904 BURKE AVENUE, LLC

904 BURKE AVENUE

BRONX, COUNTY

BRONX, NEW YORK

SITE MANAGEMENT PLAN

NYSDEC Site Number: C203032

Prepared for:

HB Bronx Realty LLC

3333 Boston Road, Bronx, New York 10469

Prepared by:

EnviroTrac Engineering PE PC

5 Old Dock Road, Yaphank, New York 11980

631-924-3001

Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

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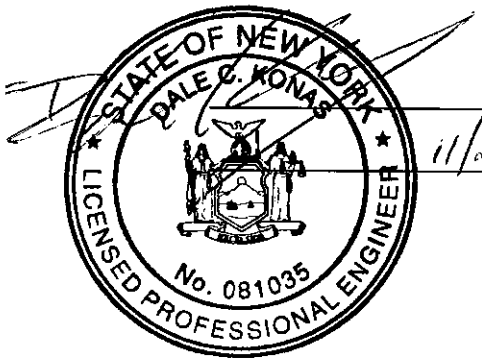
NOVEMBER 2017

CERTIFICATION STATEMENT

I, DALE KONAS, certify that I am currently a NYS registered professional engineer as in defined in 6 NYCRR Part 375 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).



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11/28/17 DATE

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List of Acronyms

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
EWP	Excavation Work 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
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
VOC	Volatile Organic Compound

ES EXECUTIVE SUMMARY

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

Site Identification: BCP #C203032

904 Burke Avenue, LLC, 904 Burke Avenue, Bronx, New York

Institutional Controls:	1. The property may be used for restricted residential, commercial, and industrial use;
	2. All ICs as listed in Section 3.2: • The property may be used for restricted residential, commercial, and industrial use; • All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP); • All Engineering Controls 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 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; • Groundwater and other environmental or public health monitoring must be performed as defined in the SMP; • 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; • All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

Site Identification: BCP #C203032

904 Burke Avenue, LLC, 904 Burke Avenue, Bronx, New York

	• Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP; • Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP; • 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.
	3. All ECs must be inspected at a frequency and in a manner defined in the SMP.
Engineering Controls:	1. Cover system
	2. Groundwater ISCO

Inspections:	Frequency
1. Cover system inspection	Annually
Monitoring:	
1. Groundwater Monitoring Wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-7A, MW-9, MW-10, and MW-13	Quarterly for first 2 years, then annually
Maintenance:	
1. Cover system maintenance	As needed
2. Monitoring well maintenance/repair	As needed
3. Change out of absorbent sock in MW-9	Monthly, as needed when LNAPL is present
Reporting:	
1. Periodic Review Report	Annually

Further descriptions of the above requirements are provided in detail in the latter sections of this Site Management Plan.

1.0 INTRODUCTION

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for 904 Burke Avenue (a.k.a. 910 Burke Avenue) located in Bronx, New York (hereinafter referred to as the "Site"). See Figure 1. The Site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP), Site No. C203032, which is administered by New York State Department of Environmental Conservation (NYSDEC).

904 Burke Avenue, LLC entered into a Brownfield Cleanup Agreement (BCA) on November 7, 2005 with the NYSDEC to remediate the Site. A figure showing the Site location and boundaries of this Site is provided on Figure 2. The boundaries of the Site are more fully described in the metes and bounds site description that is part of the Environmental Easement provided in Appendix A. At the time of entering into the BCA, the Site owner was identified as 904 Burke Avenue, LLC. This entity is owned by HB Bronx Realty LLC.

After completion of the remedial work, some contamination was left at this Site, which is hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Bronx County Clerk, requires compliance with this SMP and all ECs and ICs placed on the Site.

This SMP was prepared to manage remaining contamination at the Site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. This plan 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 only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are 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);

- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA (Index #W2-1072-05-07; Site #C203032) for the Site, 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 EnviroTrac Engineering PE PC, on behalf of HB Bronx Realty LLC, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May 2010, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the Site.

1.2 Revisions

Revisions to this plan 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 media monitoring requirements, upgrades to or shut-down of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the site conditions. In accordance with the Environmental Easement for the Site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is 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, 6NYCRR 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 Excavation Work Plan.

- Notice within 48-hours of 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.

Table 1 on the following page includes contact information for the above 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.

Table 1: Notifications*

Name	Contact Information
Nigel N. Crawford, P.E., NYSDEC Project Manager	Phone: 718-482-7778; email address: Nigel.Crawford@dec.ny.gov
Jane O'Connell, NYSDEC Regional HW Remediation Engineer	Phone: 718-482-4599 Email address: Jane.Oconnell@dec.ny.gov
Kelly Lewandowski, NYSDEC Site Control	Phone: 518-402-9553 Email address: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 Bronx, Bronx County, New York and is identified as Section 17, Block 4574, and Lot 25 on the New York City Tax Map (see Figure 3). The Site is an approximately 0.23-acre parcel and is bounded by Burke Avenue to the north, an undeveloped lot to the south, residential properties to the east, and Bronxwood Avenue to the west. The boundaries of the Site are more fully described in Appendix A – Environmental Easement. The owner and remedial party for the Site at the time of issuance of this SMP is HB Bronx Realty LLC.

2.2 Physical Setting

2.2.1 Land Use

The Site consists of the following: a fenced lot (formerly used for retail petroleum distribution) and an asphalt paved parking lot. The Site is zoned R5, residential and is currently utilized for temporary storage of automobiles by an off-site automotive sales business. There are no personnel occupying the Site.

The properties adjoining the Site and in the neighborhood surrounding the Site primarily include residential and mixed use properties. The properties immediately south of the Site include an unimproved lot; the properties immediately north of the Site include mixed use properties; the properties immediately east of the Site include residential properties; and the properties to the west of the Site include residential properties.

2.2.2 Geology

The Site is located in a portion of the Hartland Formation with bedrock consisting of basal amphibolite and pelitic schists. This formation was formed during the Paleozoic Era and is overlain by a relatively thin layer of soil (loam and sandy loam) developed after the most recent glaciation period. On-Site soils have been re-worked during the original development of the Site in 1959 and again during remedial activities conducted between 1999 and present.

Land surface elevation at the Site is approximately 100 feet above mean sea level. Based on data derived from previous investigations conducted at the Site, bedrock ranges from approximately four (4) feet to nineteen (19) feet below grade surface. Soil borings advanced to these depths revealed overlying material consisting of fine to coarse grained sand, silt, and clay. Bedrock at the Site has not been investigated. Site specific boring logs are provided in Appendix C.

2.2.3 Hydrogeology

Regionally, groundwater flows within the unconsolidated deposits to the west-northwest and toward the Bronx River, located approximately one-half mile from the Site. The depth to groundwater at the Site itself has historically varied across the Site with historical low at 11.35 feet below casing elevation at MW-9 to a historic high of 2.4 feet below casing elevation at MW-10. The general direction of groundwater flow within the unconsolidated deposits at the Site as determined by the gauging of monitoring wells located at and in close proximity of the Site is toward the northwest. There are no known private or municipal water supply wells in the vicinity of the Site.

A general depiction of groundwater flow direction is shown on Figure 4. Groundwater elevation data is provided in Table 2. Groundwater monitoring well construction logs are provided in Appendix C.

2.3 Investigation and Remedial History

The Site has been developed since 1959. A single story concrete block building was historically located on the Site, which was demolished by the owner in 2008. The Site has historically been utilized as a gasoline station and automobile repair facilities (J&S Auto Repairs and Chanty Auto Repairs).

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site. Full titles for each of the reports referenced below are provided in Section 8.0 - References.

- EnviroTrac Ltd. (May 27, 1999). NYSDEC #99-00995, 904 Burke Avenue, Bronx, New York.

In April of 1999, EnviroTrac was contracted to excavate and dispose of contaminated soil which was returned to the tank excavation area, collect endpoint samples, and backfill the excavation with clean material. Laboratory results indicated concentrations of VOCs above NYSDEC Spill Technology and Remediation Series (STARS) criteria and Spill No. 99-00995 was assigned.

In May of 1999, EnviroTrac excavated the contaminated material, took endpoint samples, and backfilled the excavation with clean material. Two (2) of the four (4) endpoint samples collected were found to contain concentrations of benzene, ethyl benzene, and xylenes above STARS criteria.

- Miller Environmental Group Inc. (January 10, 2003). Subsurface Investigation Plan.; and
- Miller Environmental Group Inc. (April 25, 2003). Sampling Summary.

In September 2002, Miller Environmental Group, Inc. conducted preliminary soil sampling at the Site in order to comply with NYSDEC requirements. A test pit was excavated in the location of the former pump island and endpoint soil samples were collected, which contained gasoline constituents above NYSDEC guidance values. The results were submitted to NYSDEC and on-site delineation of the contamination and the installation of at least three monitoring wells was required.

As part of a Subsurface Investigation conducted in April 2003, the zone of contamination was delineated and monitoring wells were installed. Monitoring Well 2 (MW-2) was not sampled due to the fact it was found to contain approximately one tenth of a foot of free phase product. Monitoring Wells 1 and 3 (MW-1 and MW-3) were sampled, with elevated levels of MTBE and BTEX detected in MW-3.

- American Environmental Solutions, Inc. (December 18, 2003). Former Service Station Investigation.

In December 2003, American Environmental Solutions, Inc. (AES) sampled the three wells located on-site as part of an initial site investigation. Laboratory results indicated VOCs concentrations exceeding NYSDEC criteria in MW-2 and MW-3.

- American Environmental Solutions, Inc. (Revised January 2010). Remedial Investigation Report.

Appropriate Interim Remedial Measures were undertaken on-site to mitigate worsening environmental conditions at the property prior to commencement of Remedial Investigation activities. As part of the initial IRM, AES conducted vacuum enhanced fluid recovery (VEFR) and continued to hand bail wells MW-2 and MW-3 in order to address petroleum sheen and odor discovered in the groundwater. The bailing and monitoring of the three existing wells was temporarily suspended due to the open excavation area described below.

In July of 2006, AES proposed an IRM to remove and dispose of contaminated material located on-site in order to eliminate the continued release of contaminants to groundwater and to reduce the impact of off-site migration. The IRM was approved by NYSDEC and AES excavated contaminated material. Upon completion of the IRM activities endpoint soil samples and groundwater samples were collected and analyzed. Following NYSDEC approval of the clean fill materials, the excavated area was backfilled in October 2007.

AES returned to the Site on January 18, 2008 to bail and sample the two (2) monitoring wells already existing on-site (MW-2 and MW-3). Pre-existing well MW-1 was destroyed during site excavation and/or building demolition.

AES conducted a remedial investigation from April 2008 through March 2009, which included the re-installation of MW-1, sampling of MW-2 and MW-3, the installation of six (6) new on-site and four (4) new off-site monitoring wells, the installation of five (5) soil gas probes, and the collection of soil samples during the installation of the monitoring wells. The investigation identified significant VOC contamination in all on-site groundwater monitoring wells, particularly those located in the northern portion of the Site. The soil vapor investigation indicated the most significant soil vapor contamination present at the northern perimeter of the Site.

- EnviroTrac Ltd. (November 22, 2016). Letter Work Plan Report.

  EnviroTrac conducted additional investigations in September 2016 to address identified data gaps. The additional investigations included a geophysical survey, and soil, groundwater, and soil vapor testing. Results of the testing identified the presence of on-site subsurface piping, VOCs in groundwater, VOCs in soil, and elevated concentrations of petroleum related constituents in soil vapor, in particular 2,2,4-trimethylpentane.

- Due to the historic presence of light non-aqueous phase liquid (LNAPL) at MW-9, prior to commencing with in-situ chemical oxidation (ISCO) treatment, LNAPL removal was conducted. A total of approximately 1.1 gallons of LNAPL were recovered via the vacuum enhanced fluid recovery event conducted in March of 2017 and via absorbent socks which were placed in the well on June 12, 2017, June 14, 2017, June 23, 2017, and August 8, 2017. LNAPL recovery during vacuum enhanced fluid recovery event and via absorbent socks is summarized on Table 3 and Table 4, respectively.

2.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for the Site as listed in the Decision Document dated May 2017 are as follows:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

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 a site.

2.5 Remaining Contamination

2.5.1 Soil

Table 5 and Figure 5 summarize the results of all post-excavation endpoint samples collected that exceed the NYSDEC Part 375 Groundwater Protection Soil Cleanup Objectives (SCOs).

Volatile organic constituents exceeding SCOs include:

- 1,2,4-Trimethylbenzene
- Acetone
- Xylenes, Total

None of the post-excavation endpoint sampling results exceed the Restricted Residential Use SCOs following completion of the remedial action.

2.5.2 Groundwater

Table 6 and Figure 6 summarize the results of all samples of groundwater that exceed the Standards, Criteria, and Guidelines (SCGs) after completion of the remedial action. The provided results pertain to the ISCO application performance monitoring and the most recent data obtained on August 8, 2017 are representative of an intermediate stage in the contaminant concentration reduction process. The appearance of elevated sulfate (an electron acceptor) concentrations indicates the development of favorable conditions for ongoing natural attenuation through the biological pathway.

Due to the historic presence of light non-aqueous phase liquid (LNAPL) at MW-9, prior to commencing with in-situ chemical oxidation (ISCO) treatment, LNAPL removal was conducted. A total of approximately 1.1 gallons of LNAPL were recovered via the vacuum enhanced fluid recovery event conducted in March of 2017 and via absorbent socks which were placed in the well on June 12, 2017, June 14, 2017, June 23, 2017, and August 8, 2017. LNAPL recovery during vacuum enhanced fluid recovery event and via absorbent socks is summarized on Table 3 and Table 4, respectively.

Volatile organic constituents exceeding criteria include:

- 1,2,4,5-Tetramethylbenzene
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Benzene
- Ethylbenzene
- Isopropylbenzene
- Methyl tert butyl ether
- n-Butylbenzene
- n-Propylbenzene
- Naphthalene
- o-Xylene

- p/m-Xylene
- sec-Butylbenzene
- Toluene
- Xylenes, Total

2.5.3 Soil Vapor

Table 7 summarizes the results of all samples of soil vapor after completion of the remedial action. The soil vapor sampling locations are depicted on Figure 7.

3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

3.1 General

Since remaining contamination exists at 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 Excavation Work Plan (EWP) (as provided in Appendix D) for the proper handling of remaining contamination that may 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 Decision Document to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the Site to restricted residential, commercial or industrial uses only. 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. These ICs are:

- The property may be used for restricted residential, commercial, and industrial use;

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

- All Engineering Controls 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 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;

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

- 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;

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

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

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

- 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.

3.3 Engineering Controls

3.3.1 Cover System

Exposure to remaining contamination at the Site is prevented by a cover system placed over the entire Site. At the time of the publication of this SMP, the cover system is comprised of a minimum of 3.5 inches of asphalt pavement and 3 inches of compacted recycled concrete aggregate and gravel, as needed. Figure 8 presents the location and details of the cover system. The Excavation Work Plan (EWP) provided in

Appendix D outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Procedures for the inspection of this cover are provided in the Monitoring and Sampling Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the Site. A HASP is attached as Appendix E and CAMP is attached as Appendix F. The attached HASP is in current compliance with DER-10, 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 and CAMP will be updated and re-submitted with the notification procedures provided in Section D-1 of the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP, and CAMP, and will be included in the periodic inspection and certification reports submitted in accordance with Site Reporting Requirements (see Section 6).

3.3.2 In-Situ Chemical Oxidation

The application of In-Situ Chemical Oxidation (ISCO) in June 2017 was utilized as an engineering control to address recalcitrant VOCs in soil that may have been providing an ongoing on-site source to groundwater. Carus Corporation's ("Carus") Oxygen BioChem (OBC)^{TM} Reagent ("OBC") is a mixture of sodium persulfate and calcium peroxide oxidants for short-term ISCO and provides electron acceptors for longer-term biological oxidation. The chemical reagent was applied within a combined total area of approximately 5,000 ft^3 through injections at 11 locations as shown on Figure 9. Performance monitoring was conducted at one week and approximately 6 weeks post-injection. Natural attenuation monitoring will be conducted in accordance with this SMP.

3.3.3 Criteria for Completion of Remediation

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.

3.3.3.1 – Cover System

The cover 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.

3.3.3.2 - Monitoring Wells associated with Monitored Natural Attenuation

Groundwater monitoring activities to assess natural attenuation will continue, as determined by the NYSDEC with consultation with NYSDOH, until remaining groundwater concentrations are found to be consistently below ambient water quality standards, the Site SCGs, or have become asymptotic at an acceptable level over an extended period. In the event that monitoring data indicates that monitoring for natural attenuation may no longer be required, a proposal to discontinue the system will be submitted by the remedial party.

Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC.

4.0 MONITORING AND SAMPLING PLAN

4.1 General

This Monitoring and Sampling Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring and Sampling Plan may only be revised 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 for the Site are included in the Quality Assurance Project Plan provided in Appendix G.

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

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils);
- Assessing compliance with applicable NYSDEC SCGs, particularly groundwater standards and Part 375 SCOs for soil; 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 and Sampling Plan provides information on:

- Sampling locations, protocol and frequency;
- Information on all designed monitoring systems;
- Analytical sampling program requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Reporting requirements are provided in Section 6.0 of this SMP.

4.2 Site-Wide Inspection

Site-wide inspections will be performed annually. Modification to the frequency or duration of the inspections will require approval from the NYSDEC. Site-wide inspections will also be performed after all severe weather conditions that may affect ECs or monitoring devices. During these inspections, an inspection form will be completed as provided in Appendix H – Site Management Forms. 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; and

Reporting requirements are outlined in Section 6.0 of this plan.

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 5 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 7 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.

4.3 Post-Remediation Media Monitoring and Sampling

Samples shall be collected from the groundwater on annual routine basis. Sampling locations, required analytical parameters and schedule are provided in Table 8 – Remedial System Sampling Requirements and Schedule below. Modification to the frequency or sampling requirements will require approval from the NYSDEC.

Detailed sample collection and analytical procedures and protocols are provided in Appendix I – Field Sampling Plan and Appendix G – Quality Assurance Project Plan.

4.3.1 Groundwater Sampling

Groundwater monitoring will be performed quarterly for the first two years to assess the performance of the remedy. Following that period, a review and analysis of the testing results will be submitted to the NYSDEC with a recommendation for future sampling. Subsequent sampling frequency is to be determined by the NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by the NYSDEC.

Monitoring well construction details are included in Appendix C. As part of the groundwater monitoring, monitoring wells, MW-1, MW-2, MW-3, MW-4, MW-5, MW-7A, MW-10, and MW-13 will be sampled to evaluate the effectiveness of the remedial measures. In the absence of LNAPL, MW-9 will also be included in the sampling protocol. The location of these wells is depicted on Figure 6. If LNAPL is noted at MW-9, change out of the absorbent sock is to occur on a monthly basis and the volume of LNAPL recovered is to be calculated and recorded, and reported in the Site Management Reporting. The number of wells sampled in the required well network may be reduced based upon ongoing results and written approval of the NYSDEC.

The following is a summary of the wells to be sampled and analytes tested during the initial implementation of this SMP.

Table 8: Remedial System Sampling Requirements and Schedule

Well	Location/Purpose	Analytes	Schedule
MW-1	On-site/Source area monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-2	Off-site/Downgradient monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-3	On-site/Western plume perimeter monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-4	On-site/Source area monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-5	On-site/Source area monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-7A	Off-site/Downgradient monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-9*	On-site/Source area monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-10	On-site/Southern plume perimeter monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-13	On-site/Western plume perimeter monitoring	Method 8260 VOCs	Quarterly for first 2 years

*MW-9 is to be included in the sampling event should no LNAPL be present in the well. If LNAPL is present at MW-9 at the time of the sampling event, the well is not to be sampled.

The sampling events are to be conducted via low flow sampling methods and submitted for analysis for full list volatile organic compounds (VOCs) via EPA Method 8260. The recording of field parameters is required. The collection of field blanks is not required. However, the collection of field blanks will be required should a NYSDEC-approved change in the groundwater sampling protocol be implemented which includes reusable sampling equipment.

Purge water is to be containerized in steel NYSDOT 55-gallon drums, properly labeled, and stored on-Site until off-site disposal has been arranged at a facility which can accept the material.

Any spent absorbent socks or bailed LNAPL are to be containerized in steel NYSDOT 55-gallon drums, properly labeled, and stored on-Site until off-site disposal has been arranged at a facility which can accept the material.

Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Quarterly Report and Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Laboratory detection limits and minimum reporting limits to be achieved by the ELAP certified laboratory are specified in the Quality Assurance Project Plan in Appendix G.

If biofouling or silt accumulation occurs in the on-Site and/or off-Site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced, if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified prior to any repair or decommissioning of any monitoring well for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent Periodic Review Report. Well decommissioning without replacement will be done only with the prior approval of the NYSDEC. Well abandonment will be performed in accordance with NYSDEC's guidance entitled "CP-43: Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be replaced in kind in the nearest available location, unless otherwise approved by the NYSDEC.

The sampling frequency may only be modified with the approval of the NYSDEC. This SMP will be modified to reflect changes in sampling plans approved by the NYSDEC.

Deliverables for the groundwater monitoring program are specified in Section 7.0, Reporting Requirements.

4.3.2 Soil Vapor Intrusion Sampling

Currently, no structures are present on-site and soil vapor intrusion is not a concern. However, soil vapor intrusion will be assessed in the event buildings are constructed on the Site. In the event that any structure(s) is proposed for the site, a plan for soil vapor intrusion sampling will be developed and submitted to NYSDEC and NYSDOH for review and approval prior to occupying the structure(s).

4.3.3 Monitoring and Sampling Protocol

All sampling activities will be recorded in a field book and associated sampling log as provided in Appendix H - Site Management Forms. Other observations (e.g., groundwater monitoring well integrity, etc.) will be noted on the sampling log. The sampling log will serve as the inspection form for the monitoring network. Additional detail regarding monitoring and sampling protocols are provided in the Site-specific Field Sampling Plan provided as Appendix I of this document.

5.0 OPERATION AND MAINTENANCE PLAN

5.1 General

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. REPORTING REQUIREMENTS

6.1 Site Management Reports

All site management inspection, maintenance and monitoring events will be recorded on the appropriate site management forms provided in Appendix H. 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 of Table 9 and summarized in the Periodic Review Report.

Table 9: Schedule of Interim Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
Groundwater Monitoring Report	Quarterly
Periodic Review Report	Annually, or as otherwise determined by the Department

* 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);
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;

- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- Copies of waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts associated with the proper off-Site disposal associated with generated wastes (LNAPL, spent absorbent socks, etc.)
- Any observations, conclusions, or recommendations; and
- A determination as to whether contaminant conditions have changed since the last reporting event.

Routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting maintenance activities;
- Description of maintenance activities performed;
- Any modifications to the system;
- 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); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

Non-routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Description of non-routine activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

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^{TM} database in accordance with the requirements found at this link:
http://www.dec.ny.gov/chemical/62440.html.

6.2 Periodic Review Report

A Periodic Review Report (PRR) will be submitted to the Department beginning sixteen (16) months after the Certificate of Completion is issued. After submittal of the initial Periodic Review Report, the next PRR shall be submitted annually 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 30 days of the end of each certification period. Media sampling results will also 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.
- A summary of any discharge monitoring data and/or information generated during the reporting period, with comments and conclusions.
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends.
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all 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, ROD or Decision Document;
  - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
  - Any new conclusions or observations regarding Site contamination based on inspections or data generated by the Monitoring and Sampling Plan for the media being monitored;
  - Recommendations regarding any necessary changes to the remedy and/or Monitoring and Sampling Plan; and
  - Trends in contaminant levels in the affected media will be evaluated to determine if the remedy continues to be effective in achieving remedial goals as specified by the Decision Document.
  - The overall performance and effectiveness of the remedy.

6.2.1 Certification of Institutional and Engineering Controls

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;*
- *The institutional control and/or 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 systems are in place and effective and performing as designed;*
- *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, [name], of [business address], am certifying as [Owner/Remedial Party or Owner's/Remedial Party's Designated Site Representative] for the Site."

At the end of each certifying period, as determined by the NYSDEC, the following certification will be provided to the Department:

"For each institutional identified for the Site, I certify that all of the following statements are true:

- *The institutional 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;*
- *If a financial assurance mechanism is required under the oversight document for the Site, the mechanism remains valid and sufficient for the intended purpose under the document;*

- *Use of the Site is compliant with the environmental easement.*

- *No new information has come to my attention, including groundwater monitoring data from wells located at the Site boundary, if any, to indicate that the assumptions made in the qualitative exposure assessment of off-site contamination are no longer valid. The remedial party will also have to certify every five years that the assumptions made in the qualitative exposure assessment remain valid; 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, [name], of [business address], am certifying as [Owner or Owner's Designated Site Representative] for the Site."

For this BCP project, 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.

6.3 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.

7.0 REFERENCES

6NYCRR Part 375, Environmental Remediation Programs. December 14, 2006.

NYSDEC DER-10 – “Technical Guidance for Site Investigation and Remediation”.

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).

EnviroTrac Ltd. (May 27, 1999). NYSDEC #99-00995, 904 Burke Avenue, Bronx, New York.

Miller Environmental Group Inc. (January 10, 2003). Subsurface Investigation Plan.

Miller Environmental Group Inc. (April 25, 2003). Sampling Summary.

American Environmental Solutions, Inc. (December 18, 2003). Former Service Station Investigation.

American Environmental Solutions, Inc. (Revised January 2010). Remedial Investigation Report.

EnviroTrac Ltd. (November 22, 2016). Letter Work Plan Report.

EnviroTrac Engineering PE PC. (May 26, 2017). Remedial Action Work Plan.

EnviroTrac Engineering PE PC. Final Engineering Report.

TABLES

Table 1: Notifications
904 Burke Avenue, Bronx, New York
BCP Site #C203032

Name	Contact Information
Nigel N. Crawford, P.E., NYSDEC Project Manager	Phone: 718-482-7778; email address: Nigel.Crawford@dec.ny.gov
Jane O'Connell, NYSDEC Regaional HW Remediation Engineer	Phone: 718-482-4599 Email address: Jane.Oconnell@dec.ny.gov
Kelly Lewandowski (NYSDEC Site Control)	Phone: 518-402-9553 Email address:Kelly.Lewandowski@dec.ny.gov

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

Table 2: Groundwater Elevation Data
904 Burke Avenue, Bronx, New York
BCP Site #C203032

Well Location	Top of Casing Elevation[1]	Date Measured	Depth to Water (ft. bc.)[2]	Depth to Product (ft. bc.)[2]	Product Thickness	Water Table Elevation (ft. relative)
MW-1	96.96	9/1/2016	11.12	0.00	0.00	85.84
		9/12/2016	8.49	0.00	0.00	88.47
		9/13/2016	6.94	0.00	0.00	90.02
		12/2/2016	5.09	0.00	0.00	91.87
		3/3/2017	6.00	0.00	0.00	90.96
		6/12/2017	5.43	0.00	0.00	91.53
		6/23/2017	4.56	0.00	0.00	92.40
		8/8/2017	4.91	0.00	0.00	92.05
MW-2	96.60	9/1/2016	7.4	0.00	0.00	89.20
		9/12/2016	7.48	0.00	0.00	89.12
		9/13/2016	7.55	0.00	0.00	89.05
		12/2/2016	5.86	0.00	0.00	90.74
		3/3/2017	5.54	0.00	0.00	91.06
		6/12/2017	5.82	0.00	0.00	90.78
		6/23/2017	5.35	0.00	0.00	91.25
		8/8/2017	5.56	0.00	0.00	91.04
MW-3	97.16	9/1/2016	9	0.00	0.00	88.16
		9/12/2016	8.31	0.00	0.00	88.85
		9/13/2016	8.25	0.00	0.00	88.91
		12/2/2016	7.23	0.00	0.00	89.93
		3/3/2017	5.55	0.00	0.00	91.61
		6/12/2017	5.55	0.00	0.00	91.61
		6/23/2017	5.60	0.00	0.00	91.56
		8/8/2017	6.98	0.00	0.00	90.18
MW-4	97.34	9/1/2016	9.39	0.00	0.00	87.95
		9/12/2016	7.85	0.00	0.00	89.49
		9/13/2016	8.59	0.00	0.00	88.75
		12/2/2016	6.85	0.00	0.00	90.49
		3/3/2017	4.78	0.00	0.00	92.56
		6/12/2017	5.95	0.00	0.00	91.39
		6/23/2017	5.94	0.00	0.00	91.40
		8/8/2017	6.84	0.00	0.00	90.50
MW-5	97.80	9/1/2016	8.98	0.00	0.00	88.82
		9/12/2016	8.27	0.00	0.00	89.53
		9/13/2016	8.3	0.00	0.00	89.50
		12/2/2016	6.25	0.00	0.00	91.55
		3/3/2017	5.31	0.00	0.00	92.49
		6/12/2017	5.30	0.00	0.00	92.50
		6/23/2017	5.31	0.00	0.00	92.49
		8/8/2017	6.58	0.00	0.00	91.22
MW-7a	96.00	9/1/2016	12.60	0.00	0.00	83.40
		9/12/2016	10.77	0.00	0.00	85.23
		9/13/2016	10.77	0.00	0.00	85.23
		12/2/2016	10.35	0.00	0.00	85.65
		3/3/2017	9.00	0.00	0.00	87.00
		6/12/2017	8.84	0.00	0.00	87.16
		6/23/2017	8.71	0.00	0.00	87.29
		8/8/2017	9.85	0.00	0.00	86.15
MW-9	97.84	9/1/2016	8.49	8.88	0.39	89.35
		9/12/2016	8.85	11.35	2.50	88.99
		9/13/2016	8.90	10.80	1.90	88.94
		12/2/2016	7.10	7.40	0.30	90.74
		3/3/2017	6.15	6.16	0.01	91.69
		6/12/2017	6.17	6.19	0.02	91.67
		6/23/2017	5.32	0.00	0.00	92.52
		8/8/2017	Not recorded			
MW-10	98.00	9/1/2016	12.31	0.00	0.00	85.69
		9/12/2016	8.32	0.00	0.00	89.68
		9/13/2016	9.35	0.00	0.00	88.65
		12/2/2016	5.77	0.00	0.00	92.23
		3/3/2017	5.15	0.00	0.00	92.85
		6/12/2017	5.25	0.00	0.00	92.75
		6/23/2017	6.46	0.00	0.00	91.54
		8/8/2017	6.63	0.00	0.00	91.37
MW-13	97.17	9/1/2016	Not installed			
		9/12/2016	Not installed			
		9/13/2016	Not installed			
		12/2/2016	Not installed			
		3/3/2017	Not installed			
		6/12/2017	9.98	0.00	0.00	87.19
		6/23/2017	10.71	0.00	0.00	86.46
		8/8/2017	10.75	0.00	0.00	86.42

Notes:
1. ft msl - feet relative to mean sea level.
2. ft. bc. - feet below top of well casing.

