DECISION DOCUMENT

1525 Bedford Avenue
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224206
November 2016

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

1525 Bedford Avenue
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224206
November 2016

Statement of Purpose and Basis

This document presents the remedy for the 1525 Bedford Avenue site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the 1525 Bedford Avenue site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Vapor Mitigation

Any on-site buildings will be required to have a sub-slab depressurization system, or a similar engineered system, to mitigate the migration of vapors into the building from soil and groundwater.

3. Soil Vapor Extraction

Soil vapor extraction (SVE) will be implemented to remove volatile organic compounds (VOCs) from the subsurface. VOCs will be physically removed from the soil by applying a vacuum to wells that have been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOCs from the soil to the SVE well. The air extracted from the SVE wells is then treated as necessary prior to being discharged into the atmosphere.

Nineteen (19) SVE wells will be installed into the vadose zone and screened from 9 feet below the ground surface to a depth of approximately 24 feet. The air containing VOCs extracted from the SVE wells will be treated by passing the air stream through activated carbon which removes the VOCs from the air prior to it being discharged into the atmosphere.

4. Cover System

A soil cover will be required to allow for restricted residential use of the site, in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil placed over the demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d). In areas where buildings are placed, the soil cover would not be required.

5. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- Require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- Allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- Restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- Require compliance with the Department approved Site Management Plan.

6. Site Management Plan

a. An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional controls: The Environmental Easement as discussed in paragraph 5 above.

Engineering controls: Vapor Mitigation system as discussed in paragraph 2, Soil Vapor Extraction wells as discussed in paragraph 3, and soil cover system discussed in paragraph 4 above.

This plan includes, but may not be limited to:

- An Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- a provision that should building demolition occur in the future, a soil cover consistent with that described in Paragraph 4 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- Monitoring of the SVE system including, but not limited to: vapor concentrations and vacuums to assess the performance and effectiveness of the remedy; and
- A schedule of monitoring frequency of submittals to the Department.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

November 4, 2016

Date

James B. Harrington, Director
Remedial Bureau A

DECISION DOCUMENT

1525 Bedford Avenue
Brooklyn, Kings County
Site No. C224206
November 2016

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

Brooklyn Public Library - Bedford Library
Attn: Alicia Pritchard
496 Franklin Avenue
Brooklyn, NY 11238
Phone: 718-623-0012

Brooklyn Community Board 8
Attn: Michelle George
1291 St. Marks Avenue
Brooklyn, NY 11213
Phone: 718-467-5574

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The 1525 Bedford Avenue site is located in an urban area in the Crown Heights neighborhood of Brooklyn, Kings County. The site is bound by Bedford Avenue to the west, Lincoln Place to the north, multiple-story residential buildings to the east, and Eastern Parkway and the Metropolitan Transit Authority tunnels to the south.

Site Features: The site occupies an area of approximately 29,076-square-feet, and is currently an active construction site. The site was most recently occupied by a gasoline filling station, a service garage with a cellar level, a two-story retail store/office space and a car wash."

Current Zoning/Use: The site is currently zoned as R7D residential with a C2-4 commercial overlay.

Historical Use: The site has been occupied by auto-related facilities (auto garages/repair, filling stations, car washes) since at least 1924.

Spill #9109883 was reported on December 16, 1991. Impacted soil was excavated and the incident was closed on February 27, 2003. In 1995, spill #9501801 was reported to the NYSDEC due to the discovery of gasoline in the subsurface. Subsequent investigations revealed persistent VOC contamination in the soil, groundwater, and soil vapor. Remedial activities have been conducted since 1995 including UST removal, soil removal, and fluid recovery, but the spill incident remains open.

Site Geology and Hydrogeology: The site and surrounding area north of Eastern Parkway slope to the north and is at an elevation of approximately 135 feet above mean sea level. Perched groundwater was encountered at depths ranging from 20 to 50 feet below grade surface, and likely results from infiltrated surface water trapped atop interspersed lenses of low permeability soil. A regional groundwater aquifer (the Upper Glacial Aquifer) was encountered at depths ranging from 126 to 136 below grade surface. Regional groundwater flow is relatively flat with a slight gradient towards the north east. Soil beneath the site consists of fill material underlain by glacial till. The fill material extends to approximately 20 feet below ground surface (bgs) and generally consists of dark brown/brown and gray fine-to-medium sand with varying amounts of glass, wood, brick, silt, clay, gravel and cobbles. The till generally consists of interbedded layers of sand, sandy silt, silt and intermittent lenses of clay to at least 45 feet bgs. The site is underlain by fine-grained quartz-feldspar granulite.

