DECISION DOCUMENT

1921 Atlantic Avenue
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224279
June 2020

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

DECLARATION STATEMENT - DECISION DOCUMENT

1921 Atlantic Avenue
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224279
June 2020

Statement of Purpose and Basis

This document presents the remedy for the 1921 Atlantic 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 1921 Atlantic 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and

- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

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

- Soil exceeding the 6 NYCRR Part 371 hazardous criteria for lead;
- Any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination; and
- Stained soils and soils exhibiting petroleum-type odors.

Excavation and off-site disposal of all on-site soils which exceed unrestricted use SCOs, as defined by 6 NYCRR Part 375-6.8**.** If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 10,055 cubic yards of contaminated soil will be removed from the site. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site.

4. Local Institutional Controls

If no EE or SMP is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOH code which prohibits potable use of groundwater without prior approval and local institutional controls.

5. Vapor Intrusion Evaluation

As part of the track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

Conditional Track 1

The intent of the remedy is to achieve Track 1 unrestricted use; therefore no environmental easement or site management plan is anticipated. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report, then a Site Management Plan (SMP) and Environmental Easement (EE) will be required to address the SVI evaluation and implement actions as needed; if a mitigation or monitoring action is needed, a Track 1 cleanup can only be achieved if the mitigation system or other required action is no longer needed within 5 years of the date of the Certificate of Completion.

In the event that Track 1 unrestricted use is not achieved, the following contingent remedial elements will be required and the remedy will achieve a Track 4 restricted residential cleanup.

Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 4 restricted residential cleanup at a minimum and will include imposition of a site cover (as a contingency if soil greater than 2 feet but less than 15 feet deep does not meet the restricted residential SCOs), an environmental easement, and site management plan as described below.

6. Cover System

A site 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 a soil cover is to be used it will be a minimum of two feet of soil placed over a 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 for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

7. 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.

8. Site Management Plan

A Site Management Plan is required, which includes the following:

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 discussed in Paragraph 6(a) above.
- Engineering Controls: The Cover System discussed in Paragraph 6**.**

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 for evaluation of the potential for soil vapor intrusion for any new buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 5 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;
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls; and
- monitoring for vapor intrusion for any new buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

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

- Monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

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.

June 22, 2020

Date

Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

1921 Atlantic Avenue
Brooklyn, Kings County
Site No. C224279
June 2020

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:

DECInfo Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C224279

Brooklyn Public Library
10 Grand Army Plaza
Brooklyn, NY 11238
Phone: 718.230.2100

Brooklyn Community Board No. 3
1360 Fulton Street
Brooklyn, NY 11216
Phone: 718-622-6601

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 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

Site Location: The site consists of fifteen parcels located at 1921 Atlantic Avenue and 19 Prescott Place, identified as Block 1557 and Lots 1-4, 23, 26, 28, and 31-38, in the Bedford-Stuyvesant neighborhood of Brooklyn, NY. The site is bounded by Bancroft Place to the east, Atlantic Avenue to the south, Prescott Place to the west, and residential buildings to the north. The site is located in a highly developed urban area of Brooklyn consisting primarily of industrial and commercial structures.

Site Features: The site is 30,164 square-feet (0.69 acres) in area and consists of vacant land and primarily covered with vegetation, but also includes asphalt and bare concrete. Based on topographic maps, no permanent surface water bodies are located within a one-mile radius of the subject property.

Current Zoning and Land Use: The site is currently zoned for M1-1/R7D for industrial, commercial, and residential use and is also within the Atlantic Avenue Special Mixed-Use District (MX-10). The surrounding properties are currently used as multi-story residential and commercial buildings. Long Island Railroad tracks are south of the site in the center of Atlantic Avenue.

Past Use of the Site: The site was first developed sometime prior to 1888 and used for residential purposes until 1934. From approximately 1934 to 2005 the site was mostly used for commercial purposes with some residential use remaining. In 1934, the subject property was listed in the city directory as having an oil and gas service station occupying lot 37. Lots 37 and 38 were used as a gas station and for auto repair. Lot 37 was operated by Ben VI Service Station. Additionally, Lot 38 was operated by CYS Auto Body Shop. The property has been vacant since 2006.