Table 3: Vacuum Enhanced Product Recovery Data Summary
Vacuum Enhanced Product Recovery Event conducted on March 3, 2017
904 Burke Avenue, Bronx, New York
NYSDEC BCP Number: C203032

Data Summary											Fluid Recovery Summary	
Well ID	Time	DTP (ft) Pre Vac	DTW (ft) Pre Vac	DTB (ft) Pre Vac	Product Thickness (ft)	Time	DTP (ft) Post Vac	DTW (ft) Post Vac	DTB (ft) Post Vac	Product Thickness (ft)	Total Gallons	Gallons of Product
MW-1	7:15	-	6.00	15.1	0.00	13:44	-	6.09	-	0.00	N/A	N/A
MW-2	7:06	-	5.54	13.26	0.00	13:50	-	5.57	-	0.00	N/A	N/A
MW-3	7:09	-	5.55	25.59	0.00	13:47	-	5.58	-	0.00	N/A	N/A
MW-4	7:21	-	4.78	10.16	0.00	13:39	-	4.86	-	0.00	N/A	N/A
MW-5	7:27	-	5.31	9.22	0.00	13:36	-	5.34	-	0.00	N/A	N/A
MW-7a	7:02	-	9.00	14.76	0.00	13:54	-	9.04	-	0.00	N/A	N/A
MW-9	7:40	6.14	6.15	-	0.01	13:38	-	8.17	-	0.00	130	0.5
MW-10	7:32	-	5.15	14.58	0.00	13:33	-	5.17	-	0.00	N/A	N/A

Notes:
Event conducted on March 3, 2017
DTP - Depth to product below top of casing
DTW - Depth to water below top of casing
DTB - Depth to bottom of well below top of casing.
- Not gauged
N/A - Not applicable

Table 4: MW-9 LNAPL Removal Summary
NYSDEC BCP # 203032
904 Burke Avenue, Bronx, New York

Date	Sock[1] Capacity (fluid oz)	Sock Capacity[2] (lb)	Field Weight (lb)	Tare Weight (lb)	LNAPL Weight (lb)	Percent of Capacity	LNAPL Removed via absorbent sock (gal)	LNAPL Bailed (gal)	Total LNAPL Removed During Event (gal)	Cumulative LNAPL Removed (gal)	Action Taken
12/2/2016	LNAPL bailing event							1.000	1.000	1.0	new sock[1] deployed following completion of bailing
12/15/2016	48	2.6	2.3	0.4	1.9	72%	0.329	0.002	0.330	1.3	new sock[1] deployed following completion of bailing
12/30/2016	48	2.6	2.9	0.4	2.5	95%	0.414	0.010	0.424	1.8	new sock[1] deployed following completion of bailing
1/19/2017	48	2.6	2.4	0.4	2.0	76%	0.343	N/A	0.343	2.1	Following the removal of the sock, the well was quickly bailed of ~11 gallons (two well volumes) and a new sock[1] immediately deployed following completion of bailing.
2/22/2017	48	2.6	0.6	0.4	0.2	8%	0.086	N/A	0.086	2.2	Sock removed from well. In preparation for NYSDEC requested vacuum enhanced recovery events, no new sock was deployed in the well.
6/12/2017	48	2.6	0.4	0.4	0.0	0%	0.057	N/A	0.057	2.2	new sock[1] deployed following gauging.
6/14/2017	48	2.6	1.5	0.4	1.1	42%	0.214	N/A	0.214	2.5	new sock[1] deployed following pre-injection gauging.
6/23/2017	48	2.6	2.8	0.4	2.4	91%	0.400	N/A	0.400	2.9	new sock[1] deployed following post-injection gauging.
8/8/2017	48	2.6	1.3	0.4	0.9	34%	0.186	N/A	0.186	3.0	new sock[1] deployed following gauging.
8/22/2017	48	2.6	1.1	0.4	0.7	27%	0.157	0.250	0.407	3.4	new sock[1] deployed following gauging.
8/24/2017	48	2.6	2.5	0.4	2.1	80%	0.357	0.100	0.457	3.9	new sock[1] deployed following gauging.

Notes:
(1) Pig Sump Skimmer SKM404.
(2) Absorbed LNAPL, assume 7 lb/gallon.

Table 5: Summary of Soil Results Exceeding Regulatory Criteria
904 Burke Avenue, Bronx, New York
BCP Site #C203032

Compound	NYSDEC Part 375 Restricted Residential Use Criteria	NYSDEC Part 375 Groundwater Protection Criteria	validated PP1-20170627 6/27/2017 1' bgs	validated PP2-20170627 6/27/2017 1' bgs	validated PP3-20170627 6/27/2017 1' bgs	validated PP4-20170628 6/28/2017 2' bgs	validated PP5-20170628 6/28/2017 2' bgs	validated PP6-20170628 6/28/2017 2' bgs	validated PP7-20170628 6/28/2017 1.5' bgs	validated PP8-20170629 6/29/2017 1.5' bgs
VOCs										
1,2,4-Trimethylbenzene	52	3.6	0.0002 J	0.0053 U	0.066	0.048 U	0.0021 J	0.00032 J	0.0054 U	0.0043 UJ
Acetone	100	0.05	0.008 J	0.0086 J	0.045 J	0.097 U	0.079	0.12	0.014	0.0086 UJ
Xylenes, Total	100	1.6	0.0022 U	0.0021 U	0.14	0.0019 U	0.00046 J	0.00052 J	0.0022 U	0.0017 UJ

Compound	NYSDEC Part 375 Restricted Residential Use	NYSDEC Part 375 Groundwater	validated NORTH WALL-6/28/2017 3' bgs	validated EAST WALL-6/28/2017 4' bgs	validated SOUTH WALL-6/28/2017 4' bgs	validated WEST WALL-6/28/2017 3' bgs	validated B-1-20170628 6/28/2017 6' bgs	validated B-2-20170628 6/28/2017 6' bgs
VOCs								
1,2,4-Trimethylbenzene	52	3.6	0.00018 J	0.0049 U	0.034 U	0.0046 U	5.4	0.0043 U
Acetone	100	0.05	0.097	0.059	0.059	0.043	0.32 J	0.042
Xylenes, Total	100	1.6	0.00056 J	0.002 U	0.014 U	0.0018 U	1.7	0.0017 U

Notes:
concentrations in mg/kg
U qualifier: Non-detected (concentration is below the laboratory reporting limit).
J qualifier: Estimated value.

Table 6: Remaining Groundwater Exceedances
904 Burke Avenue, Bronx, New York
BCP Site #C203032

Compound	NY AWQS	validated MW-1 6/12/2017	validated MW-1 6/23/2017	validated MW-1 8/8/2017	validated MW-2 6/12/2017	validated MW-2 6/23/2017	validated MW-2 8/8/2017	validated MW-3 6/12/2017	validated MW-3 6/23/2017	validated MW-3 8/8/2017	validated MW-4 6/12/2017	validated MW-4 6/23/2017	validated MW-4 8/8/2017	validated MW-5 6/12/2017	validated MW-5 6/23/2017	validated MW-5 8/8/2017
Inorganics																
Sulfate	250,000	800,000	660,000	950,000	15,000	880,000	200,000	6,900 U	15,000	1,100,000	1,600 U	2,300,000	1,200,000	1,800 U	2,200,000	920,000
VOCs																
1,2,4,5-Tetramethylbenzene	5	2 U	2 U	2 U	7.8	0.6 J	20	4 U	4.3	5.9	14	8 U	6.4	35	2 U	22
1,2,4-Trimethylbenzene	5	2.5 U	2.5 U	2.5 U	27	2.5 U	200	5 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	510	2.5 U	470
1,2-Dichloroethane	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.32 J	2 U	1 U	0.5 U	0.5 U	0.5 U	4.4	0.5 U	5 U	0.5 U	5 U
1,2-Dichloropropane	1	1 U	1 U	1 U	1 U	1 U	4 U	2 U	1 U	1 U	1 U	2.2 J	1 U	10 U	1 U	10 U
1,3,5-Trimethylbenzene	5	2.5 U	2.5 U	2.5 U	7.5	2.5 U	50	5 U	2.5 U	2.5 U	2 J	10 U	2.5 U	100	2.5 U	48
2-Butanone	50	5 U	5 U	5 U	5 U	5 U	20 U	10 U	5 U	5 U	5 U	120	5 U	50 U	16	50 U
Acetone	50	5 U	5 U	5 U	5 U	65	11 J	10 U	1.5 J	2.3 J	6	630	44	50 U	200	50 U
Acrylonitrile	5	5 U	5 U	5 U	5 U	5 U	20 U	10 U	5 U	5 U	5 U	20 U	5 U	50 U	5 U	50 U
Benzene	1	0.5 U	0.5 U	0.5 U	0.19 J	0.61	2 U	1 U	0.49 J	0.5 U	31	33	11	360	0.21 J	640
Bromomethane	5	2.5 U	2.5 U	2.5 U	2.5 U	5.5	10 U	5 U	2.5 U	2.5 U	2.5 U	22	2.5 U	25 U	2.4 J	25 U
Chloroethane	5	2.5 U	2.5 U	2.5 U	2.5 U	9	10 U	5 U	2.5 U	0.9 J	2.5 U	44	2.5 U	25 U	2.5 U	25 U
Chloromethane	5	2.5 U	2.5 U	2.5 U	2.5 U	45	10 U	5 U	2.5 U	2.5 U	2.5 U	310	4.9	25 U	16	25 U
Ethylbenzene	5	2.5 U	2.5 U	2.5 U	11	12	280	5 U	2.5 U	2.5 U	9.6	10 U	2.9	500	2.5 U	600
Isopropylbenzene	5	2.5 U	2.5 U	2.5 U	2.2 J	2.5 U	6.3 J	5 U	1.2 J	1.7 J	6.1	10 U	2.5	32	2.5 U	21 J
Methyl tert butyl ether	10	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	10 U	1.7 J	1.9 J	16	25	10 U	14	25 U	38	25 U
n-Butylbenzene	5	2.5 U	2.5 U	2.5 UJ	0.84 J	2.5 U	10 UJ	5 U	2.5 U	2.5 UJ	2.3 J	10 U	0.93 J	25 U	2.5 U	25 UJ
n-Propylbenzene	5	2.5 U	2.5 U	2.5 U	2.9	2.5 U	15	5 U	1.2 J	2.5 U	8.8	10 U	4.2	66	2.5 U	46
Naphthalene	10	2.8 J	2.5 U	2.5 U	16 J	3.6	87	5.3 J	1.2 J	2.5 U	11	10 U	1.7 J	180 J	2.5 U	190
o-Xylene	5	2.5 U	2.5 U	2.5 U	12	2.5 U	200	5 U	2.5 U	2.5 U	3.3	10 U	2.5 U	45	2.5 U	50
p/m-Xylene	5	2.5 U	2.5 U	2.5 U	21	2.5 U	650	5 U	2.5 U	2.5 U	17	10 U	2.2 J	610	2.5 U	540
sec-Butylbenzene	5	2.5 U	2.5 U	2.5 UJ	0.71 J	2.5 U	10 UJ	5 U	0.73 J	1.2 J	2.9	10 U	2.2 J	25 U	2.5 U	25 UJ
Toluene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	10 U	5 U	2.5 U	2.5 U	2.8	10 U	2.5 U	62	2.5 U	28
Xylenes, Total	5	2.5 U	2.5 U	2.5 U	33	2.5 U	850	5 U	2.5 U	2.5 U	20	10 U	2.2 J	660	2.5 U	590

Table 6: Summary of Groundwater Sampling Results
904 Burke Avenue, Bronx, New York
BCP Site #C203032

Compound	NY AWQS	validated MW-7a 6/12/2017	validated MW-7a 6/23/2017	validated MW-7a 8/8/2017	validated MW-10 6/12/2017	validated MW-10 6/23/2017	validated MW-10 8/8/2017	validated MW-13 6/12/2017	validated MW-13 6/26/2017	validated MW-13 8/8/2017
Inorganics										
Sulfate	250,000	10,000 U	17,000	1,400 U	5,700 U	22,000	25,000	35,000	34,000	15,000
VOCs										
1,2,4,5-Tetramethylbenzene	5	61	14	66	2 U	2 U	2 U	62	88	30
1,2,4-Trimethylbenzene	5	52	6.2	59	2.5 U	2.5 U	2.5 U	11	19	2.7
1,2-Dichloroethane	0.6	0.5 U	1.2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	1	1 U	2.5 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	5	14	1.9 J	28	2.5 U	2.5 U	2.5 U	3.8	5.4	1.5 J
2-Butanone	50	5 U	12 U	20 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	50	5 U	12	20 U	5 U	5 U	5 U	5 U	12	5 U
Acrylonitrile	5	5 U	12 U	20 U	5 U	5 U	5 U	23	5 U	5 U
Benzene	1	0.49 J	1.2 U	0.68 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	5	2.5 U	6.2 U	10 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U
Chloroethane	5	2.5 U	6.2 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chloromethane	5	2.5 U	6.2 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U
Ethylbenzene	5	91	23	120	2.5 U	2.5 U	2.5 U	22	36	13
Isopropylbenzene	5	24	4.8 J	35	2.5 U	2.5 U	2.5 U	20	28	10
Methyl tert butyl ether	10	2.5 U	6.2 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
n-Butylbenzene	5	12	3.7 J	17 J	2.5 U	2.5 U	2.5 UJ	8.6	13	3.1 J
n-Propylbenzene	5	76	24	100	2.5 U	2.5 U	2.5 U	51	89	23
Naphthalene	10	42 J	9.9	63	0.71 J	1.2 J	2.5 U	24 J	36	19
o-Xylene	5	0.7 J	6.2 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
p/m-Xylene	5	49	10	83	2.5 U	2.5 U	2.5 U	7.9	7.2	1.2 J
sec-Butylbenzene	5	8.7	2.4 J	12 J	2.5 U	2.5 U	2.5 UJ	10	13	4.1 J
Toluene	5	1.2 J	6.2 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Xylenes, Total	5	50 J	10	83	2.5 U	2.5 U	2.5 U	7.9	7.2	1.2 J

Notes:
concentrations in ug/l
6/12/2017: pre-injection round of groundwater sampling
6/15 and 6/16/2017: ISCO reagent injections.
6/23/2017: post-injection round 1 of groundwater sampling (1 week post injections).
8/8/2017: post-injection round 2 of groundwater sampling (approximately 7 weeks post injections).
U qualifier: Non-detected (concentration is below the laboratory reporting limit).
J qualifier: Estimated value.

Table 7: Summary of Soil Vapor Sampling Results
904 Burke Avenue, Bronx, New York
BCP Site #C203032

	validated	validated	validated	validated	validated	validated	validated	validated
Analytical Parameter	**SG-9-42641** **9/29/2016**	**SG-9-20170808** **8/8/2017**	**SG-10-42641** **9/29/2016**	**SG-11-42641** **9/29/2016**	**SG-11-20170808** **8/8/2017**	**SG-12-42641** **9/29/2016**	**SG-13-42641** **9/29/2016**	**Outside Ambient-42641** **9/29/2016**
Volatile Organics								
1,1,2-trichloroethane	5.46 U	2.18 U	2.73 U	90 U	163 U	726	89 U	1.09 U
1,2,4-trimethylbenzene	6.54	1.97 U	5.6	81.1 U	147 U	377 U	885	1.26
1,3,5-trimethylbenzene	4.92 U	1.97 U	2.46 U	81.1 U	147 U	377 U	245	0.983 U
1,3-Dichlorobenzene	6.01 U	8.78	3.01 U	99.2 U	179 U	461 U	98 U	1.2 U
1,4-Dichlorobenzene	26.3	2.4 U	26.5	99.2 U	179 U	461 U	98 U	1.28
2,2,4-Trimethylpentane	321	148	7.99	106,000	74,700	2,600,000	88,300	2.38
2-Butanone	98.5	98.8	77.6	122 U	219 U	566 U	120 U	1.47 U
2-Hexanone	14.5	2.79	19.7	67.6 U	122 U	314 U	67 U	0.82 U
4-Ethyltoluene	4.92 U	1.97 U	2.46 U	81.1 U	147 U	377 U	243	0.983 U
4-Methyl-2-Pentanone	10.2 U	4.1 U	5.12 U	169 U	305 U	3,690	167 U	2.05 U
Acetone	2,520	2,240	1,380	12,400	354 U	174,000	194 U	11.4
Benzene	3.26	11.4	2.8	52.7 U	95.2 U	245 U	235	1.73
Carbon Disulfide	15.9	13.2	2.27	51.4 U	92.8 U	239 U	91.2	0.623 U
Chloroform	4.88 U	17.3	2.44 U	80.6 U	146 U	375 U	79.6 U	0.977 U
Chloromethane	2.07 U	1.92	1.03 U	34.1 U	61.5 U	158 U	33.7 U	1.32
Cyclohexane	3.44 U	1.67	2.93	209	103 U	264 U	1,860	7.16
Dichlorofluoromethane	4.94 U	1.98 U	2.47 U	81.6 U	147 U	379 U	80.6 U	2.12
Ethyl Alcohol	47.1 U	90.8	23.6 U	778 U	1,400 U	3,620 U	769 U	9.42 U
Ethylbenzene	13.8	2.81	6.43	71.7 U	129 U	333 U	70.8 U	0.899
Heptane	7.17	7.38	8.2	76.2	122 U	314 U	2,990	1.39
Isopropanol	6.15 U	18.5	3.07 U	102 U	183 U	472 U	100 U	1.5
N-Hexane	4.65	10.1	5.85	659	170	670	10,600	1.33
O-Xylene	12.9	3.07	7.51	71.7 U	129 U	333 U	433	1.16
P/M-Xylene	35.8	9.08	22.7	143 U	258 U	665 U	517	2.91
Tert-Butyl Alcohol	16.9	103	18.5	125 U	226 U	582 U	124 U	1.52 U
Tetrachloroethene	6.78 U	2.71 U	80	112 U	202 U	520 U	111 U	1.36 U
Tetrahydrofuran	7.37 U	8.35	6.99	122 U	219 U	566 U	120 U	1.47 U
Toluene	21.8	36.1	27.8	62.2 U	112 U	289 U	67	5.31
Trichlorofluoromethane	5.62 U	2.25 U	2.81 U	92.7 U	167 U	431 U	92 U	1.69
Vinyl Chloride	2.56 U	1.02 U	1.28 U	42.2 U	76.2 U	196 U	49	0.511 U
Tracer Gas								
Helium	0.205 U	0.197 U	0.199 U	0.165 U	0.186 U	0.191 U	0.337	N/A

Notes:

With the exception of helium, all results in micrograms per cubic meter of air (ug/m^3). Helium results are expressed in percent.

N/A: Not applicable

U qualifier: Non-detected (concentration is below the laboratory reporting limit).

J qualifier: Estimated value.

Table 8: Remedial System Sampling Requirements and Schedule
904 Burke Avenue, Bronx, New York
BCP Site #C203032

Well	Location/Purpose	Analytes	Schedule
MW-1	On-site/Source area monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-2	Off-site/Downgradient monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-3	On-site/Western plume perimeter monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-4	On-site/Source area monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-5	On-site/Source area monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-7A	Off-site/Downgradient monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-9*	On-site/Source area monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-10	On-site/Southern plume perimeter monitoring	Method 8260 VOCs	Quarterly for first 2 years
MW-13	On-site/Western plume perimeter monitoring	Method 8260 VOCs	Quarterly for first 2 years

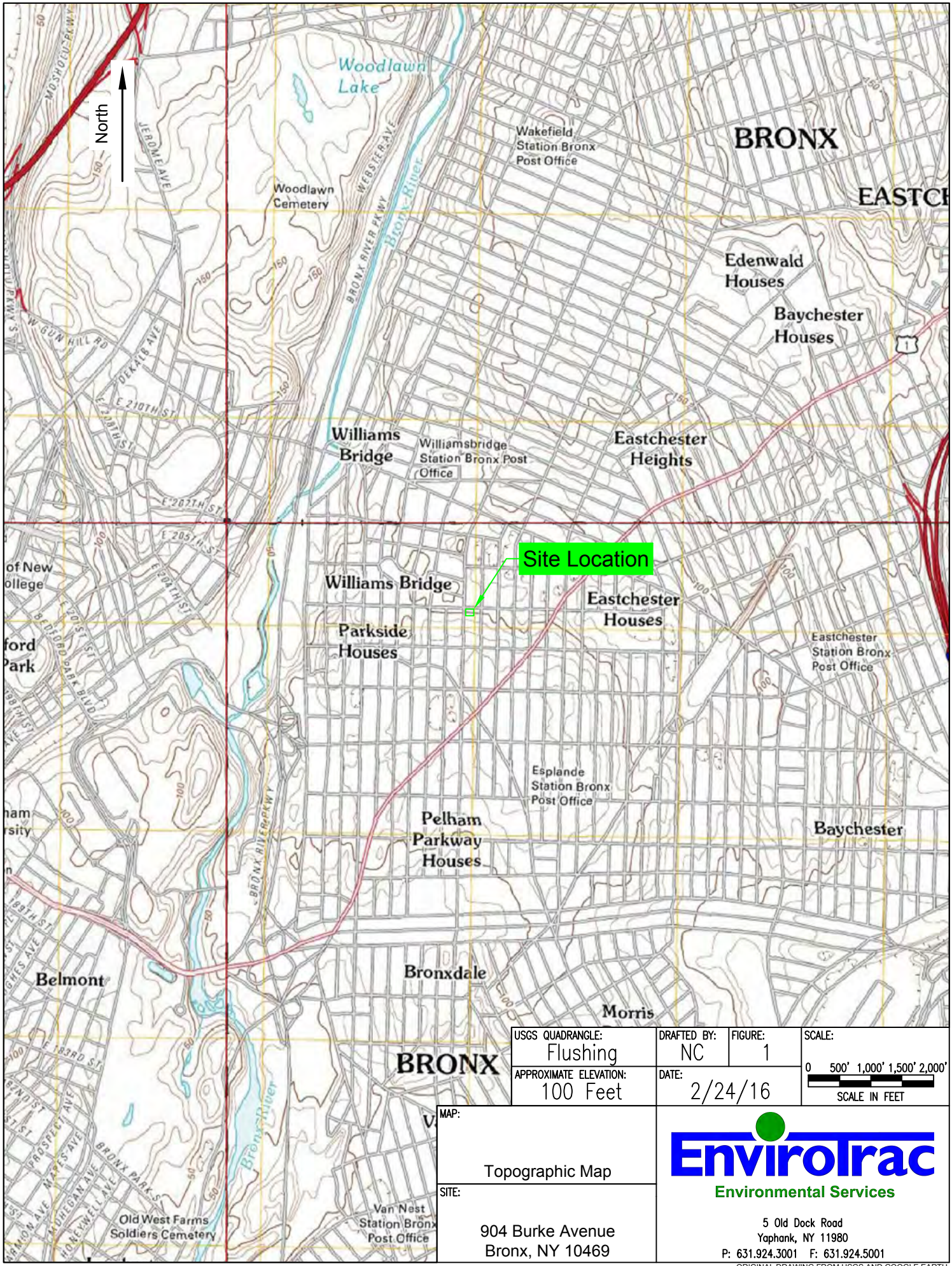
Notes:
*MW-9 is to be included in the sampling event should no LNAPL be present in the well. If LNAPL is present at MW-9 at the time of the sampling event, the well is not to be sampled.

Table 9: Schedule of Interim Monitoring/Inspection Reports
904 Burke Avenue, Bronx, New York
BCP Site #C203032

Task/Report	Reporting Frequency*
Groundwater Monitoring Report	Quarterly
Periodic Review Report	Annually, or as otherwise determined by the Department.

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

FIGURES



USGS QUADRANGLE:	DRAFTED BY:	FIGURE:	SCALE:
Flushing	NC	1	0 500' 1,000' 1,500' 2,000' SCALE IN FEET
APPROXIMATE ELEVATION: 100 Feet	DATE: 2/24/16		

MAP: Topographic Map

SITE: 904 Burke Avenue Bronx, NY 10469

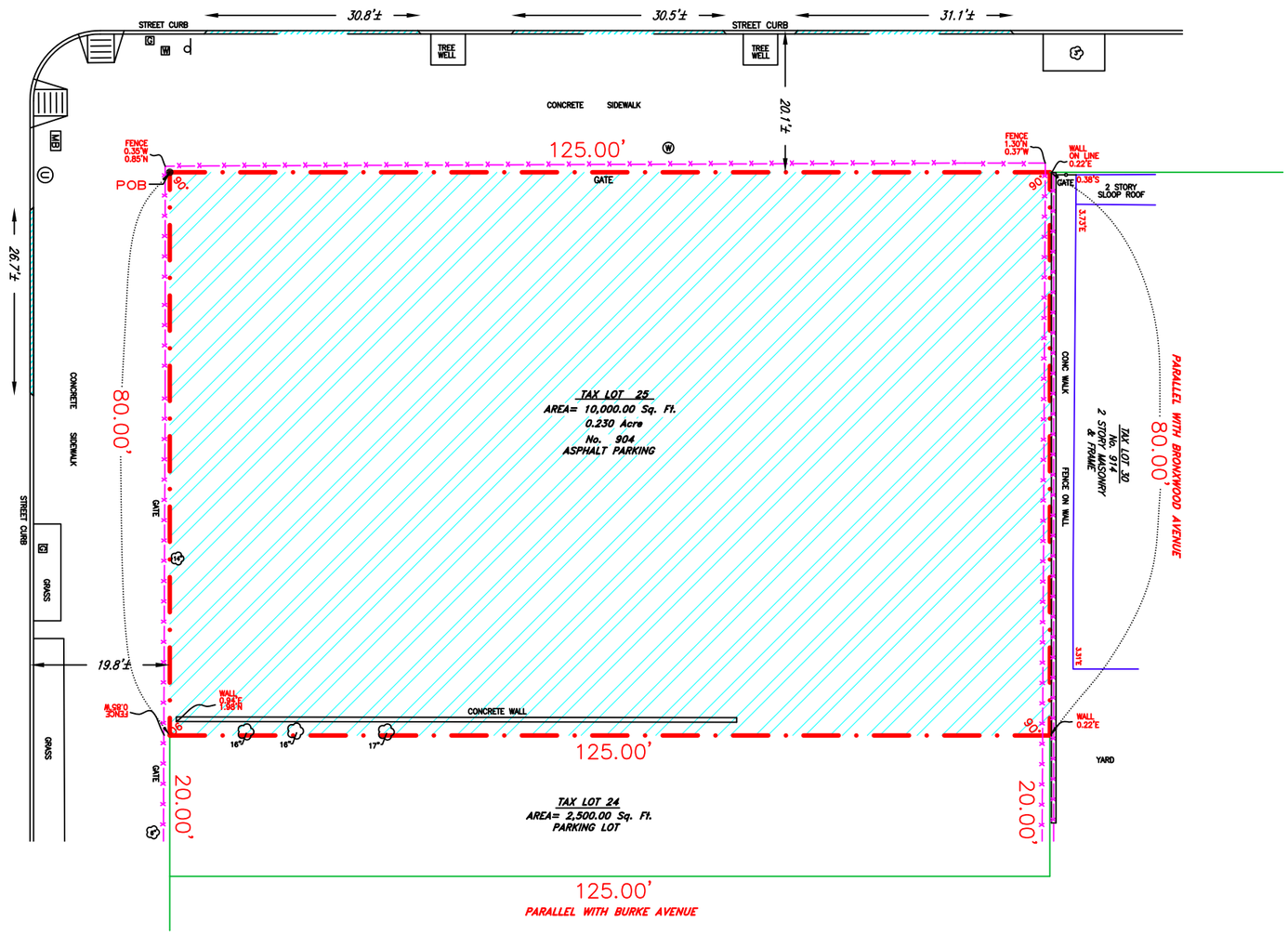
EnviroTrac
Environmental Services
5 Old Dock Road
Yaphank, NY 11980
P: 631.924.3001 F: 631.924.5001

ORIGINAL DRAWING FROM USGS AND GOOGLE EARTH.

north

BURKE AVENUE (100' WIDE) (MORRIS AVENUE) (59.8'± BETWEEN CURBS)

BRONXWOOD AVENUE (100' WIDE) (60.3'± BETWEEN CURBS)



LEGEND:

- BROWNFIELD CLEANUP PROGRAM SITE BOUNDARY
- CHAIN LINK FENCE

EnviroTrac
ENVIRONMENTAL SERVICES
5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
PHONE: (631)924-3001 FAX: (631)924-5001

0 20
SCALE IN FEET

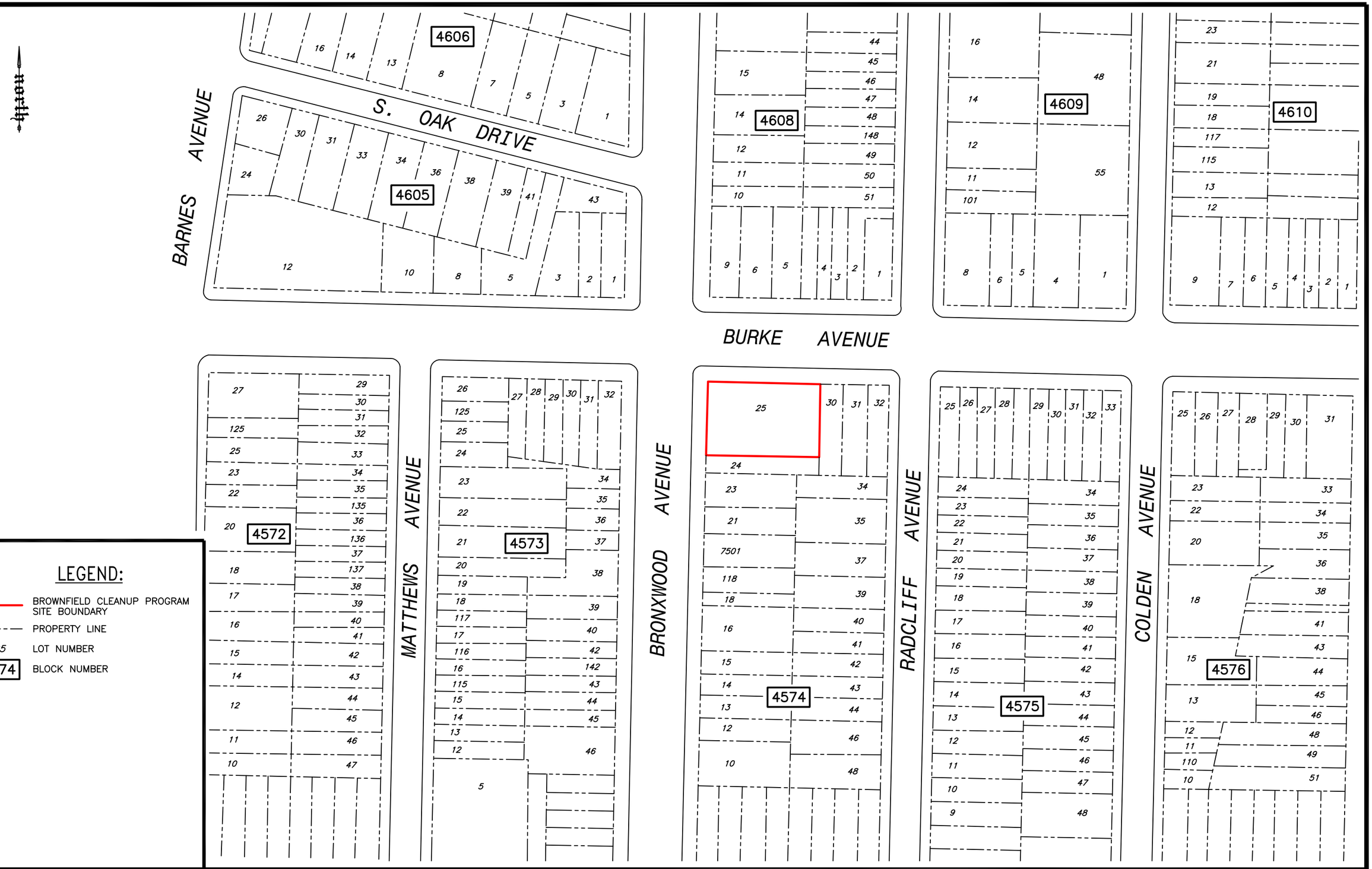
DATE: 8/3/2017

REVISED BY: BS

904 BURKE AVENUE
BRONX, NEW YORK

SITE LOCATION AND BOUNDARY MAP

FIGURE # 2



LEGEND:

- BROWNFIELD CLEANUP PROGRAM SITE BOUNDARY
- PROPERTY LINE
- 25 LOT NUMBER
- 4574 BLOCK NUMBER

EnviroTrac
ENVIRONMENTAL SERVICES
5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
PHONE: (631)924-3001 FAX: (631)924-5001

0 100
SCALE IN FEET

DATE: 8/3/2017

REVISED BY: BS

904 BURKE AVENUE
BRONX, NEW YORK

NEW YORK CITY TAX MAP

FIGURE # 3

north

BURKE AVENUE

GENERAL GROUNDWATER FLOW DIRECTION

BRONXWOOD AVENUE

RADCLIFF AVENUE

CONCRETE SIDEWALK

MW-7A

MW-2

GATE

MW-13

MW-1

GATE

MW-3

MW-4

MW-5

MW-9

MW-10

FORMER AUTO REPAIR SHOP

RETAINING WALL

GATE

LEGEND:

- BROWNFIELD CLEANUP PROGRAM SITE BOUNDARY
- CHAIN LINK FENCE
- MONITORING WELL

EnviroTrac
ENVIRONMENTAL SERVICES
5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
PHONE: (631)924-3001 FAX: (631)924-5001

