is included in Attachment A.

2.3 Field Team Leader

The field team leader will be responsible for supervising the daily sampling and health and safety activities in the field and will ensure adherence to the SMP and Health and Safety Plan (HASP). The field team leader will report to the Project Manager on a regular basis regarding daily progress and any deviations from the SMP. The field team leader will be a qualified, responsible person, able to act professionally and promptly during required activities. The field team leader will be established for each task; however, Mr. Stephen Schmid is expected to be a field team leader for much of the work under the SMP. Mr. Schmid's resume is included in Attachment A.

2.4 Project Quality Assurance/Quality Control Officer

The Quality Assurance/Quality Control (QA/QC) Officer will be responsible for adherence to the QAPP. The QA/QC officer will review the procedures with all personnel prior to commencing any fieldwork and will assess implementation of the required procedures. Ms. Michelle Lapin will serve as the QA/QC officer for the SMP. Ms. Lapin's resume is included in Attachment A.

2.5 Laboratory Quality Assurance/Quality Control Officer

The laboratory QA/QC officer will be responsible for quality control procedures and checks in the laboratory and ensuring adherence to laboratory protocols. The laboratory QA/QC will track the movement of samples from the time they are checked in at the laboratory to the time that analytical results are issued. The laboratory QA/QC will conduct a final check on the analytical calculations and sign off on the laboratory reports. The laboratory QA/QC officer will be determined upon selection of a contract laboratory(s) for the SMP.

3.0 STANDARD OPERATING PROCEDURES

The following sections describe the standard operating procedures (SOPs) for the monitoring activities included in the SMP. During these operations, all field personnel will wear appropriate personal protective equipment (PPE) and safety monitoring will be performed as described in the Site-specific Health and Safety Plan (HASP) provided as Appendix C of the SMP. SMP implementation will include inspections of the Site composite cover system, and an Excavation Work Plan (EWP) and other provisions and appropriate actions to be taken in the event that future renovation or redevelopment of the Site requires the breaching of the composite cover system and excavation/removal of underlying soil/fill.

In all instances, any atypical or unexpected findings noted during inspections, sampling events, or SMP-governed fieldwork will be communicated immediately to the environmental professional managing the Site work and, as necessary, to the NYSDEC project manager or NYSDEC's successor agency.

3.1 Excavation and/or Site Composite Cover System Disturbance

The procedures for excavation and/or other invasive work that may disturb Site soil beneath the Site composite cover system will be as follows:

- Soil removal and/or other invasive activities will be completed as needed in accordance with the SMP and EWP.
- Following invasive work, the demarcation layer will be replaced to provide a visual reference to the top of the residual management zone (RMZ).
- The composite cover system will be replaced to restore the condition to that which existed prior to the excavation. In general, the restoration types must match or exceed the existing material and thickness conditions of the Site cover types presented in the SMP to maintain Site composite cover system integrity across the entire Site.
- Decontaminate all equipment used in composite cover system disturbance as described in Sections 3.2 and 3.3 of this QAPP.

3.2 Decontamination of Sampling Equipment

All sampling equipment (drilling rods and casing, macrocore samplers, probe rods, etc.) will be either dedicated or decontaminated between sampling locations. The decontamination procedure will be as follows:

1. Scrub using tap water/Simple Green® mixture and bristle brush.
2. Rinse with tap water.
3. Scrub again with tap water/Simple Green® and bristle brush.
4. Rinse with distilled water.
5. Air-dry the equipment, if possible.

Decontamination will be conducted within 55-gallon drums or on plastic sheeting (or equivalent) that is bermed to prevent discharge to the ground or drains.

3.3 Heavy Equipment Decontamination

Decontamination of chemically-contaminated heavy equipment (e.g., augers, excavator buckets) will be accomplished using high-pressure steam; dry contamination will be decontaminated using brushes and shovels. Decontamination will take place on a decontamination pad and all liquids used in the decontamination procedure will be collected. Vehicles or equipment brought into an

exclusion zone will be treated as contaminated and will be decontaminated prior to removal. Personnel performing this task will wear the proper PPE as prescribed in the Site-specific HASP.

A decontamination area will be established around the planned excavation area, adjacent to the environmental enclosure. The floor of the decontamination area will be covered with 6-mil plastic sheeting, as necessary, and bermed to prevent spreading of decontamination fluids or potential discharge to the ground surface.

All equipment in direct contact with known or potentially contaminated material will be either dedicated or decontaminated prior to handling less contaminated material or removal from the Site. Decontamination of chemically-contaminated heavy equipment will be accomplished using high-pressure steam; dry contamination will be decontaminated using brushes and shovels. All liquids used in the decontamination procedure will be collected, stored, and disposed of in accordance with federal, state, and local regulations.

3.4 Management of Investigation-Derived Waste (IDW)

Any IDW waste will be containerized in New York State Department of Transportation (NYSDOT)-approved 55-gallon drums or other appropriate containers. The drums will be sealed at the end of each workday and labeled with the date, the well or boring number(s), the type of waste (i.e., drill cuttings, development water or purge water) and the name of an AKRF point-of-contact. Drums will be staged in secure areas, away from public access to the extent practicable.

Soil/fill samples collected from soil boring or excavation activities will be used for waste characterization of soil/fill, since such data would be biased towards areas expected to be most contaminated. Additional waste characterization soil or other samples may be collected, if requested by the disposal facility. All IDW will be disposed of or treated according to applicable local, state, and federal regulations.

4.0 SAMPLING AND LABORATORY PROCEDURES

4.1 Import Soil/Fill Sampling

Prior to importing soil/fill for use as backfill, the intended imported material will be evaluated using the following procedures:

- A segregated stockpile of the intended imported material will be made available for sampling at a frequency and for the required parameters as outlined in Section 5.4(e) 10 of NYSDEC DER-10.
- Soil/fill sample(s) will be collected from the segregated stockpile for analysis in accordance with NYSDEC requirements and sampling results will be submitted to NYSDEC for approval.
- No material will be added to or removed from the segregated stockpile intended for import following the sample collection.
- Samples will be collected into laboratory-supplied containers.
- Samples will be kept in an ice-filled cooler or refrigerator, with the exception of any asbestos samples, until receipt by the laboratory.
- The clean soil/fill layer will be underlain by a demarcation layer such as orange snow fence to indicate the top of the original soil/fill.
- Decontaminate all sampling equipment between sampling locations as described in Sections 3.2 and 3.3 of this QAPP.

4.2 Reuse Sampling

Prior to reuse as backfill, excavated material will be evaluated using the following criteria:

- Concrete or demolition debris that does not exhibit signs of contamination will be sampled for asbestos prior to reuse on-site.
- Soil/fill material proposed for reuse will be sampled at a frequency and for the required parameters as outlined in NYSDEC's DER-10, Table 5.4.
- Samples will be collected in laboratory-supplied containers.
- Samples will be kept in an ice-filled cooler or refrigerator, with the exception of any asbestos samples, until receipt by the laboratory.
- Decontaminate all sampling equipment between sampling locations as described in Sections 3.2 and 3.3 of this QAPP.

4.3 Endpoint Soil Sampling

In the event that evidence of contamination [odors, staining, elevated photoionization detector (PID) readings, or analytical results of soil samples above NYSDEC Part 375 Restricted Residential Soil Cleanup Objectives (RRSCOs)] is identified during any breach to the composite cover system or excavation of soil/fill as part of the redevelopment or renovation of the Site, endpoint soil sampling activities will be performed in accordance with NYSDEC DER-10. Per NYSDEC DER-10 Section 5.4, sidewall samples will be collected a minimum one sample for every 30 linear feet and bottom samples will be collected at a frequency of one every 900 square feet. Endpoint soil samples will be analyzed for NYSDEC Final Commissioner's Policy - Soil Cleanup Guidance (CP-51) volatile organic compounds (VOCs) by EPA Method 8260C, target compound list (TCL) semivolatile organic compounds/base-neutrals (SVOCs/BNs) by EPA

Method 8270D, and Toxicity Characteristic Leaching Procedure (TCLP) metals by EPA Method 6010C.

Soil sampling will be conducted according to the following procedures:

- Characterize the sample according to the modified Burmister soil classification system.
- After selecting which samples will be analyzed in the laboratory, fill the required laboratory-supplied sample jars with the soil from the selected sampling location or labeled sealable plastic bags. Seal and label the sample jars as described in Section 4.4 of this QAPP and place in an ice-filled cooler.
- Decontaminate any reusable soil sampling equipment between sample locations as described in Section 3.2 of this QAPP.
- Record boring number, sample depth, and sample observations (evidence of contamination, PID readings, soil classification) in field logbook and boring log data sheet, if applicable.

4.4 Laboratory Methods

Table 1 summarizes the laboratory methods that will be used to analyze field samples and the sample container type, preservation, and applicable holding times. Other analytes may be added if required by the disposal facility. An Environmental Laboratory Approval Program (ELAP)-certified laboratory will be used for all chemical analyses in accordance with DER-10 2.1(b) and 2.1(f), including NYSDEC July 2005 Analytical Services Protocol (ASP) Category B Deliverables.

Table 1
Laboratory Analytical Methods for Analysis Groups

Sample Type	Analysis	Method	Container Type	Preservative	Hold Time
Soil/Fill (Reuse/Backfill)	TCL VOCs	8260C	Encore samplers (3)	4 °C	48 hours
	TCL SVOCs	8270D	4 oz. clear glass jar	4 °C	5 days to extract, 49 days to analyze
	TAL Metals Mercury	6010C 7471B	4 oz. clear glass jar	4 °C	14 days 26 days
	PCBs	8082A	4 oz. clear glass jar	4 °C	14 days
	Pesticides	8081B	4 oz. clear glass jar	4 °C	5 days to extract, 49 days to analyze
Soil/Fill (Endpoint Sampling)	CP-51 VOCs	8260	Encore samplers (3), 2 oz. plastic jar	4 °C	48 hours
	TCL SVOCs-BNs	8270D	4 oz. clear glass jar	4 °C	5 days to extract, 49 days to analyze
	TCLP Metals	6010C	4 oz. clear glass jar	4 °C	14 days 26 days

4.5 Quality Control Sampling

In addition to the laboratory analysis of the characterization soil samples for reuse and off-site disposal, additional analysis will be included for quality control measures, as required by the NYSDEC July 2005 ASP Category B sampling techniques. These samples will include field blanks, trip blanks, matrix spike/matrix spike duplicates (MS/MSD), and blind duplicate samples

at a frequency of one sample per 20 field samples collected. Table 2 provides a summary of the field samples and QA/QC samples to be analyzed by the laboratory.