Site Geology and Hydrogeology: Based on soil borings completed during the Remedial Investigation (RI) and Supplemental Remedial Investigation (SRI), the site is underlain by a historic fill material layer approximately seven to nine feet thick. Below this historic fill material, native soils were encountered consisting of silt or fine brown sand with gravel. The non-native historic fill material generally appears to consist of brown silty sands, concrete, brick, and other construction debris. No confining units were encountered in the soil borings. The depth to bedrock is expected to be greater than 100 feet below ground surface.

Based on groundwater monitoring well data collected during the RI and SRI, the depth to groundwater beneath the site is approximately 70 feet below ground surface. The direction of groundwater flow is toward the east-southeast. The site appears to be at or close to the hydrogeologic divide, therefore, groundwater flow direction may be subject to change. There are no public water supply wells within a one-mile radius of the subject property.

A site location map is attached as Figure 1 and the site boundary is presented in 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 (or an alternative) that restrict(s) the use of the site to restricted residential use as described in Part 375-1.8(g) were/was 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 Applicant(s) under the Brownfield Cleanup Agreement is a/are Volunteer(s). The Applicant(s) does/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.

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:

arsenic	benzo(a)anthracene	a-Chlordane
cadmium	benzo(a)pyrene	tetrachloroethene (PCE)
chromium	benzo(b)fluoranthene	trichloroethene (TCE)
mercury	benzo(k)fluoranthene	methylene chloride
lead	chrysene	manganese
barium	indeno(1,2,3-cd)pyrene	dibenzo(a,h)anthracene
PCB aroclors	phenanthrene	fluoranthene
pyrene	4,4'-DDE	4,4'-DDT
4,4'-DDD	benzene	toluene
ethylbenzene	xylenes	

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

- soil
- groundwater

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.

There were no IRMs performed at the site during the RI.

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.

Nature and Extent of Contamination:

A site-wide investigation was conducted to delineate contamination in soil, groundwater and soil vapor. Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), pesticides and the emerging contaminants per-and polyfluoroalkyl (PFAS), and 1,4 dioxane. Soil vapor samples were analyzed for VOCs. Based upon the investigation, the primary contaminants of concern for the site include heavy metals, SVOCs, pesticides and PCBs. Results are summarized below:

Soil:

No VOCs were identified in soil at concentrations exceeding the 6NYCRR Part 375 unrestricted use soil cleanup objectives (UUSCOs). SVOCs consisting of polycyclic aromatic hydrocarbons (PAHs) were detected at levels exceeding UUSCOs in twenty-two of twenty-seven soil borings site wide within the historic fill layer. The SVOCs that exceeded the UUSCOs included: benzo(a)anthracene up to 100 parts per million (ppm) (UUSCO is 1 ppm) , benzo(a)pyrene up to 84 ppm (UUSCO 1 ppm), benzo(b)fluoranthene up to 110 ppm (UUSCO 1 ppm), benzo(k)fluoranthene up to 37 ppm (UUSCO 0.8 ppm), chrysene up to 110 ppm (UUSCO 1 ppm), dibenzo(a,h)anthracene up to 16 ppm (UUSCO 0.33 ppm), fluoranthene up to 240 ppm (UUSCO 100 ppm), indeno(1,2,3-cd)pyrene up to 45 ppm (UUSCO 0.5 ppm), phenanthrene up to 240 ppm (UUSCO 100 ppm), and pyrene up to 220 ppm (UUSCO 100 ppm).

Metals exceeded the UUSCOs site-wide and included trivalent chromium with detected concentrations up to 260 ppm (UUSCO 30 ppm), mercury up to 1.8 ppm (UUSCO 0.18 ppm), barium up to 2,100 ppm (UUSCO 350 ppm), lead up to 7,500 ppm (UUSCO 63 ppm), manganese up to 2,700 ppm (UUSCO 1,600 ppm), arsenic up to 16 ppm (UUSCO 13 ppm), and cadmium up to 8 ppm (UUSCO 2.5 ppm). Of these metals, chromium, mercury, barium, lead, manganese, arsenic, and cadmium also exceeded Restricted Residential SCOs. Lead is present on every lot and exceeds both the commercial and industrial SCOs on certain lots. Therefore, some soil may have to be disposed as hazardous waste based upon TCLP sampling to be completed as part of waste characterization.