0 20
SCALE IN FEET

DATE: 8/8/2017

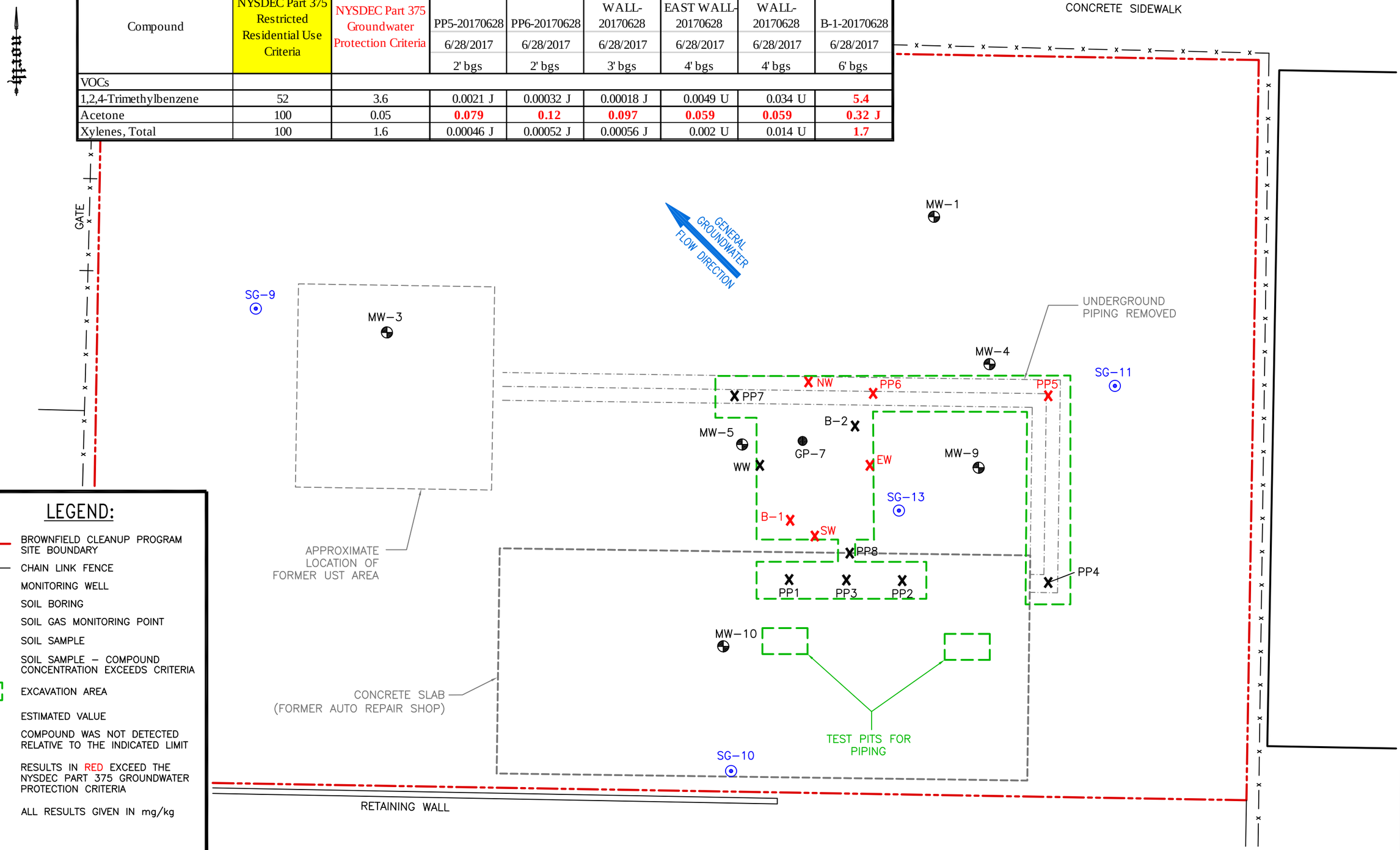
REVISED BY: BS

904 BURKE AVENUE
BRONX, NEW YORK

GROUNDWATER FLOW DIRECTION

FIGURE #
4

Compound	NYSDEC Part 375 Restricted Residential Use Criteria	NYSDEC Part 375 Groundwater Protection Criteria	PP5-20170628	PP6-20170628	NORTH WALL-20170628	EAST WALL-20170628	SOUTH WALL-20170628	B-1-20170628
			6/28/2017	6/28/2017	6/28/2017	6/28/2017	6/28/2017	6/28/2017
			2' bgs	2' bgs	3' bgs	4' bgs	4' bgs	6' bgs
VOCs								
1,2,4-Trimethylbenzene	52	3.6	0.0021 J	0.00032 J	0.00018 J	0.0049 U	0.034 U	**5.4**
Acetone	100	0.05	**0.079**	**0.12**	**0.097**	**0.059**	**0.059**	**0.32 J**
Xylenes, Total	100	1.6	0.00046 J	0.00052 J	0.00056 J	0.002 U	0.014 U	**1.7**



LEGEND:

- BROWNFIELD CLEANUP PROGRAM SITE BOUNDARY
- CHAIN LINK FENCE
- MONITORING WELL
- SOIL BORING
- SOIL GAS MONITORING POINT
- SOIL SAMPLE
- SOIL SAMPLE – COMPOUND CONCENTRATION EXCEEDS CRITERIA
- EXCAVATION AREA
- J — ESTIMATED VALUE
- U — COMPOUND WAS NOT DETECTED RELATIVE TO THE INDICATED LIMIT

RESULTS IN RED EXCEED THE NYSDEC PART 375 GROUNDWATER PROTECTION CRITERIA

ALL RESULTS GIVEN IN mg/kg

EnviroTrac
ENVIRONMENTAL SERVICES
5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
PHONE: (631)924-3001 FAX: (631)924-5001

0 10
SCALE IN FEET

DATE: 8/9/2017

REVISED BY: BS

904 BURKE AVENUE
BRONX, NEW YORK

SUMMARY OF SOIL RESULTS EXCEEDING REGULATORY CRITERIA

FIGURE # 5

north

WELL ID: MW–7A DATE SAMPLED: 8/8/2017	NY AWQS	RESULT
COMPOUND		
1,2,4,5–TETRAMETHYLBENZENE	5	66
1,2,4–TRIMETHYLBENZENE	5	59
1,3,5–TRIMETHYLBENZENE	5	28
ETHYLBENZENE	5	120
ISOPROPYLBENZENE	5	35
n–BUTYLBENZENE	5	17 J
n–PROPYLBENZENE	5	100
NAPHTHALENE	10	63
sec–BUTYLBENZENE	5	12 J
TOTAL XYLENES	5	83

WELL ID: MW–2 DATE SAMPLED: 8/8/2017	NY AWQS	RESULT
COMPOUND		
1,2,4,5–TETRAMETHYLBENZENE	5	20
1,2,4–TRIMETHYLBENZENE	5	200
1,3,5–TRIMETHYLBENZENE	5	50
ETHYLBENZENE	5	280
ISOPROPYLBENZENE	5	6.3 J
n–PROPYLBENZENE	5	15
NAPHTHALENE	10	87
TOTAL XYLENES	5	850

WELL ID: MW–13 DATE SAMPLED: 8/8/2017	NY AWQS	RESULT
COMPOUND		
1,2,4,5–TETRAMETHYLBENZENE	5	30
ETHYLBENZENE	5	13
ISOPROPYLBENZENE	5	10
n–PROPYLBENZENE	5	23
NAPHTHALENE	10	19

WELL ID: MW–3 DATE SAMPLED: 8/8/2017	NY AWQS	RESULT
COMPOUND		
1,2,4,5–TETRAMETHYLBENZENE	5	5.9
METHYL TERT BUTYL ETHER	10	16

WELL ID: MW–4 DATE SAMPLED: 8/8/2017	NY AWQS	RESULT
COMPOUND		
1,2,4,5–TETRAMETHYLBENZENE	5	6.4
BENZENE	1	11
METHYL TERT BUTYL ETHER	10	14

WELL ID: MW–5 DATE SAMPLED: 8/8/2017	NY AWQS	RESULT
COMPOUND		
1,2,4,5–TETRAMETHYLBENZENE	5	22
1,2,4–TRIMETHYLBENZENE	5	470
1,3,5–TRIMETHYLBENZENE	5	48
BENZENE	1	640
ETHYLBENZENE	5	600
ISOPROPYLBENZENE	5	21 J
n–PROPYLBENZENE	5	46
NAPHTHALENE	10	190
TOLUENE	5	28
TOTAL XYLENES	5	590

BURKE AVENUE

BRONXWOOD AVENUE

RADCLIFF AVENUE

MW–7A

MW–2

MW–13

MW–1

MW–3

MW–4

MW–5

MW–9

MW–10

INSTALL SITE–WIDE COVER/CAP

AREA OF INCREASED SULFATE CONCENTRATIONS DUE TO REAGENT INJECTIONS

CONCRETE SIDEWALK

GATE

UNDERGROUND PIPING REMOVED

APPROXIMATE LOCATION OF FORMER UST AREA

RETAINING WALL

CONCRETE SLAB (FORMER AUTO REPAIR SHOP)

LEGEND:

- BROWNFIELD CLEANUP PROGRAM SITE BOUNDARY
- CHAIN LINK FENCE
- MONITORING WELL
- J ESTIMATED VALUE

NOTES:

ONLY CONCENTRATIONS WHICH EXCEED THE NY AWQS ARE SHOWN.

CONCENTRATIONS ARE IN µg/L.

MW–1 AND MW–10 HAD NO VOC EXCEEDANCES.

MW–9 WAS NOT SAMPLED DUE TO THE PRESENCE OF LIGHT NON–AQUEOUS PHASE LIQUID (LNAPL).

EnviroTrac
ENVIRONMENTAL SERVICES
5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
PHONE: (631)924–3001 FAX: (631)924–5001

0 20
SCALE IN FEET

DATE: 9/11/2017

REVISED BY: BS

904 BURKE AVENUE
BRONX, NEW YORK

REMAINING GROUNDWATER EXCEEDANCES

FIGURE # 6

north

SG–12	9/29/2016	8/8/2017
TOTAL VOCs	2,779,086	
2,2,4–TRIMETHYLPENTANE ACETONE 4–METHYL–2–PENTANONE	2,600,000 174,000 3,690	NOT SAMPLED
% OF TOTAL	99.9%	

SG–13	9/29/2016	8/8/2017
TOTAL VOCs	106,515	
2,2,4–TRIMETHYLPENTANE N–HEXANE HEPTANE	88,300 10,600 2,990	NOT SAMPLED
% OF TOTAL	95.7%	

SG–11	9/29/2016	8/8/2017
TOTAL VOCs	119,344	74,870
2,2,4–TRIMETHYLPENTANE ACETONE 2–BUTANONE	106,000 12,400 659	74,700 354 U 170
% OF TOTAL	99.8%	100%

OUTSIDE AMBIENT	9/29/2016	8/8/2017
TOTAL VOCs	45	
ACETONE CYCLOHEXANE TOLUENE	11.4 7.16 5.31	NOT SAMPLED
% OF TOTAL	53.2%	

SG–9	9/29/2016	8/8/2017
TOTAL VOCs	3,119	2,883
ACETONE 2,2,4–TRIMETHYLPENTANE 2–BUTANONE	2,520 321 98.5	2,240 148 98.8
% OF TOTAL	94.2%	88.8%

SG–10	9/29/2016	8/8/2017
TOTAL VOCs	1,709	
ACETONE TETRACHLOROETHENE 2–BUTANONE	1,380 80 77.6	NOT SAMPLED
% OF TOTAL	90.0%	

BURKE AVENUE

BRONXWOOD AVENUE

RADCLIFF AVENUE

CONCRETE SIDEWALK

GATE

GATE

GATE

SG–9

SG–10

SG–11

SG–12

SG–13

AMBIENT AIR SAMPLE

RETAINING WALL

LEGEND:

- BROWNFIELD CLEANUP PROGRAM SITE BOUNDARY
- CHAIN LINK FENCE
- SOIL GAS MONITORING POINT

SAMPLING LOCATION
TOTAL VOCs (µg/m3)
THREE HIGHEST COMPOUND CONCENTRATIONS COMPOUND #1 (µg/m3) COMPOUND #2 (µg/m3) COMPOUND #3 (µg/m3)
% OF TOTAL

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ENVIRONMENTAL SERVICES
5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
PHONE: (631)924–3001 FAX: (631)924–5001

0 20
SCALE IN FEET

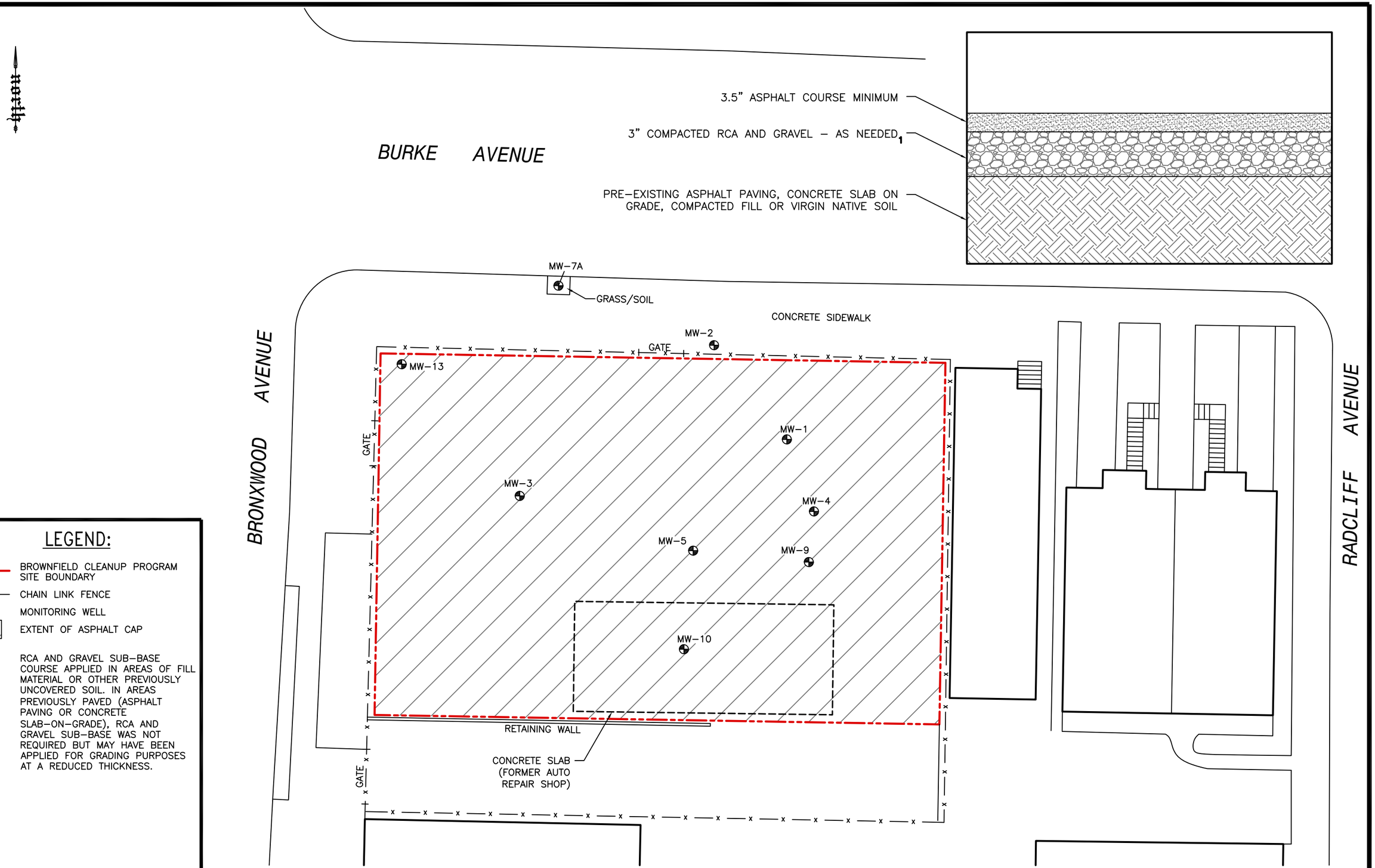
DATE: 10/11/2017

REVISED BY: BS

904 BURKE AVENUE
BRONX, NEW YORK

SOIL VAPOR SAMPLING LOCATIONS AND RESULTS

FIGURE # 7



LEGEND:

- BROWNFIELD CLEANUP PROGRAM SITE BOUNDARY
- CHAIN LINK FENCE
- MONITORING WELL
- EXTENT OF ASPHALT CAP

1 RCA AND GRAVEL SUB–BASE COURSE APPLIED IN AREAS OF FILL MATERIAL OR OTHER PREVIOUSLY UNCOVERED SOIL. IN AREAS PREVIOUSLY PAVED (ASPHALT PAVING OR CONCRETE SLAB–ON–GRADE), RCA AND GRAVEL SUB–BASE WAS NOT REQUIRED BUT MAY HAVE BEEN APPLIED FOR GRADING PURPOSES AT A REDUCED THICKNESS.

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ENVIRONMENTAL SERVICES
5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
PHONE: (631)924–3001 FAX: (631)924–5001

0 20
SCALE IN FEET

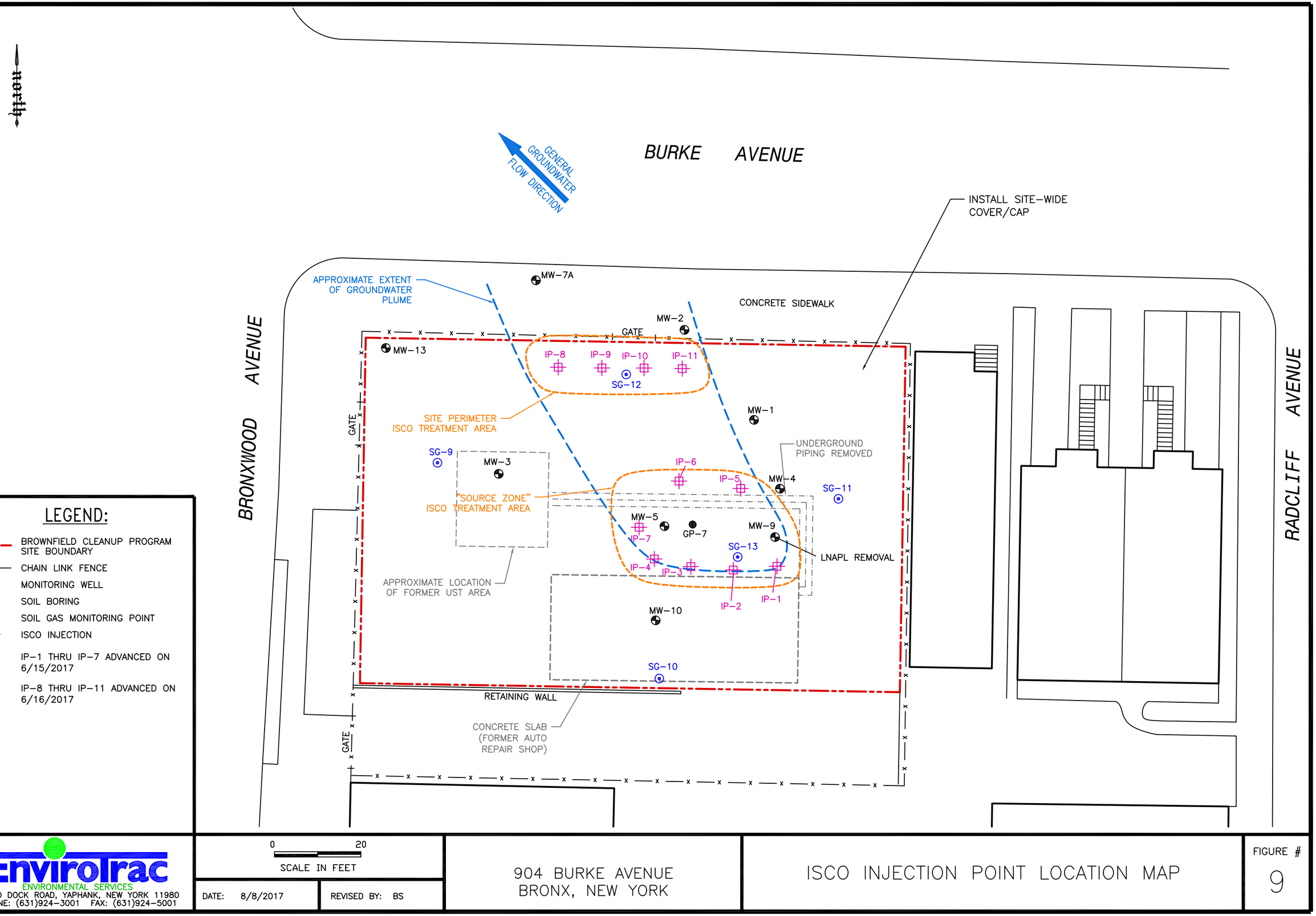
DATE: 10/20/2017

REVISED BY: BS

904 BURKE AVENUE
BRONX, NEW YORK

AS–BUILT:
ENGINEERING COVER SYSTEM LAYOUT

FIGURE #
8



LEGEND:

- BROWNFIELD CLEANUP PROGRAM SITE BOUNDARY
- CHAIN LINK FENCE
- MONITORING WELL
- SOIL BORING
- SOIL GAS MONITORING POINT
- ISCO INJECTION

IP-1 THRU IP-7 ADVANCED ON 6/15/2017

IP-8 THRU IP-11 ADVANCED ON 6/16/2017

EnviroTrac
ENVIRONMENTAL SERVICES
5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
PHONE: (631)924-3001 FAX: (631)924-5001

0 20
SCALE IN FEET

DATE: 8/8/2017

REVISED BY: BS

904 BURKE AVENUE
BRONX, NEW YORK

ISCO INJECTION POINT LOCATION MAP

FIGURE # 9

APPENDIX A – ENVIRONMENTAL EASEMENT

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

2017102401590001002153 17

REAL PROPERTY TRANSFER TAX COVER PAGE **PAGE 1 OF 1**

Document ID: 2017102401590001 Document Date: 10-11-2017 Preparation Date: 10-30-2017
Document Type: EASEMENT

PARTIES

FIRST GRANTOR/SELLER:	**FIRST GRANTEE/BUYER:**
H B BRONX REALTY LLC	NYSDEC
3333 BOSTON ROAD	625 BROADWAY
BRONX, NY 10469	ALBANY, NY 12233

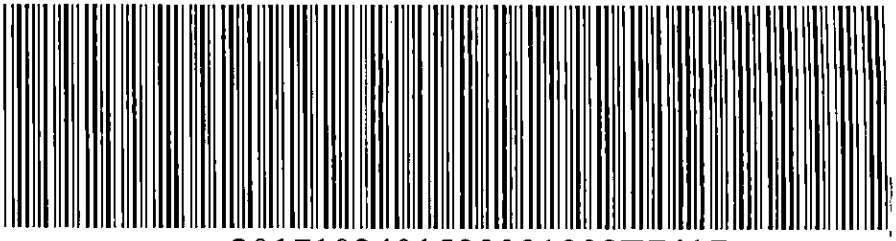
ASSOCIATED TAX FORM ID: 201710240042910102

RPTT SUPPORTING DOCUMENTS SUBMITTED:

Page Count

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.



2017102401590001002E7417

RECORDING AND ENDORSEMENT COVER PAGE **PAGE 1 OF 10**

Document ID: 2017102401590001 Document Date: 10-11-2017 Preparation Date: 10-30-2017
Document Type: EASEMENT
Document Page Count: 9

PRESENTER:	**RETURN TO:**
BURKE AVE EASEMENT 3305 BOSTON ROAD BRONX, NY 10469 917-693-4249 CONTRERASLMAC4@GMAIL.COM	BURKE AVE EASEMENT 3305 BOSTON ROAD BRONX, NY 10469 917-693-4249 CONTRERASLMAC4@GMAIL.COM

PROPERTY DATA

Borough	Block	Lot	Unit	Address
BRONX	4574	25	Entire Lot	910 BURKE AVENUE

Property Type: PARKING SPACE Easement

CROSS REFERENCE DATA

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

PARTIES

GRANTOR/SELLER:	**GRANTEE/BUYER:**
H B BRONX REALTY LLC 3333 BOSTON ROAD BRONX, NY 10469	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:	$	82.00
Affidavit Fee:	$	0.00

Filing Fee:		
	$	100.00
NYC Real Property Transfer Tax:		
	$	0.00
NYS Real Estate Transfer Tax:		
	$	0.00

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

THIS INDENTURE made this 11th day of October 2017 between Owner(s) HB Bronx Realty, LLC, having an office at 3333 Boston Road, Bronx, New York 10469, County of Bronx, State of New York (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 904 Burke Avenue in the City of New York, County of Bronx 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 4574 Lot 25, being the same as that property conveyed to Grantor by deed dated March 24, 2004 and recorded in the City Register of the City of New York as CRFN # 2005000201149. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.230 +/- acres, and is hereinafter more fully described in the Land Title Survey dated May 24, 2017 prepared by Ramzan Alli, L.L.S. of NY Land Surveyor P.C., 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: W2-1072-05-07, 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 b 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: C203032
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.

Remainder of Page Intentionally Left Blank

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

HB Bronx Realty, LLC:

By: _____

Print Name: Harold Bendell

Title: Member Date: 9-25-17

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF)

On the 25th day of Sept., in the year 20 17, before me, the undersigned, personally appeared Harold Bendell, 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.

_____
Notary Public - State of New York

ERIC L. KELTZ
Notary Public, State of New York
Registration #02KE6083924
Qualified In Queens County
Commission Expires November 25, 2018

SEAL

State of New York, County of Queens SS:

On the day of in the year before me, the undersigned,
Personally appeared HAROLD BENDELL

Personally know to me or proved to me on the basis of satisfactory evidence to be the individual (s) whose name (s) is (are) subscribed to the within instrument and acknowledged to me that he/she/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) or the persona upon behalf of which the individual (s) acted, executed the instrument.

ROBERT COTTRELL
NOTARY PUBLIC STATE OF NEW YORK
NO. 01C04886219
QUALIFIED IN QUEENS COUNTY
COMMISSION EXPIRES MARCH 2, 2019

(signature and office of individual taking acknowledgment)

SEAL

TO BE USED ONLY WHEN THE ACKNOWLEDGMENT IS MADE OUTSIDE NEW YORK STATE

State (or District of Columbia, Territory, or Foreign Country) or SS:

On the day of in the year before me, the undersigned Personally appeared

Personally known to me or proved to me on the basis of satisfactory evidence to be the individual (s) whose name (s) is (are) subscribed to the within instrument and acknowledged to me that he/she/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, and that such individual made such appearance before the undersigned in the

_____ in
(insert the city or other political subdivision)

_____
(and insert the State or Country or other place the acknowledgment was taken)

(signature and office of individual taking acknowledgment)

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: _____
Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

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

On the 11th day of October, in the year 2017 before me, the undersigned, personally appeared Robert W. Schick, 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

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2018

SEAL

SCHEDULE "A" PROPERTY DESCRIPTION

904 Burke Ave Site

BCP Site Number C203032

Section 16, Block 4574, Lot 25

ALL that certain plot, piece or parcel of land situate lying and being in the Borough of Bronx, County of Bronx, City and State of New York, bounded and described as follows:

BEGINNING at a point formed by the intersection of the east side of Bronxwood Avenue and the south side of Burke Avenue;

RUNNING THENCE easterly along the south side of Burke Avenue a distance of 125.00 feet to a point;

THENCE south parallel with the Bronxwood Avenue a distance of 80.00 feet to a point;

THENCE west parallel with Burke Avenue a distance of 125.00 feet to a point;

THENCE north along the east side of Bronxwood Avenue a distance of 80.00 feet to the point and place of BEGINNING.

Said premises being more commonly known as 904 Burke Avenue, Bronx, New York

NEW YORK CITY DEPARTMENT OF FINANCE

NYC - RPT Finance

REAL PROPERTY TRANSFER TAX RETURN

(Pursuant to Title 11, Chapter 21, NYC Administrative Code)

CITY REGISTER

OCT 2 4 2017

▲ DO NOT WRITE IN THIS SPACE ▲
FOR OFFICE USE ONLY

Instructions: If you are filing this form as part of a Non-Recorded Transfer, mail your completed RPT form to: NYC Dept. of Finance, Non-Recorded RPTT Return Processing, 66 John Street, 13th Floor, New York, NY 10038. See Instructions on page 17 of this form for further details.

GRANTOR

● Name: HB Bronx Realty LLC

● Grantor is a(n): (check one) ☐ individual ☐ partnership (see instructions) ☐ corporation ☑ single member LLC ☐ multiple member LLC (see instructions) ☐ other _____

Telephone Number:

● Permanent mailing address after transfer (number and street): 3333 Boston Rd.

● City and State: Bronx NY

Zip Code: 10469

● Single member's name if grantor is a single member LLC (see instructions): Harold Bendell

SOCIAL SECURITY NUMBER: ___ ■ ___ ■ ____

OR

EMPLOYER IDENTIFICATION NUMBER: 13 ■ 4158818

SINGLE MEMBER EIN OR SSN: 129360219

GRANTEE

● Name: The People of the State of New York

● Grantee is a(n): (check one) ☐ individual ☐ partnership (see instructions) ☐ corporation ☑ other _____ ☐ single member LLC ☐ multiple member LLC (see instructions)

Telephone Number:

● Permanent mailing address after transfer (number and street): NYSDEC 625 Broadway

● City and State: Albany NY

Zip Code: 12233

● Single member's name if grantee is a single member LLC (see instructions):

SOCIAL SECURITY NUMBER: ___ ■ ___ ■ ____

OR

EMPLOYER IDENTIFICATION NUMBER: 14 ■ 6013202

SINGLE MEMBER EIN OR SSN:

PROPERTY LOCATION

LIST EACH LOT SEPARATELY. ATTACH A RIDER IF ADDITIONAL SPACE IS REQUIRED

● Address (number and street)	Apt. No.	Borough	Block	Lot	# of Floors	Square Feet	● Assessed Value of Property
904 Burke Ave		Bronx	4574	25	N/A	10,000	1,000,000.

● DATE OF TRANSFER TO GRANTEE: 10/11/17

● PERCENTAGE OF INTEREST TRANSFERRED: 100 %

CONDITION OF TRANSFER. See Instructions

● Check (✓) all of the conditions that apply and fill out the appropriate schedules on pages 5-11 of this return. Additionally, Schedules1 and 2 **must** be completed for all transfers.

a. ☐.....Arms length transfer
b. ☐.....Transfer in exercise of option to purchase
c. ☐.....Transfer from cooperative sponsor to cooperative corporation
d. ☐.....Transfer by referee or receiver (complete Schedule A, page 5)
e. ☐.....Transfer pursuant to marital settlement agreement or divorce decree (complete Schedule I, page 9)
f. ☐.....Deed in lieu of foreclosure (complete Schedule C, page 6)
g. ☐.....Transfer pursuant to liquidation of an entity (complete Schedule D, page 6)
h. ☐.....Transfer from principal to agent, dummy, strawman or conduit or vice-versa (complete Schedule E, page 7)
i. ☐.....Transfer pursuant to trust agreement or will (attach a copy of trust agreement or will)
j. ☐.....Gift transfer not subject to indebtedness
k. ☐.....Gift transfer subject to indebtedness
l. ☐.....Transfer to a business entity in exchange for an interest in the business entity (complete Schedule F, page 7)
m. ☑.....Transfer to a governmental body
n. ☐.....Correction deed
o. ☐.....Transfer by or to a tax exempt organization (complete Schedule G, page 8).
p. ☐.....Transfer of property partly within and partly without NYC
q. ☐.....Transfer of successful bid pursuant to foreclosure
r. ☐.....Transfer by borrower solely as security for a debt or a transfer by lender solely to return such security
s. ☐.....Transfer wholly or partly exempt as a mere change of identity or form of ownership. Complete Schedule M, page 9)
t. ☐.....Transfer to a REIT or to a corporation or partnership controlled by a REIT. (Complete Schedule R, pages 10 and 11)
u. ☐.....Other transfer in connection with financing (describe): _____
v. ☐.....A grant or assignment of a leasehold interest in a tax-free NY area
w. ☑.....Other (describe): Conveyance of an easement

● TYPE OF PROPERTY (✓)

a. ☐ ..... 1-3 family house
b. ☐ ..... Individual residential condominium unit
c. ☐ ..... Individual cooperative apartment
d. ☐ ..... Commercial condominium unit
e. ☐ ..... Commercial cooperative
f. ☐ ..... Apartment building
g. ☐ ..... Office building
h. ☐ ..... Industrial building
i. ☐ ..... Utility
j. ☑ ..... OTHER. (describe): vacant lot

● TYPE OF INTEREST (✓)

Check box at LEFT if you intend to record a document related to this transfer. Check box at RIGHT if you do not intend to record a document related to this transfer.