Table 2
Field Sample and QC Sample Quantities

Sample Type	Parameters	EPA Method	Field Samples	QC Samples			
				Field Blank	Trip Blank	MS/MSD	Blind Duplicate
Soil	VOCs	EPA 8260	20	1	1	1	1
	SVOCs	EPA 8270	20	1	--	1	1
	TAL Metals	EPA 6000/7000	20	1	--	1	1
	Pesticides	EPA 8081	20	1	--	1	1
	PCBs	EPA 8082	20	1	--	1	1

4.6 Sample Handling

4.6.1 Sample Identification

All samples will be consistently identified in all field documentation, chain-of-custody (COC) documents, and laboratory reports using an alpha-numeric code. Soil samples will be identified with the sample depth interval (in parenthesis). Soil samples will be labeled with the depth interval and its location carefully measured and logged in the field book.

All samples will be amended with the collection date at the end of the sample name in a year, month, day (YYYYMMDD) format. Blind duplicate sample nomenclature will consist of: the sample type, followed by an "X"; MS/MSD sample nomenclature will consist of the parent sample name only but triplicate sample volume will be collected and the COC comment section will explain that the additional volume is for running the MS/MSD; and trip and field blanks will consist of "TB-" and "FB-", respectively.

Table 3 provides examples of the sampling identification scheme.

Table 3
Examples of Sample Nomenclature

Sample Description	Sample Designation
Import soil sample collected from the first imported stockpile	ISP-1_YYYYMMDD
Reuse soil sample collected from the first on-site stockpile	SP-1_YYYYMMDD
Blind duplicate sample	ISP-X_YYYYMMDD
Trip blank sample	TB-1_YYYYMMDD
Field blank sample	FB-1_YYYYMMDD

4.6.2 Sample Labeling and Shipping

All sample containers will be provided with labels containing the following information:

- Project identification
- Sample identification
- Date and time of collection
- Analysis(es) to be performed
- Sampler's initials

Once the samples are collected and labeled, they will be placed in chilled coolers and stored in a cool area away from direct sunlight to await shipment to the laboratory. All samples will be shipped to the laboratory at least twice per week. At the start and end of each workday, field personnel will add ice to the coolers as needed.

The samples will be prepared for shipment by placing each sample in a sealable plastic bag, then wrapping each container in bubble wrap to prevent breakage, adding freezer packs and/or fresh ice in sealable plastic bags and the chain-of-custody (COC) form. Samples will be shipped overnight (e.g., Federal Express) or transported by a laboratory courier. All coolers shipped to the laboratory will be sealed with mailing tape and a COC seal to ensure that the coolers remain sealed during delivery.

4.6.3 Sample Custody

Field personnel will be responsible for maintaining the sample coolers in a secured location until they are picked up and/or sent to the laboratory. The record of possession of samples from the time they are obtained in the field to the time they are delivered to the laboratory or shipped off-site will be documented on COC forms. The COC forms will contain the following information: project name; names of sampling personnel; sample number; date and time of collection and matrix; and signatures of individuals involved in sample transfer, and the dates and times of transfers. Laboratory personnel will note the condition of the custody seal and sample containers at sample check-in.

4.7 Field Instrumentation

Field personnel will be trained in the proper operation of all field instruments at the start of the field program. Instruction manuals for the equipment will be on file at the Site for referencing proper operation, maintenance and calibration procedures. The equipment will be calibrated according to manufacturer specifications at the start of each day of fieldwork, if applicable. If an instrument fails calibration, the project manager or QA/QC officer will be contacted immediately to obtain a replacement instrument. A calibration log will be maintained to record the date of each calibration, any failure to calibrate and corrective actions taken. The PID will be calibrated each day using 100 parts per million (ppm) isobutylene standard gas.

ATTACHMENT A

RESUMES OF KEY PROJECT PERSONNEL

MICHELLE LAPIN, P.E.

SENIOR VICE PRESIDENT

Michelle Lapin is a Senior Vice President with more than 25 years of experience in the assessment and remediation of hazardous waste issues. She leads the firm's Hazardous Materials group and offers extensive experience providing strategic planning and management for clients. Ms. Lapin has been responsible for the administration of technical solutions to contaminated soil, groundwater, air and geotechnical problems. Her other duties have included technical and report review, proposal writing, scheduling, budgeting, and acting as liaison between clients and regulatory agencies, and project coordination with federal, state, and local authorities.

Ms. Lapin's hydrogeologic experience includes groundwater investigations, formulation and administration of groundwater monitoring programs and remediation throughout the Northeast. Her experience with groundwater contamination includes Level B hazardous waste site investigations; leaking underground storage tank studies, including hazardous soil removal and disposal and associated soil and water issues; soil gas/vapor intrusion surveys; and wetlands issues. Ms. Lapin is experienced in coordinating and monitoring field programs concerning hazardous waste cell closures. She has directed hundreds of Phase I, Phase II, and Phase III investigations and remediations, many of them in conjunction with developers, law firms, lending institutions, and national retail chains. She is also experienced in the cleanup of contaminated properties under Brownfield Cleanup Program (BCP) regulations.

BACKGROUND

Education

M.S., Civil Engineering, Syracuse University, 1985
B.S., Civil Engineering, Clarkson University, 1983

Professional Licenses/Certifications

New York State P.E.
State of Connecticut P.E.

Professional Memberships

Member, National Society of Professional Engineers (NSPE), National and CT Chapters
Member, American Society of Civil Engineers (ASCE), National and CT Chapters
Member, Connecticut Business & Industry Association (CBIA), CBIA Environmental Policies Council (EPC)
Member, Environmental Professionals' Organization of Connecticut (EPOC)
Board Member, New York City Brownfield Partnership

Years of Experience

Year started in company: 1994
Year started in industry: 1986

RELEVANT EXPERIENCE

West 61st Street Rezoning/Residential Development, New York, NY

Ms. Lapin is directing the firm's hazardous materials work for this mixed-use development in Manhattan. The Algin Management Company hired AKRF to prepare an environmental impact statement (EIS) for the proposed rezoning of the western portion of the block between West 60th and 61st Streets, between Amsterdam and West

End Avenues. The purpose of the proposed action was to facilitate the development of two 30-story residential towers with accessory parking spaces, and landscaped open space. The EIS examined a "worst case" condition for rezoning the block, which allowed Algin to build a residential building of approximately 375,000 square feet at their site. The building now contains 475 apartments, 200 accessory parking spaces, a health club, and community facility space. This site, with the services of AKRF, entered into New York State's Brownfield Cleanup Program (BCP). On-site issues included underground storage tanks remaining from previous on-site buildings, petroleum contamination from these tanks and possibly from off-site sources, and other soil contaminants (metals, semi-volatile organic compounds, etc.) from fill materials and previous on-site buildings. AKRF oversaw the adherence to the Construction Health and Safety Plan (HASP), which was submitted to and approved by the New York State Department of Environmental Conservation (NYSDEC), and monitored the waste streams, to ensure that the different types of waste were disposed of at the correct receiving facilities. This oversight also included confirmation and characteristic soil sampling for the receiving facilities and NYSDEC. A "Track 1" Clean up of the majority of the property (the portion including the buildings) was completed and the final Engineering Report was approved by the NYSDEC. AKRF has also completed a smaller portion of the property as a "Track 4" cleanup, which includes a tennis court and landscaped areas.

Hudson River Park, New York, NY
Ms. Lapin is directing AKRF's hazardous materials work during construction of Hudson River Park, a five-mile linear park along Manhattan's West Side. As the Hudson River Park Trust's (HRPT's) environmental consultant, AKRF is overseeing preparation and implementation of additional soil and groundwater investigations (working with both NYSDEC and the New York City Department of Environmental Protection (NYCDEP)), all health and safety activities, and removal of both known underground storage tanks and those encountered during construction. Previously, the firm performed hazardous materials assessments as part of the environmental impact statement (EIS) process, including extensive database and historical research, and soil and groundwater investigations. Ms. Lapin has been the senior consultant for the soil and groundwater investigations and remediation, and the asbestos investigations and abatement oversight.

Roosevelt Union Free School District – District-wide Improvement Program, Roosevelt, NY
Ms. Lapin managed the hazardous materials investigation for the Draft and Final EISs for the improvement program, which included the demolition of three existing elementary schools and portions of the junior-senior high school, and the reconstruction of three replacement elementary schools, a separate replacement middle school, and renovations to the high school. Following the EIS, additional hazardous materials investigations were completed, including comprehensive asbestos and lead surveys; Phase I and Phase II Environmental Site Assessments; the preparation of asbestos, lead, hazardous materials and demolition specifications; and obtaining site-specific variances from the New York State Department of Labor (NYSDOL). The middle school remediation was conducted through coordination with the NYSDEC, New York State Department of Health (NYSDOH), the New York State Education Department (NYSED) and the local school district. After project approval and completion of construction/renovation of the new middle school, the school opened for the Fall 2008 semester as planned. AKRF continues to provide oversight for ongoing abatement at a number of the schools, and overall environmental consulting to the school district.

Fiterman Hall Deconstruction and Decontamination Project, New York, NY
The 15-story Fiterman Hall building, located at 30 West Broadway, originally constructed as an office building in the 1950s, had served as an extension of the City University of New York (CUNY) Borough of Manhattan Community College (BMCC) since 1993. The building was severely damaged during the September 11, 2001, World Trade Center (WTC) attack when 7 WTC collapsed and struck the south façade of the building, resulting in the partial collapse of the southwest corner of the structure. The building was subsequently stabilized, with breaches closed and major debris removed. Because extensive mold and WTC dust contaminants remain within the building, it must be taken down. The project required the preparation of two environmental assessment statements (EASs)—one for the deconstruction and decontamination of Fiterman Hall and one for the construction of a replacement building on the site. AKRF prepared the EAS for the Deconstruction and Decontamination project, which included the decontamination of the interior and exterior of the building, the

removal and disposal of all building contents, and the deconstruction of the existing, approximately 377,000-gross-square-foot partially collapsed structure. Ms. Lapin reviewed the EAS's deconstruction and decontamination plans. The cleanup plan was submitted to the United States Environmental Protection Agency (USEPA).