Several pesticides were detected above UUSCOs including a-chlordane which exceeded the UUSCOs at 11 ppm (UUSCO of 0.094 ppm), 4,4'-DDD up to 0.1 ppm (UUSCO of 0.0033 ppm), 4-4'-DDE up to 0.065 ppm (UUSCO of 0.0033 ppm), and 4,4'-DDT up to 0.17 ppm (UUSCO of 0.0033 ppm). Of these, a-chlordane also exceeded restricted residential SCOs.

PCB exceedances of UUSCOs were limited to Aroclor-1254, detected at concentrations up to 1.9 ppm (UUSCO 0.1 ppm) and Aroclor-1260 up to 0.18 ppm (UUSCO 0.1 ppm) within the 0-2' sample interval at various soil boring locations across the site. Both of these Aroclors were also detected above restricted residential SCOs at one boring location in the shallow sampling interval.

Based on the sampling results, there is no indication that these contaminants have migrated off-site.

Groundwater:

Groundwater sample results did not identify VOCs, SVOCs, pesticides, herbicides, or PCBs above New York State 6 NYCRR Part 703.5 Class GA groundwater quality standards. Several dissolved metals were identified in groundwater, but only manganese, detected at concentrations up to 540 parts per billion (ppb) (compared to standard of 300 ppb), magnesium up to 81,000 ppb (standard 35,000 ppb), and sodium up to 255,000 ppb (standard 20,000 ppb) exceeded their respective standards. With the exception of manganese, which was also identified in soil, these are naturally occurring metals. Based on the groundwater sampling results, there is no indication that these contaminants have migrated off-site.

Soil Vapor:

Benzene, toluene, ethylbenzene, and xylenes (BTEX) compounds were detected in all soil vapor samples with cumulative concentrations up to 2,507 micrograms per cubic meter ($\mu g/m^3$). Benzene was detected at a concentration of 162 $\mu g/m^3$ at LSV-1. Toluene, ethylbenzene, and xylenes (total) were detected at maximum concentrations of 738.63 $\mu g/m^3$, 289.72 $\mu g/m^3$, and 1402.97 $\mu g/m^3$ respectively. These elevated concentrations of BTEX compounds were detected at the northwest corner of the site at soil vapor locations SV006 and LSV-1. Tetrachloroethene (PCE) was detected in seven of eight samples with a maximum concentration of 34.6 $\mu g/m^3$, Trichloroethene (TCE) was detected in five of eight samples with a maximum concentration of 2.63 $\mu g/m^3$. Methylene chloride was detected in seven of eight samples with a maximum concentration of 17 $\mu g/m^3$. Based on the soil vapor sampling results, soil vapor intrusion does not appear to be a concern for off-site buildings.

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 fenced to restrict public access. Direct contact with contaminated soil is unlikely unless people dig below the surface. People are not drinking the contaminated groundwater because the area is served by a public water supply not affected by this contamination. Volatile organic compounds in soil vapor (air spaces within the soil) may migrate into buildings and affect 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. Because the site is vacant, the inhalation of site-related contaminants due to soil vapor intrusion does not represent a concern in its current condition, however the potential exists for inhalation exposures to site contamination for any future on-site redevelopment and occupancy. Environmental sampling indicates soil vapor intrusion is not likely a concern for off-site buildings.**6.5:**

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.

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.

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 Conditional Track 1 remedy.

The selected remedy is referred to as the Soil Excavation and Soil Vapor Intrusion Evaluation 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;
- 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

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- Any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination; and
- Stained soils and soils exhibiting petroleum-type odors.

Excavation and off-site disposal of all on-site soils which exceed unrestricted use SCOs, as defined by 6 NYCRR Part 375-6.8**.** If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 10,055 cubic yards of contaminated soil will be removed from the site. Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site.