	REC.		NON REC.
a.	☐	Fee	☐
b.	☐	Leasehold Grant	☐
c.	☐	Leasehold Assignment or Surrender	☐
d.	☑	Easement	☐
e.	☐	Subterranean Rights	☐
f.	☐	Development Rights	☐
g.	☐	Stock	☐
h.	☐	Partnership Interest	☐
i.	☐	OTHER. (describe):	☐

SCHEDULE 1 - DETAILS OF CONSIDERATION

COMPLETE THIS SCHEDULE FOR ALL TRANSFERS AFTER COMPLETING THE APPROPRIATE SCHEDULES ON PAGES 5 THROUGH 11. ENTER "ZERO" ON LINE 11 IF THE TRANSFER REPORTED WAS WITHOUT CONSIDERATION.

1. Cash	● 1.		
2. Purchase money mortgage	● 2.		
3. Unpaid principal of pre-existing mortgage(s)	● 3.		
4. Accrued interest on pre-existing mortgage(s)	● 4.		
5. Accrued real estate taxes	● 5.		
6. Amounts of other liens on property	● 6.		
7. Value of shares of stock or of partnership interest received	● 7.		
8. Value of real or personal property received in exchange	● 8.		
9. Amount of Real Property Transfer Tax and/or other taxes or expenses of the grantor which are paid by the grantee	● 9.		
10. Other (describe):	● 10.		
11. **TOTAL CONSIDERATION** (add lines 1 through 10 - must equal amount entered on line 1 of Schedule 2) (see instructions)	● 11.	$ 0	00

See instructions for special rules relating to transfers of cooperative units, liquidations, marital settlements and transfers of property to a business entity in return for an interest in the entity.

SCHEDULE 2 - COMPUTATION OF TAX

A. **Payment**	Pay amount shown on line 12 - *See Instructions*	Payment Enclosed	
1. Total Consideration (from line 11, above)	● 1.		
2. Excludable liens (see instructions)	● 2.		
3. Consideration (Line 1 less line 2)	● 3.		
4. Tax Rate (see instructions)	● 4.		%
5. Percentage change in beneficial ownership (see instructions)	● 5.		%
6. Taxable consideration (multiply line 3 by line 5)	● 6.		
7. Tax (multiply line 6 by line 4)	● 7.		
8. Credit (see instructions)	● 8.		
9. Tax due (line 7 less line 8) (if the result is negative, enter zero)	● 9.		
10. Interest (see instructions)	● 10.		
11. Penalty (see instructions)	● 11.		
12. **Total Tax Due** (add lines 9, 10 and 11)	● 12.	$ 0	00

SCHEDULE 3 - TRANSFERS INVOLVING MULTIPLE GRANTORS AND/OR GRANTEES

NOTE If additional space is needed, attach copies of this schedule or an addendum listing all of the information required below.

GRANTOR(S)

- Name
- Grantor is a(n): (check one) ☐ individual ☐ partnership (see instructions) ☐ corporation ☐ single member LLC ☐ multiple member LLC (see instructions) ☐ other_____ — Telephone Number
- Permanent mailing address after transfer (number and street)
- City and State — Zip Code
- Single member's name if grantor is a single member LLC (see instructions)

SOCIAL SECURITY NUMBER ___ - ___ - ___

OR

EMPLOYER IDENTIFICATION NUMBER ___ - ___

SINGLE MEMBER EIN OR SSN ___

- Name
- Grantor is a(n): (check one) ☐ individual ☐ partnership (see instructions) ☐ corporation ☐ single member LLC ☐ multiple member LLC (see instructions) ☐ other_____ — Telephone Number
- Permanent mailing address after transfer (number and street)
- City and State — Zip Code
- Single member's name if grantor is a single member LLC (see instructions)

SOCIAL SECURITY NUMBER ___ - ___ - ___

OR

EMPLOYER IDENTIFICATION NUMBER ___ - ___

SINGLE MEMBER EIN OR SSN ___

GRANTEE(S)

- Name
- Grantee is a(n): (check one) ☐ individual ☐ partnership (see instructions) ☐ corporation ☐ single member LLC ☐ multiple member LLC (see instructions) ☐ other_____ — Telephone Number
- Permanent mailing address after transfer (number and street)
- City and State — Zip Code
- Single member's name if grantee is a single member LLC (see instructions)

SOCIAL SECURITY NUMBER ___ - ___ - ___

OR

EMPLOYER IDENTIFICATION NUMBER ___ - ___

SINGLE MEMBER EIN OR SSN ___

- Name
- Grantee is a(n): (check one) ☐ individual ☐ partnership (see instructions) ☐ corporation ☐ single member LLC ☐ multiple member LLC (see instructions) ☐ other_____ — Telephone Number
- Permanent mailing address after transfer (number and street)
- City and State — Zip Code
- Single member's name if grantee is a single member LLC (see instructions)

SOCIAL SECURITY NUMBER ___ - ___ - ___

OR

EMPLOYER IDENTIFICATION NUMBER ___ - ___

SINGLE MEMBER EIN OR SSN ___

NEW YORK CITY DEPARTMENT OF FINANCE

NYC - RPT

Department of Finance

REAL PROPERTY TRANSFER TAX RETURN

(Pursuant to Title 11, Chapter 21, NYC Administrative Code)

CITY REGISTER

OCT 24 2017

▲ DO NOT WRITE IN THIS SPACE ▲
FOR OFFICE USE ONLY

GRANTOR

● Name H B BRONX REALTY LLC

● Grantor is a(n): (check one) ☐ individual ☐ partnership ☐ corporation ☑ single member LLC ☐ multiple member LLC (see instructions) ☐ other

Telephone Number: 917-681-7751

● Permanent mailing address after transfer (number and street): 3333 BOSTON ROAD

● City and State: BRONX, NY

Zip Code: 10469

● Single member's name if grantor is a single member LLC: HAROLD BENDELL

SOCIAL SECURITY NUMBER

OR

EMPLOYER IDENTIFICATION NUMBER: 13-4158818

SINGLE MEMBER EIN OR SSN: 129-36-0219

GRANTEE

● Name NYSDEC

● Grantee is a(n): (check one) ☐ individual ☐ partnership ☐ corporation ☐ single member LLC ☐ multiple member LLC (see instructions) ☑ other THE PEOPLE OF THE STATE OF NY

Telephone Number:

● Permanent mailing address after transfer (number and street): 625 BROADWAY

● City and State: ALBANY, NY

Zip Code: 12233

● Single member's name if grantee is a single member LLC:

SOCIAL SECURITY NUMBER

OR

EMPLOYER IDENTIFICATION NUMBER: 14-6013200

SINGLE MEMBER EIN OR SSN

PROPERTY LOCATION

LIST EACH LOT SEPARATELY. ATTACH A RIDER IF ADDITIONAL SPACE IS REQUIRED

● Address (number and street)	Apt. No.	Borough	Block	Lot	# of Floors	Square Feet	● Assessed Value of Property
910 BURKE AVENUE		BRONX	4574	25	1	1,587	148,050.00

● DATE OF TRANSFER TO GRANTEE: 10/11/2017

● PERCENTAGE OF INTEREST TRANSFERRED: 100 %

CONDITION OF TRANSFER. See Instructions

● Check (✓) all of the conditions that apply and fill out the appropriate schedules of this return. Additionally, Schedules1 and 2 must be completed for all transfers.

a. ☐ ..... Arms length transfer
b. ☐ ..... Transfer in exercise of option to purchase
c. ☐ ..... Transfer from cooperative sponsor to cooperative corporation
d. ☐ ..... Transfer by referee or receiver (complete Schedule A)
e. ☐ ..... Transfer pursuant to marital settlement agreement or divorce decree (complete Schedule I)
f. ☐ ..... Deed in lieu of foreclosure (complete Schedule C)
g. ☐ ..... Transfer pursuant to liquidation of an entity (complete Schedule D)
h. ☐ ..... Transfer from principal to agent, dummy, strawman or conduit or vice-versa (complete Schedule E)
i. ☐ ..... Transfer pursuant to trust agreement or will (attach a copy of trust agreement or will)
j. ☐ ..... Gift transfer not subject to indebtedness
k. ☐ ..... Gift transfer subject to indebtedness
l. ☐ ..... Transfer to a business entity in exchange for an interest in the business entity (complete Schedule F)
m. ☑ ..... Transfer to a governmental body
n. ☐ ..... Correction deed
o. ☐ ..... Transfer by or to a tax exempt organization (complete Schedule G)
p. ☐ ..... Transfer of property partly within and partly without NYC
q. ☐ ..... Transfer of successful bid pursuant to foreclosure
r. ☐ ..... Transfer by borrower solely as security for a debt or a transfer by lender solely to return such security
s. ☐ ..... Transfer wholly or partly exempt as a mere change of identity or form of ownership. Complete Schedule M)
t. ☐ ..... Transfer to a REIT or to a corporation or partnership controlled by a REIT. (Complete Schedule R)
u. ☐ ..... Other transfer in connection with financing (describe): _____
v. ☐ ..... A grant or assignment of a leasehold interest in a tax-free NY area
w. ☐ ..... Transfer to an HDFC or an entity controlled by an HDFC. (Complete Schedule L)
x. ..... Reserved
y. ..... Reserved
z. ☑ ..... Other (describe) CONVEYANCE OF AN EASEMENT

2017102400429101O2

● TYPE OF PROPERTY (✓)	● TYPE OF INTEREST (✓)

a. ☐ ..... 1-3 family house
b. ☑ ..... Individual residential condominium unit
c. ☐ ..... Individual cooperative apartment
d. ☐ ..... Commercial condominium unit
e. ☐ ..... Commercial cooperative
f. ☐ ..... Apartment building
g. ☐ ..... Office building
h. ☐ ..... Industrial building
i. ☐ ..... Utility
j. ☐ ..... OTHER. (describe): _____

Check box at LEFT if you intend to record a document related to this transfer. Check box at RIGHT if you do not intend to record a document related to this transfer.

	REC.		NON REC.
a.	☐	Fee	☐
b.	☐	Leasehold Grant	☐
c.	☐	Leasehold Assignment or Surrender	☐
d.	☐	Easement	☑
e.	☐	Subterranean Rights	☐
f.	☐	Development Rights	☐
g.	☐	Stock	☐
h.	☐	Partnership Interest	☐
i.	☐	OTHER. (describe): _____	☐

SCHEDULE 1 - DETAILS OF CONSIDERATION

COMPLETE THIS SCHEDULE FOR ALL TRANSFERS AFTER COMPLETING THE APPROPRIATE SCHEDULES ON PAGES 5 THROUGH 12. ENTER "ZERO" ON LINE 11 IF THE TRANSFER REPORTED WAS WITHOUT CONSIDERATION.

1. Cash	● 1.	0 00
2. Purchase money mortgage	● 2.	0 00
3. Unpaid principal of pre-existing mortgage(s)	● 3.	0 00
4. Accrued interest on pre-existing mortgage(s)	● 4.	0 00
5. Accrued real estate taxes	● 5.	0 00
6. Amounts of other liens on property	● 6.	0 00
7. Value of shares of stock or of partnership interest received	● 7.	0 00
8. Value of real or personal property received in exchange	● 8.	0 00
9. Amount of Real Property Transfer Tax and/or other taxes or expenses of the grantor which are paid by the grantee	● 9.	0 00
10. Other (describe): _____	● 10.	0 00
11. **TOTAL CONSIDERATION** (add lines 1 through 10 - must equal amount entered on line 1 of Schedule 2) (see instructions)	● 11.	$ 0 00

See instructions for special rules relating to transfers of cooperative units, liquidations, marital settlements and transfers of property to a business entity in return for an interest in the entity.

SCHEDULE 2 - COMPUTATION OF TAX

A. **Payment**	Pay amount shown on line 15 - *See Instructions*	Payment Enclosed

1. Total Consideration (from line 11, above)	● 1.	0 00
2. Excludable liens (see instructions)	● 2.	0 00
3. Consideration (line 1 less line 2)	● 3.	0 00
4. Tax Rate (see instructions)	● 4.	0 %
5. HDFC Exemption (see Schedule L, line 15)	● 5.	0 00
6. Consideration less HDFC Exemption (line 3 less line 5)	● 6.	0 00
7. Percentage change in beneficial ownership (see instructions)	● 7.	100 %
8 Taxable consideration (multiply line 6 by line 7)	● 8.	0 00
9. Tax (multiply line 8 by line 4)	● 9.	0 00
10. Credit (see instructions)	● 10.	0 00
11. Transfer tax previously paid (see Schedule L, line 18)	● 11.	0 00
12. Tax due (line 9 less line 10 and 11) (if the result is negative, enter zero)	● 12.	0 00
13. Interest (see instructions)	● 13.	0 00
14. Penalty (see instructions)	● 14.	0 00
15. **Total Tax Due** (add lines 12, 13 and 14)	● 15.	$ 0 00

GRANTOR'S ATTORNEY

Name of Attorney		Telephone Number ( )	
Address (number and street)	City and State		Zip Code
EMPLOYER IDENTIFICATION NUMBER	OR	SOCIAL SECURITY NUMBER	

GRANTEE'S ATTORNEY

Name of Attorney		Telephone Number ( )	
Address (number and street)	City and State		Zip Code
EMPLOYER IDENTIFICATION NUMBER	OR	SOCIAL SECURITY NUMBER	

CERTIFICATION

I swear or affirm that this return, including any accompanying schedules, affidavits and attachments, has been examined by me and is, to the best of my knowledge, a true and complete return made in good faith, pursuant to Title 11, Chapter 21 of the Administrative Code and the regulations issued thereunder.

GRANTOR

Sworn to and subscribed to before me on this 3rd day of October, 2017.

Signature of Notary

13-4158878
EMPLOYER IDENTIFICATION NUMBER OR SOCIAL SECURITY NUMBER

Harold Bendell
HB Bronx Realty LLC
Name of Grantor

Signature of Grantor

Notary's stamp or seal

ROBERT COTTRELL
NOTARY PUBLIC STATE OF NEW YORK
NO. 01C04886219
QUALIFIED IN QUEENS COUNTY
COMMISSION EXPIRES MARCH 2, 2019

SEAL

GRANTEE

Sworn to and subscribed to before me on this 11th day of October, 2017.

Signature of Notary

14-6013200
EMPLOYER IDENTIFICATION NUMBER OR SOCIAL SECURITY NUMBER

NYSDEC
Andrew Guglielmi
Name of Grantee

Signature of Grantee

Notary's stamp or seal

Caitlin E. Stephen
Notary Public, State of New York
No. 02ST6338529
Qualified in Albany County
Commission Expires Mar. 14, 2020

SEAL

GRANTEE: To ensure that your property and water/sewer tax bills are sent to the proper address, please visit the Finance website at nyc.gov/finance. If you do not have internet access, call 311.

GRANTOR'S ATTORNEY ▼

Name of Attorney		Telephone Number ( )
Address (number and street)	City and State	Zip Code
EMPLOYER IDENTIFICATION NUMBER	OR	SOCIAL SECURITY NUMBER

GRANTEE'S ATTORNEY ▼

Name of Attorney		Telephone Number ( )
Address (number and street)	City and State	Zip Code
EMPLOYER IDENTIFICATION NUMBER	OR	SOCIAL SECURITY NUMBER

CERTIFICATION ▼

I swear or affirm that this return, including any accompanying schedules, affidavits and attachments, has been examined by me and is, to the best of my knowledge, a true and complete return made in good faith, pursuant to Title 11, Chapter 21 of the Administrative Code and the regulations issued thereunder.

GRANTOR

Sworn to and subscribed to before me on this _____ day of _____, _____.

Signature of Notary

Notary's stamp or seal

13-4158818
EMPLOYER IDENTIFICATION NUMBER OR SOCIAL SECURITY NUMBER

H B BRONX REALTY LLC
Name of Grantor

Signature of Grantor

GRANTEE

Sworn to and subscribed to before me on this _____ day of _____, _____.

Signature of Notary

Notary's stamp or seal

14-6013200
EMPLOYER IDENTIFICATION NUMBER OR SOCIAL SECURITY NUMBER

NYSDEC
Name of Grantee

Signature of Grantee

2017102400429101

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

2017102401590001002252 57

REAL ESTATE TRANSFER TAX COVER PAGE **PAGE 1 OF 1**

Document ID: 2017102401590001 Document Date: 10-11-2017 Preparation Date: 10-30-2017
Document Type: EASEMENT

PARTIES

FIRST GRANTOR/SELLER:	**FIRST GRANTEE/BUYER:**
H B BRONX REALTY LLC	NYSDEC
3333 BOSTON ROAD	625 BROADWAY
BRONX, NY 10469	ALBANY, NY 12233

ASSOCIATED TAX FORM ID: 201710240042930102

RETT SUPPORTING DOCUMENTS SUBMITTED:

Page Count

TP-584 (4/13)

New York State Department of Taxation and Finance

Combined Real Estate Transfer Tax Return, Credit Line Mortgage Certificate, and Certification of Exemption from the Payment of Estimated Personal Income Tax

Recording office time stamp

See Form TP-584-I, Instructions for Form TP-584, before completing this form. Print or type.

Schedule A — Information relating to conveyance

Grantor/Transferor

☐ Individual
☐ Corporation
☐ Partnership
☐ Estate/Trust
☑ Single member LLC
☐ Other

Name *(if individual, last, first, middle initial)* (☐ *check if more than one grantor*): HB Bronx Realty, LLC

Social security number:

Mailing address: 3333 Boston Road

Social security number:

City: Bronx | State: NY | ZIP code: 10469

Federal EIN: 13-4158818

Single member's name if grantor is a single member LLC *(see instructions)*: Harold Bendell

Single member EIN or SSN: 129-36-0219

Grantee/Transferee

☐ Individual
☐ Corporation
☐ Partnership
☐ Estate/Trust
☐ Single member LLC
☑ Other

Name *(if individual, last, first, middle initial)* (☐ *check if more than one grantee*): The People of the State of New York

Social security number:

Mailing address: NYSDEC

Social security number:

City: 625 Broadway | State: Albany NY | ZIP code: 12233

Federal EIN: 14-6013200

Single member's name if grantee is a single member LLC *(see instructions)*:

Single member EIN or SSN:

Location and description of property conveyed

Tax map designation – Section, block & lot *(include dots and dashes)*	SWIS code (six digits)	Street address	City, town, or village	County
Block 4574 Lot 25		904 Burke Ave.	Bronx NY	Bronx

Type of property conveyed *(check applicable box)*

1 ☐ One- to three-family house
2 ☐ Residential cooperative
3 ☐ Residential condominium
4 ☐ Vacant land
5 ☑ Commercial/Industrial
6 ☐ Apartment building
7 ☐ Office building
8 ☐ Other _____

Date of conveyance: 10 (month) / 11 (day) / 17 (year)

Percentage of real property conveyed which is residential real property 0 % *(see instructions)*

Condition of conveyance *(check all that apply)*

a. ☐ Conveyance of fee interest
b. ☐ Acquisition of a controlling interest (state percentage acquired _____ %)
c. ☐ Transfer of a controlling interest (state percentage transferred _____ %)
d. ☐ Conveyance to cooperative housing corporation
e. ☐ Conveyance pursuant to or in lieu of foreclosure or enforcement of security interest *(attach Form TP-584.1, Schedule E)*
f. ☐ Conveyance which consists of a mere change of identity or form of ownership or organization *(attach Form TP-584.1, Schedule F)*
g. ☐ Conveyance for which credit for tax previously paid will be claimed *(attach Form TP-584.1, Schedule G)*
h. ☐ Conveyance of cooperative apartment(s)
i. ☐ Syndication
j. ☐ Conveyance of air rights or development rights
k. ☐ Contract assignment
l. ☐ Option assignment or surrender
m. ☐ Leasehold assignment or surrender
n. ☐ Leasehold grant
o. ☑ Conveyance of an easement
p. ☐ Conveyance for which exemption from transfer tax claimed *(complete Schedule B, Part III)*
q. ☐ Conveyance of property partly within and partly outside the state
r. ☐ Conveyance pursuant to divorce or separation
s. ☐ Other *(describe)* _____

For recording officer's use	Amount received	Date received	Transaction number
	Schedule B., Part I $ _____ Schedule B., Part II $	CITY REGISTER OCT 24 2017	

Schedule B – Real estate transfer tax return (Tax Law, Article 31)

Part I Computation of tax due

1	Enter amount of consideration for the conveyance *(if you are claiming a total exemption from tax, check the exemption claimed box, enter consideration and proceed to Part III)* ☑ **Exemption claimed**	1.	0
2	Continuing lien deduction *(see instructions if property is taken subject to mortgage or lien)*	2.	
3	Taxable consideration *(subtract line 2 from line 1)*	3.	
4	Tax: $2 for each $500, or fractional part thereof, of consideration on line 3	4.	
5	Amount of credit claimed for tax previously paid *(see instructions and attach Form TP-584.1,* Schedule G*)*	5.	
6	Total tax due* *(subtract line 5 from line 4)*	6.	

Part II – Computation of additional tax due on the conveyance of residential real property for $1 million or more

1	Enter amount of consideration for conveyance *(from* Part I, *line 1)*	1.	0
2	Taxable consideration *(multiply line 1 by the percentage of the premises which is residential real property, as shown in* Schedule A*)*	2.	
3	Total additional transfer tax due* *(multiply line 2 by 1% (.01))*	3.	

Part III – Explanation of exemption claimed on Part I, line 1 *(check any boxes that apply)*

The conveyance of real property is exempt from the real estate transfer tax for the following reason:

a. Conveyance is to the United Nations, the United States of America, the state of New York, or any of their instrumentalities, agencies, or political subdivisions (or any public corporation, including a public corporation created pursuant to agreement or compact with another state or Canada) ..... a ☑

b. Conveyance is to secure a debt or other obligation ..... b ☐

c. Conveyance is without additional consideration to confirm, correct, modify, or supplement a prior conveyance ..... c ☐

d. Conveyance of real property is without consideration and not in connection with a sale, including conveyances conveying realty as bona fide gifts ..... d ☑

e. Conveyance is given in connection with a tax sale ..... e ☐

f. Conveyance is a mere change of identity or form of ownership or organization where there is no change in beneficial ownership. (This exemption cannot be claimed for a conveyance to a cooperative housing corporation of real property comprising the cooperative dwelling or dwellings.) Attach Form TP-584.1, Schedule F ..... f ☐

g. Conveyance consists of deed of partition ..... g ☐

h. Conveyance is given pursuant to the federal Bankruptcy Act ..... h ☐

i. Conveyance consists of the execution of a contract to sell real property, without the use or occupancy of such property, or the granting of an option to purchase real property, without the use or occupancy of such property ..... i ☐

j. Conveyance of an option or contract to purchase real property with the use or occupancy of such property where the consideration is less than $200,000 and such property was used solely by the grantor as the grantor's personal residence and consists of a one-, two-, or three-family house, an individual residential condominium unit, or the sale of stock in a cooperative housing corporation in connection with the grant or transfer of a proprietary leasehold covering an individual residential cooperative apartment ..... j ☐

k. Conveyance is not a conveyance within the meaning of Tax Law, Article 31, section 1401(e) *(attach documents supporting such claim)* ..... k ☐

*The total tax (from Part I, line 6 and Part II, line 3 above) is due within 15 days from the date conveyance. Please make check(s) payable to the county clerk where the recording is to take place. If the recording is to take place in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, make check(s) payable to the ***NYC Department of Finance.*** If a recording is not required, send this return and your check(s) made payable to the ***NYS Department of Taxation and Finance,*** directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

TP-584 (4/13)

New York State Department of Taxation and Finance

Combined Real Estate Transfer Tax Return, Credit Line Mortgage Certificate, and Certification of Exemption from the Payment of Estimated Personal Income Tax

Recording office time stamp

See Form TP-584-I, Instructions for Form TP-584, before completing this form. Print or type.

Schedule A — Information relating to conveyance

Grantor/Transferor

☐ Individual
☐ Corporation
☐ Partnership
☐ Estate/Trust
☑ Single member LLC
☐ Other

Name *(if individual, last, first, middle initial)* (☐ *check if more than one grantor)*
H B BRONX REALTY LLC

Social security number

Mailing address 3333 BOSTON ROAD

Social security number

City	State	ZIP code
BRONX	NY	10469

Federal EIN 13 4158818

Single member's name if grantor is a single member LLC *(see instructions)*
BENDELL, HAROLD

Single member EIN or SSN 129-36-0219

Grantee/Transferee

☐ Individual
☐ Corporation
☐ Partnership
☐ Estate/Trust
☐ Single member LLC
☑ Other

Name *(if individual, last, first, middle initial)* (☐ *check if more than one grantee)*
NYSDEC

Social security number

Mailing address 625 BROADWAY

Social security number

City	State	ZIP code
ALBANY	NY	12233

Federal EIN 14 6013200

Single member's name if grantee is a single member LLC *(see instructions)*

Single member EIN or SSN

Location and description of property conveyed

Tax map designation - Section, block & lot *(include dots and dashes)*	SWIS code (six digits)	Street address	City, town, or village	County
2 - 4574 - 25	650000	910 BURKE AVENUE	NEW YORK	BRONX

Type of property conveyed *(check applicable box)*

1 ☐ One- to three-family house
2 ☐ Residential cooperative
3 ☑ Residential condominium
4 ☐ Vacant land
5 ☐ Commercial/Industrial
6 ☐ Apartment building
7 ☐ Office building
8 ☐ Other _____

Date of conveyance: 10 (month) 11 (day) 2017 (year)

Percentage of real property conveyed which is residential real property 100.00 % *(see instructions)*

Condition of conveyance *(check all that apply)*

a. ☐ Conveyance of fee interest
b. ☐ Acquisition of a controlling interest (state percentage acquired _____ %)
c. ☐ Transfer of a controlling interest (state percentage transferred _____ %)
d. ☐ Conveyance to cooperative housing corporation
e. ☐ Conveyance pursuant to or in lieu of foreclosure or enforcement of security interest *(attach Form TP-584.1, Schedule E)*
f. ☐ Conveyance which consists of a mere change of identity or form of ownership or organization *(attach Form TP-584.1, Schedule F)*
g. ☐ Conveyance for which credit for tax previously paid will be claimed *(attach Form TP-584.1, Schedule G)*
h. ☐ Conveyance of cooperative apartment(s)
i. ☐ Syndication
j. ☐ Conveyance of air rights or development rights
k. ☐ Contract assignment
l. ☐ Option assignment or surrender
m. ☐ Leasehold assignment or surrender
n. ☐ Leasehold grant
o. ☑ Conveyance of an easement
p. ☑ Conveyance for which exemption from transfer tax claimed *(complete Schedule B, Part III)*
q. ☐ Conveyance of property partly within and partly outside the state
r. ☐ Conveyance pursuant to divorce or separation
s. ☐ Other *(describe)* _____

For recording officer's use	Amount received	Date received	Transaction number
	Schedule B., Part I $ Schedule B., Part II $	CITY REGISTER OCT 24 2017	

2017102400429301O2

Schedule B — Real estate transfer tax return (Tax Law, Article 31)

Part I – Computation of tax due

1	Enter amount of consideration for the conveyance *(if you are claiming a total exemption from tax, check the exemption claimed box, enter consideration and proceed to Part III)* ☑ **Exemption claimed**	1.	0 00
2	Continuing lien deduction *(see instructions if property is taken subject to mortgage or lien)*	2.	0 00
3	Taxable consideration *(subtract line 2 from line 1)*	3.	0 00
4	Tax: $2 for each $500, or fractional part thereof, of consideration on line 3	4.	0 00
5	Amount of credit claimed for tax previously paid *(see instructions and attach Form TP-584.1,* Schedule G*)*	5.	0 00
6	Total tax due* *(subtract line 5 from line 4)*	6.	0 00

Part II – Computation of additional tax due on the conveyance of residential real property for $1 million or more

1	Enter amount of consideration for conveyance *(from* Part I, *line 1)*	1.	0 00
2	Taxable consideration *(multiply line 1 by the percentage of the premises which is residential real property, as shown in* Schedule A*)*	2.	0 00
3	Total additional transfer tax due* *(multiply line 2 by 1% (.01))*	3.	0 00

Part III – Explanation of exemption claimed on Part I, line 1 *(check any boxes that apply)*

The conveyance of real property is exempt from the real estate transfer tax for the following reason:

a. Conveyance is to the United Nations, the United States of America, the state of New York, or any of their instrumentalities, agencies, or political subdivisions (or any public corporation, including a public corporation created pursuant to agreement or compact with another state or Canada) ..... a ☑

b. Conveyance is to secure a debt or other obligation ..... b ☐

c. Conveyance is without additional consideration to confirm, correct, modify, or supplement a prior conveyance ..... c ☐

d. Conveyance of real property is without consideration and not in connection with a sale, including conveyances conveying realty as bona fide gifts ..... d ☑

e. Conveyance is given in connection with a tax sale ..... e ☐

f. Conveyance is a mere change of identity or form of ownership or organization where there is no change in beneficial ownership. (This exemption cannot be claimed for a conveyance to a cooperative housing corporation of real property comprising the cooperative dwelling or dwellings.) Attach Form TP-584.1, Schedule F ..... f ☐

g. Conveyance consists of deed of partition ..... g ☐

h. Conveyance is given pursuant to the federal Bankruptcy Act ..... h ☐

i. Conveyance consists of the execution of a contract to sell real property, without the use or occupancy of such property, or the granting of an option to purchase real property, without the use or occupancy of such property ..... i ☐

j. Conveyance of an option or contract to purchase real property with the use or occupancy of such property where the consideration is less than $200,000 and such property was used solely by the grantor as the grantor's personal residence and consists of a one-, two-, or three-family house, an individual residential condominium unit, or the sale of stock in a cooperative housing corporation in connection with the grant or transfer of a proprietary leasehold covering an individual residential cooperative apartment ..... j ☐

k. Conveyance is not a conveyance within the meaning of Tax Law, Article 31, section 1401(e) *(attach documents supporting such claim)* ..... k ☐

*The total tax (from Part I, line 6 and Part II, line 3 above) is due within 15 days from the date conveyance. Please make check(s) payable to the county clerk where the recording is to take place. If the recording is to take place in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, make check(s) payable to the ***NYC Department of Finance***. If a recording is not required, send this return and your check(s) made payable to the ***NYS Department of Taxation and Finance***, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

Schedule C — Credit Line Mortgage Certificate (Tax Law, Article 11)

Complete the following only if the interest being transferred is a fee simple interest.
I (we) certify that: *(check the appropriate box)*

1. ☐ The real property being sold or transferred is not subject to an outstanding credit line mortgage.

2. ☐ The real property being sold or transferred is subject to an outstanding credit line mortgage. However, an exemption from the tax is claimed for the following reason:
   - ☐ The transfer of real property is a transfer of a fee simple interest to a person or persons who held a fee simple interest in the real property (whether as a joint tenant, a tenant in common or otherwise) immediately before the transfer.
   - ☐ The transfer of real property is (A) to a person or persons related by blood, marriage or adoption to the original obligor or to one or more of the original obligors or (B) to a person or entity where 50% or more of the beneficial interest in such real property after the transfer is held by the transferor or such related person or persons (as in the case of a transfer to a trustee for the benefit of a minor or the transfer to a trust for the benefit of the transferor).
   - ☐ The transfer of real property is a transfer to a trustee in bankruptcy, a receiver, assignee, or other officer of a court.
   - ☐ The maximum principal amount secured by the credit line mortgage is $3,000,000 or more, and the real property being sold or transferred is **not** principally improved nor will it be improved by a one- to six-family owner-occupied residence or dwelling.

     Please note: for purposes of determining whether the maximum principal amount secured is $3,000,000 or more as described above, the amounts secured by two or more credit line mortgages may be aggregated under certain circumstances. See TSB-M-96(6)-R for more information regarding these aggregation requirements.
   - ☐ Other *(attach detailed explanation)*.

3. ☐ The real property being transferred is presently subject to an outstanding credit line mortgage. However, no tax is due for the following reason:
   - ☐ A certificate of discharge of the credit line mortgage is being offered at the time of recording the deed.
   - ☐ A check has been drawn payable for transmission to the credit line mortgagee or his agent for the balance due, and a satisfaction of such mortgage will be recorded as soon as it is available.

4. ☐ The real property being transferred is subject to an outstanding credit line mortgage recorded in _____ (insert liber and page or reel or other identification of the mortgage). The maximum principal amount of debt or obligation secured by the mortgage is _____. No exemption from tax is claimed and the tax of _____ is being paid herewith. *(Make check payable to county clerk where deed will be recorded or, if the recording is to take place in New York City but not in Richmond County, make check payable to the **NYC Department of Finance.**)*

Signature (both the grantor(s) and grantee(s) must sign)

The undersigned certify that the above information contained in schedules A, B, and C, including any return, certification, schedule, or attachment, is to the best of his/her knowledge, true and complete, and authorize the person(s) submitting such form on their behalf to receive a copy for purposes of recording the deed or other instrument effecting the conveyance.