Columbia University Manhattanville Academic Mixed-Use Development, New York, NY
Ms. Lapin served as Hazardous Materials Task Leader on this EIS for approximately 4 million square feet of new academic, research and neighborhood uses to be constructed north of Columbia University's existing Morningside campus. The Hazardous Materials work included Phase I Environmental Site Assessments for the properties within the site boundaries, and estimates for a Subsurface (Phase II) Investigation of the entire development area. The firm's Hazardous Materials group has performed over 30 individual Phase I Environmental Site Assessments for properties within the development area. In addition, a Preliminary Environmental Site Assessment (PESA) was completed in conjunction with the EIS. Based on the Phase I studies, AKRF conducted a subsurface (Phase II) investigation in accordance with an NYCDEP-approved investigative work plan and health and safety plan. Subsurface activities included the advancement of soil borings, groundwater monitor wells, and the collection of soil and groundwater samples for laboratory analysis. This study estimated costs to remediate contaminated soil, groundwater and hazardous building materials, including lead-based paint and asbestos-containing materials.

Yonkers Waterfront Redevelopment Project, Yonkers, NY
For this redevelopment along Yonkers' Hudson River waterfront, Ms. Lapin headed the remedial investigation and remediation work that included Phase I assessments of 12 parcels, investigations of underground storage tank removals and associated soil remediation, remedial alternatives reports, and remedial work plans for multiple parcels. Several of the city-owned parcels were remediated under a Voluntary Cleanup Agreement; others were administered with state Brownfields grants. Hazardous waste remediation was completed on both brownfield and voluntary clean-up parcels, which enabled construction of mixed-use retail, residential development, and parking.

Davids Island Site Investigations, New Rochelle, NY
Ms. Lapin managed the hazardous materials investigation of Westchester County's Davids Island, The island, which features pre- and post-Civil War military buildings and parade grounds and is viewed as a major heritage, tourism, and recreational amenity, was planned for county park purposes. The investigation included a Phase I site assessment, with historical research dating to the 17th century, a Phase II (Subsurface) Investigation, underground storage tank investigations, asbestos surveys, and conditions surveys of all remaining structures. Cost estimates were submitted to Westchester County for soil remediation, asbestos abatement, and building demolition.

Site Selection and Installation of 11 Turbine Generators, New York and Long Island, NY
AKRF was retained by the New York Power Authority (NYPA) to assist in the State Environmental Quality Review Act (SEQRA) review of the proposed siting, construction, and operation of 11 single-cycle gas turbine generators in the New York metropolitan area. Ms. Lapin managed the hazardous materials investigation of the sites. The work included Phase I site assessments, subsurface investigations, and construction health and safety plans.

Cross Westchester (I-287) Expressway Phases V and VI, Westchester County, NY
Ms. Lapin served as Project Manager for the New York State Department of Transportation's (NYSDOT) reconstruction of Westchester County's major east-west artery and was responsible for directing the contaminated materials aspect of the final design effort. As part of her duties, she managed the asbestos investigations at eight bridges and wetland delineation along the entire corridor, wrote the scope of work and provided general project management.

Supermarket Redevelopment, New Fairfield, CT
AKRF provided consulting services to the developer and owner of a 9-acre site including conducting a remedial investigation and remediation of a site contaminated from former dry cleaning operations and off-site gasoline spills. The investigation included the installation of monitoring wells in three distinct aquifers, geophysical logging, pump tests, and associated data analysis. Ms. Lapin presented the environmental issues and planned remediation to local and state officials during the early stages of the planning process to incorporate their comments into the final remedial design. A remedial action work plan (RAWP) was completed and approved by the Connecticut

Department of Environmental Protection within a year to enable redevelopment work for a new supermarket and shopping center. The RAWP included the remediation of soil within the source area and a multi-well pump and treat system for the recovery of non-aqueous and dissolved phase contamination in groundwater. The design of the recovery well system included extensive groundwater modeling to ensure capture of the contaminant plume and the appropriate quantity and spacing of the wells. Ms. Lapin directed the soil removal remedial activities and monitoring for additional potential contamination during construction. In addition, AKRF performed comprehensive pre-demolition asbestos and lead-based paint surveys of the former site structures, conducted abatement, air monitoring and oversight, and provided environmental consulting support for the development of the site. The groundwater remediation system was installed during site development and began operation once development was complete.

East 75th/East 76th Street Site, New York, NY

Ms. Lapin served as Senior Manager for this project that encompassed coordination and direct remediation efforts of this former dry cleaning facility and parking garage prior to the sale of the property and its ultimate redevelopment for use as a private school. A preliminary site investigation identified 20 current and former petroleum and solvent tanks on the property. A soil and groundwater testing program was designed and implemented to identify the presence and extent of contamination resulting from potential tank spills. This investigation confirmed the presence of subsurface petroleum contamination in the soil and solvent contamination from former dry cleaning activities in the bedrock. AKRF completed oversight of the remediation under the State's Voluntary Cleanup Program. Remediation, consisting of tank removals and excavation of contaminated soil and the removal of solvent-contaminated bedrock down to 30 feet below grade, has been completed. AKRF completed oversight of the pre-treatment of groundwater prior to discharge to the municipal sewer system and an off-site study to determine impacts to groundwater in downgradient locations.

Home Depot, Various Locations, NY

Ms. Lapin, serving as either Project Manager or Senior Manager, has managed the investigations and remediation at multiple Home Depot sites in the five boroughs, Long Island, and Connecticut. The investigations have included Phase I and II site assessments, asbestos and lead paint surveys, abatement specifications and oversight, and soil and groundwater remediation.

Avalon on the Sound, New Rochelle, NY

For Avalon Bay Communities, Ms. Lapin managed the investigations and remediation of two luxury residential towers and an associated parking garage. Remediation of the first phase of development (the first residential tower and the parking garage) included gasoline contamination from a former taxi facility, fuel oil contamination from multiple residential underground storage tanks, and chemical contamination from former on-site manufacturing facilities. The remediation and closure of the tank spills was coordinated with the New York State Department of Environmental Conservation (NYSDEC). The initial investigation of the Phase II development—an additional high-rise luxury residential building—detected petroleum contamination. A second investigation was conducted to delineate the extent of the contamination and estimate the costs for remediation. AKRF oversaw the remediation and conducted the Health and Safety monitoring. The remediation was completed with closure and approvals of the NYSDEC.

East River Science Park, New York, NY

Originally, New York University School of Medicine (NYUSOM) retained the firm to prepare a full Environmental Impact Statement (EIS) for its proposed East River Science Park (ERSP). As originally contemplated, the proposed complex was to occupy a portion of the Bellevue Hospital campus between East 30th Street and approximately East 28th Street and would have included a clinical practice, research, and biotech facilities, housing units, a child care center, and a conference center and parking.

Ms. Lapin managed the Phase I Environmental Site Assessment and other hazardous materials-related issues. Events relating to September 11, 2001 delayed the project for several years. When it resurfaced with a new developer and a diminished scope, Ms. Lapin updated the hazardous materials issues and consulted with the new

developer regarding remediation strategies and involvement of regulatory agencies. For the actual remediation/development, the city requested oversight by AKRF to represent its interests (the city is retaining ownership of the land). Ms. Lapin completed directing the remediation oversight on behalf of the City of New York for the remediation of this former psychiatric hospital building, laundry building and parking areas. The new 550,000 square-foot development includes a biotechnology center, street level retail, and an elevated plaza.

STEPHEN SCHMID

ENVIRONMENTAL SCIENTIST

Stephen Schmid is an Environmental Scientist in AKRF's Hazardous Materials Department with five years of experience. He has experience in Phase I and II site assessments, asbestos surveying and monitoring, and construction/remediation. Mr. Schmid is a 2011 graduate from the University of New Hampshire, where he studied marine and freshwater biology, and environmental conservation. Prior to joining AKRF Mr. Schmid conducted fieldwork, water sampling and analysis in addition to assisting in a study of lakes in the North Eastern United States.

BACKGROUND

Education

BS Marine & Freshwater Biology, University of New Hampshire, Durham, NH

Licenses/Certifications

40 Hour OSHA HAZWOPER

10 Hour OSHA Construction Health and Safety

NYS DEC Erosion and Sediment Control Certificate

Asbestos Project Monitor, Air Sampling Technician, Inspector and Investigator

Years of Experience

Year started in company: 2012

Year started in industry: 2011

RELEVANT EXPERIENCE

Willets Point, Queens, NY

AKRF supported the New York City Economic Development Corporation (EDC) with Phase 1 of the Willets Point Redevelopment Plan, which includes the demolition of existing structures. Mr. Schmid performed pre-demolition asbestos-containing materials and universal waste surveys of approximately 70 structures throughout the 23-acre area site in Queens along with an AKRF licensed NYC asbestos investigator.

Adelaar, Monticello, NY

The project is a multi-phase development consisting of approximately 1,700 acres. The project site has been developed with a mixed-use residential-commercial hotel, casino, water park and entertainment village. AKRF provided acquisition and development support, including performing Phase I and II environmental site assessments. Mr. Schmid provided assistance with Phase I assessments, oversight during remedial soil handling activities and conducted inspections in accordance with the Stormwater Pollution and Prevention Plans.

NYCHA Randolph Houses, W 114th Street, Harlem, NY

AKRF was directed to survey 14 five story affordable housing apartment buildings for potential asbestos containing materials prior to the renovation of the buildings. Mr. Schmid along with AKRF licensed NYC asbestos investigators performed the collection of bulk samples throughout the building's main floors, basements and roofs to confirm the presence of asbestos in some of the building materials.

25 Broad Street, Manhattan, NY

AKRF was contracted by LCOR during the demolition of a residential building on a property which will eventually be redeveloped. AKRF was responsible for creating and implementing a community air monitoring program during demolition activities. As the environmental scientist Mr. Schmid was the on-site monitor responsible for calibrating equipment and monitoring levels of volatile organic compounds and particulate matter for the surrounding area and construction personnel. Reports of the daily activity including data collected throughout the day were prepared for submittal to the client.