A site location map is attached as Figure 1. A site boundary map is attached as Figure 2.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives that restrict the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) were evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicants under the Brownfield Cleanup Agreement are Volunteers. The Applicants do not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

Off-site contamination will be addressed under the Department's Oil Spill Response and Remediation program.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination and;
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

benzene	ethylbenzene
toluene	xylene (mixed)

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil
- soil vapor intrusion

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

Implementation of the NYSDEC-approved Interim Remedial Measures (IRM) Work Plan dated June 1, 2015 began on June 8, 2015 and was completed on October 27, 2016.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

Excavation and off-site disposal of contaminant source areas, including:

- petroleum contaminated soil, ranging from 18 to 27 feet below grade surface; and
- Removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

Approximately 23,000 cubic yards of contaminated soil exceeding restricted residential soil cleanup objectives was removed from the site. Clean fill meeting restricted residential SCOs consistent with 6 NYCRR Part 375-6.7(d) was brought in to complete the backfilling of the excavation and establish the designed grades at the site.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), and pesticides. Based upon investigations conducted to date, the primary contaminants of concern include the petroleum volatile organic compounds (VOCs) benzene, toluene, ethylbenzene, and xylene (BTEX).

Soil – On-site soil sampling conducted during the remedial investigation (RI) found petroleum related compounds exceeding protection of groundwater soil cleanup objectives (SCOs) as well as restricted residential SCOs for those compounds, down to depths at least 40 ft bgs. Values up to 49 mg/kg of benzene, 1800 mg/kg of toluene, 200 mg/kg of ethylbenzene, and 1200 mg/kg of xylene were found in the soil samples. Off-site soil samples collected during a subsurface hydrocarbon assessment, which was performed in September 2010, did not contain VOC concentrations above NYSDEC Restricted-Residential Use Soil Cleanup Objectives. Analysis revealed SVOCs, and metals, at concentrations that exceeded their respective RRU SCOs. Pesticides were detected at values below their respective UU SCOs. Excavation and off-site disposal of contaminated soil was completed during IRM activities.

Groundwater - Groundwater sampling conducted during the RI found exceedances of groundwater standards, in perched and regional groundwater, for petroleum related VOCs. Groundwater samples exhibited values of 100 µg/L of benzene, 220 µg/L of toluene, 12 µg/L of ethylbenzene, and 217 µg/L of xylene. These compounds were not detected in downgradient, off-site, wells as indicated in the quarterly groundwater monitoring report for April 2014. Metal concentrations detected in one well (WW01) above AWQS, are attributable to background groundwater conditions.

Soil vapor - Sampling conducted in 2014 indicated the presence of petroleum VOCs in the vadose zone consistent with the compounds in the groundwater. Soil vapor samples showed values of 52,400 $\mu g/m^3$ for benzene, 46,000 $\mu g/m^3$ for toluene, 27,500 $\mu g/m^3$ for ethylbenzene, and 53,900 $\mu g/m^3$ for xylene. From the 2015 RI, soil vapor sampling indicated elevated concentrations of tetrachloroethylene (PCE) in limited areas of the site, with a maximum value of 23,900 $\mu g/m^3$ in the southwest corner of the site. PCE was not found in perched or regional groundwater on-site, nor in soil samples, indicated this is likely an off-site source. If future on-site sampling (groundwater or soils) indicates PCE at elevated levels, additional soil and groundwater sampling is recommended off-site to locate the source of PCE.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

The site is completely fenced, which restricts public access. However, persons who enter the site could contact contaminants in the soil by walking on the site, digging or otherwise disturbing the soil. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site redevelopment. Further evaluation is recommended to determine whether soil vapor intrusion is a concern for off-site structures.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

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

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- 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.

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.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The elements of the selected remedy, as shown in Figure 3, are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
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- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Vapor Mitigation

Any on-site buildings will be required to have a sub-slab depressurization system, or a similar engineered system, to mitigate the migration of vapors into the building from soil and groundwater.

3. Soil Vapor Extraction

Soil vapor extraction (SVE) will be implemented to remove volatile organic compounds (VOCs) from the subsurface. VOCs will be physically removed from the soil by applying a vacuum to wells that have been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOCs from the soil to the SVE well. The air extracted from the SVE wells is then treated as necessary prior to being discharged into the atmosphere.

Nineteen (19) SVE wells will be installed into the vadose zone and screened from 9 feet below the ground surface to a depth of approximately 24 feet. The air containing VOCs extracted from the SVE wells will be treated by passing the air stream through activated carbon which removes the VOCs from the air prior to it being discharged into the atmosphere.

4. Cover System

A soil cover will be required to allow for restricted residential use of the site, in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil placed over the demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d). In areas where buildings are placed, the soil cover would not be required.

5. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- Require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- Allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- Restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- Require compliance with the Department approved Site Management Plan.