Grantor signature	Title	Grantee signature	Title
	Member		
Grantor signature	Title	Grantee signature	Title
		Andrew Guglielmi	Attorney

Reminder: Did you complete all of the required information in Schedules A, B, and C? Are you required to complete Schedule D? If you checked *e*, *f*, or *g* in Schedule A, did you complete Form TP-584.1? Have you attached your check(s) made payable to the county clerk where recording will take place or, if the recording is in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, to the ***NYC Department of Finance***? If no recording is required, send your check(s), made payable to the ***Department of Taxation and Finance,*** directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

APPENDIX B - LIST OF SITE CONTACTS

Name	Phone/Email Address
HB Bronx Realty LLC (Site Owner)	Phone: 718-881-7900
Christine Bergin (HB Bronx Realty LLC [Remedial Party])	Phone: 718-881-7900 x301 Email: christineb@cityworldauto.com
Dale Konas, P.E. (EnviroTrac Professional Engineer on record through issuance of Certificate of Completion)	Phone: 631-924-3001; Email: dalek@envirotrac.com
Tarek Khouri, P.E. (Hydro Tech Environmental Engineering and Geology, DPC, Professional Engineer on record post issuance of Certificate of Completion)	Phone: 718-622-2835 Email: tkhouri@hydrotechenvironmental.com
Nigel Crawford, P.E. (NYSDEC DER Project Manager)	Phone: 718-482-7778; Email: Nigel.Crawford@dec.ny.gov
Jane O'Connell (NYSDEC Regional HW Remediation Engineer)	Phone: 718-482-4599 Email address: Jane.Oconnel@dec.ny.gov
Kelly Lewandowski (NYSDEC Site Control)	Phone: 518-402-9553 Email address: Kelly.Lewandowski@dec.ny.gov

APPENDIX C – BORING AND MONITORING WELL CONSTRUCTION LOGS

Geologic Log and Well Construction Details

Log of MW-13

ENVIROTRAC LTD.

5 Old Dock Road, Yaphank, NY 11980

Client:	BCP #:	Depth to Water (ft. from measuring pt.)		Site Elevation Datum
904 Burke Avenue LLC	C203032			
Site Name:	Address:	Date	DTW	Not Surveyed
904 Burke Avenue	904 Burke Ave, Bronx, NY			
Drilling Company:	Method:	6/6/2017	10.09	
AARCO Environmental	Hollow Stem Auger			Measuring Point Elevation
Date Started:	Date Completed:			
06/06/17	06/06/17			Not Surveyed
Completion Depth:	*ENVIROTRAC* Geologist:			
12'	Priscilla De Jesus			

WELL CONSTRUCTION (NTS)	DEPTH (ft below grade)	SAMPLES Recovery (ft.)	SAMPLES Blow per 6 in.	SAMPLES PID (ppm)	SOIL DESCRIPTION
MW-13					
	0	NA	NA	3.5	**0-5'** Hand cleared through asphalt; Brown to Gray mixed sized **SAND**, trace gravel, Dry, No odor
	5	NA	NA	0	**5-8'** Gray fine to medium **SAND**, trace gravel Dry, no odor
▼	10	NA	NA	0	**8-10'** Gray fine to medium **SAND**, trace gravel, dry, no odor
	12	NA	NA	0	**10-12'** Dark Gray, fine to medium **SAND**, wet, no odor.

LEGEND:

- Bentonite Seal
- Gravel Pack (morie #2)
- Screen
- End/Top Cap
- Cement

Well Construction Details

Bottom of Well:	12'
Screen Zone:	2'-12'
Screen material:	20 slot, 2" schedule 40 PVC
Casing material:	2" schedule 40 PVC
Sand Pack:	2'-12' (morie #2)
Bentonite Seal:	1'-2'
Cement Surface:	8" manhole set in road box

NTS - Not to Scale ND - Not Detected NM - Not Measured NA - Not Applicable DTW - Depth to Water

Geologic Log

GP-1

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

Client: HB Realty		Depth to Water (ft. from measuring pt.)		Site Elevation
Site Name: 904 Burke Avenue, Bronx		Date	DTW	NM
Drilling Company: Aarco	Method: Geoprobe	9/13/2016	8'	Measuring Point Elevation
Date Started: 9/13/2016	Date Completed: 9/13/2106			NM
Completion Depth: 12'	ENVIROTRAC Geologist: Wala Canario			

GP-1 (NTS)	DEPTH (feet below grade)	SAMPLES Recovery (inches)	SAMPLES PID (ppm)	SOIL DESCRIPTION
GP-4				
	0	NA		0' - 1' - Gravel Mix 1' - 4' - Well Sorted Very Fine Sand, No Odor
				4' - 5'- Crushed Rock
	5	NA		5' - 6' - Grayish Silt / Clay Mix, No Odor 6' - Resistance
	10	NA		

LEGEND:

- Asphalt and Gravel/Sand Mix
- Crushed Rock
- Coarse Sand
- Clay / Silt Mix
- Clay
- Very Fine Sand / Silt
- Silt
- Fine Sand
- Very Fine Sand
- Resistance

NTS - Not to Scale NA - Not Applicable NM - Not Measured DTW - Depth to Water

EnviroTrac Environmental Services

Geologic Log

GP-2

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

Client: HB Realty		Depth to Water (ft. from measuring pt.)		Site Elevation
Site Name: 904 Burke Avenue, Bronx		Date	DTW	NM
Drilling Company: Aarco	Method: Geoprobe	9/13/2016	7'	Measuring Point Elevation
Date Started: 9/13/2016	Date Completed: 9/13/2016			NM
Completion Depth: 8'	ENVIROTRAC Geologist: Wala Canario			

GP-2 (NTS)	DEPTH (feet below grade)	SAMPLES Recovery (inches)	SAMPLES PID (ppm)	SOIL DESCRIPTION
GP-2				
	0	NA		0' - 2' - Fine Sorted Gray San with Traces of Rocks
			0.0	2' - 5' - Fine well soreted Brown Sand, No Odors
			0.1	
	5	NA		5' - 7' - Well Sorted Light Brown Fine Sand, No Odors and Mosit at 6'
			10.1	
			366.0	7' - 8' - Groundwater at 7'. Saturated Well Sotred Fine Black Sand with Petroleum Odor
				8' - Resitance **(Sample GP-2 (7'-8'))**

LEGEND:

- Asphalt and Gravel/Sand Mix
- Crushed Rock / Concrete
- Coarse Sand
- Clay / Silt Mix
- Clay
- Very Fine Sand / Silt
- Silt
- Fine Sand
- Very Fine Sand
- Resistance

NTS - Not to Scale NA - Not Applicable NM - Not Measured DTW - Depth to Water

EnviroTrac Environmental Services

Geologic Log

GP-3

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

Client: HB Realty		Depth to Water (ft. from measuring pt.)		Site Elevation
				NM
Site Name: 904 Burke Avenue, Bronx		Date	DTW	
		9/13/2016	NA	
Drilling Company: Aarco	Method: Geoprobe			Measuring Point Elevation
				NM
Date Started: 9/13/2016	Date Completed: 9/13/2016			
Completion Depth: 7'	ENVIROTRAC Geologist: Wala Canario			

GP-3 (NTS)	DEPTH (feet below grade)	SAMPLES Recovery (inches)	SAMPLES PID (ppm)	SOIL DESCRIPTION
GP-3				
	0	NA		0' - 6" - Ashphalt and Rock Mix
			0	6" - 3' - Sorted Corase Brown Sand, No Odor
				3' - 4' - Concrete
			0	4' - 5'6" - Moist Gray Clay
	5	NA		5'6" - 6' - Moist Brown Clay
			0.0	6' - 7' - Crushed Rock
				7' - Resistance

LEGEND:

- Asphalt and Gravel/Sand Mix
- Crushed Rock / Concrete
- Coarse Sand
- Clay / Silt Mix
- Clay
- Very Fine Sand / Silt
- Silt
- Fine Sand
- Very Fine Sand
- Resistance

NTS - Not to Scale NA - Not Applicable NM - Not Measured DTW - Depth to Water

EnviroTrac Environmental Services

Geologic Log

GP-4

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

Client: HB Realty		Depth to Water (ft. from measuring pt.)		Site Elevation
		Date	DTW	NM
Site Name: 904 Burke Avenue, Bronx		9/13/2016	8'	
Drilling Company: Aarco	Method: Geoprobe			Measuring Point Elevation
Date Started: 9/13/2016	Date Completed: 9/13/2106			NM
Completion Depth: 12'	ENVIROTRAC Geologist: Wala Canario			

GP-4 (NTS)	DEPTH (feet below grade)	SAMPLES Recovery (inches)	SAMPLES PID (ppm)	SOIL DESCRIPTION
GP-4				
	0	NA		0' - 1' - Asphalt and Gravel Mix
				1' - 2' - Gray Silt, with No Odor
			0.0	2' - 6' - Moist Grey Silt and Clay Mix, with No Odor
			0.0	
	5	NA		
			0.0	6 - 8'6" - Groundwater at 8'. Saturated Brown Silt, with no Odor
			0.0	8'6" - 9' - Moist Clay and Silt Mix, with No Odor **(Sample GP-2 (8'-9'))**
				9' - Resistance
	10	NA		

LEGEND:

- Asphalt and Gravel/Sand Mix
- Crushed Rock
- Coarse Sand
- Clay / Silt Mix
- Clay
- Very Fine Sand / Silt
- Silt
- Fine Sand
- Very Fine Sand
- Resistance

NTS - Not to Scale NA - Not Applicable NM - Not Measured DTW - Depth to Water

EnviroTrac Environmental Services

Geologic Log

GP-5

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

Client: HB Realty		Depth to Water (ft. from measuring pt.)		Site Elevation
				NM
Site Name: 904 Burke Avenue, Bronx		Date	DTW	
		9/13/2016	NA	
Drilling Company: Aarco	Method: Geoprobe			Measuring Point Elevation
				NM
Date Started: 9/13/2016	Date Completed: 9/13/2016			
Completion Depth: 4'	ENVIROTRAC Geologist: Wala Canario			

GP-5 (NTS)	DEPTH (feet below grade)	SAMPLES Recovery (inches)	SAMPLES PID (ppm)	SOIL DESCRIPTION
GP-5				
	0	NA		0' - 1' - Ashpalt
				1' - 4' - Tan Fine Sand, No Odors
			0.0	
		NA	0.0	4' - Resistance
	5			

LEGEND:

- Asphalt and Gravel/Sand Mix
- Crushed Rock
- Coarse Sand
- Clay / Silt Mix
- Clay
- Very Fine Sand / Silt
- Silt
- Fine Sand
- Very Fine Sand
- Resistance

NTS - Not to Scale NA - Not Applicable NM - Not Measured DTW - Depth to Water

EnviroTrac Environmental Services

Geologic Log

GP-6

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

Client: HB Realty		Depth to Water (ft. from measuring pt.)		Site Elevation
				NM
Site Name: 904 Burke Avenue, Bronx		Date	DTW	
		9/13/2016	7'	
Drilling Company: Aacro	Method: Geoprobe			Measuring Point Elevation
				NM
Date Started: 9/13/2016	Date Completed: 9/13/2016			
Completion Depth: 8'	ENVIROTRAC Geologist: Wala Canario			

GP-6 (NTS)	DEPTH (feet below grade)	SAMPLES Recovery (inches)	SAMPLES PID (ppm)	SOIL DESCRIPTION
GP-6				
	0	NA		0'-6" - Ashpalt & Rock Mix
			0.0	6"- 4' Well Sorted Fine Grained Sand, No Odor
			0.00	
			0.00	4' - 5' - Well Sorted Very Fine Grained Gray Sand, No Odor
	5	NA	10.50	5' - 6' - Gray, Very Fine Sand / Silt Mix, with Strong Petroleum Odor
			0.00	6' - 7' - Crushed Rock
			1,272.00	7' - 8' - Moist Black Coarse Sand, with Strong Petroluem Odor. Groundwater at 7'**(Sample GP-6 (7'-8')**
				8' - Resistance
	10			

LEGEND:

- Asphalt and Gravel/Sand Mix
- Crushed Rock
- Coarse Sand
- Clay / Silt Mix
- Clay
- Very Fine Sand / Silt
- Silt
- Fine Sand
- Very Fine Sand
- Resistance

NTS - Not to Scale NA - Not Applicable NM - Not Measured DTW - Depth to Water

EnviroTrac Environmental Services

Geologic Log

GP-7

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

Client: HB Realty		Depth to Water (ft. from measuring pt.)		Site Elevation
Site Name: 904 Burke Avenue, Bronx		Date	DTW	NA
		9/13/2016	9'	
Drilling Company: Aarco	Method: Geoprobe			Measuring Point Elevation
Date Started: 9/13/2016	Date Completed: 9/13/2016			NA
Completion Depth: 10'	ENVIROTRAC Geologist: Wala Canario			

GP-7 (NTS)	DEPTH (feet below grade)	SAMPLES Recovery (inches)	SAMPLES PID (ppm)	SOIL DESCRIPTION
GP-7				
	0	NA		0' - 6" - Asphalt & Rock Mix
			0.0	6" - 1'6" - Sorted Brown Coarse Sand, No Odor
			2.1	1'6" - 3' - Dark Fine Sand **(Sample GP-7 (4'-5')**
			35.0	4' - 6' - Brown Silt / Clay Mix, with Petroleum Odor
	5	NA		
			1.0	6' - 7' - Moist Brown Clay, with Petroleum Odor **(Sample GP-7 (6'-7'))**
				7' - 7'6" - Crushed Rock
			258.0	7'6" - 10' - Super Saturated, Brown Silt, with Strong Petroleum Odor. Groundwater at 9'. **(Sample GP-7 (9-10') & Sample Duplicate GP-13 (9-10'))**
	10	NA		10' - Resistance

LEGEND:

- Asphalt and Gravel Mix
- Crushed Rock
- Coarse Sand
- Clay / Silt Mix
- Clay
- Very Fine Sand / Silt
- Silt
- Fine Sand
- Very Fine Sand
- Resistance

NTS - Not to Scale NA - Not Applicable NM - Not Measured DTW - Depth to Water

EnviroTrac Environmental Services

Geologic Log

GP-8

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

Client: HB Realty		Depth to Water (ft. from measuring pt.)		Site Elevation: NA
Site Name: 904 Burke Avenue, Bronx		Date: 9/13/2016	DTW: 15'	
Drilling Company: Aarco	Method: Geoprobe			Measuring Point Elevation: NA
Date Started: 9/13/2016	Date Completed: 9/13/2016			
Completion Depth: 15'	ENVIROTRAC Geologist: Wala Canario			

GP-8 (NTS)	DEPTH (feet below grade)	SAMPLES Recovery (inches)	SAMPLES PID (ppm)	SOIL DESCRIPTION
GP-8				
	0	NA		0' - 6" - Asphalt and Rock Mix
			0.0	6" - 1' - Sorted Brown, Coarse Sand, No Odor
			0.0	1' - 3' - Well Sorted Dark Gray Coarse Sand, No Odor
			0.0	3' - 6' - Dark Gray Silt / Clay Mix, No Odor **(Sample GP-8 (4'-5'))**
	5	NA		
			0.0	6' - 7' - Sorted Brown Coarse Sand, No Odor
			0.0	7' - 9' - Graysih Brown Clay, Moist and No Odor **(Samples GP-8 MS (7'-8'), GP-8 MSD (7'-8'), & GP-8 (7'-8'))**
			0.0	9' - 10' - Saturated Well Sorted, Fine GrainedGreyish Brown Sand, No Odor
	10	NA	2.0	10' - 12' - Saturated Clay / Silt Mix, Slight Petroleum Odor
			71.8	12' - 15' - Ground Water at 15'. Well Sorted, Fine Black Sand, with Strong Petroluem Odor. (Petroluem Sheen at 13'-14') **(Sample GP-18 (13'-14'))**
			4.1	
	15	NA		15' - Resistance

LEGEND:

- Asphalt and Gravel Mix
- Coarse Sand
- Clay / Silt Mix
- Clay
- Very Fine Sand / Silt
- Silt
- Fine Sand
- Very Fine Sand
- Resistance

NTS - Not to Scale NA - Not Applicable NM - Not Measured DTW - Depth to Water

EnviroTrac Environmental Services

Geologic Log

GP-9

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

Client: HB Realty		Depth to Water (ft. from measuring pt.)		Site Elevation
Site Name: 904 Burke Avenue, Bronx		Date	DTW	NA
Drilling Company: Aarco	Method: Geoprobe	9/13/2016	15'	Measuring Point Elevation
Date Started: 9/13/2016	Date Completed: 9/13/2016			NA
Completion Depth: 19'	ENVIROTRAC Geologist: Wala Canario			

GP-9 (NTS)	DEPTH (feet below grade)	SAMPLES Recovery (inches)	SAMPLES PID (ppm)	SOIL DESCRIPTION
GP-9				
	0	NA		0' - 6" - Asphalt and Gravel Mix
				6" - 2' - Light Brown Unsorted Coarse Sand, No Odor
			0.0	2' - 5' - Gray Very Fine / Silt, No Odor
			0.0	
	5	NA		5' - 6' - Gray Very Fine / Silt, No Odor
			0.0	6' - 8' - Well Sotred, Gray Very Fine Sand, No Odor
			0.0	8' - 10' - Well Sorted Brown Very Fine / Silt, No Odor
	10	NA	0.0	10' - 14' - Well Sorted Brown Silt, No Odor and Moist
			0.0	
			0.0	14' - 15' - Well Sotred Reddish Brown Silt, Moist and No Odor
	15	NA		15' - 19' - Groundwater At 15'. Well Sorted Very Fine Brown Super Saturated Sand
			0.0	
			0.0	15' - 19' - Groundwater At 15'. Well Sorted Very Fine Brown Super Saturated Sand
	19	NA		19' - Resistance

LEGEND:

- Asphalt and Gravel Mix
- Coarse Sand
- Very Fine Sand / Silt
- Silt
- Very Fine Sand
- Resistance

NTS - Not to Scale NA - Not Applicable NM - Not Measured DTW - Depth to Water

EnviroTrac Environmental Services

Geologic Log

GP-10

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

Client:		Depth to Water (ft. from measuring pt.)		Site Elevation
HB Realty				NM
Site Name:		Date	DTW	
904 Burke Avenue, Bronx		9/13/2016	NA	
Drilling Company:	Method:			
Aacro	Geoprobe			Measuring Point Elevation
Date Started:	Date Completed:			NM
9/13/2106	9/13/2016			
Completion Depth:	ENVIROTRAC Geologist:			
10'	Wala Canario			

GP-10 (NTS)	DEPTH (feet below grade)	SAMPLES Recovery (inches)	SAMPLES PID (ppm)	SOIL DESCRIPTION
GP-10				
	0	NA		0' - 1' - Asphalt and Rock Mixed
				1' - 3' - Fine Brown Sand, No Odor
			0.0	
				3' - 5' - Coarse Brown Sand with Rocks Throughout
			0.0	
	5	NA		5' - 9' - Well Sorted Fine Brown and White Sand Mix
			0.0	
			0.0	
				9' - 10' - Sorted Fine Brown Sand with Traces of White Rocks, No Odor
	10	NA	0.0	10' - Resistance

LEGEND:

- Asphalt and Gravel/Sand Mix
- Crushed Rock
- Coarse Sand
- Clay / Silt Mix
- Clay
- Very Fine Sand / Silt
- Silt
- Fine Sand
- Very Fine Sand
- Resistance

NTS - Not to Scale NA - Not Applicable NM - Not Measured DTW - Depth to Water

EnviroTrac Environmental Services

Geologic Log

GP-11

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

Client: HB Realty		Depth to Water (ft. from measuring pt.)		Site Elevation
Site Name: 904 Burke Avenue, Bronx		Date	DTW	NM
		9/13/2016	11'	
Drilling Company: Aarco	Method: Geoprobe			Measuring Point Elevation
Date Started: 9/13/2016	Date Completed: 9/13/2106			NM
Completion Depth: 12'	ENVIROTRAC Geologist: Wala Canario			

GP-11 (NTS)	DEPTH (feet below grade)	SAMPLES Recovery (inches)	SAMPLES PID (ppm)	SOIL DESCRIPTION
GP-11				
	0	NA		0' - 1' - Concrete and Sand
			16.6	1' - 4' - Moist Silt, with Slight Petroleum Odor
			33.0	4' - 5' - Gray Fine Sand, with Petroleum Odor
	5		59.2	5' - 7' - Sorted Gary Fine Sand, with Petroleum Odor
		NA		
			287.0	7' - 9' - Sorted Light Gray Coarse Sand, with Petroleum Odor
	10		287.8	10' - 12' - Moist Well Sorted, Very Fine Brownish Gray Sand, with Very Strong Petroleum Odor
		NA		12' - Resistance

LEGEND:

- Asphalt and Gravel/Sand Mix
- Crushed Rock
- Coarse Sand
- Clay / Silt Mix
- Clay
- Very Fine Sand / Silt
- Silt
- Fine Sand
- Very Fine Sand
- Resistance

NTS - Not to Scale NA - Not Applicable NM - Not Measured DTW - Depth to Water

EnviroTrac Environmental Services

AES, Inc.

BORING LOG

PROJECT:	Remedial Investigation	Boring #	#1
LOCATION:	904 Burke Avenue	DRILLER:	N/A
DATE:	4/21/2008	INSPECTOR:	J. Gallo/B. Pendergast

	SAMPLER	CASING	GROUNDWATER DEPTH MEASUREMENTS				GROUNDWATER COMMENTS
TYPE:			RIM ELEV.:				
SIZE (ID)			DATE:				
HAMMER (LB)			TIME:				
FALL (IN)			DEPTH:				

SAMPLE			PID (ppm)	SOIL CLASSIFICATION
DEPTH	DEPTH	PEN/REC		
0	2		0.0	brown soil

GENERAL COMMENTS

Soil boring conducted using hand auger. One sample collected from 2'

AES, Inc.

WELL LOG

PROJECT:	Remedial Investigation
LOCATION:	904 Burke Avenue
DATE:	4/11/2008
Boring #	MW1
DRILLER:	Regional Group
INSPECTOR:	J. Gallo/B. Pendergast

	SAMPLER	CASING
TYPE:		
SIZE (ID)		
HAMMER (LB)		
FALL (IN)		

GROUNDWATER DEPTH MEASUREMENTS			
RIM ELEV.:			
DATE:			
TIME:			
DEPTH:			

GROUNDWATER COMMENTS

SAMPLE			PID (ppm)	SOIL CLASSIFICATION
DEPTH	DEPTH	PEN/REC		
0	2		22.0	dark brown soil
6	8		10.0	dark brown/gray moist soil
8	12		1.0	moist brown/dark brown soil

GENERAL COMMENTS

Groundwater encountered at 12'. Soil sample collected from 0-2'.

AES, Inc.

WELL LOG

PROJECT:	Remedial Investigation
LOCATION:	904 Burke Avenue
DATE:	4/11/2008
Boring #	MW4
DRILLER:	Regional Group
INSPECTOR:	J. Gallo/B. Pendergast

	SAMPLER	CASING
TYPE:		
SIZE (ID)		
HAMMER (LB)		
FALL (IN)		

GROUNDWATER DEPTH MEASUREMENTS			
RIM ELEV.:			
DATE:			
TIME:			
DEPTH:			

GROUNDWATER COMMENTS

SAMPLE			PID (ppm)	SOIL CLASSIFICATION
DEPTH	DEPTH	PEN/REC		
0	2		11.0	Dark brown gray soil
6	7		0.0	Moist brown/gray soil
7	8		8.0	Dark brown moist soil

GENERAL COMMENTS

Groundwater encountered at 8' below grade. Refusal encountered at 11.5'. Soil sample collected from 0-2'.

AES, Inc.

WELL LOG

PROJECT:	Remedial Investigation
LOCATION:	904 Burke Avenue
DATE:	4/11/2008
Boring #	MW5A
DRILLER:	Regional Group
INSPECTOR:	J. Gallo/B. Pendergast

	SAMPLER	CASING	GROUNDWATER DEPTH MEASUREMENTS				GROUNDWATER COMMENTS
TYPE:			RIM ELEV.:				
SIZE (ID)			DATE:				
HAMMER (LB)			TIME:				
FALL (IN)			DEPTH:				

SAMPLE			PID (ppm)	SOIL CLASSIFICATION
DEPTH	DEPTH	PEN/REC		
0	2		0.0	gray soil
2	4		0.0	gray soil
4	5		0.0	gray moist soil

GENERAL COMMENTS

Groundwater encountered at 5'. Well collapsed prior to well being set after two attempts.

AES, Inc.

WELL LOG

PROJECT:	Remedial Investigation
LOCATION:	904 Burke Avenue
DATE:	4/22/2008
Boring #	MW5
DRILLER:	Enviroporbe
INSPECTOR:	J. Gallo/B. Pendergast

	SAMPLER	CASING	GROUNDWATER DEPTH MEASUREMENTS				GROUNDWATER COMMENTS
TYPE:			RIM ELEV.:				
SIZE (ID)			DATE:				
HAMMER (LB)			TIME:				
FALL (IN)			DEPTH:				

SAMPLE			PID (ppm)	SOIL CLASSIFICATION
DEPTH	DEPTH	PEN/REC		
0	2		0.0	brown/dark brown soil
	5		0.0	above water; brown-dark brown soil
	6		0.0	at water; moist/wet brown-dark brown sandy soil

GENERAL COMMENTS

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AES, Inc.

WELL LOG

PROJECT:	Remedial Investigation
LOCATION:	904 Burke Avenue
DATE:	1/15/2009
Boring #	MW7A
DRILLER:	Moretrench
INSPECTOR:	J. Gallo/B. Pendergast

	SAMPLER	CASING
TYPE:		
SIZE (ID)		
HAMMER (LB)		
FALL (IN)		

GROUNDWATER DEPTH MEASUREMENTS			
RIM ELEV.:			
DATE:			
TIME:			
DEPTH:			

GROUNDWATER COMMENTS

SAMPLE			PID (ppm)	SOIL CLASSIFICATION
DEPTH	DEPTH	PEN/REC		
0	2'		0.0	Soil is brown dark brown in color
	10'		0.0	brown in color moist sample above water
	14'		0.0	brown wet soil at water

GENERAL COMMENTS

AES, Inc.

WELL LOG

PROJECT:	Remedial Investigation
LOCATION:	904 Burke Avenue
	1/16/2009
Boring #	MW8A
DRILLER:	Moretrench
INSPECTOR:	J. Gallo

	SAMPLER	CASING	GROUNDWATER DEPTH MEASUREMENTS				GROUNDWATER COMMENTS
TYPE:			RIM ELEV.:				
SIZE (ID)			DATE:				
HAMMER (LB)			TIME:				
FALL (IN)			DEPTH:				

SAMPLE			PID (ppm)	SOIL CLASSIFICATION
DEPTH	DEPTH	PEN/REC		
0	2'		0.0	brown in color
	9'		0.0	above water; dark brown-brown soil
	10'		0.0	at water; dark brown-brown soil

GENERAL COMMENTS

AES, Inc.

WELL LOG

PROJECT:	Remedial Investigation
LOCATION:	904 Burke Avenue
DATE:	10/30/2008
Boring #	MW9
DRILLER:	Moretrench
INSPECTOR:	J. Gallo/B. Pendergast

	SAMPLER	CASING	GROUNDWATER DEPTH MEASUREMENTS				GROUNDWATER COMMENTS
TYPE:			RIM ELEV.:				
SIZE (ID)			DATE:				
HAMMER (LB)			TIME:				
FALL (IN)			DEPTH:				

SAMPLE			PID (ppm)	SOIL CLASSIFICATION
DEPTH	DEPTH	PEN/REC		
0	2'		2.0	dark brown-brown soil
	12'		10.0	above water dark brown-brown soil
	15		3.0	wet/moist brown sandy soil

GENERAL COMMENTS

AES, Inc.

WELL LOG

PROJECT:	Remedial Investigation
LOCATION:	904 Burke Avenue
DATE:	10/30/2008
Boring #	MW10
DRILLER:	Moretrench
INSPECTOR:	J. Gallo/B. Pendergast

	SAMPLER	CASING
TYPE:		
SIZE (ID)		
HAMMER (LB)		
FALL (IN)		

GROUNDWATER DEPTH MEASUREMENTS			
RIM ELEV.:			
DATE:			
TIME:			
DEPTH:			

GROUNDWATER COMMENTS

SAMPLE			PID (ppm)	SOIL CLASSIFICATION
DEPTH	DEPTH	PEN/REC		
0	2'		2.0	dark brown-brown soil
	10'		8.0	above water dark brown-brown soil
	12'		10.0	wet/moist brown sandy soil

GENERAL COMMENTS

AES, Inc.

WELL LOG

PROJECT:	Remedial Investigation
LOCATION:	904 Burke Avenue
DATE:	3/12/2009
Boring #	MW11
DRILLER:	Moretrench
INSPECTOR:	J. Gallo

	SAMPLER	CASING	GROUNDWATER DEPTH MEASUREMENTS				GROUNDWATER COMMENTS
TYPE:			RIM ELEV.:				
SIZE (ID)			DATE:				
HAMMER (LB)			TIME:				
FALL (IN)			DEPTH:				

SAMPLE			PID (ppm)	SOIL CLASSIFICATION
DEPTH	DEPTH	PEN/REC		
0	2'		0.0	brown soil
	9'		0.0	above water; brown soil
	10'		0.0	at water; wet/moist brown sandy soil

GENERAL COMMENTS

AES, Inc.

WELL LOG

PROJECT:	Remedial Investigation
LOCATION:	904 Burke Avenue
DATE:	3/13/2009
Boring #	MW12
DRILLER:	Moretrench
INSPECTOR:	B. Pendergast

	SAMPLER	CASING	GROUNDWATER DEPTH MEASUREMENTS			
TYPE:			RIM ELEV.:			
SIZE (ID)			DATE:			
HAMMER (LB)			TIME:			
FALL (IN)			DEPTH:			

GROUNDWATER COMMENTS

SAMPLE			PID (ppm)	SOIL CLASSIFICATION
DEPTH	DEPTH	PEN/REC		
0	2'		0.0	brown-dark brown soil
	7'		0.0	above water: brown soil
	8'		0.0	at water; wet/moist sandy brown soil

GENERAL COMMENTS

APPENDIX D – EXCAVATION WORK PLAN (EWP)

D-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the Site owner or their representative will notify the NYSDEC. Table D-1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information.

Table D-1: Notifications*

Jane O'Connell (NYSDEC Regional HW Remediation Engineer)	Phone: 718-482-4599 Email address: Jane.Oconnell@dec.ny.gov
Nigel Crawford, P.E. (Regional Office NYSDEC Representative)	Phone: 718-482-7778; Email: Nigel.Crawford@dec.ny.gov
Kelly Lewandowski (NYSDEC Site Control)	Phone: 518-402-9553 Email address:Kelly.Lewandowski@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 soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control;
- 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 EWP;
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix E of this SMP;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

D-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed by a qualified environmental professional during all excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-Site disposal and material that requires testing to determine if the material can be reused on-Site as soil beneath a cover. Further discussion of off-site disposal of materials and on-site reuse is provided in Section D-6 and Section D-7 of this Appendix.

D-3 SOIL STAGING METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each 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.

D-4 MATERIALS EXCAVATION AND LOAD-OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the Site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-site, as appropriate. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the activities performed under this section are complete Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the Site are clean of dirt and other materials derived from the Site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

D-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Truck transport routes are as follows: Trucks departing the Site will exit the western portion of the Site on to Bronxwood Avenue. Trucks will travel north on Bronxwood Avenue to East Gun Hill Road, and then travel east on East Gun Hill Road until connecting to Interstate 95, as shown on Figure D-5.