Kent Avenue, Brooklyn, NY (AKA Northside Piers and 1 North 4th Place)

The project was a multi-phase development consisting of a waterfront block in the Williamsburg Rezoning Area. The project site has been developed with a mixed-use residential-commercial high rise towers with an esplanade and a pier along the East River. AKRF provided acquisition and development support, including performing Phase I and II environmental site assessments, and preparation of Remedial Action Plans (RAPs) and Construction Health and Safety Plan (CHASPs) for approval by DEP and OER. As the environmental scientist Mr. Schmid provided assistance with construction oversight during soil handling activities and managing the Community Air Monitoring Plan (CAMP) activities.

250 North 10th Street, LLC., Residential Redevelopment Site, Brooklyn, NY

AKRF was retained to investigate and remediate this former industrial property in the Williamsburg section of Brooklyn, New York in connection with site redevelopment. The site is approximately 50,000 square feet, and redevelopment included a six story residential building and parking garage. The work was completed to satisfy the requirements of the NYC E-designation Program and NYC Voluntary Cleanup Program (NYC VCP). AKRF completed a Remedial Investigation (RI) to evaluate the nature and extent of site contamination, and developed a Remedial Action Work Plan (RAWP) to properly address site contamination during redevelopment. Remediation included removal of underground storage tanks, more than 7,500 tons of contaminated soil, and installation of a vapor barrier and site cap across the entire property. The remediation was completed under oversight of the NYC Office of Environmental Remediation (OER), and in a manner that has rendered the Site protective of public health and the environment consistent with residential use of the property. As the environmental scientist Mr. Schmid conducted construction oversight and community air monitoring during the removal of contaminated soil.

Pier 40, 353 West Street, New York, NY

AKRF was directed to survey the property for potential asbestos containing materials prior to renovations and upgrades to multiple rooms. As the environmental scientist Mr. Schmid collected bulk samples to test for asbestos along with an AKRF licensed NYC asbestos investigator. Results confirmed the presence of asbestos in some of the rooms and Mr. Schmid subsequently provided project monitoring and the collection of air samples during the abatement.

137-44 94th Avenue, Queens, NY

AKRF was contracted to survey the building for potential asbestos containing materials prior to demolition. As the environmental scientist Mr. Schmid collected bulk samples to test for asbestos along with an AKRF licensed NYC asbestos investigator. Results confirmed the presence of asbestos in an office, trailer and the roof. During abatement Mr. Schmid served as the project monitor and collected daily air samples.

The Home Depot, Rego Park, NY

AKRF has designed, installed and performed upgrades to an air sparging and soil vapor extraction system being used to remediate tetrachloroethene contamination at this site under the NYSDEC Voluntary Cleanup Program. As the environmental scientist Mr. Schmid has performed low flow, indoor air and effluent sampling as part of ongoing monitoring activities to assess the progress of the cleanup.

AP-Williamsburg, LLC, 50 North 5th Street Development, Brooklyn, NY

AKRF directed the remedial program at a 55,000-square foot site located in the Williamsburg section of Brooklyn, New York. The site had an industrial and manufacturing history for over 100 years that included a barrel making factory, use of kilns, and a carpet and flooring materials warehouse. AKRF completed a Remedial Investigation (RI) to evaluate the nature and extent of site contamination, and developed a Remedial Action Work Plan (RAWP) to properly address site contamination during redevelopment. Remediation included removal of more than 5,000 tons of contaminated soil, and installation of a vapor barrier and sub-slab depressurization system (SSDS) beneath the site building. The remediation was completed in a manner that has rendered the Site protective of public health and the environment consistent with commercial and residential use of the property, and in accordance with the requirements of the NYC OER E-designation program. The site includes a seven story residential apartment building with street level retail space and a parking garage. As the environmental scientist Mr. Schmid provided oversight and community air monitoring during construction activities.

Gedney Way Leaf and Yard Waste Composting Facility, White Plains, NY

AKRF directed the remediation and landfill closure project at the existing composting facility. The project included investigation to document disposal history, extent of landfill materials and a solvent plume, preparation of a landfill closure plan, and management of landfill closure and cap construction. The landfill investigation and closure activities were completed to satisfy the requirements of a New York State Department of Environmental Conservation's (NYSDEC) consent order, and were completed in compliance with NYSDEC DER-10 and 6NYCRR Part 360. As the environmental scientist Mr. Schmid performed construction oversight and low-flow groundwater sampling during construction activities.

443 Greenwich Street, New York, NY

AKRF was retained to investigate and remediate this property in the Tribeca section of Manhattan, New York in connection with site redevelopment for a multi-story residential building. AKRF completed a Remedial Investigation (RI) to evaluate the nature and extent of site contamination, and developed a Remedial Action Work Plan (RAWP) to properly address site contamination during redevelopment. Remediation included removal of contaminated soil and installation of a vapor barrier. The remediation was completed under oversight of the NYC Office of Environmental Remediation (OER), and in a manner that has rendered the Site protective of public health and the environment consistent with residential use of the property. As the environmental scientist Mr. Schmid conducted construction oversight and community air monitoring during the removal of contaminated soil.

606 W 57th Street, New York, NY

AKRF was retained to investigate and remediate this property in Manhattan, New York in connection with site redevelopment for a multi-story residential structure. The work is being completed to satisfy the requirements of the NYC E-designation Program. AKRF completed a Remedial Investigation (RI) to evaluate the nature and extent of site contamination, and developed a Remedial Action Work Plan (RAWP) to properly address site contamination during redevelopment. Remediation includes removal of underground storage tanks and contaminated soil. The remediation is being completed under oversight of the NYC Office of Environmental Remediation (OER), and in a manner that has rendered the Site protective of public health and the environment consistent with residential use of the property. As the environmental scientist Mr. Schmid conducted construction oversight and community air monitoring during the removal of contaminated soil.

NYCEDC Office of Environmental Remediation (OER) On-Call Environmental Consulting Services

Second Farms, Bronx, NY

AKRF, Inc. was contracted by OER to conduct a subsurface investigation of a 1.12-acre parcel in the Bronx, New York under the United States Environmental Protection Agency (USEPA) Brownfield Assessment Grant program.

As the environmental scientist Mr. Schmid assisted in the investigation which included a geophysical survey and utility mark-outs, and the collection and analysis of soil, groundwater, soil vapor, indoor air and ambient air samples.

Former Nelson Foundry, Long Island City, NY

AKRF, Inc. was contracted by OER to conduct a subsurface investigation around the perimeter of a former foundry property in Long Island City, New York under the USEPA Brownfield Assessment Grant program. The work included preparation of a rigorous investigation work plan, Quality Assurance Project Plan, and Health and Safety Plan. The investigation will include a geophysical survey and utility mark-outs and the collection and analysis of soil, groundwater, soil vapor, and ambient air samples. The project also requires careful coordination of investigation-derived waste due to lack of on-site storage and daily drum pick-ups. As the environmental scientist Mr. Schmid conducted low flow sampling for the analysis of groundwater.

AXEL E. SCHWENDT

VICE PRESIDENT

Mr. Schwendt is a Vice President for AKRF with over 20 years of experience in the environmental consulting field. Mr. Schwendt has extensive experience in Phase II studies involving subsurface soil and groundwater investigations, and has been involved in all aspects of soil and groundwater remediation, including those related to manufactured gas plants (MGP). He has designed, managed and implemented large-scale site investigations and remedial measures for various properties, including those under different regulatory programs such as the New York State Department of Environmental Conservation's (NYSDEC) Voluntary Cleanup Program and Brownfield Cleanup Program, New York State's Spill Response Program, the Mayor's Office of Environmental Remediation (OER) E-Designation Program, New Jersey's Industrial Site Recovery Act (ISRA), and Pennsylvania's Land Recycling program. Mr. Schwendt manages the hazardous materials tasks for the company's Environmental Impact Statements (EISs) and also conducts and manages Phase I Environmental Site Assessments (ESAs) for various individual clients and industries as well as for area-wide rezoning projects.

Mr. Schwendt has extensive experience in underground and aboveground storage tank (UST and AST) management, including tank removals, installations, and upgrades. He has designed and implemented remedial investigations surrounding UST and AST releases and overseen the installation and maintenance of pump-and-treat and other remedial systems. He has performed storage tank compliance audits and maintenance inspections all across the country and prepared Spill Prevention, Control, and Countermeasures Plans (SPCC Plans) for over 100 individual facilities, including designing and conducting the personnel training programs.

Mr. Schwendt worked with several other firms prior to joining AKRF, which provided him with a variety of skills. He has expertise with Chemical Bulk Storage Spill Prevention Reports, Environmental Emergency Response Plans, Integrated Contingency Plans, and multi-phase compliance audits, including some international projects. He has also performed various types of hydrogeologic testing, including pilot tests, slug tests, pump tests and groundwater modeling, and has been responsible for data review and management.

BACKGROUND

Education

B.A., Earth Science and Environmental Studies, Tulane University, 1991

M.S., Geology, University of Delaware, 2002

Years of Experience

Year started in company: 2002

Year started in industry: 1995

RELEVANT EXPERIENCE

New York City Department of Design and Construction (NYCDDC) Feasibility and Pre-Scoping Services for East Side Coastal Resiliency, New York, NY

Mr. Schwendt assisted with the subsurface exploration program for a multidisciplinary design team selected by the New York City agency partnership of NYCDDC, New York City Department of Parks and Recreation (NYCDPR), and Office of Recovery and Resiliency (ORR) for the Feasibility Study and Pre-Scoping Services for East Side Coastal Resiliency (ESCR) project. The AKRF Team provided technical analysis and pre-scoping

services, including complex conceptual design services, for 100+ year storm protection with anticipated sea level rise along the east side of Lower Manhattan. The ESCR subsurface exploration program involved a review of available utility plans and environmental reports involving manufactured gas plant (MGP) and petroleum-related contamination along a 2.5 mile study area from Montgomery Street to East 23rd Street to develop a Subsurface Investigation Work Plan for approval by the New York City Department of Environmental Protection (NYCDEP). The program included both public and private utility mark-out services across vast areas of the project containing critical infrastructure to enable the installation of 81 deep borings, 515 shallow borings, and 10 temporary groundwater wells.