4. Local Institutional Controls

If no EE or SMP is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOH code which prohibits potable use of groundwater without prior approval.

5. Vapor Intrusion Evaluation

As part of the track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

Conditional Track 1

The intent of the remedy is to achieve Track 1 unrestricted use; therefore no environmental easement or site management plan is anticipated. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report, then a Site Management Plan (SMP) and Environmental Easement (EE) will be required to address the SVI evaluation and implement actions as needed; if a mitigation or monitoring action is needed, a Track 1 cleanup can only be achieved if the mitigation system or other required action is no longer needed within 5 years of the date of the Certificate of Completion.

In the event that Track 1 unrestricted use is not achieved, the following contingent remedial elements will be required and the remedy will achieve a Track 4 restricted residential cleanup.

Engineering and Institutional Controls

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6. Cover System

A site 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 a soil cover is to be used it will be a minimum of two feet of soil placed over a 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 for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

7. 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.

8. Site Management Plan

A Site Management Plan is required, which includes the following:

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:

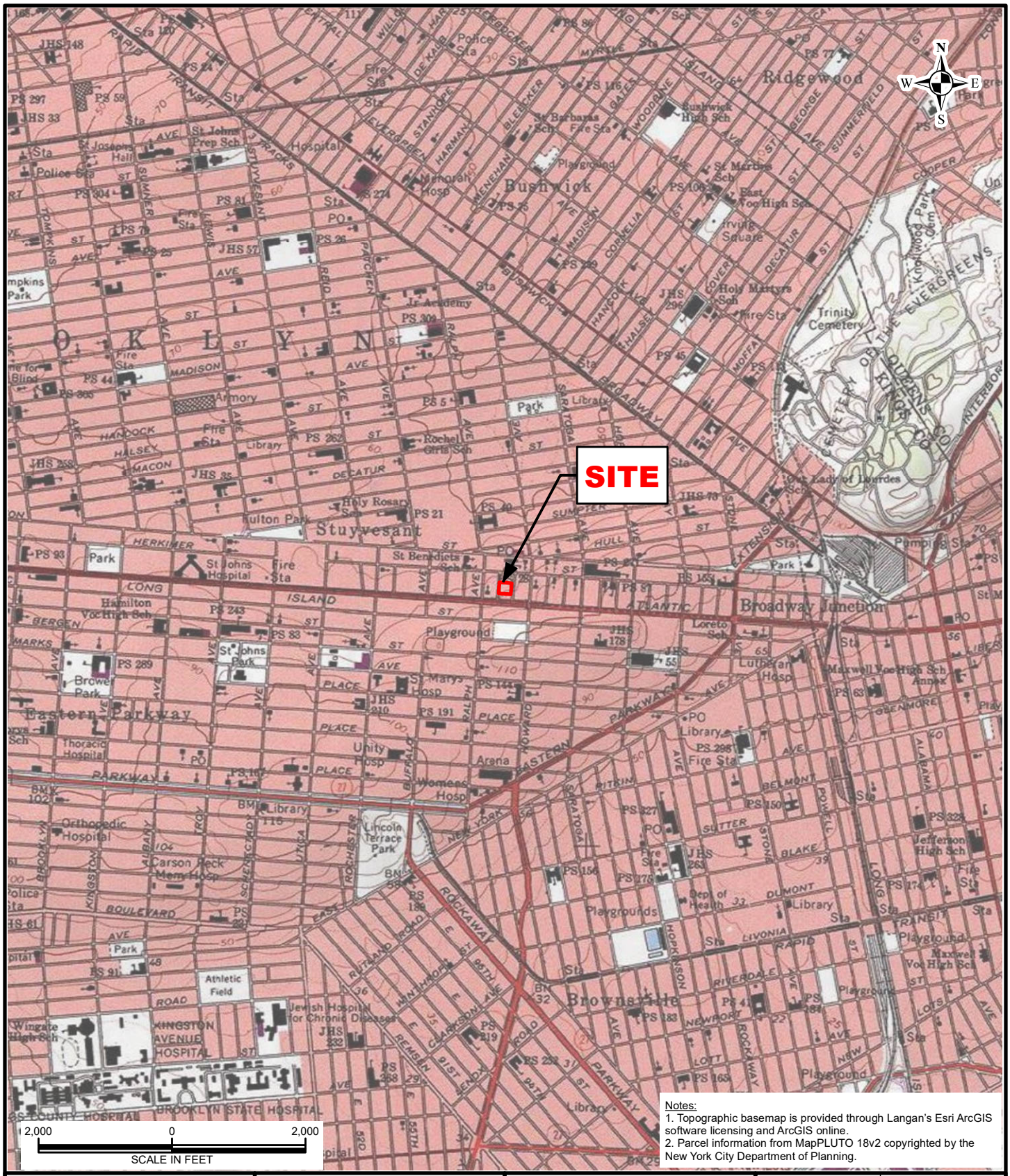
- Institutional Controls: The Environmental Easement discussed in Paragraph 7 above.
- Engineering Controls: The soil cover discussed in Paragraph 6**.**