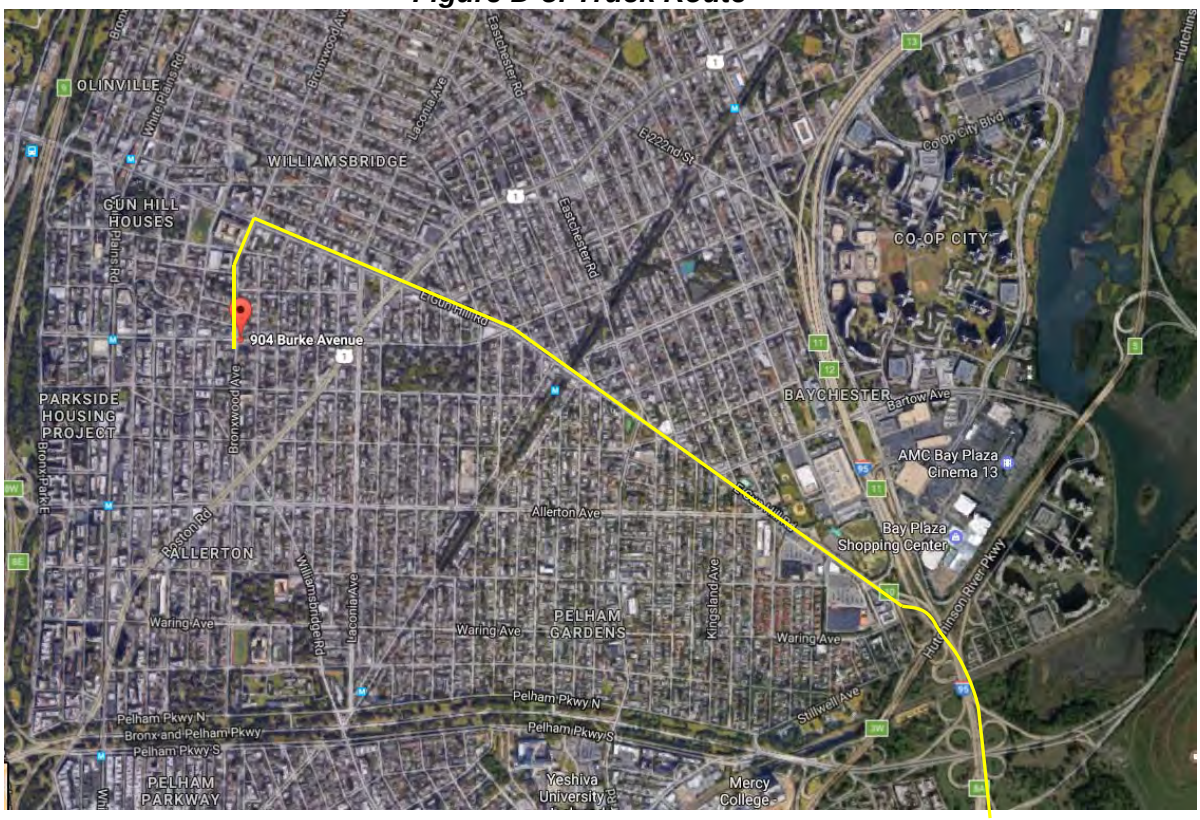
All trucks loaded with Site materials will exit the vicinity of the Site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site.

Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

Figure D-5: Truck Route



D-6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the Site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6 NYCRR Part 360) and Federal regulations. If disposal of material from this Site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this Site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review

Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

D-7 MATERIALS REUSE ON-SITE

Under the existing and anticipated site use, excavation may potentially occur in the paved area located across the Site. Any soil or groundwater generated from beneath the asphalt cap will be tested for reuse on-site or disposed of off-site depending on the volume of material generated and specifics pertaining to the excavation. Soil considered for reuse on-site will be laboratory tested for metals, polychlorinated biphenyls (PCBs), pesticides, semi-volatiles, and volatiles. Laboratory results will be compared to 6 NYCRR Part 375 Table 375-6.8(b) the lower of Protection of Public Health for Restricted Residential SCOs or Protection of Groundwater SCOs (for VOCs only) to determine re-use suitability.

The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for reuse on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the Site will not be reused on-site.

D-8 FLUIDS MANAGEMENT

All liquids to be removed from the Site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the Site, and will be managed off-site, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

D-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the SCOs for cover material set forth in 6NYCRR Part 375-6.7(d). A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP.

D-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the Site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the Site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review.

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 6 NYCRR 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 are listed in Attachment 1. 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.

D-11 STORM WATER POLLUTION PREVENTION

Under the current and anticipated future use of the Site as a private temporary automobile automotive storage facility, large scale excavations or situations requiring a storm water pollution prevention plan are not anticipated. Should a major excavation be required, an appropriate storm water pollution prevention plan will be developed and provided in advance of any excavation work to the NYSDEC.

D-12 EXCAVATION CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the Site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC’s Project Manager. Reportable quantities of petroleum product will also be

reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

D-13 COMMUNITY AIR MONITORING PLAN

Real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) will be conducted during implementation of excavation activities under this SMP to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses) from potential airborne contaminant releases as a direct result of the remedial work activities.

Continuous monitoring will be required for all ground intrusive activities including, but not necessarily limited to, the installation of sub-slab depressurization components, soil borings and ISCO injection monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of collection of groundwater samples and the injection of chemical reagents into the subsurface using injection/monitoring wells. In some instances, depending upon the proximity of potentially exposed individuals and/or field observations during implementation of such work, continuous monitoring may be required during these activities.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the work area on a continuous basis during intrusive activities (e.g., injection/monitoring well installations). Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below:

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous

readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the work area at temporary particulate monitoring stations during work activities (e.g., injection/monitoring well installations).

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

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150

mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

D-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used on a routine basis will include the implementation of the CAMP activities provided in Section D-13 and securing excavation stockpiles (covering with poly-sheeting). If nuisance odors are identified at the Site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the remedial party's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site

conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

D-15 DUST CONTROL PLAN

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

D-16 OTHER NUISANCES

Procedures to address other nuisances that may require control will be developed as needed based on the work scope and other pertinent site conditions present at the time of the proposed excavation activities. Such plans may include, but are not limited to: a plan for rodent control during site clearing/grubbing and a plan to ensure compliance with local noise control ordinances.

APPENDIX E – HEALTH AND SAFETY PLAN

Table of Contents

APPENDICES

EnviroTrac Environmental Services

1.0 Introduction

This general Health and Safety Plan (HASP) has been prepared to identify and address potential health and safety concerns that may be encountered as a result of the below activities that may be conducted at the 904 Burke Avenue LLC site located at 904 Burke Avenue, Bronx, New York (Site).

This HASP is intended to be utilized as a component to the Site Management Plan that is required to manage residual contamination at the Site. Identified potential activities currently include:

- Intrusive activities during on-going property maintenance and/or future redevelopment; and
- Groundwater monitoring to evaluate the effectiveness of the remedy.

The owner of the Site, its contractors, and other on-Site workers will be responsible for the development and/or implementation of health and safety provisions associated with future environmentally-related activities at the Site.

The procedures were developed in accordance with Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard 29 CFR 1910.120.

2.0 Site Background

2.1 Site Description

The Site is a Brownfield Cleanup Program site located at 904 Burke Avenue, Bronx, New York. The Site is located in a mixed commercial and residential area in Bronx, Bronx County, New York. Presently the Site exists as a vacant lot and is utilized as a private temporary automotive storage facility.

2.2 Site History

The Site has been developed for approximately fifty years. A single story concrete block building was historically located on-Site and had been utilized as a gasoline station and automobile repair facilities (J&S Auto Repairs and Chanty Auto Repairs). The concrete block building was demolished by the property owner in early 2008.

American Environmental Solutions, Inc.'s (AES) Remedial Investigation Report (RIR) dated revised January 2010 indicated a remedial investigation (RI) was conducted between April 2008 and March 2009. The RI included the installation of six (6) monitoring wells, installation of five (5) soil gas sampling points, the collection of twenty-two (22) soil samples, and the collection of eleven (11) groundwater samples. The RI findings identified two (2) areas of concern (AOC) which were located in the northern area of the Site (in the vicinity of the former underground storage tanks) and in the area of the former on-Site building.

Volatile organic compounds (VOCs) exceeding the Ambient Water Quality Standards and Guidance Values including acetone, benzene, ethylbenzene, m,p-xylene, sec-butylbenzene, and toluene were identified in groundwater samples, while metals and semi-volatile organic compounds (SVOCS) exceeding Part 375 Unrestricted Use Criteria were identified in soil samples. Soil vapor sampling indicated significantly elevated levels of compounds including hexane, benzene and toluene.

Based on review of the RI findings it was determined that data gaps required additional testing to be conducted to prepare a final remedial plan for the Site. Additional testing conducted in September 2016 included a geophysical survey, and soil, groundwater, and soil vapor testing. Results of the testing identified the presence of on-Site subsurface piping, VOCs in groundwater and in soil, and elevated concentrations of petroleum related petroleum constituents in soil vapor. Given the findings related to historic Site operations that, and based on concentration and/or location, represent sources or off-Site migration conditions which warranted cleanup.

Subsequent remedial activities were conducted in June 2017 which included excavation of on-Site subsurface piping, hot spot excavation, and in-situ chemical oxidation (ISCO) injections to address groundwater conditions. Post-excavation endpoint sampling and analysis indicated none of the post-excavation endpoint sampling results exceeded the Restricted Residential Use SCOs. The final round of post-ISCO injection groundwater monitoring conducted on August 8, 2017 indicated concentrations of VOCs which exceeded criteria include:

- 1,2,4,5-Tetramethylbenzene
- 1,2,4-Trimethylbenzene

- 1,3,5-Trimethylbenzene
- Benzene
- Ethylbenzene
- Isopropylbenzene
- Methyl tert butyl ether
- n-Butylbenzene
- n-Propylbenzene
- Naphthalene
- o-Xylene
- p/m-Xylene
- sec-Butylbenzene
- Toluene
- Xylenes, Total

2.3 Contaminants of Concern

The primary contaminants of concern at the Site are petroleum-related volatile organic compounds (VOCs), which are present in soil, soil vapor, and groundwater, and semi-volatile organic compounds (SVOCs) in soil. The most prevalently found contaminants of concern and their most recently quantified maximum concentrations are as follows:

Contaminant	Maximum Concentration Present
Soil VOCs	
Acetone	0.32 mg/kg
1,3,5-Trimethylbenzene	5.4 mg/kg
Xylenes, Total	1.7 mg/kg
Groundwater VOCs	
1,2,4,5-Tetramethylbenzene	66 ug/l
1,2,4-Trimethylbenzene	470 ug/l
1,3,5-Trimethylbenzene	50 ug/l
Benzene	640 ug/l
Ethylbenzene	600 ug/l
Isopropylbenzene	35 ug/l
Methyl tert butyl ether	16 ug/l
n-Butylbenzene	17 ug/l
n-Propylbenzene	100 ug/l
Naphthalene	190 ug/l
o-Xylene	200 ug/l
m,p-Xylene	650 ug/l
sec-Butylbenzene	12 ug/l
Toluene	28 ug/l

Xylenes, Total	850 ug/l
Soil Vapor VOCs	
1,3-Dichlorobenzene	8.78 ug/m^3
2,2,4-Trimethylpentane	74,700 ug/m^3
2-Butanone	98.8 ug/m^3
2-Hexanone	2.79 ug/m^3
Acetone	2,240 ug/m^3
Benzene	11.4 ug/m^3
Carbon Disulfide	13.2 ug/m^3
Chloroform	17.3 ug/m^3
Chloromethane	1.92 ug/m^3
Cyclohexane	1.67 ug/m^3
Ethyl Alcohol	90.8 ug/m^3
Ethylbenzene	2.81 ug/m^3
Heptane	7.38 ug/m^3
Isopropanol	18.5 ug/m^3
N-Hexane	170 ug/m^3
O-Xylene	3.07 ug/m^3
P/M-Xylene	9.08 ug/m^3
Tert-Butyl Alcohol	103 ug/m^3
Tetrahydrofuran	8.35 ug/m^3
Toluene	36.1 ug/m^3

Notes: mg/kg = milligrams per kilogram; ug/l = micrograms per liter; ug/m^3 = micrograms per cubic meter of air

3.0 Objectives

The objective of this HASP is to protect on-Site worker health and safety during field activities. General guidelines in the HASP are provided to assure that safe working conditions exist at the Site. The health and safety procedures set forth in this plan have been established based on analysis of potential hazards and protection measures have been selected in response to these potential risks. The HASP will be modified as required based on the scope of work to be performed and if unforeseen changes occur while work is in progress. This plan has been designed to meet the following objectives:

- Evaluate the risk associated with each operation;
- Provide for identification, recognition, evaluation, and control of health, safety, and environmental hazards (if any);
- Provide the requirements for an optimum, safe, and healthful work environment, in which personnel are not exposed to avoidable risks, accidents, or injuries in the performance of their duties;
- Identify the roles and responsibilities of on-Site personnel;
- Establish personnel protection standards and mandatory safety practices and procedures for all on-Site personnel; and
- This document will be periodically reviewed to ensure that it is current and appropriate.

4.0 Personnel Responsibilities

The Health and Safety Coordinator (HSC) is responsible for the development and implementation of the HASP. The Health and Safety Officer (HSO) will be responsible for the day to day implementation of the HASP. In addition, the HSO is responsible for the distribution of this HASP to all field personnel and discussion of the plan prior to the start of field activities. The HSO will also have the following authority and responsibilities:

- Responsibility for the field implementation;
- Authority to make necessary field modifications to this HASP with approval of authorized State representatives;
- Responsibility to ensure that at a minimum the following safety equipment is available at the Site prior to start of the work: fire extinguisher, personal protective equipment, and first aid supplies;
- Authority to suspend field operations due to potential health and safety concerns;
- Responsibility to supervise emergency response activities; and
- Implementation and documentation of daily pre-task field briefings (tailgate safety meetings).

HSO alternates will be designated to act accordingly when the primary HSO is not present at the Site. All site personnel and contract workers working within the exclusion zone will have received the appropriate level of training necessary to perform applicable duties and comply with 29 CFR 1910.120.

Other site personnel may be called upon to perform HSO duties. The HSO or alternate will be on-Site at all times during intrusive work activities. All personnel working on-Site will supply documentation of compliance with 29 CFR 1910.120 in advance of undertaking any physical activities at the Site.

All personnel who will be working at the Site will be provided with a copy of this HASP. A sign-in sheet will be maintained documenting all visitors have been provided with a copy of the HASP and have been advised of the Site hazards. Personnel responsible for HASP monitoring during on-Site activities will be responsible for informing the field workers and subcontractors of any changes in conditions and/or levels of protection required in the affected work area. This HASP must be modified or amended when circumstances or conditions develop that are beyond the scope of the operations described in this HASP.

Contractors, consultants, state or local agencies, or other parties, and their employees, involved with work at the Site will be responsible for their own safety while on-Site. Their employees will be required to understand the information contained in this HASP, and must follow the recommendations that are made in this document. As an alternative, contractors, consultants, state or local agencies, or other parties, and their employees, involved with this project can utilize their own health and safety plan for this project as long as it is found acceptable to the New York State Department of Health (NYSDOH), and/or New York State Department of Environmental Conservation (NYSDEC).

5.0 Site Characterization

5.1 Environmental Hazard Evaluation

The environmental hazards associated with intrusive activities (e.g. excavation), groundwater monitoring well sampling, and soil vapor sampling/air monitoring at the Site principally concern the potential presence of VOCs in soil, groundwater, and soil vapor. Potential routes by which workers could be exposed to VOCs or other hazardous constituents include:

- Inhalation;
- Ingestion; and
- Dermal contact.

6.0 Chemical Exposure Data

All of the active on-Site personnel will be protected against potential exposure to the constituents of concern using suitable personal protection as discussed below and as detailed in Section 11.

1. Inhalation
   Environmental air monitoring for organic vapors will be conducted through the use of a photoionization detector (PID) within and at the perimeter of the exclusion zone and work areas during all on-Site soil testing and activities including collection of soil samples, soil vapor and ambient air samples, and groundwater monitoring well gauging and sampling. Level D personal protective equipment (PPE) will be required, as detailed in Section 11.

   Organic Vapors
   If PID monitoring readings are greater than 25 and less than 100 ppm levels within the breathing zone, engineering controls will be initiated as detailed in Section 12.

   If PID readings in the exclusion zone exceed 100 ppm, work will cease. Prior to authorization to recommence work by the HSO, work practices will be implemented to lower volatile emissions only after approval by the Engineer. If work practices do not lower emissions to less than 100 ppm then recommencement of work will only take place at appropriate PPE Levels as detailed in Section 11.

2. Ingestion
   There is also a possibility of ingestion of soil materials during field activities. Safe work practices should be followed to avoid potential ingestion of soil materials. No food, drink, or smoking will be allowed in the exclusion zone.

3. Dermal Contact
   Due to the potential for dermal contact with soils containing hazardous constituents, all active site personnel performing invasive and non-invasive sampling and pilot testing activities will be required to wear appropriate Level D personal protective clothing, as detailed in Section 11, including work boots, hard hats, eye protection, and appropriate work gloves. Work boots should meet ANSI Z41 American National Standard for Personal Protection – Protective Footwear. As a precautionary measure, extra skin protective gear will be available on-Site in the field vehicle, to include Tyvek suits, to be worn, if necessary.

7.0 Operation Safety and Health Risk Analysis

The following subsections describe each task/operation in terms of the specific hazards associated with it. In addition, the protective measures to be implemented during completion of those operations are also identified. An additional HASP should be developed for tasks/operations not covered by this general HASP.

7.1 Chemical Hazard Risk Analysis

The evaluation of hazards is based upon the knowledge of the Site background and anticipated risks posed by the specific operation.

The following subsections describe each general tasks/operations in terms of the specific hazards associated with it. In addition, the protective measures to be implemented during completion of those operations are also identified. Chemical hazards at the Site are summarized below.

The Permissible Exposure Limit (PEL), Threshold Limit Value (TLV) and Immediately Dangerous to Life and Health (IDLH) levels are listed below for the contaminant of concern. In general OSHA PELs are regulatory requirements that must be met and TLVs are guidance values. The PEL represents the maximum exposure concentration an individual can be exposed to as a time weighted average of 8 hours. TLVs represent the exposure concentration which an individual can be exposed to eight hours a day, five days a week (40 hours), without harmful effects. The IDLH represents the maximum concentration of a contaminant for which an individual can be exposed to for thirty minutes without any "escape impairing" symptoms or irreversible health effects.

Task Analysis – Work Zone Air Monitoring Chemical Hazards of Concern

Contaminant	Pel/TLV/IDHL	Routes of concentration	Exposure
1,2,4,5-Tetramethylbenzene	PEL: None established TLV: None established IDHL: None established	Groundwater	Ingestion Contact
1,2,4-Trimethylbenzene	PEL: 25 ppm TLV: 25 ppm IDHL: Not applicable	Groundwater	Ingestion Contact
1,3-Dichlorobenzene	PEL: None established TLV: None established IDHL: None established	Soil vapor	Inhalation
1,3,5-Trimethylbenzene	PEL: 25 ppm TLV: 25 ppm IDHL: Not applicable	Groundwater Subsurface soil	Ingestion Contact
2-Butanone	PEL: 200 ppm TLV: 200 ppm IDHL: 3,000 ppm	Soil vapor	Inhalation
2-Hexanone	PEL: 100 ppm TLV: 5 ppm IDHL: 1,600 ppm	Soil vapor	Inhalation
2,2,4-Trimethylpentane	PEL: None established TLV: 300 ppm IDHL: None established	Soil vapor	Inhalation
Acetone	PEL: 1,000 ppm TLV: 250 ppm IDHL: 2,500 ppm	Subsurface soil Soil vapor	Ingestion Contact Inhalation

Task Analysis – Work Zone Air Monitoring Chemical Hazards of Concern, continued

Contaminant	Pel/TLV/IDHL	Routes of concentration	Exposure
Benzene	PEL: 1 ppm TLV: 0.5 ppm IDHL: 500 ppm	Groundwater Soil vapor	Ingestion Contact Inhalation
Carbon Disulfide	PEL: 20 ppm TLV: 1 ppm IDHL: 500 ppm	Soil vapor	Inhalation
Chloroform	PEL: 50 ppm TLV: 10 ppm IDHL: 1,000 ppm	Soil vapor	Inhalation
Chloromethane	PEL: 100 ppm TLV: 50 ppm IDHL: 2,000 ppm	Soil vapor	Inhalation
Cyclohexane	PEL: 300 ppm TLV: 100 ppm IDHL: 1,300 ppm	Soil vapor	Inhalation
Ethyl Alcohol	PEL: 1,000 ppm TLV: 1,000 ppm IDHL: 3,300 ppm	Soil vapor	Inhalation
Ethylbenzene	PEL: 100 ppm TLV: 100 ppm IDHL: 800 ppm	Groundwater Soil vapor	Ingestion Contact Inhalation
Heptane	PEL: 500 ppm TLV: 400 ppm IDHL: 750 ppm	Soil vapor	Inhalation
Isopropanol	PEL: 400 ppm TLV: 200 ppm IDHL: 2,000 ppm	Soil vapor	Inhalation
Isopropylbenzene	PEL: 50 ppm TLV: 50 ppm IDHL: 900 ppm	Groundwater	Ingestion Contact
Methyl tert butyl ether	PEL: None established TLV: 50 ppm IDHL: None established	Groundwater	Ingestion Contact
Naphthalene	PEL: 10 ppm TLV: 10 ppm IDHL: 250 ppm	Groundwater	Ingestion Contact
n-Hexane	PEL: 500 ppm TLV: 50 ppm IDHL: 1,100 ppm	Soil vapor	Inhalation
n-Butylbenzene	PEL: None established TLV: None established IDHL: None established	Groundwater	Ingestion Contact
n-Propylbenzene	PEL: None established TLV: None established IDHL: None established	Groundwater	Ingestion Contact
sec-Butylbenzene	PEL: None established TLV: None established IDHL: None established	Groundwater	Ingestion Contact
Tert-Butyl Alcohol	PEL: 100 ppm TLV: 100 ppm IDHL: 8,000 ppm	Soil vapor	Inhalation

Task Analysis – Work Zone Air Monitoring Chemical Hazards of Concern, continued

Contaminant	Pel/TLV/IDHL	Routes of concentration	Exposure
Tetrahydrofuran	PEL: 200 ppm TLV: 200 ppm IDHL: 2,000 ppm	Soil vapor	Inhalation
Toluene	PEL: 200 ppm TLV: 50 ppm IDHL: 500 ppm	Groundwater Soil vapor	Ingestion Contact Inhalation
Xylenes	PEL: 100 ppm TLV: 100 ppm IDHL: 900 ppm	Groundwater Subsurface soil Soil vapor	Ingestion Contact Inhalation

Notes: ppm = parts per million; mg/m^3 = milligrams per cubic meter; PEL=Permissible Exposure Limit; TLV=Threshold Limit Value; IDLH=Immediately Dangerous to Life and Health

7.2 Environmental Hazard Analysis

Environmental factors such as weather, wild animals, insects, and plants can pose hazards when conducting field work. Every reasonable effort should be made to alleviate these hazards in the event they should arise.

7.2.1 Heat Stress

Heat stress manifests itself in two forms: heat stroke and heat exhaustion. Depending on ambient conditions, the worker and the work being performed, heat stress can adversely affect a worker in as little as 15 minutes. This is especially important as ambient temperatures exceed approximately 69°F at high humidity.

Heat stroke is a much more dangerous form of heat stress. Symptoms of heat stroke include high body temperatures and red or flushed hot, dry skin. There may be dizziness, nausea, headache, rapid pulse, and unconsciousness. First-aid for all forms of heat stress includes cooling the body by removing PPE, moving to a safe area, and allowing the worker to rest in a cooler environment. OSHA Quick Card for Protecting Workers from Heat Stress can be found in Appendix A.

To guard against injury by heat stress, the following control measures will be employed in hot weather:

- Provision for adequate liquids to replace lost body fluids. Employees must replace water and salt lost through perspiration. Employees will be encouraged to drink more than the amount required to satisfy thirst, since thirst satisfaction is not an accurate indicator of adequate salt and fluid replacement. Replacement fluids can be a 0.1 percent salt solution, commercial mixes such as Gatorade, Quick Kick, or a combination of these with fresh water;
- Establishment of a work regimen that will provide adequate rest periods for cooling down. Rest breaks are to be taken in a cool, shaded area during hot weather;
- Employees shall not be assigned other tasks during rest periods; and
- All employees shall be informed of the importance of adequate rest, acclimation, and proper diet in the prevention of heat stress.

7.2.2 Cold Stress

To guard against injury by cold weather conditions, the following control measures will be employed:

- Workers will be outfitted with adequate winter clothing;
- Clothing will be changed if it becomes wet;
- Warm shelters and regular rest periods will be available for workers;
- Training sessions will be held as appropriate to emphasize warning symptoms of hypothermia or frostbite such as reduced coordination, drowsiness, impaired judgment, fatigue, and numbing of toes and fingers; and
- Warm beverages will be provided.

Injury by cold weather conditions includes frostbite, which may be categorized into three types:

1. Frostbite or incipient frostbite characterized by sudden blanching or whitening of the skin;
2. Superficial frostbite - skin has a waxy or white appearance, is firm to the touch but tissue beneath is resilient; and
3. Deep frostbite - tissues are cold and hard indicating an extremely serious injury.

Sign and symptoms of frostbite include:

- The skin changes to white or grayish-yellow in appearance;
- Pain is sometimes felt early but subsides later (often there is no pain);
- Blisters may appear later;
- The affected part feels intensely cold and numb; and
- The person frequently is not aware of frostbite until someone tells him or her that they observe the pale, glossy skin.

As time passes, the affected worker may become confused, stagger, experience eyesight impairment, become unconscious, and breathing may stop. First-aid frostbite will include protecting the frozen area from further injury, bringing the victim indoors, warming the affected areas quickly with warm water, and maintaining respiration according to the first-aid procedures. Medical assistance should be obtained immediately. Frostbite may be prevented by the use of insulated gloves, socks and other protective clothing capable of keeping moisture away from the skin. All protective clothing should be chosen so that it is compatible with any chemical-resistant clothing required for the Site activities involved. OSHA Quick Card for Protecting Workers from Cold Stress can be found in Appendix A.

7.3 Physical Hazards

Precautions will be taken to prevent injuries and exposures to the following general potential hazards and implement control measures to reduce any potential risks identified. Evaluation of work-specific hazards should be made prior to the implementation of Site work and the HASP modified as necessary to address any additional identified hazards.

Potential Site Hazards and Risk Characterization		
Hazards	**Risk Characterizations**	**Control Measures**
SLIP/TRIP/FALL	Potential wet or slippery conditions due to weather, on-Site spills, on-Site water, and drainage/runoff.	Inspect/be aware of ground conditions and wet or slippery conditions. Use PPE to alleviate hazards, good boots, laced and tied; take small steps in slippery conditions, install handrails or use walking devices, like hiking poles. Use salt, calcium chloride, sand, or other material to alleviate slippery conditions and/or to melt snow/ice.
	Potential slips, trips, and falls may result due to the proposed equipment and activities at the Site like: drilling / excavation, well installation, system installation, loading/unloading, traffic control, etc.	Clear trip hazards, when possible. Use good housekeeping practices and maintain the work zone free of debris and have equipment, supplies, and tools organized and out of main travel paths. Focus on path of travel and keep solid footing. Install handrails, steps, ramps, etc. to alleviate trip or fall hazards.
INJURY TO BACK	Moving / lifting / carrying supplies, equipment, and materials around the work zone. Performing manual equipment operations such as shoveling, sweeping, raking, pushing (such as a wheel barrow), hand auguring, etc. Removal of well covers, manway covers, or manholes. Lifting and maneuvering cones and barriers to establish Work Zone Protection.	Use proper lifting techniques: lift with legs, not back; keep load close to the body; do not twist torso, turn by moving your feet. Use proper bending techniques: bend at the knees, straighten back, lift and pull using legs, and do not use back or shoulders to lift up or pull. Use proper manual equipment techniques for shoveling, raking, sweeping: turn by moving your feet, do not twist torso, use legs not back Take breaks as needed to alleviate muscle and joint strain. Get help or use mechanical lifting equipment when loads exceed 50 lbs or as needed.

Potential Site Hazards and Risk Characterization		
Hazards	**Risk Characterizations**	**Control Measures**
INJURY TO FOOT/FEET	Injury from moving or dropping of equipment, supplies, drums, tanks, and buckets onto foot/feet. Feet being run over by vehicles or being crushed from lowering equipment like a tailgate lift or equipment footing.	Wear ANSI/ASTM compliant safety boots with steel, composite, or aluminum toes while performing any tasks on-Site. Properly secure equipment and objects. Anticipate and recognize any potential conditions which may cause the dropping of equipment (i.e., ground conditions and wet, icy, or slippery conditions). Ensure proper clearance when lowering outriggers on equipment.
INJURY TO HANDS	Sharps including glass, pieces of metal, wood, plastic, etc. during clean up and debris removal process. Potential pinch points/sharp edges during equipment handling, dropping of equipment on hands. Exposure to hazardous substances from the material stored in the tanks or possible contamination in soil/ground water.	Debris should not be handled, use shovels, dustpans, etc., to pick up debris. If debris is required to be handled, use cut-resistant gloves (e.g., Kevlar). Abrasive-resistant or cut-resistant gloves (e.g., leather, Kevlar, etc.) are to be worn while working with tools, equipment, or manipulating objects that can cause cuts or abrasions to the hands. Wear chemical-resistant gloves (e.g. nitrile, neoprene, or butyl rubber gloves) during hands-on inspections, removing liquid or cleaning, handling chemicals or hazardous substances, or during other tasks that involve direct contact with chemicals or hazardous substances.
INJURY TO HEARING	Potential noise due to operating equipment during the proposed activities will not exceed the following levels at the designated durations: Duration (hrs) — Decibel Levels. (dB) 8 — 90 6 — 92 4 — 95 3 — 97 2 — 100 1.5 — 102 1 — 105 0.5 — 110 <0.25 — 115	Wear appropriate ear protection, such as: Ear Plugs: 3M™ E-A-R™ Push-Ins™ corded foam earplugs (NRR 28 dB) Ear Muffs: MSA Cap Mounted Ear Muff Model: 10087422 (NRR 28)

Potential Site Hazards and Risk Characterization		
Hazards	**Risk Characterizations**	**Control Measures**
INJURY TO HEAD AND EYES	Potential of being struck by overhead equipment such as drill rigs, or other equipment, material, and supplies around work site. Potential projectiles from equipment or surrounding environmental and remediation chemical spills during the proposed monitoring/sampling/injection activities. Potential of projectiles impacting face and eyes during preclearing of boreholes.	Wear a hard hat while in the Work Zone (certified ANSI Z89.1) Safety glasses with side shields that comply with ANSI Z87.1 requirements are to be worn at all times in the work zone. Full face shield attached to the hard hat in addition to safety glasses with side shields that comply with ANSI Z87.1 requirements are to be worn while using air-knife for preclearing, working with liquid chemicals, or similar activities that require the protection offered by a full face shield.
TRAFFIC	Potential vehicle traffic around work area	Identify traffic patterns and develop a traffic control program using sufficient traffic control devises to control the traffic. Establish Work Zone Protection. Wear proper PPE for work zones including high visibility apparel (i.e., safety vest), safety boot, safety glasses, hard hat, and long pants. Be aware of on-Site traffic patterns and any other activities/work being conducted at the Site, including the movement of heavy equipment. Use buddy system, if more than one person on-Site. A spotter is required whenever moving heavy equipment around the site or when backing any vehicle.

8.0 Risk Characterization

Based on the following factors, it is believed that the conditions of exposure during field activities, such as intrusive activity and groundwater sampling at the Site, pose low risk of adverse health effects or injury:

- Environmental monitoring will be performed, during intrusive activity and groundwater sampling, for organic vapors;
- Personnel involved with intrusive activity and groundwater sampling within the exclusion zone will follow OSHA guidelines and wear the appropriate level of protection (see Section 11);
- All Site work will be accomplished at Level D personal protection and upgrading as necessary based on action levels (see Section 11);
- Discontinuation of on-Site activities will occur when personnel exposure to organic vapors exceed the PEL or the short term exposure limit;
- As an engineering control, a regenerative air blower or exhaust fans may be used to reduce the potential for dangerous concentrations of VOCs in the breathing zone; and
- Mandatory safe occupational work practices will be followed at all times.

9.0 Work Areas

Work areas in the field will be clearly laid-out and identified with the HSO's approval prior to the commencement of work and will limit equipment, operations and personnel in the areas as defined below.

1. Exclusion Zone (EZ) - The initial exclusion zone will be the work area. The level of PPE required in this area will be determined by the HSC and the SO after air monitoring, review of the tasks to be performed and on-Site inspection have been conducted. The area will be clearly delineated from the Transition and Support areas. As work within the Exclusion zone proceeds, the delineating boundary will be relocated as necessary to prevent the accidental exposure of nearby people and equipment to either chemical or physical risk. The Exclusion Zones will be delineated by barricading (e.g., chain link, snow fencing, orange plastic fencing, cones caution tape etc.).