New York City Health and Hospitals Corporation (NYCHHC)'s Post-Sandy mitigation program at Bellevue, Coler-Goldwater, Coney Island, and Metropolitan Hospitals

AKRF is assisting the NYCHHC in the recovery, reconstruction and hazard mitigation of Bellevue Hospital, Coler Hospital, and Coney Island Hospital and other NYCHHC facilities, which were damaged as a result of the Hurricane Sandy disaster. The majority of the funding for these projects will be reimbursed from the Federal Emergency Management Agency (FEMA). AKRF is collecting baseline information and develop study plan and approach, including assessing for critical path approvals, preparing FEMA NEPA Environmental Assessments (EAs), conducting additional studies required by Federal Regulations for FEMA, permitting, and providing design/bid support. Mr. Schwendt is responsible for the hazazrdous materials tasks associated with the program, including conducting Phase I ESAs and subsurface (Phase II) investigations, and preparing necessary work plans and Remedial Action Plans (RAPs)/Construction Health and Safety Plans (CHASPs) for federal, state and city agency review and approval.

NYCDEP Task Order Contracts (TOCs) for Design and Construction Management Services Professional Engineering Design Services and Construction Management (PEDS)

AKRF is currently serving as environmental review and permitting subcontractor under all four NYCDEP TOCs contracts and both PEDS contracts that were recently awarded. In addition to the preparation of environmental review/ULURP documentation and permit applications, AKRF's responsibilities include site selection support, site/civil design, and the preparation of various permit management plans and regulatory compliance tracking in accordance with DEP's Project Delivery Manual. Mr. Schwendt is providing Hazardous Materials consulting services for the TOCs and PEDS contracts, including:

- Prospect Expressway Pump Station Upgrade;
- Clearview Pump Station Reconstruction;
- Rockaway Wastewater Treatment Plant Level 1 Biological Nutrient Removal (BNR) Upgrade; and
- Oakwood Beach Wastewater Treatment Plant Headworks Improvements.

Verdopolis JFK Airport Facility, Queens, NY

On behalf of Verdopolis JFK, AKRF prepared documentation for a New York State Department of Environmental Conservation (NYSDEC) Part 360 Solid Waste Management Facility Permit application. The facility, which would be constructed at the abandoned Hangar 16 site of the John F. Kennedy International Airport (JFK Airport), would process 180,000 tons per year of source separated, pre-consumer organic waste generated largely by food preparation facilities at JFK Airport. Using an anaerobic digestion process, the proposed facility would convert the food waste, which would otherwise be discarded in a landfill or incinerated, into three usable products. Mr. Schwendt assisted in preparing the application package, including preparation of the Engineering Report, Operations and Maintenance Plan, Contingency Plan, Facility Closure Plan, Hiring and Training Plan,

Chemical Bulk Storage Spill Prevention Report, and the Spill Control Prevention and Countermeasure Plan (SPCC Plan). Mr. Schwendt also prepared a Phase I Environmental Site Assessment (ESA) of the property to ascertain potential environmental conditions that may be exposed during site development activities.

2477 Third Avenue, Bronx, NY

Mr. Schwendt prepared the application to enter the former 2477 Third Avenue gasoline station property into the New York State Department of Environmental Conservation's (NYSDEC) Brownfield Cleanup Program (BCP). Since its acceptance into the program, Mr. Schwendt has been managing and coordinating the remedial investigation of the site, including shallow and deep aquifer groundwater testing, delineation of known areas of soil contamination, soil vapor analyses, and investigation for potential non-aqueous phase liquid (DNAPL) from past industrial activities in the surrounding area. Mr. Schwendt was responsible for developing work plans for approval by the NYSDEC and New York State Department of Health (NYSDOH), and for preparing summary reports for public comment. As part of the project, Mr. Schwendt coordinated with the client, lawyers, and architects of the planned development, tenants of neighboring properties, NYSDEC, NYSDOH, and the New York City Department of Environmental Protection (NYCDEP). Mr. Schwendt is also conducting the work necessary to address a hazardous materials E-Designation assigned to the property.

E-Designation Properties/Voluntary Cleanup Program, New York City, NY

Mr. Schwendt has assisted various public and private clients with addressing E-Designations assigned by the New York City Department of Environmental Protection (NYCDEP) to properties throughout New York City. He has prepared the required Phase I Environmental Site Assessments (Phase I ESAs) and implemented Phase II testing to the satisfaction of the New York Office of Environmental Remediation (OER). Based on the results of the testing, he has prepared Remedial Action Plans (RAPs) and Construction Health and Safety Plans (CHASPs) for approval by the NYCOER, which included strategies for mitigating on-site environmental conditions and plans for incorporating environmental engineering controls into proposed construction projects. Mr. Schwendt's clients promptly receive the Notice of Satisfaction necessary to acquire building permits from the New York City Department of Buildings (DOB). Mr. Schwendt has also managed several projects enrolled in the New York City Voluntary Cleanup Program.

St. George Ferry Terminal, Staten Island, NY

Mr. Schwendt prepared a Spill Prevention, Control, and Countermeasures Plan (SPCC Plan) for the Department of Transportation's (DOT) St. George Ferry Terminal facility in Staten Island. The facility's bulk containers store over 600,000-gallons of petroleum used to fuel boilers and emergency generators, provide oil for maintenance and repair of equipment and vessels, and to fuel the ferry vessels. Mr. Schwendt also consulted the DOT on how to upgrade the facility's fueling systems to comply with the SPCC and New York State Department of Environmental Conservation (NYSDEC) regulations.

Mount Sinai Medical Center, Manhattan, NY

Mr. Schwendt managed the Hazardous Materials task for the environmental assessment of the Mount Sinai Medical Center, which is constructing a 700,000 sf, mixed-use residential and bio-medical research facility building. His work included managing the Phase I Environmental Site Assessment (ESA), Phase II investigation, and preparing the Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) approved by the New York City Department of Environmental Protection (NYCDEP).

Lincoln Center Development Project, New York, NY

On behalf of the Lincoln Center Development Project, Inc., Mr. Schwendt conducted a Subsurface (Phase II) Investigation in the area of an underground storage tank (UST) farm located beneath the lower garage level of the West 62nd Street parking garage at Lincoln Center. The Phase II study was prompted by a request from the New York State Department of Environmental Conservation (NYSDEC) to properly close out the tanks. The tank farm includes seventeen (17) 550-gallon gasoline USTs and one (1) 550-gallon waste oil UST. The purpose of this Phase

II investigation was to determine whether historic leaks from the tanks had affected the subsurface and to assist with future tank closure activities. The Phase II report was submitted to the NYSDEC for review and included a request to close the tanks in-place instead of removing them due to the structural constraints of the tank farm location. Mr. Schwendt also managed the closure of the 18 USTs to the satisfaction of the NYSDEC.

512-522 Vanderbilt Avenue, Brooklyn, NY

On behalf of the Empire State Development Corporation (ESDC), AKRF was retained to provide hazardous material consulting services in connection with the former gasoline station property located at 512-522 Vanderbilt Avenue. Mr. Schwendt performed a Phase I Environmental Site Assessment (ESA), a geophysical survey of the site, and a soil and groundwater subsurface investigation. Data from the investigation would be used to assess remedial strategies during development of the site.

Whitney Museum of American Art, Gansevoort Facility, New York, NY

AKRF has provided various consulting services in support of the Whitney Museum of American Art's long-term planning requirements. Tasks have included transportation surveys, traffic counts, attendance projections, visual impact and shadow studies, economic benefit studies, and two Environmental Assessment Statements (EASs) for proposed new facilities for the Museum. Mr. Schwendt was responsible for the hazardous materials elements of the assessment, including preparing a Phase I ESA and conducting several Subsurface (Phase II) Investigations for review by the New York City department of Environmental Protection (NYCDEP) and Mayor's Office of Environmental Remediation (OER). Mr. Schwendt prepared and managed the implementation of the OER-approved Remedial Action Plan (RAP) for the construction project and is responsible for satisfying all of the associated regulatory reporting requirements. Environmental work at the site also included mitigating a petroleum spill discovered during site excavation activities and coordinating all remedial efforts with the New York State Department of Environmental Conservation's (NYSDEC) Department of Environmental Remediation (DER).

New York Botanical Garden, Bronx, NY

The New York Botanical Garden (NYBG) proposed to construct an accessory parking garage of approximately 825 spaces at Bedford Park Boulevard and Webster Avenue in the Bronx to provide a parking garage for staff and visitors who cannot be accommodated within NYBG's on-site facilities. Mr. Schwendt was the Project Manager for the environmental assessment's hazardous materials work, which included a Phase I Environmental Site Assessment (ESA), Phase II Investigation and the preparation of a Remedial Action Plan (RAP) and a Construction Health and Safety Plan (CHASP) to the satisfaction of the New York City Department of Environmental Protection (NYCDEP). As construction proceeds, Mr. Schwendt will be responsible for managing the environmental monitoring during all subsurface work and preparing the post-construction Closure Report required by the NYCDEP in order to receive the Notice of Satisfaction necessary to obtain occupancy permits from the New York City Department of Buildings (DOB).

Roberto Clemente State Park, Bronx, NY

AKRF participated in the rehabilitation of an existing ballfield, redevelopment of the existing picnic areas, and shoreline restoration along the Harlem River at Roberto Clemente State Park. AKRF is charged with preparing the Joint Permit Application which is necessary to procure the federal, state and local permits and approvals for the shoreline redevelopment. Mr. Schwendt worked with the firm's engineering group to conduct testing to pre-characterize soil to assist with the management of soil during construction. The testing included pre-characterization of soil for on-site reuse in accordance with the New York State Department of Environmental Conservation (NYSDEC) tidal wetland permit requirements and testing for physical parameters required for landscape planning.

Long Island Power Authority (LIPA), Long Island, NY

Mr. Schwendt managed the preparation of Phase I Environmental Site Assessments and Phase II Investigations, along with the Hazardous Materials chapters for Environmental Impact Statements, for properties owned or to be acquired by LIPA to identify potential sources of environmental contaminants prior to power station and power line installation.