6. Site Management Plan

a. An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

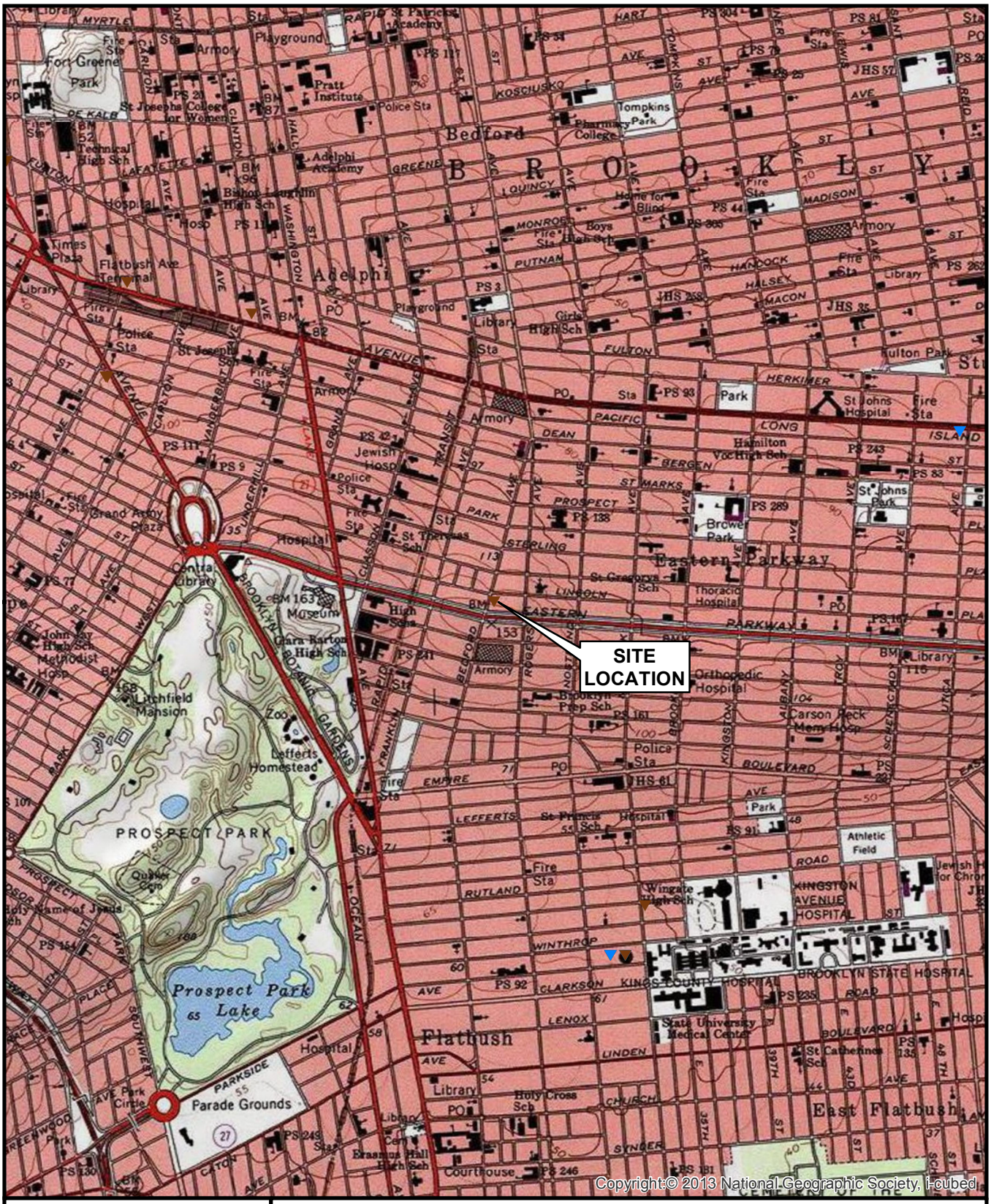
Institutional controls: The Environmental Easement as discussed in paragraph 5 above.

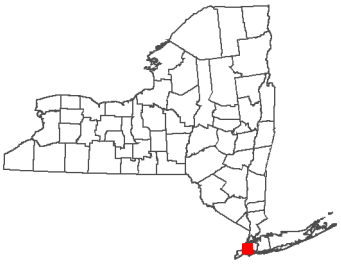
Engineering controls: Vapor Mitigation system as discussed in paragraph 2, Soil Vapor Extraction wells as discussed in paragraph 3, and soil cover system discussed in paragraph 4 above.

This plan includes, but may not be limited to:

- An Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- a provision that should building demolition occur in the future, a soil cover consistent with that described in Paragraph 4 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
    - Monitoring of the SVE system including, but not limited to: vapor concentrations and vacuums to assess the performance and effectiveness of the remedy; and
    - A schedule of monitoring frequency of submittals to the Department.