2. Contamination Reduction Zone (CRZ) – This zone will include the support and equipment area, including the stockpile area for cuttings/excavated material and the decontamination area. These areas occur at the interface of exclusion and support areas and will provide for the transfer of equipment and materials from the Support Zone to the Exclusion Zone, the decontamination of personnel and equipment prior to entering the Support area, and for the physical segregation of the Support and Exclusion areas. These areas will contain all required emergency equipment, and will provide areas for construction equipment storage and decontamination. These areas will be clearly delineated by fencing (e.g., chain link, snow fencing, orange plastic fencing, cones caution tape etc.). These areas also delineate areas that although not contaminated at a particular time may become so at a later date.

3. Support Zone (SZ) - This area is the remainder of the work site and project site. The Support Zone will be clearly delineated and procedures implemented to prevent active or passive contamination from the work site. The function of the Support Zone includes:

    - An entry area for personnel, material and equipment to the Exclusion Zone of site operations through the Contamination Reduction Zone;
    - An exit for decontamination personnel, materials and equipment from the "Decontamination" area of site operations;
    - The housing of site special services; and
    - A storage area for clean, safety, and work equipment.

9.1 General Work Rules

To protect against the occurrence of accidents and dangerous situations, as well as to minimize the potential for emergency events, all on-Site personnel shall:

- Attend a daily tailgate safety meeting and read this HASP prior to beginning any on-Site activities. Records and sign-in sheet documenting the daily tailgate safety meeting shall be maintained, as detailed in Section 15. The HASP will be reviewed periodically by all on-Site personnel conducting field activities;
- Field work will only be conducted during daylight hours unless adequate artificial lighting is provided and community/residential zoning laws permit operation after certain hours;

- No eating, drinking or smoking will be permitted within the exclusion or contamination reduction zone;
- All personnel shall be knowledgeable in the use of the first-aid equipment. Personnel will be advised of the precautions to be taken against sunburn, heat stroke, frostbite, and hypothermia, as well as any other specific environmental, chemical, or physical hazard which may arise;
- Only authorized personnel will be allowed on-Site; and
- Fire extinguishers shall be available at the work site for immediate availability in an emergency.

To minimize the possibility of injuries, the following general precautions will be taken:

- All hand and power tools, as well as any other equipment utilized on-Site, will be maintained in a safe condition;
- Safety guards will be kept in place during use;
- Power tools will be double-insulated and/or properly grounded;
- Walkways will be kept clear of equipment, vegetation, excavated material, or other obstructions;
- Proper work gloves will be provided and used when the possibility of burns, lacerations, or other injury exists;
- Hard hats, safety glasses, and work boots will be worn; and
- Employees exposed to vehicular traffic on public roads and working around heavy machinery will wear warning vests.

10.0 Personnel Training

Field team personnel associated with those activities in which the potential for exposure to hazardous substances exists are required to participate in a health and safety training program that complies with the OSHA standard 29 CFR 1910.120 (HAZWOPER). This program instructs employees on general health and safety principles and procedures, proper operation of monitoring instruments, and use of personnel protective equipment.

In addition, field team personnel must undergo site-specific training prior to the start-up of any given project or task. As activities change at a particular work site, related training must be provided as necessary. The site-specific training will address potential hazards and associated risks, site operating procedures, emergency response and site control methods to be employed. Documentation will be maintained, as detailed in Section 15, recording all work site personnel have acknowledged they have been informed of and understand the potential hazards and associated risks, site operating procedures, emergency response, and site control methods to be employed.

Personnel that have not successfully completed the required training will not be permitted to enter the Site to perform work.

10.1 Safety Meetings

The SO will conduct daily safety meetings for each working shift that will be mandatory for all project personnel. The meetings will provide refresher courses for existing equipment and protocols, chemical and environmental hazards, and will examine new site conditions as they are encountered. A sign-in sheet will be included as part of the daily safety meetings, documenting the safety meeting and those in attendance. Additional safety meetings will be held on an as-required basis.

10.2 Safety Program Triggers, Protocol, and Review

If either unforeseen or potentially detrimental site-specific safety-related factors, hazards, or conditions become evident during the performance of the work at this Site, it will be immediately brought to the attention of the SO who will take appropriate action to stabilize and address the situation. The HSC, as well as the project manager's representative, will be notified verbally and then in writing as quickly as possible for resolution. In the interim, contractors and/or its subcontractor(s) will take prudent action to establish and maintain safe working conditions and to safeguard employees, the public, and the environment. Following resolution, the safety protocols will be reviewed for effectiveness and updated/revised as appropriate.

11.0 Personal Protective Equipment

Based on available data, it is anticipated that all field activities will be performed at Level D protection. However, evaluation and assessment of the appropriateness of the selected personal protective equipment (PPE) should be conducted throughout on-Site activities.

Level D
The following Personal Protective Equipment (PPE) for Level D will be necessary for all field personnel on-Site:

- Boots (should be safety toe when working near heavy machinery);
- Hard hat;
- Work gloves;
- Dust mask (if required by the activity) and;
- Safety glasses.

If contaminated soil is exposed, safety glasses and over-boots will be used.

Additionally, if and when free phase liquids are encountered, the following equipment will be necessary for all field personnel in the affected work area or dealing with the affected soil material:

- Tyvek (e.g., Saranex) disposable coveralls;
- Safety glasses/goggles/face shield;
- Chemically resistant overboots; and
- Protective gloves.

Level C
An upgrade of PPE to Level C may be necessary for all personnel in the work area when engineering controls do not lower the exposure levels to within acceptable limits. Fit test documentation is required if Level C respiratory protection is to be worn.

The upgrade will consist of donning:

- Laminated-type Tyvek (e.g., Saranex) disposable coveralls (if not already donned);
- Nitrile or PVC gloves;
- Full-face respirator equipped with approved cartridges suitable for up to 1,000 ppm organic vapors; and
- Chemically resistant over-boots.

Work Stoppage
Work stoppage will be required for all personnel in the work area when the PID reading is greater than 100 ppm within the breathing zone of the exclusion zone. Activities may be resumed when levels below 100 ppm are reached.

12.0 Air Monitoring Program

As part of this HASP, an air monitoring program (AMP) has been developed to determine that the proper level of personnel protective equipment will be used, to document that the level of worker protection is adequate, and to assess the migration of contaminants to off-Site receptors as a result of Site work. This section covers on-Site worker monitoring as well as community monitoring.

Air monitoring equipment will be operated by personnel trained in the use of the specific equipment provided and will be under the control of the SO. A log of the location, time, type and value of each reading and/or sampling will be maintained. Copies of log sheets will be provided on a daily basis to the project manager's on-Site representative.

12.1 On-Site Worker Air Monitoring

For the On-Site Worker Air Monitoring for this project, a photoionization detector (PID) will be the employed. The instrument can detect and display the relative concentration level of VOCs in the atmosphere and will be used during invasive work (e.g., excavation activities, drilling, collection of soil samples, etc.) to monitor the air in the breathing zone (i.e., from a height of 3 to 5 feet) to assess on-Site worker exposure to VOCs (i.e., the principal chemicals of concern at the Site based on historic testing results). The equipment will be calibrated at least daily and in accordance with the manufacturer's specifications. On-Site worker action limits and response will be established as follows:

Parameter	Action Level	Action
Total Organic Vapors	0 ppm to < 1 ppm	Normal operations; record breathing zone monitoring measurements every hour.
	> 1 ppm to 5 ppm (sustained for 5 min)	Increase recording frequency to at least every 15 minutes and use benzene colorimetric tube to screen for presence of benzene.
	≥ 5 ppm to ≤ 50 ppm (sustained for 5 min)	Screen for the presence of benzene using colorimetric tube.
	> 50 ppm (sustained for 5 min)	Upgrade to level C PPE, continue screening for benzene. Stop work, evacuate work area, investigate cause of reading, reduce through engineering controls. Do not resume work until hazardous atmosphere has been controlled.
Visible Dust	Determined by on-Site SO	Stop work, institute dust containment/mitigation procedures

The potential implementation of VOC personal documentation sampling will be determined by the SO and project manager based on conditions encountered during initiation of invasive activities or

as a result of changing field conditions.

13.0 Decontamination Procedures

An equipment and worker decontamination area will be set up adjacent to the work area. The equipment decontamination procedures described herein include in-the-field and post-field decontamination of sampling equipment.

Personnel will wear the following safety equipment when decontaminating smaller equipment (e.g. shovels, groundwater gauging and sampling equipment):

- Safety glasses, goggles, and/or splash shield; and
- Nitrile or PVC gloves.

Personnel will wear the following additional safety equipment when decontaminating larger equipment (e.g. drill rigs, excavators, etc.) with a high-pressure water/steam decontamination unit:

- Tyvek disposable coveralls;
- Chemically resistant overboots; and
- Hard hat.

13.1 Equipment Decontamination

Non-disposable equipment will be cleaned after completing each sampling event. Decontamination will take place within the designated equipment and materials decontamination area. All rinsate water will be pumped into and contained in 55-gallon drums or other suitable container and properly labeled for proper off-Site disposal. Sediment remaining in the contained decontamination area will also be containerized and labeled for proper off-Site disposal.

Larger equipment (e.g. drill rigs, excavators, bobcats, bulldozers, etc.) that come in direct contact with subsurface soil will be cleaned with potable water before leaving the Site. All equipment that comes into direct contact with subsurface soil will be decontaminated with a power washer or brush in accordance with established federal and state procedures before it is removed from the Site. The decontamination will consist of removing materials (e.g. mud, etc.) using a brush and an approved water soluble soap. Degreasing, followed by high-pressure, hot-water cleaning, supplemented by detergents will be conducted as appropriate.

Smaller equipment (e.g. shovels, etc.) which have had direct contact with contaminated material will also be decontaminated before leaving the Site. The decontamination will consist of removing materials (e.g. mud, etc.) via a potable water scrub, potable water rinse, and an air dry.

Meters and probes which are used in the field (other than those used solely for air monitoring purposes, such as PID) will be decontaminated between use utilizing a non-phosphate detergent and water scrub to removal visual contamination and a potable water rinse.

13.2 Personnel Decontamination

PPE solids (e.g., disposable gloves, disposable clothing, etc.) will be decontaminated as necessary prior to doffing. Rinse water generated during decontamination of PPE that comes in contact with contaminated material or water will be contained in properly labeled on-Site drums or other suitable container and properly labeled for proper off-Site disposal. The outer layer of protective clothing will be removed in the reverse order it was put on (i.e. outer gloves, overboots, outer layer of protective clothing, etc.). Special care will be taken to reduce the risk of contaminating the worker. Required levels of protection, such as respiratory protection and safety eye wear, will be maintained until the worker is decontaminated. Under clothing, if necessary will be removed, and either cleaned or disposed of accordingly. To ensure decontamination, workers are to practice good personal hygiene, including routine showering, routine changing and laundering of clothing, face washing, and frequent hand washing.

Contaminated clothing, used respirator cartridges, and other disposable items will be put into properly labeled drums/containers for transport and proper disposal.

14.0 Emergency Response/Contingency Plan and Procedures

14.1 Emergency Notification

In cases of personal injuries, the injured person or the crew personnel in charge will notify the SO. The SO will assess the seriousness of the injury, give first aid treatment if advisable, consult by telephone with a physician if necessary, and arrange for hospitalization if required. The SO will arrange for an ambulance if required.

Notification to the local Police and Fire Department, State and Federal authorities will be made in the event a serious physical emergency or a release which cannot be controlled by remedial measures occurs.

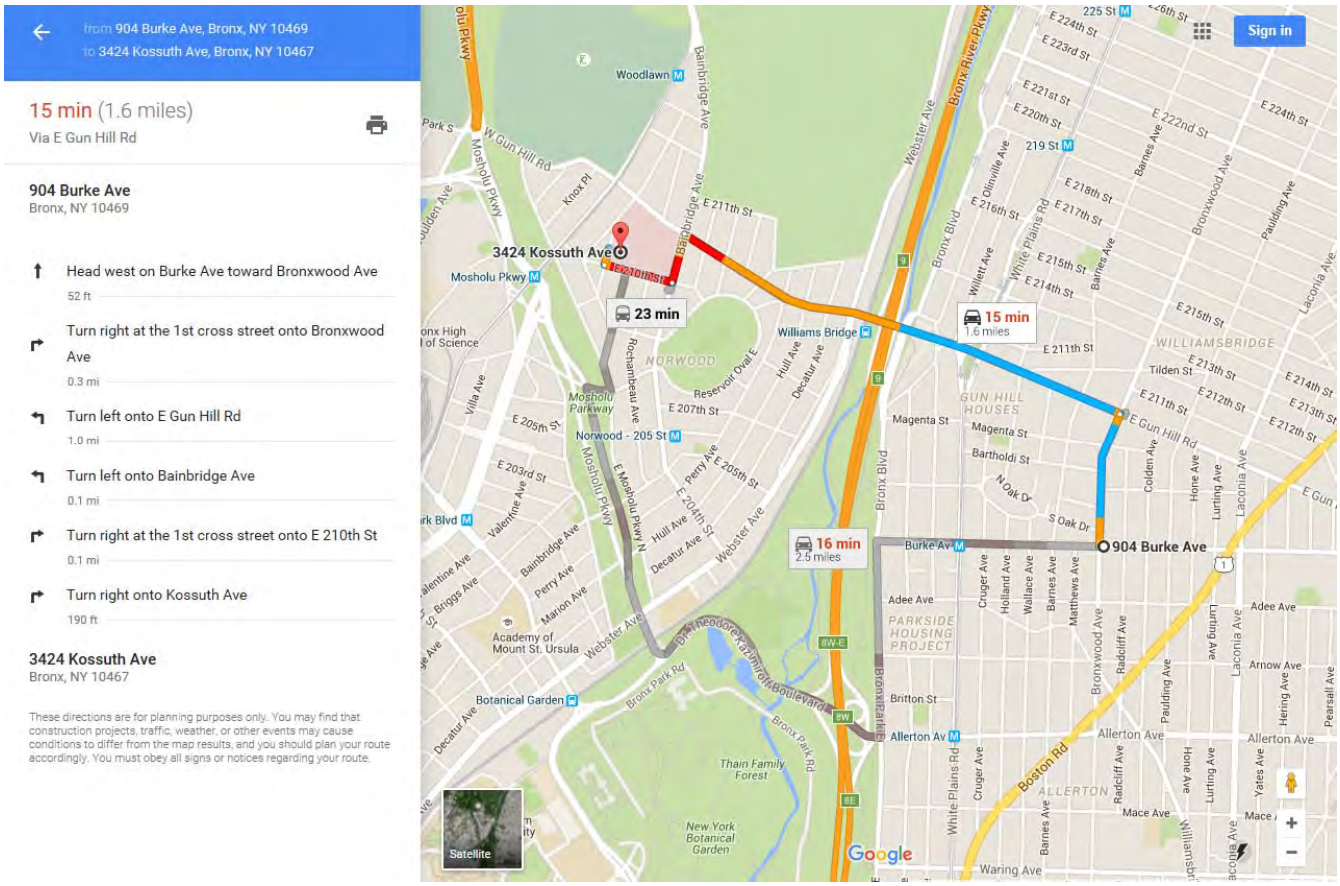
Emergency Contact Information

Emergency Service	Telephone Number
Fire Department	911
Police Department	911
Ambulance	911
Hospital/Emergency Care Facility	(718) 519-5000
New York Poison Control Center	(800) 336-6997
Chemical Emergency Advice	(800) 424-9300 (CHEMTREC)
NYSDEC Albany Central Office	(518) 402-9614
NYSDEC Regional Office	(718) 482-4900
New York State Dept. of Health – Albany	(518) 402-7860
New York State Dept. of Health – Bronx	(718) 901-6466
Federal	
National Response Center	(800) 424-8802
National Poison Control	(800) 926-1253

In the event of a medical emergency in which Hospital / Emergency care is necessary personnel will be a taken to the nearest Hospital.

The nearest hospital to the Site is:
North Central Bronx Hospital
3424 Kossuth Avenue
Bronx, New York 10467
718-519-5000

Directions:
Bronxwood Avenue north to East Gun Hill Road (0.3 mile);
Turn left onto East Gun Hill Road (1.0 mile);
Turn left onto Bainbridge Avenue (0.1 mile);
Turn right onto East 210th Street (0.1 mile);
Turn right onto Kossuth Avenue (190 feet); and
Turn right onto hospital emergency entrance drive.



14.2 On-Site Fire Prevention

To protect and prevent against accidental fire hazards, safe work practices will be followed and:

- Fire extinguishers shall be available in each vehicle and should only be used in accordance with the manufacturer's specifications and guidelines. In the event a system shed is installed at the Site in the future, a fire extinguisher shall be available in the system shed;
- The HSO shall notify the Fire Department and the consultant's project manager and/or engineer in the event that a fire cannot be controlled by the available on-Site equipment;
- As necessary, system electric shall satisfy all National Electric Code (NEC) criteria; and
- Smoking is prohibited in the exclusion and contamination reduction zone.

15.0 Logs, Reports, and Record Keeping

15.1 Security Log

A daily log of security incidents and visitors granted access to the Site will be maintained, as well as a log of all personnel entering and exiting the Site. All approved visitors to the Site will be briefed by the SO on safety and security, provided with temporary identification and safety equipment, and escorted throughout their visit. Site visitors will not be permitted to enter a hazardous work zone. Project site will be posted, "Warning: Hazardous Work Area, Do Not Enter Unless Authorized," and access restricted by the use of a snow fence.

15.2 Safety Log

The SO will maintain a safety logbook. The log will include all health and safety matters on-Site and include, but not be limited to, the following information:

- Date and weather conditions on-Site;
- A description of the proposed work for the day;
- Times when site personnel arrive and depart;
- Air monitoring data;
- Heat and/or cold stress monitoring;
- Decontamination procedures;
- Type and calibration of air sampling/monitoring equipment used;
- Safety meeting summaries; and
- Accidents.

15.3 Emergency or Accident Report

Any emergency or accident will be reported immediately to the SO and HSC. The project manager will also be notified. A written report will be submitted, no later than 24 hours of its concurrence. The report will include, but not be limited to, the nature of the problem, time, location, areas affected, manner and methods used to control the emergency, sampling and/or monitoring data, impact, if any, to the surrounding community, and corrective actions the that will be instituted to minimize future occurrences.

15.4 Daily Work Report

A daily work report will be maintained that summarizes the following:

- Work performed;
- Level of protection;
- Air monitoring results;
- Safety-related problems; and
- Corrective actions implemented.

Appendix A

OSHA Quick Cards for Heat and Cold Stress

EnviroTrac
Environmental Services

OSHA® QUICK CARD™

Protecting Workers from Heat Stress

Heat Illness

Exposure to heat can cause illness and death. The most serious heat illness is heat stroke. Other heat illnesses, such as heat exhaustion, heat cramps and heat rash, should also be avoided.

There are precautions your employer should take any time temperatures are high and the job involves physical work.

Risk Factors for Heat Illness

- High temperature and humidity, direct sun exposure, no breeze or wind
- Low liquid intake
- Heavy physical labor
- Waterproof clothing
- No recent exposure to hot workplaces

Symptoms of Heat Exhaustion

- Headache, dizziness, or fainting
- Weakness and wet skin
- Irritability or confusion
- Thirst, nausea, or vomiting

Symptoms of Heat Stroke

- May be confused, unable to think clearly, pass out, collapse, or have seizures (fits)
- May stop sweating

To Prevent Heat Illness, Your Employer Should

- Establish a complete heat illness prevention program.
- Provide training about the hazards leading to heat stress and how to prevent them.
- Provide a lot of cool water to workers close to the work area. At least one pint of water per hour is needed.

U.S. Department of Labor

For more information:

OSHA® Occupational Safety and Health Administration

www.osha.gov (800) 321-OSHA (6742)

OSHA 3154-06R 2014

OSHA® QUICK CARD™

- Modify work schedules and arrange frequent rest periods with water breaks in shaded or air-conditioned areas.
- Gradually increase workloads and allow more frequent breaks for workers new to the heat or those that have been away from work to adapt to working in the heat (acclimatization).
- Routinely check workers who are at risk of heat stress due to protective clothing and high temperature.
- Consider protective clothing that provides cooling.

How You Can Protect Yourself and Others

- Know signs/symptoms of heat illnesses; monitor yourself; use a buddy system.
- Block out direct sun and other heat sources.
- Drink plenty of fluids. Drink often and BEFORE you are thirsty. Drink water every 15 minutes.
- Avoid beverages containing alcohol or caffeine.
- Wear lightweight, light colored, loose-fitting clothes.

What to Do When a Worker is Ill from the Heat

- Call a supervisor for help. If the supervisor is not available, call 911.
- Have someone stay with the worker until help arrives.
- Move the worker to a cooler/shaded area.
- Remove outer clothing.
- Fan and mist the worker with water; apply ice (ice bags or ice towels).
- Provide cool drinking water, if able to drink.

IF THE WORKER IS NOT ALERT or seems confused, this may be a heat stroke. CALL 911 IMMEDIATELY and apply ice as soon as possible.

If you have any questions or concerns, call OSHA at 1-800-321-OSHA (6742).

U.S. Department of Labor

For more information:

OSHA® Occupational Safety and Health Administration

www.osha.gov (800) 321-OSHA (6742)

OSHA® QUICK CARD™

Protecting Workers from Cold Stress

Cold temperatures and increased wind speed (wind chill) cause heat to leave the body more quickly, putting workers at risk of cold stress. Anyone working in the cold may be at risk, e.g., workers in freezers, outdoor agriculture and construction.

Common Types of Cold Stress

Hypothermia

- Normal body temperature (98.6°F) drops to 95°F or less.
- **Mild Symptoms:** alert but shivering.
- **Moderate to Severe Symptoms:** shivering stops; confusion; slurred speech; heart rate/breathing slow; loss of consciousness; death.

Frostbite

- Body tissues freeze, e.g., hands and feet. Can occur at temperatures above freezing, due to wind chill. May result in amputation.
- **Symptoms**: numbness, reddened skin develops gray/white patches, feels firm/hard, and may blister.

Trench Foot (also known as Immersion Foot)

- Non-freezing injury to the foot, caused by lengthy exposure to wet and cold environment. Can occur at air temperature as high as 60°F, if feet are constantly wet.
- **Symptoms**: redness, swelling, numbness, and blisters.

Risk Factors

- Dressing improperly, wet clothing/skin, and exhaustion.

For Prevention, Your Employer Should:

- Train you on cold stress hazards and prevention.
- Provide engineering controls, e.g., radiant heaters.
- Gradually introduce workers to the cold; monitor workers; schedule breaks in warm areas.

For more information:

OSHA® Occupational Safety and Health Administration

U.S. Department of Labor

www.osha.gov (800) 321-OSHA (6742)

OSHA 3156-02R 2014

OSHA® QUICK CARD™

How to Protect Yourself and Others

- Know the symptoms; monitor yourself and co-workers.
- Drink warm, sweetened fluids (no alcohol).
- Dress properly:
  - Layers of loose-fitting, insulating clothes
  - Insulated jacket, gloves, and a hat (waterproof, if necessary)
  - Insulated and waterproof boots

What to Do When a Worker Suffers from Cold Stress

For Hypothermia:

- Call 911 immediately in an emergency.
- To prevent further heat loss:
  - Move the worker to a warm place.
  - Change to dry clothes.
  - Cover the body (including the head and neck) with blankets, and with something to block the cold (e.g., tarp, garbage bag). Do **not** cover the face.
- If medical help is more than 30 minutes away:
  - Give warm, sweetened drinks if alert (no alcohol).
  - Apply heat packs to the armpits, sides of chest, neck, and groin. Call 911 for additional rewarming instructions.

For Frostbite:

- Follow the recommendations "**For Hypothermia**".
- Do not rub the frostbitten area.
- Avoid walking on frostbitten feet.
- Do not apply snow/water. Do not break blisters.
- Loosely cover and protect the area from contact.
- Do not try to rewarm the area unless directed by medical personnel.

For Trench (Immersion) Foot:

- Remove wet shoes/socks; air dry (in warm area); keep affected feet elevated and avoid walking. Get medical attention.

For more information:

OSHA® Occupational Safety and Health Administration

U.S. Department of Labor

www.osha.gov (800) 321-OSHA (6742)

APPENDIX F – COMMUNITY AIR MONITORING PLAN (CAMP)

This Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress. It is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

Reliance on the procedures specified in the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Proposed Monitoring

Real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) will be conducted during implementation of the RAWP to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses) from potential airborne contaminant releases as a direct result of the remedial work activities.

Continuous monitoring will be required for all ground intrusive activities including, but not necessarily limited to, the installation of sub-slab depressurization components, soil borings and ISCO injection monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of collection of groundwater samples and the injection of chemical reagents into the subsurface using injection/monitoring wells. In some instances, depending upon the proximity of potentially exposed individuals and/or field observations during implementation of such work, continuous monitoring may be required during these activities.

<u>VOC Monitoring, Response Levels, and Actions</u>

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the work area on a continuous basis during intrusive activities (e.g., injection/monitoring well installations). Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below:

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume

provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the work area at temporary particulate monitoring stations during work activities (e.g., injection/monitoring well installations).

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

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area; and

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

Special Requirements for Work within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 ppm, monitoring should occur within the occupied structure(s). Background readings in the occupied spaces must be taken prior to commencement of the planned work. Any unusual background readings should be discussed with NYSDOH prior to commencement of the work.

If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m3, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m3 or less at the monitoring point.

All readings will be recorded and available for State (DEC and NYSDOH) and County Health personnel to review.

APPENDIX G – QUALITY ASSURANCE PROJECT PLAN

TABLE OF CONTENTS

EnviroTrac
Environmental Services

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TABLES

ATTACHMENTS

1.0 PURPOSE AND OBJECTIVES

1.1 Purpose

This Quality Assurance Project Plan (QAPP) has been prepared for site management plan (SMP) activities at the 904 Burke Avenue site located at 904 Burke Avenue in Bronx, New York. The QAPP is intended to set Chemical Quality Assurance (CQA) guidelines of reliable data obtained by measurement activities, such that data generated are scientifically valid, defensible, comparable, and of known precision and accuracy.

This QAPP contains a detailed discussion of the chemical quality assurance protocols to be used by field and laboratory personnel, as well as project organization and responsibilities.

Analysis of media samples will be conducted by a laboratory certified in New York State to conduct work under the Environmental Laboratory Approval and Analytical Services Programs (ELAP/ASP) producing Category B deliverables.

This QAPP contains a detailed discussion of the quality assurance and quality control (QA/QC) protocols to be utilized by the contractor and laboratory personnel.

1.2 Definitions

The parameters that will be used to specify data quality objectives, and to evaluate the analytical system performance for all analytical samples are precision, accuracy, representativeness, completeness, and comparability (PARCC). Definitions of these and other key terms used in this QAPP are provided below.

- ***Accuracy*** - the degree of agreement of a measurement with an accepted reference value. Accuracy is generally reported as a percent recovery, and calculated as: Accuracy = Measured Value/Accepted Value x 100

- ***Analyte*** - the chemical or property for which a sample is analyzed.

- ***Comparability*** - the expression of information in units and terms consistent with reporting conventions; the collection of data by equivalent means; or the generation of data by the same analytical method. Aqueous samples will be reported as ug/l, solid samples will be reported in units of mg/kg, dry weight.

- ***Completeness*** - the percentage of valid data obtained relative to that which would be expected under normal conditions. Data are judged valid if they meet the stated precision and accuracy goals.

- ***Duplicate*** - two separate samples taken from the same source by the same person at essentially the same time and under the same conditions that are placed into separate containers for independent analysis. Duplicate samples are intended to assess the effectiveness of equipment decontamination, the precision of sampling efforts, the impacts of ambient environmental conditions on sensitive analyses (e.g., volatile organics analysis (VOA), and the potential for contaminants attributable to reagents or decontamination fluids. Identifying such potential sources of error is essential to the success of the sampling program and the validity of the environmental data. Each QC sample is described below. As a minimum, each set of ten or fewer field samples will include a trip blank, a duplicate, and one sample collected in a sufficient volume to allow the laboratory to perform a matrix spike.

- ***Field Blanks*** - field blanks (sometimes referred to as "equipment blanks" or "sampler blanks") are the final analyte-free water rinse from equipment decontamination in the field and are collected at least one during a sampling episode. If analytes pertinent to the project are found in the field blank, the results from the blanks will be used to qualify the levels of analytes in the samples. This qualification is made during data validation. The field blank is analyzed for the same analytes as the sample that has been collected with that equipment.

- ***Precision*** - a measure of the agreement among individual measurements of the sample property under prescribed similar conditions. Precision is generally reported as Relative Standard Deviation (RSD) or Relative Percent Difference (RPD).

  Relative standard deviation is used when three or more measurements are available and is calculated as:

  RSD = Standard Deviation/Arithmetic Mean x 100.

  Relative percent difference is used for duplicate measurements, calculated as:

  RPD = ((Value 1-Value 2)/Arithmetic Mean) x 100.

- ***Quality Assurance (QA)*** - all means taken in the field and inside the laboratory to make certain that all procedures and protocols use the same calibration and standardization procedures for reporting results; also, a program which integrates the quality planning, quality assessment, and quality improvements activities within an organization.

- ***Quality Control (QC)*** - all the means taken by an analyst to ensure that the total measurement system is calibrated correctly. It is achieved by using reference standards, duplicates, replicates, and sample spikes. In addition, the routine application of procedures designed to ensure that the data produced achieve known limits of precision and accuracy.

- ***Replicate*** - two aliquots taken from the same sample container and analyzed separately. Where replicates are impossible, as with volatile organics, duplicates must be taken.

- ***Representativeness*** - degree to which data represent a characteristic of a set of samples. The representativeness of the data is a function of the procedures and caution utilized in collecting and analyzing the samples. The representativeness can be documented by the relative percent difference between separately collected, but otherwise identical sample volumes.

- ***Trip Blanks*** - trip blanks are samples that originate from analyte-free water taken from the laboratory to the Site and returned to the laboratory with the volatile organic samples. One trip blank should accompany each cooler containing volatile organics; it will be stored at the laboratory with the samples, and analyzed with the sample set. Trip blanks are only analyzed for VOCs.

1.3 Data Quality Objectives

1.3.1 Overall Data Quality Objectives

Data Quality Objectives (DQO) are quantitative and qualitative statements specifying the quality of the environmental data necessary to support the decision-making process to guide the site characterization activities and any subsequent actions. DQO define the total uncertainty in the data that is acceptable for each specific activity conducted. This uncertainty includes both sampling error and analytical error. Ideally, the prospect of zero uncertainty is the objective; however, the very processes by which data are collected in the field and analyzed in the laboratory contribute to the uncertainty of the data. It is the overall objective to keep the total uncertainty to a minimal level such that it will not hinder the intended use of the data.

To achieve the project DQO, specific data quality parameters such as detection limits, criteria for accuracy and precision, sample representativeness, data comparability and data completeness must be specified. The overall objectives are established such that there is a high degree of confidence in the measurements.

The parameters that will be used to specify data quality objectives and to evaluate the analytical system performance for rinsate and soil samples are PARCC: precision, accuracy, representativeness, completeness, and comparability.

1.3.2 Field Investigation Data Quality Objectives

To permit calculation of precision and accuracy for the samples, blind field duplicate, trip

blanks, and matrix spike/matrix spike duplicate (MS/MSD) samples will be collected, analyzed, and evaluated. Through the submission of field QC samples, the distinction can be made between laboratory problems, sampling technique considerations, sample matrix effects, and laboratory artifacts. To assure sample representativeness, all sample collection will be performed in strict accordance with the procedures set forth in this QAPP. The analytical methods and quality assurances for the Site are summarized on Table 1.

Precision will be calculated as RPD if there are only two analytical points and percent relative standard deviation (% RSD) if there are more than two analytical points. Blind field duplicate and MS/MSD sample analyses will provide the means to assess precision. The submission of field and trip blanks will provide a check with respect to accuracy and will monitor chemicals that may be introduced during sampling, preservation, handling, shipping, and/or the analytical process. In the event that the blanks are contaminated and/or poor precision is obtained, the associated data will be appropriately qualified.

Representativeness will be assured through the implementation of the Site Management Plan of which this QAPP is a part. This plan has been designed so that the appropriate numbers of samples of each matrix and of each location of interest are obtained for analysis.

Ideally, 100% completeness is the goal. However, it must be recognized that unforeseen issues may result in the generation of some data that may not be acceptable for use. Therefore, a completeness target of 90%, as determined by the total number of usable data points versus the total number of data points measured, will be the realistic goal of this program.