Rose Plaza on the River, Brooklyn, NY

Mr. Schwendt conducted a Subsurface (Phase II) Investigation at the 470 Kent Avenue property located in Brooklyn, New York. The objective of the subsurface investigation was to characterize the subsurface soil and groundwater conditions and determine whether past or present on-site and/or off-site potential sources of contamination have adversely affected the site. Results of the Phase II study were also used to evaluate any potential environmental risks and/or the need for remedial action at the site prior to future development. The proposed development of the site includes the construction of approximately 665 market rate dwelling units and approximately 33,750 square feet of commercial uses. The scope of the Phase II study was based on a Phase I Environmental Site Assessment (January 2004) performed by AKRF, which identified recognized environmental conditions for the site, including the potential for soil and groundwater contamination from a historical on-site manufactured gas plant, and potential underground storage tanks. Phase II activities were conducted in accordance with AKRF's Sampling Protocol and site-specific Health and Safety Plan (HASP), which was reviewed and approved by the New York City Department of Environmental Protection (NYCDEP).

Albert Einstein College of Medicine Environmental Investigation, Bronx, NY

Mr. Schwendt managed a Subsurface (Phase II) Investigation at an approximately eight-acre portion of the Jacobi Medical Center fronting on Eastchester Road in the Bronx, New York. The site, owned by New York City, contained an old boiler house, a storage warehouse, a laundry facility, and several paved parking areas. The objective of the subsurface investigation was to characterize the subsurface conditions on the property and determine whether past or present on-site and/or off-site potential sources of contamination have adversely affected the site.

Storage Deluxe, Various Locations, NY

Mr. Schwendt is currently the project manager for assisting Storage Deluxe with the ongoing expansion of their self-storage facilities primarily in the five boroughs of New York City and Westchester County. He conducts and manages environmental due diligence needs related to their property transactions, including Phase I Environmental Site Assessments (ESAs), Phase II investigations, and geophysical surveys, as well as consulting on petroleum bulk storage tank management. He assists Storage Deluxe in making decisions with respect to environmental risk issues.

South Bronx Overall Economic Development Corporation (SoBRO) Port Morris Brownfield Opportunity Areas (BOA), Bronx, NY

Mr. Schwendt is assisting SoBRO with the in-depth and thorough analysis of existing conditions, opportunities, and reuse potential for properties located in the proposed Port Morris Brownfield Opportunity Area with an emphasis on the identification and reuse potential of strategic brownfield sites that may be catalysts for revitalization. His work so far has included the preparation of Phase I Environmental Site Assessments (ESAs) and conducting Phase II investigations for the catalyst sites and advising on the suitability of enacting zoning changes to permit various property uses. Mr. Schwendt also assisted SoBRO with the BOA application process.

Kings Plaza, LLC Total Energy Plant, Brooklyn, NY

Mr. Schwendt has conducted regular environmental compliance reviews of the Kings Plaza Total Energy Plant (TEP) in Brooklyn, New York. The reviews were conducted to observe operations and to review environmental permits, agency correspondence, operating records, recordkeeping and monitoring procedures, and regulatory reporting requirements. As a result of the review, Mr. Schwendt provided the TEP with recommendations for the

management of various waste streams and petroleum/chemical bulk storage associated with facility operations and prepared a Spill Control Prevention and Countermeasure Plan (SPCC Plan) for the facility.

270 Greenwich Street, New York NY

Mr. Schwendt conducted a subsurface (Phase II) investigation that included the advancement of soil borings and the collection of soil and groundwater samples from the 270 Greenwich Street property in the Tribeca neighborhood of New York City. The site will be developed with approximately 402 dwelling units (172 rental units and 230 for sale condominiums), approximately 224,084 gross square feet of destination and local retail space, and below-grade public parking. The purpose of this Phase II subsurface investigation was to ascertain subsurface soil and groundwater quality beneath the site and determine whether past on- or off-site operations have affected the property. The subsurface investigation was also intended to determine whether there are any special handling or disposal requirements for pumped groundwater, should dewatering be necessary during site development. The Phase II study included soil and groundwater sampling as well as a geophysical investigation to determine whether unknown underground storage tanks were present at the site. Field activities were performed in accordance with Mr. Schwendt's Sampling Protocol and Health and Safety Plan (HASP), which were approved by the New York City Department of Environmental Protection (NYCDEP).

Columbia University Manhattanville Rezoning and Academic Mixed-Use Development, New York, NY

Mr. Schwendt managed the hazardous materials task on the Environmental Impact Statement (EIS) for approximately 4 million square feet of new academic, research and neighborhood uses to be constructed north of Columbia University's existing Morningside Heights campus. The work included more than 25 Phase I Environmental Site Assessments (ESAs) for the properties within the rezoning area and estimates for upcoming investigation and remediation. In addition, a Preliminary Environmental Site Assessment (PESA) was completed for the whole project area. Recognized environmental concerns in the area included: current and historical underground storage tanks; current and historical auto-related use such as repair shops and gasoline stations; two historical manufactured gas holders; and a Consolidated Edison cooling plant located on West 132nd Street. Mr. Schwendt conducted a subsurface investigation at the site to characterize the subsurface conditions on the property and determine whether past or present on-site and/or off-site potential sources of contamination have adversely affected the study site, and to use the analytical data to evaluate any potential environmental risks and/or the need for remedial action at the site prior to future development. Based on the results of the investigation, Mr. Schwendt prepared a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) for the project, which was approved by the New York City Department of Environmental Protection (NYCDEP).

Hudson River Park, New York, NY

Mr. Schwendt serves as the on-call environmental consultant for the ongoing development of the Hudson River Park, the approximately 5 to 6 mile section of waterfront property from Battery Place to 59th Street along the western edge of Manhattan. He conducts subsurface investigations, coordinates tank removals, implements soil and groundwater remediations, provides guidance on construction and environmental health and safety issues, interfaces with regulatory agencies as necessary, and manages the mitigation of environmental conditions encountered during site development activities.

Brooklyn Bridge Park, Brooklyn, NY

AKRF is providing environmental planning and review services for the development of a new 70-acre park that will revitalize 1.5 miles of the East River waterfront between Jay Street and Atlantic Avenue. When completed, the park will provide open space, recreational facilities, a hotel, restaurants, and retail, historic, and educational venues. Mr. Schwendt was involved with the completion of the Environmental Impact Statement (EIS) and conducted a Phase I Environmental Site Assessment (ESA) and Phase II Subsurface Investigation for the proposed Brooklyn

Bridge Park area. He serves as the park's on-call consultant for addressing environmental conditions as development progresses and has conducted several tank removals and contaminated soil delineation and remediation projects for various sections of the park.

Titan Property Management, Rego Park, NY

Mr. Schwendt was involved with an extensive site investigation for a property involved in the New York State Voluntary Cleanup Program. The property was resting on a plume of PCE contamination. The goal of the investigation was to determine whether the property is the source of the contamination and to collect data to provide information for the design and implementation of a site remedial system. The investigation involved extensive soil, soil gas, and groundwater investigation, and included the investigation of surrounding properties.

ABCO Refrigeration Company, Long Island, NY

Mr. Schwendt managed a tank closure and dry well assessment and remediation project for the ABCO Refrigeration Company. Historic contamination was found seeping from the ground in the location of an old underground storage tank, which is believed to be a source of adverse impact. An adjacent drywell was impacted by the tank as well as from past dumping activities of a former typewriter ribbon ink manufacturing company. A site-wide investigation of the ten drywells was also implemented at the request of the Nassau County Department of Health. Mr. Schwendt undertook soil remedial activities that led to the property receiving closure with respect to the underground storage tank. Drywell remedial activities were successful and the site received approval from the United States Environmental Protection Agency (USEPA) to continue use of on-site drywells.

Levin Management Corporation Property—Site Investigation, Pelham Manor, NY

Mr. Schwendt was involved in the site investigation of a former manufactured gas plant (MGP) that handled petroleum off-loading and storage until the late 1950s. Soils have also been observed to have been affected by non-aqueous phase liquid (NAPL) consisting of oil- and tar-like material. Floating or light NAPL (LNAPL) has also been detected in on-site groundwater. The objectives of the site investigation were to collect additional data to further determine the extent of NAPL-affected soil both above and below the water table throughout the site and to further delineate groundwater contamination throughout the site. The site investigation also sought to confirm the on-site groundwater flow direction and that NAPL had not migrated to the downgradient perimeter of the site, including Eastchester Creek. Mr. Schwendt was brought on board for this project for his expertise in soil and groundwater MGP contaminant delineation.

NYCDEP Bureau of Environmental Engineering 26th Ward Wastewater Treatment Plant—Site Investigation, Brooklyn, New York

Mr. Schwendt managed and conducted environmental sampling and testing at the 26th Ward Wastewater Treatment Plant property located in Brooklyn, New York. This investigation was performed to determine the presence or absence of contamination in the soil and groundwater that would affect the proposed construction of a new raw sewage pump station. Mr. Schwendt provided the 26th Ward with the protocol necessary for the special handling and disposal of the excavated soil as well as for the groundwater that would be pumped during dewatering operations.

Olnick Organization, New York, NY

AKRF was retained by the Olnick Organization to prepare and implement an Spill Prevention, Control, and Countermeasures Plan (SPCC Plan) for their aboveground storage tank system for an office building in Manhattan. Mr. Schwendt performed the site inspections and provided the Olnick Organization with a list of recommendations for upgrades to their fuel transfer piping system that would bring the facility into compliance with SPCC regulations. He also provided Olnick with a plan for implementing the required SPCC training program for their facility personnel.

Site investigations of former MGP Facilities/Properties for Consolidated Edison, New York City, NY & Westchester County, NY

While with another firm, Mr. Schwendt worked on this project, which included a service station in New York City and an electrical substation in Westchester County, New York. Mr. Schwendt performed the site characterizations, including subsurface soil and groundwater impact delineation and aquifer testing. The findings from these characterizations are being used by Consolidated Edison to make appropriate changes to the design specifications and to plan for appropriate handling of impacted materials and health and safety protocols during future construction activities.