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 for evaluation of the potential for soil vapor intrusion for any new buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 5 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;
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls; and
- monitoring for vapor intrusion for any new buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

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

- Monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



Notes:
1. Topographic basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online.
2. Parcel information from MapPLUTO 18v2 copyrighted by the New York City Department of Planning.

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Langan International LLC
Collectively known as Langan

NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
1921 ATLANTIC AVENUE

BLOCK No. 1557, LOT Nos. 1, 2, 3, 4, 23, 26, 28, 31, 32, 33, 34, 35, 36, 37 & 38

BROOKLYN NEW YORK

Drawing Title
SITE LOCATION MAP

Project No. 100681201	Figure 1
Date 8/28/2019	
Scale 1"=2,000'	
Drawn By ATR	
Last Revised 11/12/2019	

Path: \\Langan.com\data\PAR\data2\100681201\Project Data\ArcGIS\MXD\Environmental_Figures\2019-09 RAP\Figure 1 - Site Location Map.mxd Date: 11/12/2019 User: ibaker Time: 9:35:12 AM

Notes
Lot numbers are shown within the boundary of each lot.
Lot numbers in red are privately owned and lot numbers in black are owned by NYC HPD.

Adjacent Lot

Site Boundary

Document Path: W:\Projects\M-R\OER\1703\mapfiles\RIR\FIG02_SitePlan.mxd

PWGC
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DRAWING PREPARED FOR:

NYC Office of Environmental Remediation
100 Gold Street, 2nd Floor
New York, NY

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	OER1703	Designed by:	MG
Date:	4/25/2018	Drawn by:	TS
Scale:	AS SHOWN	Approved by:	MG

SITE PLAN

19 Prescott Place
Brooklyn, NY

FIGURE NO:

2

Legend

- Site Boundary
- Extents of mass excavation to a depth of 9 feet below street level

Prescott Place

Barncroft Place

Atlantic Avenue

N W E S

Notes:
1. Excavation extents from GF55 Partners, "Cellar/Foundation Layout Plan", dated 4/17/2019.
2. Parcel information from MapPLUTO 18v2 copyrighted by the New York City Department of Planning.
3. Aerial imagery from Langan's subscription to Nearmap ltd., collected October 26, 2018.
4. The site boundary shown corresponds to tax map metes and bounds as well as the description of the real property described in the 26 November 2018 Brownfield Cleanup Agreement (Site No. C224279).

30 0 30
SCALE IN FEET

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Langan Engineering & Environmental Services, Inc.
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Langan International LLC
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BROOKLYN NEW YORK

Drawing Title
ALTERNATIVE I - TRACK 1 CLEANUP EXCAVATION EXTENTS

Project No. 100681201	Figure 3
Date 3/12/2020	
Scale 1 " = 30 '	
Drawn By IHB	

Path: \\Langan.com\data\PAR\data2\100681201\Project Data\ArcGIS\MXD\Environmental_Figures\2019-09 RAP\Figure 7 - Alternative I - Track 1 Cleanup.mxd Date: 3/12/2020 User: aruane Time: 10:00:16 AM