Comparability is defined as the extent to which data from one data set can be compared to similar data sets. Comparability between data sets is often questionable due to issues such as different analytical methods used or inter-laboratory differences. In order that the data generated as part of this project remain comparable to any previously generated data or data to be generated in the future, currently published analytical

methods have been identified for the analysis of the collected samples. These methods will be performed by an analytical laboratory with a demonstrated proficiency in the analysis of similar samples by the referenced methods. In addition, samples will be collected using documented procedures to ensure consistency of effort and reproducibility if necessary.

1.3.3 Laboratory Data Quality Objectives

The analytical laboratory will demonstrate analytical precision and accuracy by the analysis of various QC samples (i.e., laboratory duplicates, spike samples, matrix spike duplicates and laboratory control samples). Relevant precision and accuracy criteria for the analytical parameters related to this Site Management Plan are provided in Attachment 1, Laboratory Reporting Limits and Standard QC Limits. Precision, as well as instrument stability, will also be demonstrated by comparison of calibration response factors from the initial calibration to that of the continuing calibrations. Laboratory accuracy will be evaluated by the addition of surrogate and matrix spike compounds, and will be presented as percent recovery (%R). Precision will be presented as RPD, % RSD, or percent difference (%D), whichever is appropriate for the number and type of QC samples analyzed. Lab blanks are also used to demonstrate accuracy of analyses and possible effects from laboratory artifact contamination.

2.0 QUALITY ASSURANCE/QUALITY CONTROL PROVISIONS

2.1 Equipment Decontamination

To minimize the possible occurrence of cross-contamination, dedicated disposable equipment will be used to collect samples at the Site whenever possible. All non-disposable sampling equipment will be cleaned before each use by washing with solutions in the following order:

1. Phosphate-free detergent wash;
2. Tap water rinse;
3. Air dry; and
4. Wrap in aluminum foil until use.

The tap water may be obtained from any municipal supply system. Sampling equipment will be decontaminated in an area covered by plastic near the sampling location. All spent liquids developed during the decontamination process will be collected for proper disposal in accordance with procedures provided in Section 3.0.

2.2 Field Calibration and Maintenance of Equipment

A maintenance, calibration, and operation program will be implemented to ensure that routine calibration and maintenance is performed on all field instruments. Team members are familiar with the field calibration, operation, and maintenance of the equipment, and will perform the prescribed field operating procedures outlined in the Operation and Field Manuals accompanying the respective instruments. They will keep records of all field instrument calibrations and field checks in the field log books.

If on-site monitoring equipment should fail, the Project Manager will be contacted immediately. The Project Manager will either provide replacement equipment or have the malfunction repaired immediately.

Field equipment will be maintained through the use of a tracking system. Each piece of

equipment will carry a tag which identifies the date of the most recent maintenance, and/or battery charge, and the condition. When equipment is damaged or in need of repair it will be immediately and appropriately flagged for the required maintenance to be performed. This process ensures that only operable and maintained equipment enters the field. Routine daily maintenance procedures conducted in the field will include:

- Removal of surface dirt and debris from exposed surfaces of the sampling equipment and measurement systems;
- Protection of equipment from adverse weather conditions;
- Daily inspections of sampling equipment and measurement systems for possible problems such as cracked or clogged lines or tubing or weak batteries;
- Daily checks of instrument calibration; and
- Charge battery packs for equipment that is not in use.

2.3 Sample Preparation, Transportation and Holding

Sample bottles will be labeled with the sample location, identification number, and date and time of sampling prior to being filled with sample. Once filled the sample containers will be immediately capped and placed into an iced cooler for transport to the laboratory.

Field Chain-of Custody records completed at the time of sample collection will accompany the samples inside the cooler for shipment to the laboratory. These record forms will be sealed in a ziplock plastic bag to protect them against moisture. Each cooler will contain sufficient ice packs to insure that a 4^0C temperature is maintained, and will be packed in a manner to prevent damage to sample containers. Temperature blanks will accompany the coolers from the laboratory to the site and back to the laboratory. Sample coolers will be sealed with nylon strapping tape and the Field Team Leader (FTL) will sign and date a custody seal and place it on the cooler in such a way that any tampering during shipment will be detected.

All coolers will either be driven to or shipped by an overnight courier according to current US DOT regulations. Upon receiving the samples, the Sample Custodian at the laboratory will inspect the condition of the samples, compare the information on the

sample labels against the field Chain-of-Custody record, assign a laboratory control number, and log the control number into the computer sample inventory system. The Sample Custodian will then store the sample in a secure sample storage cooler maintained at 4°C and maintain custody until the sample is assigned to an analyst for analysis. Custody will be maintained until disposal of the analyzed samples.

The Sample Custodian at the laboratory will note any damaged sample vials, void space within the vials, or discrepancies between the sample label and information on the field Chain-of-Custody record when logging the sample. This information will also be communicated to the FTL or field personnel so proper action can be taken. The Chain-of-Custody form will be signed by both the relinquishing and receiving parties and the reason for transfer indicated each time the sample changes hands.

An internal Chain-of-Custody form will be used by the laboratory to document sample possession from laboratory Sample Custodian to Analysts and final disposition. All Chain-of-Custody information will be supplied with the data packages for inclusion in the document control file.

2.4 Record Keeping

One or more bound books will be maintained for the site; each book will be consecutively numbered. All sample collection, handling and shipping information will be recorded in the field notebook. Accurate and detailed field notes will be maintained. Decontamination procedures will also be documented in the field notebook. The book(s) will remain with the site evidence file. Copies will be made for the Project Manager and for the person who made the entries if requested. All entries in the Logbook will be made in ink. Logbook entries will include but not be limited to the following:

First Page:

- Site Name and number;
- Date and time started; and
- Personnel on site.

Subsequent Pages:

- Detailed description of investigative activities including lithology, physical characteristics, sampling, on-site meetings and any problems encountered along with the duration of these activities;
- Documentation of all personnel monitoring results (e.g. PID readings);
- List of all samples obtained and sample appearance (referenced to field logs if necessary);
- List of personal protection used and documentation procedure; and
- All other pertinent daily activities.

Each New Day Will Contain:

- Date and time started;
- Weather;
- Personnel on-site;
- Activity information; and
- Initials of note keeper.

*Note: When a mistake is made in the log, it will be crossed out with a single ink line and will be initialed and dated.

Special care will be taken in the description and documentation of sampling procedures. Sampling information to be documented in the field notebook and/or associated forms are as follows:

- Sample #;
- Date and Time Sample collected;
- Source of Sample;
- Location of Sample - document with a site sketch and/or written description of the sampling location so that accurate re-sampling can be conducted if necessary;
- Sampling equipment;
- Analysis and QA/QC required;

- Field instrument calibration including date of calibration, standards used; and their source, results of calibration and any corrective actions taken;
- Field data;
- Field observations - all significant observations will be documented;
- Sample condition;
- Site conditions (stressed vegetation, exposure of buried wastes, erosion problems, etc.);
- Sample shipping procedure, date, time, destination and if legal seals were attached to transport container(s); and
- Comments - Any observation or event that occurred that would be relevant to the site; for example: weather changes and effect on sampling, conversations with the client, public official or private citizen; and instrument calibration, equipment problems, and field changes.

2.5 Analytical Procedures

2.5.1 Aqueous Samples

Analysis of the groundwater samples will be conducted by a laboratory certified in New York State to conduct work under the Environmental Laboratory Approval and Analytical Services Programs (ELAP/ASP). Groundwater samples will be analyzed for the full volatile organic compound (VOC) list, EPA Method 8260.

2.5.2 Laboratory Deliverables

Laboratory deliverables packages will follow the NYS ASP Category B format.

3.0 MANAGEMENT OF INVESTIGATION DERIVED WASTE

Investigation derived waste is anticipated to be generated during the conformance with the SMP. Groundwater samples are to be collected utilizing low flow sampling protocol. Purge water will be generated during the low flow sampling approach.

The following procedures will be used to manage IDW.

3.1 Investigation Generated Water/fluid Handling and Disposal

All water/fluid generated during sampling events will be collected, handled and discharged/disposed of pursuant to applicable guidance and regulations.

Water/fluid generated during sampling events:

i. will be containerized upon production and will be subject to the following handling/disposal guidelines:
   (1) 6 NYCRR Part 364 will not apply to the transport of the containers from the point of generation to a temporary on-site storage area;
   (2) the containers will be securely staged, pending appropriate disposal as set forth in subparagraph ii below;
   (3) NAPL shall never be released to the ground;
   (4) where containers include water mixed with NAPL, the water can be decanted from the NAPL (or vice versa) as long as a measurable layer of water remains with the NAPL, and the decanted water is NAPL- and/or sheen-free;
   (5) groundwater from several monitoring wells may be combined; and
   (6) NAPL may be collected from several containers and combined;

ii. may be stored on-site in labeled containers in an area with secondary containment awaiting treatment and/or disposal, in accordance with applicable DEC waste management regulations (e.g., 6 NYCRR Parts 360, 364 and the 370 series) or other provisions approved by DER. The contents of the containers will be:

(1) properly treated or disposed of, when any of the following are observed:
   (A) visual evidence of contamination, consisting of discoloration, sheens, free product or NAPL;
   (B) olfactory evidence of contamination; or
   (C) concentrations of contaminants above groundwater standards at levels of concern are known to be present in the monitoring wells, based on previous sampling of the groundwater; or

(2) if none of the conditions described in clause ii.(1) apply, the containerized water may be:
   (A) recharged to unpaved ground into the same groundwater unit, within or directly adjacent to a source area in a manner which does not result in surface water runoff, with DER approval; and

(3) treatment of contaminated water/fluids will be at:
   (A) a permitted off-site facility;

iii. sediment that settles out during monitoring well development or well purging, provided there is no NAPL or free product present, will be handled and disposed in accordance with paragraphs 1 to 3 above, as appropriate for the location of the well.

4.0 QA/QC REQUIREMENTS FOR FIELD SAMPLES

In accordance with sampling and analysis requirements provided in DER-10, Chapter 2 Sampling, Analysis and Quality Assurance, testing for laboratory characterization of site media will include provisions to serve as a check on the accuracy and integrity of results. This will entail the collection and analysis of various blanks, duplicates and spiked samples as described below.

Trip Blanks

The trip blank will be used to determine if any cross-contamination occurs between aqueous samples during shipment. The analytical laboratory will supply trip blanks as aliquots of distilled, deionized water that will be sealed in a sample bottle prior to initiation of each day of fieldwork. Glass vials (40 ml) with Teflon lined lids will be used for trip blanks. The sealed trip blank bottles will be placed in a cooler with the empty sample bottles and will be shipped to the Site by the laboratory personnel. If multiple coolers are necessary to store and transport aqueous VOC samples, then each cooler must contain an individual trip blank. Trip blanks are analyzed for VOCs only.

Field Blanks

Field blanks will be collected to evaluate the cleanliness of soil and aqueous sampling equipment, sample bottles and the potential for cross-contamination of samples due to handling of equipment, sample bottles and contaminants present in the air. Field blanks will collected at a frequency of one per decontamination event for each type of sampling equipment, and each media being sampled (e.g., a groundwater bailer for groundwater, and a hand auger for soil sampling), at a minimum of one per equipment type and/ or media per day.

Field blanks will be collected prior to the occurrence of any analytical field-sampling event by pouring deionized or potable water over a particular piece of sampling equipment and into a sample container. The analytical laboratory will provide field blank water and sample jars with preservatives for the collection of all field blanks. Glass jars

will be used for organic blanks. The field blanks as well as the trip blanks will accompany field personnel to the sampling location. The field blanks will be analyzed for the same analytes as the environmental samples being collected that day and will be shipped with the samples taken.

Field blanks will be taken in accordance with the procedure described below:

- Decontaminate sampler using the procedures specified in the QAPP;
- Pour distilled/deionized water over the sampling equipment and collect the rinsate water in the appropriate sample bottles;
- The sample will be immediately placed in a sample cooler and maintained at a temperature of 4°C until receipt by the laboratory; and
- Fill out sample log, labels, and chain of custody (COC) forms, and record in field notebook.

Temperature Blanks

The temperature blank will be used to determine the temperature of the samples within the cooler upon arrival at the analytical laboratory. A laboratory-supplied temperature blank will be an aliquot of distilled, deionized water that will be sealed in a sample bottle. The sealed temperature blank bottles will be placed in a cooler with the empty sample bottles and will be shipped to the Site by the laboratory personnel. If multiple coolers are necessary to store and transport samples, then each cooler must contain an individual temperature blank.

Blind Field Duplicate Samples

Blind field duplicate samples will be collected and analyzed to check laboratory reproducibility of analytical data. Blind field duplicate samples will be collected at a frequency of at least 5% (one out of every 20 samples) of the total number of samples collected to evaluate the precision and reproducibility of the analytical methods. All blind field duplicate samples will be submitted to the analytical laboratory as a normal sample, however will have a fictitious sample identification and fictitious time of sample

collection. Each blind field duplicate will be cross-referenced to document which actual sample it is a blind field duplicate of in the field notes and on the master sample log.

Split Samples

Split samples are not anticipated for work conducted at the Site; however, if split samples are required, then the following procedures will be conducted:

One of the aspects for generating sound quality analytical data is to collect quality assurance (QA) split samples that will be submitted to a third party analytical laboratory selected by the NYSDEC for analysis. The results from the QA split samples will then be compared to the analytical results from the primary analytical laboratory.

Matrix Spike/Matrix Spike Duplicate

Additional environmental sample volume will be collected for use as MS/MSD samples at a frequency of at least 5% (one out of every 20 samples) of the total number of samples collected per matrix to evaluate the precision and reproducibility of the analytical methods.

The field sampling quality assurance-sampling program is summarized in Table 1.

5.0 DATA MANAGEMENT AND REPORTING PLAN

5.1 Data Use and Management Objectives

Data Use Objectives

The typical data use objectives for this project are:

- Determining treatment and disposal options (as warranted);
- Determining constituent concentrations in soil, soil vapor, and groundwater (as warranted); and
- Determining natural attenuation.

Data Management Objectives

The primary objective of proper data management is to ensure and document that all necessary work is conducted in accordance with the project goals and QAPP in an efficient and high quality manner thereby maximizing the confidence in the data in terms of precision, accuracy, representativeness, completeness, and comparability (PARCC). Data management procedures not only include field and laboratory documentation, but also include how the information is handled after the conclusion of field investigation and laboratory analyses area completed. - Data handling procedures include project file management, reporting, usability analysis and use of consistent formats for the presentation of the data.

Project File Specifications

The Project Manager will keep all project information in a maintained central Project File. The Project File will be assigned a unique project number that will be clearly displayed on all project file folders (including electronic files). Electronic files will be maintained in a similarly organized Project File located on a central network system that is backed regularly to both on-site and off-site locations. Both hard copy and electronic Project Files will contain, at a minimum copies or originals of the following key project

information:

- All correspondence including letters, transmittals, telephone logs, memoranda, and emails;
- Meeting notes;
- Technical information such as analytical data; field survey results, field notes, field logbooks and field management forms;
- Project calculations;
- Subcontractor agreements/contracts, and insurance certificates;
- Project-specific health and safety information/records;
- Access agreements;
- Project document output review/approval documentation; and
- Reports: Monthly Progress, Interim Technical, and Draft/Final Technical.

5.2 Reporting

Field Data

Field data will be recorded and reported by field personnel using appropriate field data documentation materials such as the field logbook, field management forms, and COC forms.

Good field management procedures include following proper chain of custody procedures to track a sample from collection through analysis, noting when and how samples are split (if necessary), making regular and complete entries in the field logbook, and the consistent use and completion of field management forms. Proper completion of these forms and the field logbook are necessary to support the consequent actions that may result from the sample analysis. This documentation will support that the samples were collected and handled properly making the resultant data complete, comparable, and defensible.

5.2.1 Data Validation

Field data generated in accordance with the SMP scope of work will primarily consist of data associated with groundwater sampling. This data will be assessed by review of the project documentation to check that the scope of work specified in the SMP and this QAPP have been correctly implemented and that documentation exists for the specified field instrument calibrations. This documentation will be considered sufficient to provide that proper procedures have been followed during the field investigation.

DUSRs will be prepared to provide a thorough evaluation of analytical data with the primary objective to determine whether or not the data, as presented, meets the site/project specific criteria for data quality and data use. These reports will be prepared by a qualified party independent of the laboratory performing the analysis and independent from any direct involvement with the project for all samples when Category B data deliverables are provided. All of the laboratory testing that will be conducted during the implementation of the SMP will include Category B deliverables.

5.2.2 Electronic Deliverables

In accordance with DER-10 Section 1.15 electronic deliverables will be utilized to the greatest degree appropriate. The NYSDEC has implemented an Environmental Information Management System (EIMS). The EIMS uses the database software application EQuIS from EarthSoft® Inc. to manage environmental data. Pursuant to 6 NYCRR 375-1.11(a) all data submitted to the DER will be in the DEC-approved Electronic Data Deliverable (EDD) and new data will be submitted on a continuous basis immediately after data validation occurs but not to exceed 90 days after the data has been obtained.

5.3 Data Presentation Formats

Project data will be presented in consistent formats for all letters, Progress Reports, Interim Technical Reports, and Draft/Final Technical Reports. Specific formats will be tailored to best fit the needs of the data being presented but general specifications are described below.

Data Records

The data record will generally include one or more of the following:

- Unique sample or field measurement code;
- Sampling or field measurement location and sample or measurement type;
- Sampling or field measurement raw data;
- Laboratory analysis ID number;
- Property or component measured; and
- Result of analysis (e.g., concentration).

Tabular Displays

The following data will generally be presented in tabular displays:

- Unsorted (raw) data;
- Results for each medium or for each constituent monitored;
- Data reduction for statistical analysis;
- Sorting of data by potential stratification factors (e.g., location, soil Layer/depth, topography, etc.); and
- Summary data.

Graphical Displays

The following data will be presented in graphical formats (e.g., bar graphs, line graphs,

area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.):

- Sample locations and sampling grid;
- Boundaries of sampling area;
- Areas where additional data are necessary;
- Constituent concentrations at each sample location;
- Geographical extent of impacts;
- Constituent concentration levels, averages, minima and maxima;
- Changes in concentration in relation to distance from the source, time,
- depth or other parameters;
- Features affecting intramedia transport; and
- Potential receptors.

6.0 PERFORMANCE AUDITS

6.1 Field Audits

During field activities, the quality assurance officer (QAO) or designee may accompany sampling personnel into the field to verify that the sampling program is being properly implemented and to detect and define problems so that corrective action can be taken. All findings will be documented and provided to the Project Manager and Field Task Manager.

6.2 Laboratory Audits

The NYSDOH ELAP CLP certified laboratories that have satisfactorily completed performance audits and performance evaluation samples will be used for all sample analysis. The results of the most recent performance audits and performance evaluations will be made available upon request. The Project Manager may perform a laboratory audit if warranted.

7.0 CORRECTIVE ACTIONS

The laboratory utilized for this project will meet the specifications for corrective action protocols typical for performing contract laboratory services. Laboratory corrective action may include instrumentation maintenance, methods modification, cross contamination/carry over issues, sample tracking practices, laboratory information management (LIMs), etc.

Prior to mobilization for the sampling event, a meeting may be scheduled among representatives of the contractor and the laboratory to discuss general corrective action approach and establish procedures to ensure good and timely communications among all parties during the investigation. New procedures will be put into effect as appropriate.

TABLES

Table 1 - Analytical Methods/Quality Assurance Summary Table
NYSDEC BCP #C203032
904 Burke Avenue, Bronx, NY

Aqueous samples		
Analytical Parameter		TCL VOA
Number of Samples		TBD
Number of Duplicate Samples (1)		TBD
Number of Trip Blanks (2)		TBD
Number of MS/MSD Pairs (3)		TBD
Analytical Method		SW-846 8260C
Sample Container		40 ml glass with septum top
Sample Preservation		Cool, 4°C, HCl to pH<2
Sample Holding Time		14 days

Notes:
MS/MSD - Matrix Spike, Matrix Spike Duplicate.
(1) Duplicates will be collected at a frequency of five percent (1 per 20 field samples).
(2) Trip Blanks will be collected at the rate of one per aqueous sample shipment when VOCs are collected.
(3) MS/MSD pairs will be collected at a frequency of five percent (1 per 20 field samples), where applicable.

ATTACHMENT 1

Laboratory Reporting Limits and Standard QC Limits for Aqueous Samples

EnviroTrac
Environmental Services

Laboratory Report Limits and Standard QC Limits for Aqueous Samples
NYSDEC BCP #C203032
904 Burke Avenue, Bronx, NY

VOC analytes	CAS #	Reporting Limit	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
Methylene chloride	75-09-2	3	0.289	ug/l	70-130	20	70-130	20	20	
1,1-Dichloroethane	75-34-3	0.75	0.21	ug/l	70-130	20	70-130	20	20	
Chloroform	67-66-3	0.75	0.162	ug/l	70-130	20	70-130	20	20	
Carbon tetrachloride	56-23-5	0.5	0.134	ug/l	63-132	20	63-132	20	20	
1,2-Dichloropropane	78-87-5	1.75	0.133	ug/l	70-130	20	70-130	20	20	
Dibromochloromethane	124-48-1	0.5	0.149	ug/l	63-130	20	63-130	20	20	
1,1,2-Trichloroethane	79-00-5	0.75	0.144	ug/l	70-130	20	70-130	20	20	
Tetrachloroethene	127-18-4	0.5	0.181	ug/l	70-130	20	70-130	20	20	
Chlorobenzene	108-90-7	0.5	0.178	ug/l	75-130	25	75-130	25	25	
Trichlorofluoromethane	75-69-4	2.5	0.161	ug/l	62-150	20	62-150	20	20	
1,2-Dichloroethane	107-06-2	0.5	0.132	ug/l	70-130	20	70-130	20	20	
1,1,1-Trichloroethane	71-55-6	0.5	0.158	ug/l	67-130	20	67-130	20	20	
Bromodichloromethane	75-27-4	0.5	0.192	ug/l	67-130	20	67-130	20	20	
trans-1,3-Dichloropropene	10061-02-6	0.5	0.164	ug/l	70-130	20	70-130	20	20	
cis-1,3-Dichloropropene	10061-01-5	0.5	0.144	ug/l	70-130	20	70-130	20	20	
1,3-Dichloropropene, Total	542-75-6	0.5	0.144	ug/l				20	20	
1,1-Dichloropropene	563-58-6	2.5	0.173	ug/l	70-130	20	70-130	20	20	
Bromoform	75-25-2	2	0.248	ug/l	54-136	20	54-136	20	20	
1,1,2,2-Tetrachloroethane	79-34-5	0.5	0.144	ug/l	67-130	20	67-130	20	20	
Benzene	71-43-2	0.5	0.159	ug/l	70-130	25	70-130	25	25	
Toluene	108-88-3	0.75	0.161	ug/l	70-130	25	70-130	25	25	
Ethylbenzene	100-41-4	0.5	0.168	ug/l	70-130	20	70-130	20	20	
Chloromethane	74-87-3	2.5	0.176	ug/l	64-130	20	64-130	20	20	
Bromomethane	74-83-9	1	0.256	ug/l	39-139	20	39-139	20	20	
Vinyl chloride	75-01-4	1	0.0699	ug/l	55-140	20	55-140	20	20	
Chloroethane	75-00-3	1	0.134	ug/l	55-138	20	55-138	20	20	
1,1-Dichloroethene	75-35-4	0.5	0.142	ug/l	61-145	25	61-145	25	25	
trans-1,2-Dichloroethene	156-60-5	0.75	0.163	ug/l	70-130	20	70-130	20	20	
1,2-Dichloroethene (total)	540-59-0	0.5	0.163	ug/l				20	20	
Trichloroethene	79-01-6	0.5	0.175	ug/l	70-130	25	70-130	25	25	
1,2-Dichlorobenzene	95-50-1	2.5	0.184	ug/l	70-130	20	70-130	20	20	
1,3-Dichlorobenzene	541-73-1	2.5	0.186	ug/l	70-130	20	70-130	20	20	
1,4-Dichlorobenzene	106-46-7	2.5	0.187	ug/l	70-130	20	70-130	20	20	
Methyl tert butyl ether	1634-04-4	1	0.16	ug/l	63-130	20	63-130	20	20	
p/m-Xylene	179601-23-1	1	0.332	ug/l	70-130	20	70-130	20	20	
o-Xylene	95-47-6	1	0.33	ug/l	70-130	20	70-130	20	20	
Xylene (Total)	1330-20-7	1	0.33	ug/l				20	20	
cis-1,2-Dichloroethene	156-59-2	0.5	0.187	ug/l	70-130	20	70-130	20	20	
Dibromomethane	74-95-3	5	0.363	ug/l	70-130	20	70-130	20	20	
1,2,3-Trichloropropane	96-18-4	5	0.176	ug/l	64-130	20	64-130	20	20	
Styrene	100-42-5	1	0.359	ug/l	70-130	20	70-130	20	20	
Dichlorodifluoromethane	75-71-8	5	0.245	ug/l	36-147	20	36-147	20	20	
Acetone	67-64-1	5	1.46	ug/l	58-148	20	58-148	20	20	
Carbon disulfide	75-15-0	5	0.299	ug/l	51-130	20	51-130	20	20	
2-Butanone	78-93-3	5	1.94	ug/l	63-138	20	63-138	20	20	
Vinyl acetate	108-05-4	5	0.311	ug/l	70-130	20	70-130	20	20	
4-Methyl-2-pentanone	108-10-1	5	0.416	ug/l	59-130	20	59-130	20	20	
2-Hexanone	591-78-6	5	0.515	ug/l	57-130	20	57-130	20	20	
Acrylonitrile	107-13-1	5	0.43	ug/l	70-130	20	70-130	20	20	

Laboratory Report Limits and Standard QC Limits for Aqueous Samples
NYSDEC BCP #C203032
904 Burke Avenue, Bronx, NY

VOC analytes	CAS #	Reporting Limit	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
Bromochloromethane	74-97-5	2.5	0.138	ug/l	70-130	20	70-130	20	20	
2,2-Dichloropropane	594-20-7	2.5	0.204	ug/l	63-133	20	63-133	20	20	
1,2-Dibromoethane	106-93-4	2	0.193	ug/l	70-130	20	70-130	20	20	
1,3-Dichloropropane	142-28-9	2.5	0.212	ug/l	70-130	20	70-130	20	20	
1,1,1,2-Tetrachloroethane	630-20-6	0.5	0.164	ug/l	64-130	20	64-130	20	20	
Bromobenzene	108-86-1	2.5	0.152	ug/l	70-130	20	70-130	20	20	
n-Butylbenzene	104-51-8	0.5	0.192	ug/l	53-136	20	53-136	20	20	
sec-Butylbenzene	135-98-8	0.5	0.181	ug/l	70-130	20	70-130	20	20	
tert-Butylbenzene	98-06-6	2.5	0.185	ug/l	70-130	20	70-130	20	20	
o-Chlorotoluene	95-49-8	2.5	0.17	ug/l	70-130	20	70-130	20	20	
p-Chlorotoluene	106-43-4	2.5	0.185	ug/l	70-130	20	70-130	20	20	
1,2-Dibromo-3-chloropropane	96-12-8	2.5	0.327	ug/l	41-144	20	41-144	20	20	
Hexachlorobutadiene	87-68-3	0.5	0.217	ug/l	63-130	20	63-130	20	20	
Isopropylbenzene	98-82-8	0.5	0.187	ug/l	70-130	20	70-130	20	20	
p-Isopropyltoluene	99-87-6	0.5	0.188	ug/l	70-130	20	70-130	20	20	
Naphthalene	91-20-3	2.5	0.216	ug/l	70-130	20	70-130	20	20	
n-Propylbenzene	103-65-1	0.5	0.173	ug/l	69-130	20	69-130	20	20	
1,2,3-Trichlorobenzene	87-61-6	2.5	0.234	ug/l	70-130	20	70-130	20	20	
1,2,4-Trichlorobenzene	120-82-1	2.5	0.22	ug/l	70-130	20	70-130	20	20	
1,3,5-Trimethylbenzene	108-67-8	2.5	0.174	ug/l	64-130	20	64-130	20	20	
1,2,4-Trimethylbenzene	95-63-6	2.5	0.191	ug/l	70-130	20	70-130	20	20	
trans-1,4-Dichloro-2-butene	110-57-6	2.5	0.173	ug/l	70-130	20	70-130	20	20	
Ethyl ether	60-29-7	2.5	0.15	ug/l	59-134	20	59-134	20	20	
1,4-Dioxane	123-91-1	250	41.1	ug/l	56-162	20	56-162	20	20	
1,4-Diethylbenzene	105-05-5	2	0.392	ug/l	70-130	20	70-130	20	20	
4-Ethyltoluene	622-96-8	2	0.34	ug/l	70-130	20	70-130	20	20	
1,2,4,5-Tetramethylbenzene	95-93-2	2	0.542	ug/l	70-130	20	70-130	20	20	
1,2-Dichloroethane-d4	*17060-07-0*									*70-130*
Toluene-d8	*2037-26-5*									*70-130*
4-Bromofluorobenzene	*460-00-4*									*70-130*
Dibromofluoromethane	*1868-53-7*									*70-130*

APPENDIX H - SITE MANAGEMENT FORMS

COVER SYSTEM INSPECTION FORM

904 Burke Avenue, LLC
904 Burke Avenue
Bronx, New York
NYSDEC BCP Site #: C203032

Name of Inspector:_____

Company of Inspector:_____

Inspection Date:_____

Weather:_____

General Description of Cover System Condition (include photographic documentation: ____

_____

_____

Evidence of subsidence?	Yes	No
Evidence of potholes?	Yes	No
Evidence of cracks?	Yes	No
Evidence of asphalt deterioration?	Yes	No
Evidence of staining?	Yes	No
Evidence of water accumulation/puddling?	Yes	No

Additional inspection observations:_____

_____

_____

Describe any conditions which were encountered which would limit the completeness of the inspection (e.g. snow/leaf cover, vehicle obstructions, etc.):

_____

_____

Describe any corrective measures (append additional pages as needed and include before and after photographic documentation):_____

GROUNDWATER MONITORING EVENT FORM

904 Burke Avenue, LLC
904 Burke Avenue
Bronx, New York
NYSDEC BCP Site #: C203032

Name of lead sampler:_____

Company of sampler:_____

Monitoring date:_____

Weather:_____

General description of activities performed:_____

_____

_____

List of wells sampled:_____

Sampling method(s):_____

Parameters for lab testing:_____

Field parameters:_____

Attach associated field sampling forms and well gauging form:

Laboratory(s):_____

Attach copy of chain(s) of custody:

Investigation derived waste generated:

_____Yes, _____Type, _____Estimated quantity, _____Status

_____No

Additional information:_____

_____

GROUNDWATER MONITORING EVENT FORM

904 Burke Avenue, LLC
904 Burke Avenue
Bronx, New York
NYSDEC BCP Site #: C203032

Name of lead sampler:

Company of sampler:

Monitoring date:

Monitoring Well ID	Depth to Water (feet) pre-sampling	Depth to Product (feet)	Depth to Water (feet) post-sampling	Well Purging Information			Time of Sampling	Specific Conductance (uS/cm)	pH	ORP (mV)	Temperature (°C)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Notes
				Purge Rate (ml/min)	Purge Duration (Minutes)	Purge Volume (gallons)								

APPENDIX I – FIELD SAMPLING PLAN

Prior to the commencement of well sampling activities, each well shall be gauged by the field technician to assess the depth to groundwater. For purposes of well gauging activities, a decontaminated electronic interface probe should be utilized. The results of the gauging event shall be recorded. Following the recording of the depth to water in a well, the interface probe shall be removed from the well and decontaminated prior to use in the following well.

Groundwater samples shall be collected using low flow sampling methods. The wells will be purged of three well volumes or until field parameters stabilize. Field parameters will be recorded. The collection of blind duplicate, matrix spike, and matrix spike duplicate samples is required. The collection of field blanks is not required. However, the collection of field blanks will be required should a NYSDEC-approved change in the groundwater sampling protocol be implemented which includes reusable sampling equipment.

Analysis of the groundwater samples will be conducted by a laboratory certified in New York State to conduct work under the Environmental Laboratory Approval and Analytical Services Programs (ELAP/ASP). Groundwater samples will be analyzed for the full volatile organic compound (VOC) list via EPA Method 8260. Laboratory deliverables packages will follow the NYS ASP Category B format and will be submitted in EQuiS format. A data usability summary report will be included in the PRR as an appendix.