UST Site Investigation and Remediation for Consolidated Edison Service Center, Queens, NY

While with another firm, Mr. Schwendt worked on this project, which included due diligence site reviews, soil boring installation, monitoring well installation, hydrogeologic testing, and water quality sampling. Risk-based closures incorporating natural attenuation and groundwater monitoring activities have been proposed. Remedial work plans are under development for other facilities where more aggressive remedial actions are required. Mr. Schwendt also performed subsurface investigations and site characterizations for several other Consolidated Edison facilities including soil-gas surveys and a radiological scoping survey.

Petroleum Bulk Storage Management Program for Bell Atlantic-New York (now Verizon), Manhattan, Brooklyn, Queens, Bronx, Staten Island, and Long Island, NY

While with another firm, Mr. Schwendt personally designed and conducted subsurface investigations for underground storage tank (UST) remediations including characterization of releases, soil and ground water investigations, pilot tests, slug tests, pump tests, groundwater modeling, horizontal and vertical impact delineation, and preparation of compliance documentation for regulatory agencies. He performed oversight of the installation of 'pump and treat' remedial systems and performed maintenance activities. He also supervised UST installations, upgrades and closures; implemented tank tightness testing programs; addressed on-site health and safety issues and other regulatory requirements; prepared closure reports; and managed soil disposal.

Hertz Rent-A-Car Corporate Headquarters, Park Ridge, NJ

While with another firm, Mr. Schwendt served as an in-house consultant/project manager for the environmental department at Hertz's corporate office in Park Ridge, New Jersey. He managed Phase I and Phase II investigations for real estate purchases, leases and acquisitions throughout the United States and Canada. He coordinated Hertz's subcontractors and environmental consulting firms, reviewed reports, and made recommendations to the legal and real estate departments with respect to environmental risk issues.

Temple University, Philadelphia, PA

Mr. Schwendt was a lead auditor for a multi-phase compliance audit of the five campuses of Temple University. The audit included an assessment of all of the Temple University Hospitals, the School of Medicine, the College of Science and Technology, the Tyler School of Art, the College of Engineering, Ambler College (Community and Regional Planning, Horticulture, and Landscape Architecture), the Physical Plant Department, and all university facilities and maintenance departments. Regulatory programs targeted as part of the audit included, but were not limited to, federal and state air and water programs, hazardous waste management, hazardous chemicals and substances, Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for pesticides, emergency response, Community Right-to-Know, Toxic Substance Control Act (TSCA), and petroleum bulk storage regulations. Following completion of the audit, Mr. Schwendt prepared and implemented an environmental management system that conformed to the needs and culture of the Temple University organization.

University of Pennsylvania, Philadelphia, PA

Mr. Schwendt was the lead auditor for an environmental compliance audit of the University of Pennsylvania's Department of Environmental Health and Radiation Safety. The audit included an assessment for the preparation and implementation of the university's Spill Prevention, Control, and Countermeasures Plans (SPCC Plans). Mr. Schwendt prepared and implemented the university's environmental management program and provided training for the facility personnel.

Wistar Institute, Philadelphia, PA

Mr. Schwendt was the lead auditor for an environmental compliance audit of the Wistar Institute, an independent non-profit biomedical research institute in West Philadelphia, Pennsylvania. The multi-phase audit comprised an assessment of the entire facility for compliance with federal, state and local environmental regulations and included the development of an environmental management system.

Seton Hall University, South Orange, NJ

Mr. Schwendt was a lead auditor for a multi-phase compliance audit of the Seton Hall University campus. The audit comprised an assessment of the entire facility for compliance with federal and state air and water programs, hazardous waste management programs, hazardous chemicals and substances programs, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for pesticides, emergency response and Community Right-to-Know regulations, the Toxic Substance Control Act (TSCA), and petroleum bulk storage regulations. The audit included the development and implementation of an environmental management system for the Seton Hall University faculty and staff.

New York City College of Technology (City Tech) Academic Building, Brooklyn, New York

Mr. Schwendt is assisting the City University of New York (CUNY) and the Dormitory Authority of the State of New York (DASNY) in addressing the E-Designation assigned to the New York City College of Technology (City Tech) redevelopment project site in Brooklyn, New York. CUNY is proposing to construct an eight-story academic building with classrooms, laboratories, administrative space, and underground parking. Mr. Schwendt conducted the required Phase I Environmental Site Assessment (ESA) and Phase II testing to the satisfaction of the Mayor's Office of Environmental Remediation (OER) and will assist CUNY with entering the project site in the City's Voluntary Cleanup Program (VCP). The work will include preparing the required Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) and conducting the necessary environmental monitoring during construction. Mr. Schwendt will also prepare the closure documentation required for CUNY to receive the Notice of Satisfaction necessary to obtain occupancy permits from the New York City Department of Buildings (DOB).

New York University Langone Medical Center, New York, NY

Mr. Schwendt managed the hazardous materials task on the EAS for the NYU Langone Medical Center (NYULMC) development project in Manhattan, New York. NYULMC is in the process of developing the Kimmel Program, which consists of two new buildings on its main campus: the Kimmel Pavilion to house hospital functions and an Energy Building to house a combined heat and power (CHP) plant, primary electric service and emergency generators to support the campus, as well as space for patient care (specifically, radiation oncology). The work included conducting Phase I Environmental Site Assessments and Phase II subsurface investigations at each site to characterize the subsurface environmental conditions at the project site. Based on the results of the investigations, a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) were prepared for each project phase for submission to the New York City Department of Environmental Protection (NYCDEP) and Mayor's Office of Environmental Remediation (OER). Mr. Schwendt will assist NYULMC by conducting the environmental monitoring required by the agency-approved RAPs/CHASPs as construction progresses, and will prepare the closure documentation required by the agencies to obtain Certificates of Occupancy from the New York City Department of Buildings (DOB).

DASNY Term Environmental Consultant 2006-2012 and 2012-2016, Various Locations, NY

Mr. Schwendt serves as a hazardous materials task leader under the firm's on-call contract with DASNY, through which AKRF is providing State Environmental Quality Review Act (SEQRA) and City Environmental Quality Review (CEQR) environmental review services for a wide range of educational, healthcare and other institutional projects, as well as specialized technical services in historic and archaeological resources, hazardous materials, traffic, air quality, noise, and natural resources. Mr. Schwendt has also assisted DASNY with addressing E-Designations and by conducting various types of environmental investigations, including Phase I and Phase II assessments.

NYCDEP Permit Resource Division On-Call Contract, New York, NY

Under subcontract to a national engineering firm, and as part of two successive Program Management contracts, AKRF is providing support in a wide range of technical areas related to environmental and engineering permits for NYCDEP capital projects. These services fall into two major categories: preparing detailed guidance documents that will be used by project designers and construction managers on future projects, in order to expedite permit approvals and prevent delays; and providing expert review and guidance regarding permits for current projects, in order to ensure completeness of permit applications and effective coordination with regulatory agencies. The technical areas covered by AKRF include: wetlands, groundwater, surface water, and other natural resources; hazardous materials; traffic and transportation; air quality; noise and vibration; historic and archaeological resources; stormwater management; open space and parkland; and a broad range of permits and approvals from the New York City Fire Department (FDNY), the New York City Police Department (NYPD), the New York City Department of Buildings (NYCDOB), and other municipal agencies. AKRF is also helping NYCDEP improve the overall process for tracking environmental and engineering permits and approvals, from the planning and design phases of a project to construction and long-term operation. Mr. Schwendt provides consulting services related to the hazardous materials issues.

Ashutosh Sharma

Senior Environmental Professional

Ashutosh Sharma is an Environmental Scientist with over 10 years of experience in the environmental consulting field. He has managed and implemented investigations and remedial measures for various properties, including those under different regulatory programs such as the New York State Department of Environmental Conservation's (NYSDEC) Voluntary Cleanup Program and Brownfield Cleanup Program, New York State's Spill Response Program, the Mayor's Office of Environmental Remediation (OER) E-Designation Program. Mr. Sharma has extensive experience in Phase I and Phase II (subsurface) site assessment and remedial investigation, remediation and cleanup of contaminated sites, and construction oversight. He has experience with subsurface soil, groundwater and sub-slab air/vapor sampling procedures, coordinating and running Community Air Monitoring Plans (CAMP) and is familiar with relevant United States Environmental Protection Agency (USEPA), New York State Department of Environmental Conservation (NYSDEC), and New York City Department of Environmental Protection (NYCDEP) environmental laws and regulations.

Background

Education

M.S., Environmental Science, New Jersey Institute of Technology, 2007
B.Tech, Dr. B.R. Ambedkar National Institute of Technology, India, 2005

Years of Experience

Year started in industry: 2007
Year started in company: 2007

Relevant Experience

New York City School Construction Authority: On Call Environmental Consulting
Under an on-call contract, AKRF provides the New York City School Construction Authority (NYCSCA) with hazardous materials consulting services. Mr. Sharma has provided assistance with various environmental assessment tasks including Phase II (Subsurface) Environmental Site Investigations (soil, groundwater and soil gas investigations); Indoor Air Quality (IAQ) and Vapor Intrusion (VI) Assessments; and Underground Storage Tank (UST) investigations. He evaluates the results of the investigations in the context of applicable environmental regulations to assist the project manager and/or project engineer in developing recommendations for remedial actions. Mr. Sharma also provided assistance with the lead in drinking water and plumbing disinfection tasks under the current on-call contract. AKRF also oversees plumbing disinfection work, which is required prior to new plumbing being placed into service. The assignments involve reviewing and commenting on disinfection plans, supervision of the disinfection and confirmation testing, and preparation of reports documenting the work was conducted in accordance with the specifications and applicable requirements. Due to the sensitivity of school sites, work under this contract is often conducted on short notice and during non-school hours.

RXR Realty, NY: Multiple Projects

AKRF has worked with RXR Realty on multiple projects and provided services for completion of Phase I Environmental Site Assessments (ESAs), implemented Phase II Environmental Site Investigations (ESI) and soil waste characterization sampling. Mr. Sharma acted as project manager, overseeing field personnel

implementing the Phase I ESA site reconnaissance the subsurface investigations, as well as completing reports for delivery to the client.