N
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Figure 1

Site Location Map

1525 Bedford Ave.
Brooklynn, Kings County
Site No. C224206

DEPARTMENT OF ENVIRONMENTAL CONSERVATION • NEW YORK STATE •

N
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0 70 140
Feet

Figure 2

Site Map

1525 Bedford Ave.
Brooklynn, Kings County
Site No. C224206

DEPARTMENT OF ENVIRONMENTAL CONSERVATION • NEW YORK STATE •

LINCOLN PLACE

BEDFORD AVENUE

EASTERN PARKWAY

N

Excavation to about el. 119.6 feet NAVD88
to accomodate the cellar slab with
excavations to about el. 118 feet NAVD88 for foundation
and el. 114.6 feet NAVD88 for an elevator pit

Slope from about el. 128 to 134 feet NAVD88 bottom of excavation

Excavation to about 128 to 134 feet NAVD88

Slope from existing grade to about 118 feet NAVD88

No excavation

Legend

- Bottom Documentation Soil Sample Location
- Sidewall Documentation Soil Sample Location
- SVE Target Treatment Area
- 1:1 Sloped Excavation Sidewall
- Bottom of Excavations
- Elevator Pit
- Site Boundary

30 0 30
SCALE IN FEET

Notes:
1. Base Plan taken from a survey prepared by Roguski Land Surveying, P.C.dated November 21, 2014.
2. Elevations (el.) referenced in feet North American Vertical Datum 1988 (NAVD88)
3. Please refer to Appendix F for detailed soil vapor extraction (SVE) design.
4. bgs = below grade surface

LANGAN
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Langan Engineering & Environmental Services, Inc.
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan International LLC

Collectively known as Langan

Project
1525 BEDFORD AVENUE
BLOCK No. 1260, LOT Nos. 1 and 5
BROOKLYN
KINGS NEW YORK

Drawing Title
EXCAVATION PLAN AND DOCUMENTATION SOIL SAMPLES

Project No. 170329601	Figure
Date 2/3/2016	
Scale 1"= 30'	
Drawn By MNG	
Submission Date February 2016	Sheet 1 of 1

Path: \\langan.com\data\NY\data6\170329601\ArcGIS\ArcMap_Documents\IRMWP Addendum\Figure 1 - Site Excavation Plan.mxd Date: 2/3/2016 User: mng Time: 3:46:30 PM

Bcagqgm l Bocument Figure 3: Elements of the Selected Remedy

LEGEND:

PROPERTY BOUNDARY

SVE-1 — PROPOSED SOIL VAPOR EXTRACTION WELL (APPROXIMATE SPACING = 25 FT ON-CENTER)

VP-1 — PROPOSED VENT WELL/VAPOR MONITORING WELL

TARGET TREATMENT AREA

ESTIMATED SVE RADIUS OF INFLUENCE ~ 10 – 15 FT (10 FT SHOWN)

NOTES:

1. BASE PLAN TAKEN FROM "A100 – CELLAR FLOOR PLAN" PREPARED BY ISAAC & STERN ARCHITECTS, DATED (JULY 30, 2015)
2. THE PROPOSED LOCATION OF SOIL VAPOR EXTRACTION (SVE) WELLS AND VENT/VAPOR MONITORING WELLS ARE SUBJECT TO CHANGE BASED ON THE OBSERVED FIELD CONDITIONS AND WILL BE COORDINATED WITH THE ARCHITECT AND STRUCTURAL ENGINEER.
3. THE TARGET TREATMENT AREA WAS DETERMINED BASED ON THE MOST RECENT SOIL AND SOIL VAPOR DATA COLLECTED DURING THE REMEDIAL INVESTIGATION 2015 BORING ACTIVITIES.

Graphic Scale

0 30' 60'

LANGAN
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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. S.A.
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project
1525 BEDFORD AVE
BLOCK No. 1260, LOT Nos. 1 and 5
BROOKLYN
KINGS NEW YORK

Figure Title
SVE SYSTEM OVERVIEW

Project No. 170329601	Figure No.
Date 1/14/16	
Scale 1" = 30'	
Drawn By MRW / Checked By NN	
Submission Date February 2016	

Filename: \\langan.com\data\NY\data6\170329601\Cadd Data - 170329601\2D-DesignFiles\Environmental\SVE System Design\100% Construction Design\FG02-FG03-FG05-170329601-N-SP0101_CMA.dwg Date: 2/4/2016 Time: 09:24 User: mng Style Table: Langan.stb Layout: ROI Of SVE Wells

Decision Document Figure 4: SVE well locations