Larkin Plaza, Yonkers, NY

RXR SoYo Exalta LLC enrolled in the New York State Brownfield Cleanup Program (NYS BCP) to investigate and remediate the property located at 25 Warburton Avenue in Yonkers, NY. Mr. Sharma assisted the client in preparing the application to enroll the site in the NYS BCP program.. Mr. Sharma acted as the project manager for the project and prepared the Remedial Investigation Work Plan (RIWP). the Remedial Investigation Report (RIR), the Interim Remedial Measure Work Plan (IRMWP), the Remedial Action Work Plan (RAWP), the Interim Remedial Measures Construction Completion Report and the Site Management Plan (SMP) for the BCP site. Mr. Sharma also managed the field implementation of the remedial investigation and site cleanup activities during the development. Mr. Sharma maintained constant communication with the NYS Department of Environmental Conservation (NYSDEC) project manager and the client during the site redevelopment.

810 Fulton Street, Brooklyn, NY

RXR 810 Fulton Owner LLC developed the property located at 810 Fulton Street in Brooklyn. Mr. Sharma acted as project manager, overseeing field personnel implementing the requirements of the NYC Office of Environmental Remediation (OER)-approved Remedial Action Plan (RAP). Mr. Sharma also coordinated with the OER on behalf of the client on the day to day activities during the remedial action. Mr. Sharma also completed reports for delivery to the client and OER.

Lambert Houses, Bronx, NY

988 East 180th Street Housing Development Fund Corporation enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate the property located at 988 East 180th Street in the Bronx. Mr. Sharma acted as the deputy project manager overseeing field personnel implementing the construction oversight during site redevelopment, and coordinated with the client and their subcontractors. Mr. Sharma prepared the spill investigation work plan, coordinated spill cleanup and prepared the spill closure report to address the petroleum spill encountered during site redevelopment.

Melrose Commons Site C, Bronx, NY

The Bridge Inc. enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate the property located at 988 East 18th Street in the Bronx. Mr. Sharma acted as the deputy project manager overseeing field personnel implementing the construction oversight during site redevelopment, and coordinated with the client and their subcontractors. Mr. Sharma prepared the remedial closure report for delivery to the client.

Essex Crossing Sites 1, 2, 3, 4, 5, 6, and 8, Manhattan, NY

AKRF provided various services during the redevelopment of the Essex Crossing sites in the lower east of Manhattan. Mr. Sharma acted as the deputy project manager overseeing field personnel implementing the construction oversight during site redevelopment, and coordinated with the client and their subcontractors. Mr. Sharma also coordinated spill cleanups and prepared the spill closure reports to address the multiple petroleum spills encountered during redevelopment. Mr. Sharma also coordinated with the client and the New York City Department of Housing & Preservation (HPD) during the implementation of the NYC Department of Environmental Protection (DEP)-approved Remedial Action Plan (RAP). Mr. Sharma also completed reports for delivery to the client.

NYU Langone Medical Center (NYULMC) – Kimmel Pavilion, New York, NY

New York University Langone Medical Center enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate the property located at 424 East 34th Street in Manhattan. The proposed development consisted of a new medical facility. Mr. Sharma acted as the deputy project manager overseeing field personnel implementing the construction oversight during site redevelopment, and coordinated with the client and their subcontractors.

551 Tenth Avenue, New York, NY

Extell 4110 LLC enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate the property located at 547-551 Tenth Avenue in Manhattan. The property was developed with a 52-story residential building with one sub-grade level. Mr. Sharma provided construction oversight during site excavation, spill remediation, coordination and management of soil removal and fill material imports, oversight of the on-site air monitoring program, identification and proper management of contamination encountered during excavation work, and maintenance of critical paperwork and preparation of the final closure report.

Zerega Avenue – Phase I, Phase II and Wetland Survey, Bronx, NY

AKRF was contracted by EDC to conduct perform environmental services at an approximately 255,000-square foot project area located at 530 to 590 Zerega Avenue, Bronx, New York. The work included a Phase I Environmental Site Assessment (ESA), and Phase II Environmental Site Investigation which included preparation of a site-specific health and safety plan, a geophysical survey and utility mark-outs, and the collection and analysis of soil, groundwater, soil vapor, indoor air and ambient air samples. Mr. Sharma provided assistance with subsurface soil, groundwater and soil gas investigation as part of the Phase II investigation of the project site.

Rego Park Home Depot, Queens, NY

Solvent contamination was encountered during retail development of a former industrial property in Rego Park, Queens, New York. The site work included an extensive investigation and a multi-phase remediation performed under the NYSDEC Voluntary Cleanup Program (BCP). Remediation included removal of aboveground and underground storage tanks (ASTs and USTs) and hotspot soil removal. An Air Sparging/Soil Vapor Extraction (AS/SVE) groundwater remediation system designed by AKRF was installed as part of the building construction. Continued remediation work included upgrading and expanding the AS/SVE system after the store was opened. AKRF prepared the Final Engineering Report and obtained closure with a Release and Covenant Not to Sue issued by NYSDEC in 2013. AKRF continues operations, maintenance, and monitoring under the NYSDEC-approved Site Management Plan. Mr. Sharma assisted with ongoing operation, maintenance and monitoring of the AS/SVE system.

TF Cornerstone – 606 West 57th Street, New York, NY

AKRF has been retained by TF Cornerstone to provide environmental services for the proposed redevelopment of a portion of the block bounded by Eleventh and Twelfth Avenues and West 56th and 57th Streets. The proposed actions include a zoning map amendment, zoning text amendments, a special permit, and an authorization to facilitate development of approximately 1.2 million square feet of residential and retail space. AKRF is currently preparing an Environmental Impact Statement (EIS) for the New York City Department of City Planning (DCP) to analyze the effects of the proposed actions and development of the proposed building. The EIS will address the full range of environmental impacts associated with the proposed development. As part of the project's review, AKRF also prepared documents and graphics submitted to DCP under its Blue PRint program, a pre-application process that presents basic project information to DCP and clarifies major issues prior to the filing of a land use- or zoning-related application. The process is intended to standardize the pre-application process and expedite DCP's overall project review. Mr. Sharma was responsible for contractor oversight for the spill remediation activities as requested by the NYSDEC.

Whitney Museum of American Art, NY

Mr. Sharma provided assistance with subsurface soil and groundwater investigation, construction oversight and soil disposal management during the remediation phase of the project. The project included the construction of an approximately 230,000-square foot museum building with one sub-grade level with exhibition galleries, administrative offices, accessory use (café and bookstore), storage space, and an approximately 4,000-square foot restaurant.

Yankee Stadium Demolition, Bronx, NY

The New York City Economic Development Corporation (NYCEDC) project included demolition of the old Yankee Stadium and construction of a ball field known as Heritage Field. Mr. Sharma provided air monitoring and remedial action plan (RAP) oversight during the demolition and soil disturbance work.

East River Science Park, New York, NY

The New York City Economic Development Corporation (NYCEDC) proposed to construct two seventeen-story buildings to serve as a biomedical research center. The space between the two towers included an elevated atrium and an outdoor plaza on top of a parking garage. Mr. Sharma provided construction oversight during site excavation, coordination and management of soil removal and fill material imports, oversight of the on-site air monitoring program, identification and proper management of contamination encountered during excavation work, and maintenance of critical paperwork and preparation of the final closure report.

W 61st Street Site, NY

Mr. Sharma provided assistance with construction oversight during site excavation activities and helped prepare the final closure report for the site which, as part of the Brownfield Cleanup Program (BCP), was slated for redevelopment as two residential buildings with a courtyard and a tennis court.

164 Kent Avenue, Brooklyn, NY

The project was a multi-phase development consisting of a large waterfront block in the Williamsburg Rezoning Area. The project site has been developed with a mixed-use residential-commercial high rise towers with an esplanade and a pier along the East River. AKRF provided acquisition and development support, including performing Phase I and II environmental site assessments, and preparation of Remedial Action Plans (RAPs) and Construction Health and Safety Plan (CHASPs) for approval by DEP and OER. AKRF provided assistance with construction oversight during soil handling activities and managing the Community Air Monitoring Plan (CAMP) activities. To date, closure reports have been prepared and occupancy achieved for three of the four buildings. Mr. Sharma provided construction oversight during soil handling activities and running the Community Air Monitoring Plan (CAMP).

285 Jay Street, Brooklyn, NY

Under contract with the Dormitory Authority of the State New York (DASNY), AKRF completed a Phase II Subsurface investigation at the site of a proposed CUNY educational building to satisfy New York City E-designation requirements. As part of the work AKRF performed at the site, Mr. Sharma conducted sub-surface soil and groundwater investigation work and coordinated with the driller and the property owner for successful completion of the work. Mr. Sharma prepared the remedial closure report for delivery to the client.

MTA Long Island Railroad, East Side Access Project, New York, NY

The Metropolitan Transportation Authority (MTA) sponsored the East Side Access project to connect the Long Island Railroad to the Grand Central Terminal, thereby allowing Long Island commuters direct access to the East Side of Manhattan. Mr. Sharma provided assistance with the execution of the Community Air Monitoring Plan (CAMP) at various locations during the construction phase.

Adam Clayton Powell Jr. Boulevard, New York, NY

AKRF performed a Phase II study to meet the requirements of the New York City Department of Environmental Protection (NYCDEP) and to determine whether subsurface conditions had been affected by the on-site and/or off-site petroleum storage tanks and to ascertain whether current or former on- or off-site activities had adversely affected the subject property. Mr. Sharma conducted sub-surface soil and groundwater investigation at the abandoned site slated for future development. He was responsible for coordinating with the driller and the property owner for successful completion of the work.

APPENDIX F
SITE-WIDE INSPECTION FORMS

SITE-WIDE INSPECTION FORM
POP Displays Manufacturing Site
30-77 Vernon Boulevard and 30-80 12th Street
Queens, NEW YORK

Inspector:

Date:

1. Site Use Restrictions

No on-site vegetable gardens?

No groundwater withdrawal for potable/non-potable use?

Restricted residential use maintained?

2. Site Cap

Note the date that the annual site cap inspection was performed:

Repairs made as noted during inspection?

3. Soil Management

Note the date(s) of any soil disturbance activities conducted during the past year:

Proper soil management procedures implemented (cite appropriate close-out reports)?

4. Recordkeeping

Check that the following records/reports are being maintained/completed (note report/log dates as appropriate):

1) Annual site cap inspection log:

2) Close-out report(s) for soil disturbance activities (including manifests for soil disposal):

5. Comments